

# "Lawnmowers in the Sky": The Turbulent Past and Uncertain Future of Drone Warfare

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# **“Lawnmowers in the Sky”: The Turbulent Past and Uncertain Future of Drone Warfare**

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## **Executive Summary**

For the past 15 years, the drone has become one of America’s premier tools of its counterterrorism campaign, being deployed to Yemen, Somalia, Pakistan, Libya, and Syria. It is seen as means of combating terrorism without putting boots on the ground. The use of the drone has not been without controversy as critics have continued to point to the many human rights, legal, and tactical concerns associated with the weapon. At the same time, drone technology has been spreading around the world. The United States, recognizing these problems, linked limitations on the use of the drone with its new 2015 export policy for drone technology. However, any efforts that the U.S. has made to control the proliferation and use of armed drones around the world is undermined by Chinese developments in drone technology and their willingness to sell their drones to other countries. The countries with armed drones now includes the U.S., the U.K., China, Israel, Pakistan, Iran, Iraq, Nigeria, and South Africa, with Pakistan, Nigeria, and Iraq having confirmed use of armed drones in counterterrorism operations.

This paper will provide an overview of the drone’s development and history as a counterterrorism tool and an analysis of the debate around the drone’s use in the United States. It will then show how the availability of cheaper Chinese drones undermines U.S. efforts to control the proliferation and use of armed drones. Finally, the paper concludes with recommendations for how to address these on-going challenges with armed drones. It highlights the importance of first reforming the domestic legal frame justifying the U.S. use of drones, arguing that the drone program needs to be transferred to the U.S. military and Congress needs to replace the 2001 Authorization for the Use of Military Force, the law used for legal justification for drones, with clearer legal guidelines. Second, it argues that unilateral efforts to control the use of drones will ultimately be ineffective due to the availability of Chinese drones and, therefore, a multilateral treaty needs to be developed in order to provide an international standard for the use of drones.

## *Introduction*

In the oppressive June heat of Waziristan, a remote tribal region lying on Pakistan's border with Afghanistan, a young health worker was sitting on the roof of the hospital where he worked to avoid the stifling indoor temperatures. While casually chatting with his colleagues, he heard a buzzing sound echoing all around him, the telltale sound of a drone referred to by one journalist as resembling "lawnmowers in the sky".<sup>1</sup> Not realizing at the time what the buzzing sound indicated, he saw a flash minutes later from the east followed by the reverberations of an explosion.<sup>2</sup> Though the young man didn't know it on this fateful day in June 2004, he bore witness to the first U.S. drone strike in Pakistan, killing local Taliban commander Nek Muhammad Wazir.

Nearly thirteen years on, of all the weapons used to conduct America's counterterrorism operations, none has become more iconic or controversial than the drone. For the United States, it has been on the front lines of the fight against terrorism in the skies over Yemen, Pakistan, Somalia, Libya, and Syria. It also been used extensively in the war zones of Afghanistan and Iraq. The drone has become the symbol of the U.S. to many communities living under its ever-watchful eye.

For many years, the drone was the exclusive counterterrorism tool of the U.S. and its closest allies like the U.K. In recent years, however, the market for drones, or unmanned aerial vehicles (UAV), has quietly blossomed as new countries are increasingly procuring the technology and operational capabilities to deploy their own fleets of armed drones, especially as cheaper drones from China have become readily available. This exclusive club now includes the U.S., the U.K., China, Israel, Pakistan, Iran, Iraq, Nigeria, and South Africa, with Pakistan, Nigeria, and Iraq having confirmed use of armed drones in counterterrorism operations. This exclusive club will continue to grow in light of the U.S.-approved sale of drone technology to Italy in late 2015 and reported sales from China to Saudi Arabia, Egypt, and the United Arab Emirates.<sup>3</sup> While the U.S. has made efforts to limit the proliferation of U.S. drone technology and control the way in which it is used, the availability of Chinese drone technology greatly undercuts these efforts and creates great uncertainty around the future landscape of drone proliferation and use.

This paper will first provide an overview of the history and scope of the technology. Second, it will examine how and where the U.S. has deployed the weapon as part of its counterterrorism strategy and the on-going debates surrounding its use. Third, it will analyze in greater detail U.S. efforts to limit the proliferation of the technology and the role China now plays in the spread of drone technology. Finally, it will discuss the uncertain future of drone warfare, the challenges facing the regulation of drones, and provide recommendations to this end.

