

Drone Wars: Risks and Warnings

Alan W. Dowd

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Unmanned combat aerial vehicles (UCAVs) are the wonder weapons of today's wars. UCAVs have been credited with striking the convoy carrying Moammar Qaddafi; killing al Qaeda's Abu Yahya al Libi and Anwar al Awlaki; eviscerating the Taliban's ranks and other militants in the Afghanistan and Pakistan (AfPak) theater; and hitting targets from Asia to Africa—all without putting pilots in harm's way.

The drone revolution promises many benefits, but there are also drawbacks to this nascent unmanned air force—drawbacks that few policymakers have contemplated. Just as drone detractors need to acknowledge what UCAVs bring to the table, UCAV advocates need to acknowledge the negative implications of drone warfare.

Today and Tomorrow

Whatever one's view of UCAVs, the appeal of drones is understandable. As an Air Force report concludes, drones "are not limited by human performance or physiological characteristics . . . extreme persistence and maneuverability are intrinsic benefits."¹ In other words, drones can handle what humans cannot—G forces and speed, tedium and boredom. Among the other "intrinsic benefits" of drones: they deprive the enemy of human targets; they don't get tired or thirsty or hungry; they are relatively inexpensive; and with the coming of nuclear-powered drones, they offer the possibility of nearly endless above-target operation.

It is no surprise, then, that drones are beginning to dislodge manned aircraft from the crucial role they have played in warfighting since World War II. Consider some of the evidence:

- There has been a 1,200-percent increase in combat air patrols by drones since 2005.²
- In the past decade, the US drone fleet has swelled from 50 planes to 7,500, though the vast majority of these drones are not UCAVs.³ Still, drones represent 31 percent of the Pentagon's air fleet.⁴
- America's unmanned air force—including drones deployed by the military and the CIA—has struck targets in Pakistan, Iraq, Libya,

Alan W. Dowd writes on national defense, foreign policy, and international security. His writing has appeared in multiple publications including *Parameters*, *Policy Review*, *The Journal of Diplomacy and International Relations*, *World Politics Review*, *American Outlook*, *The Baltimore Sun*, *The Washington Times*, *The National Post*, *The Wall Street Journal Europe*, *The Jerusalem Post*, and *The Financial Times Deutschland*.

1 US Air Force, *United States Air Force Unmanned Aircraft Systems Flight Plan 2009-2047* (Washington, DC: U.S. Department of the Air Force, May 18, 2009), 15.

2 "Flight of the drones," *The Economist*, October 8, 2011.

3 "Predator Drones and Unmanned Aerial Vehicles (UAVs)," *The New York Times*, October 21, 2011, <http://topics.nytimes.com>.

4 Spencer Ackerman and Noah Shachtman, "Almost 1 In 3 U.S. Warplanes Is a Robot," *Wired Danger Room*, January 9, 2012.

Afghanistan, Yemen, Somalia, and the Philippines.⁵ UCAVs are so central to US efforts in Afghanistan and Pakistan that some observers have dubbed this front of the antiterror campaign “the drone war.”

- Referring to the F-35 Joint Strike Fighter, then-Joint Chiefs Chairman Admiral Michael Mullen declared not long before he retired, “There are those that see the JSF as the last manned fighter or fighter-bomber.” Raising more than a few eyebrows, he added, “I’m one that’s inclined to believe that.”⁶

Two factors are accelerating the use of drones: the public’s growing distaste for US casualties and the Pentagon’s shrinking share of the budget. Regarding the former, it pays to recall the American people’s tolerance for casualties has waxed and waned over the decades. They obviously have had a high threshold for casualties at times. For example, despite far higher casualty levels than recent conflicts, public support remained high throughout World War II and during much of Vietnam. However, that changed dramatically after Vietnam. The result was a quarter-century of push-button, almost-bloodless wars (at least for Americans), each conditioning the American people to expect less bloodshed than the previous conflict. This, in turn, conditioned political and military leaders to deliver more push-button, bloodless wars. The 9/11 attacks briefly broke this cycle, having an effect on the American public not dissimilar from the attack on Pearl Harbor. Consider a CNN poll conducted after 9/11 asking Americans if they would support military action even if it meant 5,000 American troops would be killed. As a sign of their grim, if ephemeral, determination, 76 percent said yes.⁷

