The Next Drone Wars
Preparing for Proliferation

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During World War II, a top commander in what was then the U.S. Army Air Forces, General Henry “Hap” Arnold, developed a new way to attack U-boat stations and other heavily fortified German positions: he turned old B-17 and B-24 bombers into remotely piloted aircraft and loaded them with explosives. “If you can get mechanical machines to do this,” Arnold wrote in a memo to his staff, “you are saving lives at the outset.” The missions had a poor track record, but that did not deter Arnold from declaring in 1945 that “the next war may be fought by airplanes with no men in them at all.”

Nearly seven decades later, Arnold’s prophecy is slowly being realized: armed drones are starting to rule the skies. So far, the United States has had a relative monopoly over the use of such drones, but it cannot count on maintaining that for much longer. Other states are quickly catching up. And although these new weapons will not transform the international system as fundamentally as did the proliferation of nuclear weapons and ballistic missiles, they could still be used in ways that are highly destabilizing and deadly.

Countries will not be deterred from launching drone attacks simply because an adversary has drones in its arsenal, too. If anything, the inherent advantages of drones—most of all, not placing pilots or ground forces at risk of being killed or captured—have lowered the threshold for the use of force. Spurred by the United States’ example, other countries are likely to threaten or conduct drone strikes in ways that are harmful to U.S. interests, whether by provoking regional adversaries or targeting domestic enemies.

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Fortunately for the United States, it still has the ability to shape how and whether the use of drones will spread and whether these threatening scenarios will come to pass. Countries adopt new military capabilities based on how other states have—or have not—already used them and on their perceived effectiveness. Therefore, as other countries develop their own drone technology, they could follow Washington's lead.

John Brennan, director of the CIA and chief architect of the Obama administration's drone policy, acknowledged as much in a speech in April 2012: “If we want other nations to use these technologies responsibly, we must use them responsibly.” Yet so far, the Obama
administration has ignored its own advice, failing to develop a comprehensive strategy to limit the proliferation of armed drones and promote their responsible use. The longer the United States delays, the less influence it will have to shape the rules of the game. Without U.S. leadership, it will be extremely difficult to get an international coalition to agree on a credible arrangement governing the use of armed drones.

Such an arrangement would not necessarily require new treaties or international laws; rather, it would necessitate a more broadly accepted understanding of which existing laws apply and when and a faithful and transparent adherence to them. It would also require updating the multilateral regime that was originally designed to prevent the proliferation of nuclear weapons and their delivery systems. Taken together, these measures would help minimize the spread of the most capable and lethal drones to countries that are the most conflict-prone and increase the likelihood that emerging drone powers would adopt policies that reduce the prospects for violent confrontations.

**MOVING TARGET**

In a speech last November, Thomas Lawson, Canada’s chief of the defense staff, equated missiles fired from a drone with those fired from a piloted aircraft, because they both reach their target as intended. This view—that drones represent not a paradigm shift but just a different way for states to do what they have done for decades—has become widespread. As Norton Schwartz, then chief of staff of the U.S. Air Force, said in May 2012, “If it is [a legitimate target], then I would argue that the manner in which you engage that target, whether it be close combat or remotely, is not a terribly relevant question.” But that view ignores how drones create a particular moral hazard by keeping pilots away from danger. Because the costs of launching deadly strikes with drones are lower than with piloted aircraft, civilian officials are more willing to authorize them.

Compare the relative caution with which the Clinton administration approached al Qaeda with the steady spike in the use of drones against the group since 9/11. In the 1990s, the U.S. military presented the White House with a number of plans to kill Osama bin Laden, including using long-range bombers, AC-130 gunships, U.S. special operations forces, and non-Taliban tribal groups. But the Clinton administration reasoned that they all posed too many risks to U.S.
personnel, noncombatants, and diplomatic relations with neighboring states. Without the availability of armed drone technology, in August 1998, Washington resorted to two very limited strikes, firing some 70 cruise missiles at a training camp in Afghanistan and some 13 cruise missiles at a pharmaceutical factory in Sudan (none of which killed any al Qaeda leaders).