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<sup>1</sup> Sara Hussein, @sarahussein Twitter, November 16, 2012 (<http://twitter.com/sarahussein/status/269669324652961792>).

<sup>2</sup> Alice K. Ross, "Ten years on: Eyewitnesses describe the aftermath of the first Pakistan drone strike," *The Bureau of Investigative Journalism*, June 17, 2014.

<sup>3</sup> Clay Dillow, "China: A rising drone weapons dealer to the world," *CNBC.com*, March 5, 2016.

## ***The Development of the Drone***

For centuries, militaries have strategized methods to either target or observe their enemy at a distance without putting any of their own soldiers in harm's way. Early attempts include Austria dropping bombs on Venice from pilotless balloons in 1849 and, during the Spanish-American War, the U.S. military fitting a camera to a kite for aerial reconnaissance photos. With the steady growth in the capabilities of radio technology, various types of short-range, remotely piloted devices were deployed in combat or for surveillance operations during World War II, the Cold War, and the Vietnam War with varying degrees of success.

In 1978, the Israel Aircraft Industries helped to usher in the modern era of drone technology with the development of the Scout, a pilotless aircraft with a 13-foot fiberglass wingspan, a piston-engine, a 360-degree surveillance camera, and a flight time of nearly 8 hours. This inexpensive drone was deployed with great effect by Israel during the 1982 Lebanon War in identifying Syrian missile sites. Given the success of Israel's drone in combat operations, interest grew in the American military to increase the operating potential of drone technology and develop domestic capabilities in drone manufacturing.

Following the loss of Congressional support for drone development within the military in the early 1990s, the CIA, operating outside of military jurisdiction, began to work to develop drones to aid in their covert surveillance efforts. The CIA tasked the California-based company General Atomics to develop a drone with a greater range employing more advanced satellite communications links. General Atomics responded with the MQ-1 Predator drone, which first saw flight in June 1994 and was first deployed as part of the 1995 NATO air campaign in the Balkans. The Predator, alongside its more advanced and larger version the Predator B or MQ-9 Reaper, became the mainstay of CIA drone operations, with an increased flight time of up to 40 hours, improved satellite links between operator and drone, and an ability to be armed with a 450 pound payload of Hellfire missiles.

## ***America's Premier Tool for Counterterrorism***

Quickly following the events of 9/11, the U.S., under the auspices of the CIA, quietly deployed its ready fleet of armed Predator drones to the inaccessible deserts and mountains of southern Yemen, southern Somalia, and the Federally Administered Tribal Areas (FATA) in Pakistan in order to target the leadership of al Qaeda and affiliated groups. These regions were historically outside the control of the central governments, with their inhabitants being the source of repeated resistance against the state. They constituted what many policy analysts and commentators in the media referred to as the "ungoverned spaces" or "safe havens" in which terrorist groups were found to operate. In FATA's Waziristan, for example, it has been said that government authority only extends to a hundred yards on either side of the main road beyond which resides the land of *riwaj*, or tribal custom. The tribes of the desert in the Abyan and Shabwah Provinces in southern Yemen, similarly, have been involved in on-going resistance against the Yemeni state as they point to the political and economic domination and discrimination by northern Yemenis following the unification of North and South Yemen in 1990.<sup>4</sup> For these regions, where the United States argued its interests were at threat yet was

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<sup>4</sup> See Akbar Ahmed, *The Thistle and the Drone: How America's War on Terror Became a Global War on Tribal Is-*

infeasible to either rely on local forces or deploy its own military, the use of drone strikes became an attractive option as a parallel, covert campaign to the on-going wars in Iraq and Afghanistan.

The first known drone strike took place in Yemen on November 3, 2002, killing six members of al Qaeda's leadership including one of the masterminds behind the 2000 USS Cole attack.<sup>5</sup> The tempo of the attacks rapidly increased after the election of President Barack Obama in 2008. President Obama, whose campaign rhetoric centered on his opposition to the military invasion of Iraq and the way in which President George W. Bush conducted his "War on Terror", saw the use of drone strikes as a means of fighting against terrorism while not putting any American soldiers in harm's way. Drone operators were able to sit in air-conditioned control rooms in the United States, controlling drones through satellite link with their victims thousands of miles away.