Of course, those attitudes have shifted, predictably, during what one observer calls “the wars of 9/11.”⁸ Land wars in Afghanistan and Iraq have been lengthy and costly, with 4,485 American troops killed in Iraq and more than 2,147 killed in the still-unfinished Afghanistan war, America’s longest shooting war. In the wake of Iraq and Afghanistan, it’s no coincidence that UCAVs are playing a central role in US military operations as Americans grow weary of war’s toll. Instead of putting boots on the ground in Libya, for example, Washington unleashed swarms of drones. In fact, the missiles that hit Qaddafi’s escaping convoy were fired not by an artilleryman marching through the desert or an F-18 pilot prowling overhead, but by a remote-control warrior sitting in the safety of a nondescript building outside Las Vegas.⁹ Annual drone strikes in Pakistan increased from one in 2004 to 117 in 2010, when they peaked.¹⁰ The Brookings Institution estimates that as many as 2,769 militants have been killed by UCAV strikes in Pakistan.¹¹ Today, the frequency and

5 Karen DeYoung, “Secrecy defines Obama’s drone war,” *The Washington Post*, December 19, 2011; Mark Mazzetti, “The Drone Zone,” *The New York Times*, July 6, 2012.

6 “Last Manned Aircraft?” *Air Force Magazine*, May 18, 2009.

7 Jeffrey M. Jones, “Support Remains High Even if Military Action is Prolonged, Involves Casualties,” *Gallup News Service*, October 4, 2001, <http://www.gallup.com>.

8 Simon Serfaty, “The United States, the European Union and NATO: After the Cold War and Beyond Iraq,” Center for Strategic and International Studies (CSIS) (Washington DC: CSIS, June 15, 2005).

9 Thomas Harding, “Col. Gaddafi killed: convoy bombed by drone flown by pilot in Las Vegas,” *The London Telegraph*, October 20, 2011.

10 Ian S. Livingston and Michael O’Hanlon, *Pakistan Index: Tracking Variables of Reconstruction & Security* (Washington DC: Brookings, December 29, 2011), 6-8.

11 Ian S. Livingston and Michael O’Hanlon, *Afghanistan Index: Tracking Progress and Security in Post-9/11 Afghanistan* (Washington DC: Brookings, December 13, 2012), 32.

ferocity of US drone strikes in Yemen are following the same escalating trajectory that characterized the drone war in Pakistan.

As to the Pentagon's diminishing share of the budget, "Drones, Not Marines" blared one headline after President Barack Obama unveiled his plan for scaling-back the US military. Defending the president's vision of a smaller military, *The New York Times* assured its readers that "Many of the challenges out there can be dealt with by air power, intelligence, special operations or innovative technologies like drones."¹²

Media outlets are getting their cues from the Pentagon. "As we reduce the overall defense budget," outgoing Defense Secretary Leon Panetta explained, "we will protect, and in some cases increase, our investments in special operations forces, in new technologies like . . . unmanned systems."¹³ Similarly, an Air Force report suggests that drones promote "the wisest use of tax dollars."¹⁴ A typical Predator drone, for instance, costs \$4.5 million, while an F-35 costs \$159 million, an F-22 \$377 million, and a B-2 nearly \$2 billion. Moreover, training UCAV controllers costs less than a tenth what it costs to train traditional combat aviators.¹⁵

In short, the emergence of an unmanned air force is not far away:

- In addition to its growing fleet of reconnaissance and surveillance drones, the Army's Grey Eagle/Sky Warrior drone—sharing bloodlines with the Predator—has been deployed in Iraq and Afghanistan. The Army is asking industry partners to develop a small, hand-launched drone that can strike targets six miles away.¹⁶
- The Navy is testing a carrier-borne UCAV, the X-47B, which is being put through its paces aboard the USS *Harry S. Truman*. (Related, the Navy is also developing missile-laden robot warships, such as the unmanned surface vessel precision engagement module.)
- The Air Force envisions deploying swarms of drones networked together to "operate in a variety of lethal and non-lethal missions at the command of a single pilot"¹⁷—as many as five drones per pilot.¹⁸
- The Air Force wants America's next-generation bomber, the Long Range Strike bomber, to be "optionally manned."
- UCAVs equipped with "target-recognition systems" and "autonomous attack systems" are on the horizon.¹⁹
- The Pentagon plans to double the drone fleet by 2020, as the size of

12 "A leaner Pentagon," *The New York Times*, January 5, 2012.