Presidents George W. Bush and Barack Obama, by contrast, have shown far less restraint in their use of violent force against suspected members of al Qaeda and other groups, sending armed drones to launch strikes in Afghanistan, Iraq, Libya, Pakistan, the Philippines, Somalia, and Yemen. Beyond reducing the risk to pilots, drones offer other attractive benefits. Predator and Reaper drones can now hover over a target for up to 14 hours without refueling. Since armed drones attach missiles to a surveillance platform, they offer an unmatched responsiveness when time-sensitive targets appear. Moreover, drones can detect when noncombatants enter the blast radius, enabling drone-fired missiles to be diverted at the last moment to avoid civilian casualties. The general public has also recognized these benefits: a Gallup poll conducted last March found that roughly two-thirds of Americans approved of drone strikes on suspected terrorists abroad, unless the target was a U.S. citizen.

RISE OF THE MACHINES
Understanding just how many countries currently maintain their own drones is difficult, since these programs are invariably shrouded in secrecy and misinformation. Some countries hide the existence of their drones in order to maintain a surprise capability; others, hoping to raise their prestige, boast about drones that are not yet operational. To date, only the United States, Israel, and the United Kingdom are believed to have used armed drones.

The U.S. drone program has the greatest reach. Since 2008, the United States has conducted more than 1,000 drone strikes in Afghanistan. From 2008 to 2012, the United States conducted 48 drone strikes in Iraq; in 2011, it launched at least 145 drone strikes in Libya. The use of armed drones in more traditional conflicts has been far less controversial, even if it is more prevalent, than their use off the battlefield. Nonetheless, Washington has conducted almost 400 drone strikes in Pakistan, over 100 in Yemen, around 18 in Somalia, and at least one (in 2006) in the Philippines.
Israel and the United Kingdom, meanwhile, have also deployed armed drones, although in far smaller numbers. As of July 2013, the British military had launched 299 drone strikes in Afghanistan. Israeli drones conducted an estimated 42 strike missions in the 2008–9 Gaza conflict, according to a joint investigation by Israeli and Palestinian human rights organizations, and Israeli drones were also used to target suspected terrorists in the Sinai Peninsula in August 2013, with the consent of the Egyptian government.

Although the number of drone-equipped states is currently small, it will grow as other countries play catch-up. In 2004, only 41 states had drones of any kind, armed or unarmed. But by 2011, that number had reached 76, according to the last reliable public estimate by the U.S. Government Accountability Office. According to a 2005 report by the Teal Group, an aerospace and defense industry consulting firm, it was projected that the United States would account for 90 percent of all drone expenditures worldwide over the coming decade; according to 2013 projections, that figure stood at 64 percent. For now, in addition to Israel and the United Kingdom, China and Iran appear to be the only other countries with operationally deployed armed drones (based on the evidence of public demonstrations, such as military parades and air shows). China has been showing the media various drones for half a decade, and it now spends so much on drones that its drone budget will equal the United States’ by 2020. Iran has revealed a drone that it claims has a range of 2,000 kilometers, which would cover much of the Middle East.

Still other countries are catching up. India’s government has reported that it will soon equip its existing drones with precision-guided munitions and hopes to mass-produce others to conduct cross-border attacks on suspected terrorists. Pakistan, not to be outdone by its rival, has declared that it will develop armed drones on its own or with China’s help in order to target the Taliban and al Qaeda in its lawless tribal areas. Turkey currently has about 24 drones in use or development, including what Ankara hopes will be an armed drone equivalent of a Reaper (last year it was thwarted in its efforts to buy armed drones from the United States). Meanwhile, Australia, Japan, and Singapore have developed unarmed surveillance drones that could be used for
more military purposes—some of them in highly volatile regions, such as in the area of the disputed islands known as the Senkaku in Japan and the Diaoyu in China.