The U.S. employed two types of attack: targeted strikes and signature strikes. Targeted strikes are directed against known individuals, especially the leadership of terrorist groups, when their location can be determined. President Obama maintained a "kill list" onto which individuals were placed through a secretive nomination process, subjecting them to a kill or capture policy.<sup>6</sup> In the 2013 Presidential Policy Guidance for approving drone strikes, publicly released by the White House in August 2016 in a bid for greater transparency, these individuals are deemed to "pose a continuing, imminent threat to U.S. persons" but are outside the reach of any local law enforcement or military authorities, making the "capture" part of the policy essential superfluous. The use of lethal force is authorized if there is "near certainty that an identified HVT [high-value target] is present" and "near certainty that non-combatants will not be injured or killed."<sup>7</sup>

Signature strikes, on the other hand, target behavior within a defined region rather than individuals at identifiable locations. Within a designated area, such as Waziristan or Abyan Province, the U.S. designates all "military-aged" males (ages 18-64) as combatants and targets any patterns of behavior deemed suspicious—such as large meetings or vehicle convoys. Often, the U.S. lacks specific intelligence concerning who is targeted and the intentions of their observed actions. Given this lack of intelligence, these strikes have been especially susceptible to mistakenly killing innocent people. For example, in one such signature strike in Pakistan in 2015, a U.S. drone killed Warren Weinstein, a USAID contractor who had been kidnapped by the Taliban in 2011, and Italian aid worker Giovanni Lo Porto.<sup>8</sup>

### ***The Legal Justification for Drones***

American justification for drone strikes was largely rooted in the notion of self-defense. On September 12, 2001, the UN Security Council passed Resolution 1368 which condemned the al Qaeda attacks of the previous day, recognized "the inherent right of individual or collective

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*lam* (Brookings Institution Press, 2013); Akbar Ahmed and Harrison Akins, "Wayward in Waziristan," *Foreign Policy*, March 15, 2013; and Akbar Ahmed and Harrison Akins, "Making Enemies in Yemen," *Al Jazeera*, May 5, 2013.

<sup>5</sup> "CIA 'killed al-Qaeda suspects' in Yemen," *BBC News*, November 5, 2002.

<sup>6</sup> Jo Becker and Scott Shane, "Secret 'Kill List' Proves a Test of Obama's Principle and Will," *New York Times*, May 29, 2012.

<sup>7</sup> "Procedures for Approving Direct Action Against Terrorist Targets Located Outside the United States and Areas of Active Hostilities," White House Policy Guidelines, May 22, 2013.

<sup>8</sup> Daniel Bergner, "The Killing of Warren Weinstein," *New York Times*, February 11, 2016.

self-defence”, and expressed “its readiness to take all necessary steps to respond to the terrorist attacks of 11 September 2001, and to combat all forms of terrorism.”<sup>9</sup> This position was reflected in the 2001 Authorization for the Use of Military Force (AUMF) passed on September 14, 2001, giving the President the power to “use all necessary and appropriate force” to target al Qaeda and any terrorists associated with the organization.<sup>10</sup> Further, President George W. Bush defined al Qaeda and any associated non-state forces as “unlawful combatants”, denying them full protection under the Geneva Convention.<sup>11</sup>

The Obama Administration relied on the same logic of self-defense to justify its counterterrorism campaigns against al Qaeda, including a far more extensive use of drone strikes. President Obama stated that the use of the drone was “part and parcel of our overall authority when it comes to battling al Qaeda”.<sup>12</sup> The Department of Justice wrote a white paper, released in February 2013, which provided a legal framework for lawfully killing terrorists abroad, including U.S. citizens. They included:

- 1) an informed, high-level official of the U.S. government has determined that the targeted individual poses an imminent threat of violent attack against the United States;
- 2) capture is infeasible, and the United States continues to monitor whether capture becomes feasible; and
- 3) the operation is conducted in a manner consistent with the four fundamental principles of the laws of war governing the use of force [distinction between combatants and noncombatants, proportionality of loss of life and damage to property incidental to the attack, military necessity, and prohibition of unnecessary suffering].<sup>13</sup>