13 US Department of Defense, "Defense Strategic Guidance Briefing from the Pentagon," (Washington DC: Office of the Assistant Secretary of Defense (Public Affairs) News Transcript), January 5, 2012, <http://www.defense.gov>.

14 *US Air Force Unmanned Aircraft Systems Flight Plan 2009-2047*, 15.

15 "Flight of the drones."

16 Spencer Ackerman, "Army Wants Tiny Suicidal Drone to Kill From 6 Miles Away," *Wired Danger Room*, September 10, 2012, <http://www.wired.com>.

17 *US Air Force Unmanned Aircraft Systems Flight Plan 2009-2047*, 39.

18 Andrea Shalal-Esa and Tim Hopher, "Future drone pilots may fly four warplanes at once," *Reuters*, December 24, 2011.

19 Max Boot, *War Made New: Weapons, Warriors, and the Making of the Modern World* (New York: Penguin, 2006), 440-441; Shalal-Esa and Hopher, "Future drone pilots."

the manned bomber and fighter force shrinks.²⁰

- In 2011, the Air Force trained more pilots to fly drones than fighter and bomber pilots combined.²¹ The Air Force Academy class of 2011 was the first to graduate cadets with specialties in operating drones.

In fact, “Hundreds of Air Force pilots are transitioning to drones from traditional manned aircraft,” according to an F-15E pilot interviewed for this essay. An Air Force Academy graduate with 20 years in the Air Force, including hundreds of hours of combat, the pilot concedes that he is biased when it comes to the drone debate, before adding, “Many of the veteran pilots I know that transitioned to drones were effectively forced there by having few desirable alternatives.”²²

An Air Force report on drones concedes that growth in demand for unmanned systems has made relying on “experienced pilots” to fly drones “unsustainable.”²³ So the Air Force is tasking personnel with no flight experience to drone operations, developing a pilot career field with specialized drone training “distinct from current manned aircraft pilot training” and planning to task multiple drones to a single operator.²⁴ In addition, the Air Force envisions programs that will increase use of “computer-based training and virtual instruction. . . . The goal will be to move all Air Force UAS [unmanned aircraft systems] training programs to accomplish 75 percent of all training through self-study, allowing virtual instructors to introduce and practice mission tasks with students.”²⁵ In other words, not only will the planes be unmanned and automated, so will the training.

War, as Michael Walzer observes, is “a human action . . . for whose effects someone is responsible.”²⁶ Yet who is held responsible when a UAV or UCAV goes AWOL? This is not exactly a rare occurrence. AWOL drones have crashed in eastern Iran, collided with cargo planes, smashed into Djibouti neighborhoods, and veered so dangerously off course and out of control that manned jets have been dispatched to destroy them. The Air Force concedes that its Predator, Reaper, and Global Hawk drones crash more than any other aircraft—nine are lost for every 100,000 hours flown.²⁷ And sounding more like a sci-fi magazine than a newspaper, *The Washington Post* reports that a Predator based in Djibouti “started its engine without any human direction, even though the ignition had been turned off and the fuel lines closed.”²⁸

20 David Axe, “Pentagon looks to double its unmanned air force,” *Wired.com*, May 31, 2011, <http://www.wired.com>.

21 Elisabeth Bumiller and Thom Shanker, “War evolves with drones, some tiny as bugs,” *The New York Times*, June 19, 2011.

22 Confidential interview conducted November 28, 2011; the name of interviewee is withheld by mutual agreement.

23 *U.S. Air Force Unmanned Aircraft Systems Flight Plan 2009-2047*, 28.

24 *Ibid.*, 28; Rachel Martin, “Drone pilots: the future of aerial warfare,” *NPR*, November 29, 2011.

25 *U.S. Air Force Unmanned Aircraft Systems Flight Plan 2009-2047*, 82.