LIMITED ENGAGEMENT
Given the intrinsic advantages of armed drones over conventional air-power, it is surprising that more countries have not acquired or used them already. But a closer look at the costs of drone warfare makes it clear why. First, using drones is still risky. They might lower the threshold for the use of force, but they do not eliminate it altogether. One reason some countries that have armed drones, such as China and Iran, have not yet used them is that they are not involved in major international conflicts that would justify their deployment. If either China or Iran considered starting a militarized dispute, however, the availability of drones could push its leaders to escalate.

Drone technology is also more complex than it may appear. There is a qualitative difference between the rudimentary unmanned aircraft used as far back as World War II—and even the unarmed Predators that flew in the Balkans in the mid-1990s—and the armed drones that the United States deploys over Afghanistan, Pakistan, and elsewhere today. These advanced drones require far more than a pilot at a base in the Horn of Africa or the Nevada desert to make them effective. They need actionable intelligence, sophisticated communications, access to satellite bandwidth, and complex systems engineering—all assets presently beyond the reach of most states.

It is no coincidence that the countries that possess advanced drones have also already mastered other complex military technologies, such as nuclear weapons and satellite communications. But even some states that have developed such technologies are having difficulties with drones. Russia, for example, has seen its drone efforts derailed by sharp reductions in aerospace funding and a long-declining aerospace industry. France and Italy have also been unable to pursue their own programs and have had to settle for an unarmed variant of the U.S.-made Reaper, which France has been using for reconnaissance missions in Mali.

A third explanation for the slow spread of drones is diplomatic. Conducting drone strikes in foreign countries, as the United States does, requires bilateral relations that are good enough to get the host nations to grant basing and overflight rights. Drone strikes in Somalia
and Yemen require the use of airfields in Djibouti, Ethiopia, Saudi Arabia, and the Seychelles, which the United States has secured with aid (both overt and covert) and security commitments. Few other countries have such reliable access to foreign bases. And the oceans do not offer an alternative. The United States should be able to conduct drone strikes from its ships within five years, but it will take other countries decades to have that capability.

Domestic opposition to the development or use of drones creates additional problems in other states, even some with the technological capacity to build and field them. Officials in Washington take relatively little flak for supporting the U.S. targeted-killing program, but the politics of drones are considerably different in other countries. In Germany, for example, politicians who advocate drones have faced harsh criticism from a public worried about compromising Germany’s long-standing defense-only national security policies. Developing lethal drone capabilities, many German critics contend, could increase the prospects of military interventions more generally.

Defense budgets are a final factor. The worldwide civilian and military drone market, which researchers predict will reach $8.4 billion by 2018, accounts for only a fraction of global defense spending, which estimates say will hit $1.9 trillion by the end of 2017. But drones’ costs are still prohibitive at a time when austerity dominates military spending decisions in most countries. Unless they discover unforeseen threats that require the use of armed drones, most states will not reallocate precious defense dollars to unmanned systems anytime soon.

HOSTILE ACTS
These obstacles will likely keep the number of drone powers low, but even a few more states fielding a few armed drones could seriously threaten international security. Drones have already been used in ways that go beyond their originally intended applications. For example, the U.S. Customs and Border Protection at first deployed drones to watch the Canadian and Mexican borders, but it has since repurposed them so that other agencies could use them for surveillance missions, and they have, for nearly 700. And drones themselves have created new and unforeseen missions: actual human forces must protect and recover downed drones, for example. It would therefore be myopic and misguided to assume that other states will use drones in the future only in the way the United States has.
The mere possession of drones will not make traditional interstate warfare, which is already relatively rare these days, more likely. Having armed drones, given their limitations, is unlikely to convince states to go to war, attempt to capture or control foreign territory, or try to remove a foreign leader from power. But armed drones could still increase the possibility of more limited military conflicts, especially in disputed areas where the slightest provocation could lead to strife.