26 Michael Walzer, *Just and Unjust Wars: A Moral Argument With Historical Illustrations* (New York: Basic Books, 1977), 15.

27 Carlo Munoz, “Report: Drones top list of accident-prone aircraft in Air Force,” *The Hill*, June 18, 2012.

28 Craig Whitlock, “Remote U.S. base at core of secret operations,” *The Washington Post*, October 25, 2012.

In short, drones have real technological limitations. These limitations, it seems, will only be amplified as (a) increasing numbers of nonpilots take the controls and (b) each drone operator is shouldered with an increasing number of platforms to operate. However, that is not stopping Washington from deploying more and more of these wonder weapons.

More Willing to Use

As Michael Ignatieff asked in 2000, years before the drone war began, “If war becomes unreal to the citizens of modern democracies, will they care enough to restrain and control the violence exercised in their name . . . if they and their sons and daughters are spared the hazards of combat?”²⁹ That question is directly linked to policymakers in the drone age. The risks policymakers take with UCAVs are greater because the accountability is less than with manned aircraft. After all, the loss of a drone is the loss of nothing more than metal. “More willing to lose is more willing to use,” as Daniel Haulman of the Air Force Historical Research Agency puts it.³⁰ Yet as America’s deepening involvement in Yemen underscores, drones may actually make boots-on-the-ground intervention *more* likely. To identify new targets and authenticate existing targets for the drone war, Washington has quietly sent US troops into Yemen. According to unnamed military officials, the contingent of American troops is growing.³¹ As the troops identify targets, they become targets. Thus, far from preventing more direct and riskier forms of military engagement, drones are encouraging such engagement—even as many of their operators paradoxically carry out their lethal missions from the safety of bases in Nevada or New Mexico.

Make no mistake: this is a good thing for the airmen kept away from harm; however, it may be a bad thing for our republic. Because UCAVs remove humans from the battlespace, they remove the unique characteristics humans bring to the battlespace: deliberation, doubt, fear, gut instinct, and judgment. We need humans in the battlespace, in harm’s way, not just because humans make better judgments than machines—judgment is a very human action—but because having humans in the battlespace can help the commander-in-chief make better judgments about when, where, and whether to wage war. The temptation to gain all the benefits of kinetic military operations with none of the costs, consequences, or risks may be too strong for the Executive branch to resist. Even if the Executive’s inclination toward war is not new—recall Madison’s letter to Jefferson noting how “the Executive is the branch of power most interested in war and most prone to it”—the prospect of risk-free war afforded by pilotless planes is.³²

This has been decades in the making, of course. From World War II to Desert Storm to the war on terror, the United States has grown adept at striking its enemies with increasing levels of precision and decreasing levels of risk to those pulling the trigger. But UCAVs erase the risk. And

29 Michael Ignatieff, *Virtual War: Kosovo and Beyond* (New York: Picador Books, 2000), 4.

30 Daniel L. Haulman, “U.S. Unmanned Vehicles in Combat, 1991-2003,” June 9, 2003, <http://www.dtic.mil>.

31 “U.S. escalates clandestine war in Yemen,” *Los Angeles Times*, May 16, 2012.

32 Cited in James A. Curry, Richard D. Riley, Richard M. Battiston, *Constitutional Government: The American Experience* (New York: West Publishing, 1989), 157.

without it, there is one less check on the commander-in-chief's war-making power. President Obama, for instance, has employed drones in Libya, Somalia, Yemen, Pakistan, and Iran in ways that he has not—and arguably would not—employ manned aircraft. The political cost at home—and diplomatic fallout abroad—is high when a commander-in-chief loses a pilot, but negligible when a commander-in-chief loses a pilotless drone. Just compare the nonreaction to the loss of drones in Djibouti, Iran, and the Seychelles under the Obama administration with the bona fide crises other presidents faced when US pilots were shot down over or near enemy territory. President Dwight Eisenhower weathered international humiliation after the Soviets brought down Francis Powers' U-2. President John Kennedy was pressed to go to war when Rudolf Anderson's U-2 was shot down during the Cuban Missile Crisis. President Bill Clinton had to deal with a hostage crisis abroad and a political crisis at home when Michael Durant's UH-60 Blackhawk was shot down in Mogadishu, and he was forced to mount a massive rescue operation into hostile territory when Scott O'Grady's F-16 was shot down in Bosnia. In sum, the absence or presence of US personnel in a military operation dramatically changes the calculus of war.

Not only doUCAVs lower the threshold for going to war, they also may make it easier to keep wars going, as Paul Miller, a former National Security Council official, observes. Noting that “endless war is unacceptable and dangerous,” Miller argues that the institution of the presidency needs to answer an important question: “When, and under what conditions, will the U.S. government stop using drones to bomb suspected terrorists around the world?”³³

Thanks to drones, as Miller's question suggests, “endless war” is quite possible. In this regard, it's worth noting that the drone war is an outgrowth of Washington's post-9/11 campaign against terrorist organizations and regimes—a campaign authorized by the Use of Force Resolution of 18 September 2001. That measure directed the president “to use all necessary and appropriate force against those nations, organizations or persons he determines planned, authorized, committed or aided the terrorist attacks that occurred on September 11, 2001, or harbored such organizations or persons, in order to prevent any future acts of international terrorism against the United States by such nations, organizations or persons.”³⁴

That final clause referring to “future acts of international terrorism” creates a loophole larger than a Reaper ground-attack drone—with a wingspan of some 66 feet—a loophole that should be tightened through legislation focusing on threats beyond Afghanistan. After all, it would be a stretch to say that the 18 September measure authorized—11-plus years later—an autopilot war against targets in Pakistan, Yemen, Somalia, and beyond. Those targets may indeed be enemies of, and threats to, the United States. But few of the drone war's intended targets today—not to mention the unfortunates simply in the wrong place at the wrong time—“planned, authorized, committed or aided the terrorist attacks that occurred on September 11, 2001.” Underscoring this point,

33 Paul D. Miller, “When will the U.S. drone war end?” *The Washington Post*, November 17, 2011.

34 *Joint Resolution To Authorize the Use of United States Armed Forces Against Those Responsible for the Recent Attacks Launched Against the United States*, Public Law 107-40, 107th Congress, September 18, 2001, <http://www.gpo.gov>.

The Washington Post recently reported that a growing number of drone strikes in Yemen have targeted “lower-level figures who are *suspected* of having links to terrorism operatives but are seen mainly as leaders of factions focused on gaining territory in Yemen’s internal struggle.”³⁵ (Emphasis added.) Yet the drone war goes on, largely because there are no Americans in harm’s way—at least not directly.

Developing a Complex

If we argue that drone pilots are not in the battlespace, which seems reasonable given that most of them are 7,500 miles away from the enemy, it invites friend and foe alike to draw an unsettling conclusion about American power. An example from history may be helpful.

Amid the Allied bombing raids on Germany at the end of World War II, British physicist Patrick Blackett worried that London and Washington had developed a “Jupiter Complex,” which historian Paul Johnson describes as “the notion of the Allies as righteous gods, raining retributive thunderbolts on their wicked enemies.” The Allies concluded, as Johnson explains, that strategic bombing “was the best way to make the maximum use of their vast economic resources, while suffering the minimum manpower losses.”³⁶

UCAVs take the logic of the Jupiter Complex to its ultimate conclusion—maximum use of economic and technological resources with zero manpower losses and zero risks—all buffered by the virtual-reality nature of the delivery system. Just consider *The New York Times* depiction of the inner workings of the drone war, which describes President Obama as “at the helm of a top-secret ‘nominations’ process to designate terrorists for kill or capture,” authorizing every strike in Yemen and Somalia and “the more complex and risky strikes in Pakistan,” often deciding “personally whether to go ahead” with a drone strike, and acceding to a method for tallying civilian casualties that “in effect counts all military-age males in a strike zone as combatants . . . unless there is explicit intelligence posthumously proving them innocent.”³⁷

The results are not for the squeamish. The Brookings Institution estimates that, along with the 2,700-plus militants killed by drones in Pakistan, some 400 nonmilitants may have been killed.³⁸ The use of drones to cripple al Awlaki’s Yemeni branch of al Qaeda killed dozens of people, many of them apparently not affiliated with al Qaeda, including a 16-year-old relative of al Awlaki born in Denver.³⁹ (This incident raises due-process questions, just as the proliferation of drones deployed domestically raises Fourth Amendment concerns, but that is beyond the scope of this article.)