In such settings, drones could encourage countries to act in ways that they might not if they had only manned aircraft. China already flies drones over the Senkaku/Diaoyu Islands, which has prompted the Japanese Defense Ministry to develop drone-specific rules of engagement. Japanese officials say they would be less hesitant to shoot down Chinese drones than they would manned Chinese aircraft. A similar dynamic can be seen in practice in the Persian Gulf, where Iran has fired on U.S. drones while carefully avoiding attacking manned American planes. In November 2012, for example, an Iranian fighter jet fired on a Predator drone that it claimed had entered Iran’s airspace (the U.S. military contended that the drone was over international waters). Martin Dempsey, chairman of the Joint Chiefs of Staff, called Iran’s behavior “clearly a hostile act against our assets” necessitating “a measured response,” which included using additional, manned U.S. military assets to protect the drones and the information they collect.

The fact that drones heighten the potential for miscalculation and military escalation is especially worrisome in maritime disputes. The CIA has identified 430 bilateral maritime boundaries, most of which are not defined by formal agreements between states. In the East China and South China seas, nationalist sentiments and the discovery of untapped oil and gas reserves have already made armed conflict over disputed borders among the littoral states more likely. And that prospect would only increase if these countries deployed drones in the area, which they would likely do more aggressively than if they were deploying piloted aircraft.

Even the spread of unarmed surveillance drones could increase the chances of more lethal attacks by other types of weapons. Beginning in February 2013, U.S. drones flying out of Niger provided targeting
intelligence in the form of raw video feeds to manned French aircraft hunting suspected Islamist militant groups in Mali. This intelligence led to 60 airstrikes by French planes in one week alone in March 2013.

UNMANNED ACCOUNTABILITY

Given drones’ allure, proliferation, and security implications, the key question is what Washington and other governments can do to mitigate the worst consequences of drones’ growing popularity. The answer is a combination of unilateral and multilateral actions.

As the only country to have used drones extensively, the United States must take the lead in regulating their use and export. So far, the United States has kept its exports of armed drones to a minimum (much to the chagrin of the defense industry), sending them only to the United Kingdom. Washington should maintain such restraint.

It should also revisit its own targeted-killing policies, lest other countries follow the United States’ example. The U.S. government has articulated its drone policy to the public only in an ad hoc manner. Behind closed doors, the White House reportedly oversees targeting decisions in a regular review process that includes the Pentagon, the State Department, and other agencies, but it ignores bigger strategic questions about the impact that unilateral measures on the part of the United States to restrain its own drone use could have on other states. A separate, independent review panel should be formed to answer these questions, and an unclassified version of the findings should be made available to the public. It could be modeled on the Guantanamo Review Task Force, which was charged with determining which detainees could be released or prosecuted and brought together the Departments of Justice, Defense, State, and Homeland Security; the director of national intelligence; and the Joint Chiefs of Staff. Or it could be modeled on the panel set up by the White House last summer to review the National Security Agency’s surveillance operations. Those two panels are good precedents for how to deal with the U.S. drone program since they brought together both outside experts and experts from across various government agencies to review sensitive U.S. national security policies—and they recommended meaningful reforms.

Congress, which has deferred to the executive branch on drone policy, should take a more active role by holding extensive hearings on drones’ unique use in counterterrorism and other strikes. These hearings
should continue to scrutinize the Authorization for the Use of Military Force, which the Obama administration has cited as its legal justification for drone strikes on suspected terrorists, including the U.S. citizen Anwar al-Awlaki in Yemen. But they should also focus on how drones are used in disputed areas and across borders and against publicly undefined targets, such as militants and criminals—the most common and the most dangerous scenarios.

The United States should also come clean about how it has used armed drones, which could prompt Israel and the United Kingdom to do the same. The United States and the United Kingdom have released some overall strike data, but little regarding civilian casualties, with the British military claiming it cannot collect such data “because of the immense difficulty and risks that would be involved.” Last summer, the Obama administration responded to a Freedom of Information Act request by declaring that there is “no information that can be provided at the unclassified level.” Israel has been even more reticent, refusing to acknowledge that it has conducted any drone strikes. More transparency could correct some misconceptions about drones, such as that the United States violates sovereign airspace and does not take precautions to mitigate civilian harm. Greater openness would generate public confidence in the legitimacy of drone use and could shape how other states conducted and justified their own lethal missions.