In short, it seems Washington has been seduced by the Jupiter Complex. Being seen in such a light—as detached and remote in every sense of the word, especially in waging war—should give Americans

35 Greg Miller, “U.S. drone targets in Yemen raise questions,” *The Washington Post*, June 2, 2012.

36 Paul Johnson, *Modern Times: The World from the Twenties to the Nineties* (New York: Harper Perennial, 1992), 402-403.

37 Jo Becker and Scott Shane, “Secret ‘Kill List’ Proves a Test of Obama’s Principles and Will,” *The New York Times*, May 29, 2012.

38 Livingston and O’Hanlon, 32.

39 Craig Whitlock, “U.S. airstrike that killed American teen in Yemen raises legal, ethical questions,” *The Washington Post*, October 22, 2011.

pause. “Reliance on drone strikes allows our opponents to cast our country as a distant, high-tech, amoral purveyor of death,” argues Kurt Volker, former US ambassador to NATO. “It builds resentment, facilitates terrorist recruitment and alienates those we should seek to inspire.”⁴⁰ Indeed, what appears a successful counterterrorism campaign to Americans may look very different to international observers. “In 17 of 20 countries,” a recent Pew survey found, “more than half disapprove of U.S. drone attacks targeting extremist leaders and groups in nations such as Pakistan, Yemen and Somalia.”⁴¹ Moreover, a UN official recently announced plans to create “an investigation unit” within the Human Rights Council to “inquire into individual drone attacks . . . in which it has been alleged that civilian casualties have been inflicted.”⁴²

This is not to suggest that either side of the drone debate has a monopoly on the moral high ground; both have honorable motives. UCAV advocates want to employ drone technologies to limit US casualties, while UCAV opponents are concerned that these same technologies could make war too easy to wage. This underscores there exists no simple solution to the drone dilemma. Converting to a fully unmanned air force would be dangerous. Putting the UCAV genie back in the bottle, on the other hand, would be difficult, perhaps impossible.

There are those who argue that it is a false dichotomy to say that policymakers must choose between UCAVs and manned aircraft. To be sure, UCAVs could serve as a complement to manned aircraft rather than a replacement, with pilots in the battlespace wielding UCAVs to augment their capabilities. That does not, however, appear to be where we are headed. Consider Admiral Mullen’s comments about the sunset of manned combat aircraft, the manned-versus-unmanned acquisition trajectories, the remote-control wars in Pakistan and Yemen and Somalia, and President Obama’s reliance on UCAVs. Earlier this year, for instance, when France asked for help in its counterassault against jihadists in Mali, Washington initially offered drones.⁴³ The next president will likely follow and build upon the UCAV precedents set during the Obama administration, just as the Obama administration has with the UCAV precedents set during the Bush administration. Recall that the first shot in the drone war was fired approximately 11 years ago, in Yemen, when a CIA Predator drone retrofitted with Hellfire missiles targeted and killed one of the planners of the USS *Cole* attack.

Given their record and growing capabilities, it seems unlikely that UCAVs will ever be renounced entirely; however, perhaps the use of drones for lethal purposes can be curtailed or at least contained. It is important to recall that the United States has circumscribed its own military power in the past by drawing the line at certain technologies. The United States halted development of the neutron bomb in the 1970s and dismantled its neutron arsenal in the 2000s; agreed to forswear

40 Kurt Volker, “What the U.S. risks by relying on drones,” *The Washington Post*, October 26, 2012.

41 Pew Research Global Attitudes Project, “Drone Strikes Widely Opposed, Global Opinion of Obama Slips, International Policies Faulted,” June 13, 2012, <http://www.pewglobal.org>

42 Colum Lynch, “U.N. to probe drone attacks by U.S., others resulting in civilian deaths,” *The Washington Post*, October 25, 2012.

43 Rukmini Callimachi and Baba Ahmed, “A battle to retake north Mali: Hundreds of French troops drive back al-Qaida-linked rebels,” *The Washington Post*, January 12, 2013.

chemical weapons; and renounced biological warfare “for the sake of all mankind.”⁴⁴

That brings us back to *The New York Times*’ portrait of the drone war. Washington must be mindful that the world is watching. This is not an argument in defense of international watchdogs tying America down. The UN secretariat may refuse to recognize America’s special role, but by turning to Washington whenever civil war breaks out, or nuclear weapons sprout up, or sea lanes are threatened, or natural disasters wreak havoc, or genocide is let loose, it is tacitly conceding that the United States is, well, special. Washington has every right to kill those who are trying to kill Americans. However, the brewing international backlash against the drone war reminds us that means and methods matter as much as ends.

Error War

If these geo-political consequences of remote-control war do not get our attention, then the looming geo-strategic consequences should. If we make the argument that UCAV pilots are in the battlespace, then we are effectively saying that the battlespace is the entire earth. If that is the case, the unintended consequences could be dramatic.

First, if the battlespace is the entire earth, the enemy would seem to have the right to wage war on those places where UCAV operators are based. That’s a sobering thought, one few policymakers have contemplated.

Second, power-projecting nations are following America’s lead and developing their own drones to target their distant enemies by remote. An estimated 75 countries have drone programs underway.⁴⁵ Many of these nations are less discriminating in employing military force than the United States—and less skillful. Indeed, drones may usher in a new age of accidental wars. If the best drones deployed by the best military crash more than any other aircraft in America’s fleet, imagine the accident rate for mediocre drones deployed by mediocre militaries. And then imagine the international incidents this could trigger between, say, India and Pakistan; North and South Korea; Russia and the Baltics or Poland or Georgia; China and any number of its wary neighbors.

China has at least one dozen drones on the drawing board or in production, and has announced plans to dot its coastline with 11 drone bases in the next two years.⁴⁶ The Pentagon’s recent reports on Chinese military power detail “acquisition and development of longer-range UAVs and UCAVs . . . for long-range reconnaissance and strike”; development of UCAVs to enable “a greater capacity for military preemption”; and interest in “converting retired fighter aircraft into unmanned combat aerial vehicles.”⁴⁷ At a 2011 air show, Beijing showcased one of its newest

44 US Department of State, Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction (BWC), April 10, 1972.

45 Jim Michaels, “Experts: Drones basis for new global arms race,” *USA Today*, January 8, 2013.

46 Jonathan Kaiman and Justin McCurry, “Japan and China step up drone race as tension builds over disputed islands (drone skirmishes?),” *The Guardian*, January 9, 2013.

47 US Department of Defense, “Annual Report to Congress, Military and Security Developments Involving the People’s Republic of China 2011,” 32; US Department of Defense, “Military Power of the People’s Republic of China 2007,” 12; US Department of Defense, “Military Power of the People’s Republic of China 2005,” 4.

drones by playing a video demonstrating a pilotless plane tracking a US aircraft carrier near Taiwan and relaying targeting information.⁴⁸

Equally worrisome, the proliferation of drones could enable non-power-projecting nations—and nonnations, for that matter—to join the ranks of power-projecting nations. Drones are a cheap alternative to long-range, long-endurance warplanes. Yet despite their low cost, drones can pack a punch. And owing to their size and range, they can conceal their home address far more effectively than the typical, nonstealthy manned warplane. Recall that the possibility of surprise attack by drones was cited to justify the war against Saddam Hussein's Iraq.⁴⁹

Of course, cutting-edgeUCAVs have not fallen into undeterrable hands. But if history is any guide, they will. Such is the nature of proliferation. Even if the spread ofUCAV technology does not harm the United States in a direct way, it is unlikely that opposing swarms of semiautonomous, pilotless warplanes roaming about the earth, striking at will, veering off course, crashing here and there, and sometimes simply failing to respond to their remote-control pilots will do much to promote a liberal global order.

It would be ironic if the promise of risk-free war presented by drones spawned a new era of danger for the United States and its allies.

48 "China building an army of unmanned military drones 'to rival the U.S.," *The Daily Mail*, July 5, 2011.

49 "A Policy of Evasion and Deception," US Secretary of State Colin Powell's speech to the United Nations on Iraq, *The Washington Post*, February 5, 2003, <http://www.washingtonpost.com>.