**REINING IN THE ROBOTS**

The United States, however, cannot go it alone; if the regulation of the proliferation and use of armed drones is going to work, it must be a multilateral effort. Some drone exports are currently covered by the Missile Technology Control Regime (MTCR), created in 1987 to regulate nuclear-capable missiles and related technologies. The voluntary arrangement does cover armed drones but mentions them only as an afterthought. The regime’s guidelines lump them in with cruise missiles. And they deal only with armed and unarmed unmanned systems with ranges of at least 300 kilometers and payloads of over 500 kilograms. Those limits are arbitrary and outdated; the defense contractor General Atomics has developed a version of the Predator for export designed precisely to get around them.

The MTCR also has enforcement and membership problems. Its 34 participating states are free to interpret and implement its provisions at their own discretion. But more important, China, India, Iran,
Israel, and Pakistan, which either have or aspire to develop drones, are not even members. Some nonmember states, such as Israel, which is nominally a “unilateral adherent” to the regime, act as they please and are dominating the drone export market. According to the consulting firm Frost & Sullivan, between 2005 and 2012, Israel exported $4.6 billion worth of drone systems to countries in Asia, Europe, and Latin America.

Washington should take the lead in creating better and more appropriate international regulations, building on proven initiatives. A new and enhanced drone regime would be drone-specific, covering all exports and uses of armed-capable drones, including those that fall outside the purview of the MTCR. Moreover, its membership would go beyond that of the MTCR, which is largely limited to industrialized countries, and include all states that have or could soon acquire armed drones. Although surveillance drones make strikes by other weapons platforms more likely, given their wide availability on the commercial market, it is unrealistic to try to further limit their spread by including them in this new drone regime.

To win international support to either update the MTCR or create such a new regime, Washington will have to be more forthcoming about its own use of drones. It could offer more transparency in order to garner the consensus vote that is required to modify the MTCR or to guarantee broad, credible participation in a new control regime. This kind of bargaining strategy might mirror the way nuclear-armed states have compelled nonnuclear weapons states to agree to nonproliferation. Commitments by the United States and Russia to make aggressive progress on their own disarmament after the fall of the Soviet Union convinced nonnuclear weapons states to agree in 1995 to an indefinite extension of the Nuclear Nonproliferation Treaty. Of course, even if the United States revealed some elements of its own closely guarded drone program, including that it uses drones in such places as Yemen, countries such as China might not agree to join a new regime. But given that the Obama administration has shown little inclination to stop using drones in areas in which the United States is not engaged in traditional combat, greater disclosure is the only concession it could realistically offer.

Governments concerned about the proliferation of armed drones could also pressure manufacturers, which naturally seek low barriers to export, to form their own monitoring agency. A potential regulating
organization should look more like the World Association of Nuclear Operators, which focuses on responsible use and transparency within the nuclear industry, than the Association for Unmanned Vehicle Systems International, which predominantly engages in public relations for the drone industry.

A NEW HOPE
Until now, the United States has ignored the many holes in its own policy on the possession and use of drones and in the international regime that seeks to limit drone exports because filling them would require restricting its own behavior. Obama and members of Congress, determined to prevent a terrorist attack on their watch, have overlooked the fact that tying one’s own hands now when it comes to drone use can pay security dividends down the road.

The Obama administration must abandon its post-9/11 mindset, which is fixated on thwarting terrorism at all costs. For too long, using drones has seemed to be an easy way to satisfy the desire for absolute security. But with drones’ dangers and disadvantages becoming more obvious all the time, Washington must recognize that its reliance on drones is far more complicated than previously assumed—and must act to make sure that the consequences of that reliance do not spin out of control.

When ballistic missiles proliferated in the 1980s and 1990s, the United States recognized that their unprecedented ability to swiftly deliver enormous destruction represented a new and unique threat. So Washington took concerted efforts to control their proliferation and use through export regulations, bilateral discussions, multilateral and indirect talks, and prohibitions to prevent missile transfers. Armed drones today may not be quite as destabilizing as ballistic missiles seemed then, but their dangers will grow as more countries acquire the ability to use them. Not taking measures now to mitigate their spread will only undermine the United States’ long-term interests.