This legal justification still presented the United States with the challenge of operating a covert counterterrorism campaign that operated in the sovereign territory of other states. In November 2001, the President of Yemen, Ali Abdullah Saleh, traveled to Washington, DC for meetings with President Bush, Vice President Dick Cheney, FBI Director Robert Mueller, and CIA Director George Tenet. Given al Qaeda’s known presence in the Yemeni hinterland, it appeared on early lists of potential enemies following 9/11. During the visit, Saleh, fearing his country could go the way of Afghanistan, declared Yemen “a principal partner in the coalition against terrorism.”<sup>14</sup> In negotiations concerning security cooperation, Saleh was promised nearly \$400 million in aid programs, additional funding from the IMF and World Bank, and support for Yemen’s military and intelligence agencies. Saleh, in turn, approved the deployment of U.S. troops and CIA operatives to provide training for Yemeni Special Forces and gave secret authorization to Tenet to operate drones over Yemen’s territory.

<sup>9</sup> “Resolution 1368,” United Nations Security Council Resolution, September 12, 2001.

<sup>10</sup> Authorization for the Use of Military Force, PL 107-40 [S.J.RES 23], 107<sup>th</sup> Congress (2001).

<sup>11</sup> “Enemy Combatants Memorandum,” William Haynes II, General Counsel of the Department of Defense to Members of the ASIL-CFR Roundtable, December 12, 2002.

<sup>12</sup> Jeremy Scahill, *Dirty Wars: The World is a Battlefield* (New York: Nation Books, 2013), pg. 516

<sup>13</sup> “Lawfulness of a Lethal Operation Directed Against a U.S. Citizen Who is a Senior Operational Leader of Al-Qa’ida or An Associated Force,” *Department of Justice White Paper*, [http://msnbcmedia.msn.com/i/msnbc/sections/news/020413\\_DOJ\\_White\\_Paper.pdf](http://msnbcmedia.msn.com/i/msnbc/sections/news/020413_DOJ_White_Paper.pdf), Accessed January 2017.

<sup>14</sup> Scahill, *Dirty Wars*, pg. 64.

Similarly in Pakistan, the United States received secret authorization from President Pervez Musharraf to operate its drones over FATA, primarily Waziristan, to target the Pakistani Taliban. Pakistani authorities even received classified briefings from the CIA about its drone activity.<sup>15</sup> Though publicly denying such permission, President Musharraf privately turned over Shamsi Airfield in western Baluchistan as a base for U.S. drones. In fact, the Pakistani military took credit for many early drone strikes. In August 2008, according to WikiLeaks documents, the former Pakistani Prime Minister Syed Yusuf Gilani followed in Musharraf’s duplicity stating, “I don’t care if they do it as long as they get the right people. We’ll protest in the national assembly and then ignore it.”<sup>16</sup> Between 2002 and 2008, Pakistan received nearly \$12 billion in military and economic aid from the United States.<sup>17</sup>

### ***U.S. Drone Strike Statistics***

Two organizations, the New America Foundation’s (NAF) International Security Program and The Bureau of Investigative Journalism (BIJ), track data on U.S. drone strikes, relying on publicly available news sources, government confirmations, or local sources, when possible. Below are the statistics as of January 2017 on strikes and fatalities for the three primary states in which U.S. drones have been used, listing first NAF’s numbers, then BIJ’s numbers, and finally providing graphs from NAF showing the distribution of drone strikes by year. These discrepancies also demonstrate the uncertainty that is often inherent in collecting information on these secretive campaigns. There is the on-going challenge for quantitative analysis given that many strikes are not publicly disclosed or acknowledged.<sup>18</sup>

### **Yemen**

Drone Strikes	Total Killed	Civilians Killed	Militants Killed	Unknown
182	1085-1363	87-93	965-1218	33-52 <sup>1</sup>

*Source: New America Foundation*

Confirmed Drone Strikes	Total Killed	Civilians Killed	Children Killed
143-163	592-860	65-101	8-9
Possible Extra Drone Strikes	Total Killed	Civilians Killed	Children Killed
90-107	357-509	26-61	6-9
Other Covert Operations	Total Killed	Civilians Killed	Children Killed
20-83	210-443	68-102	26-28 <sup>2</sup>

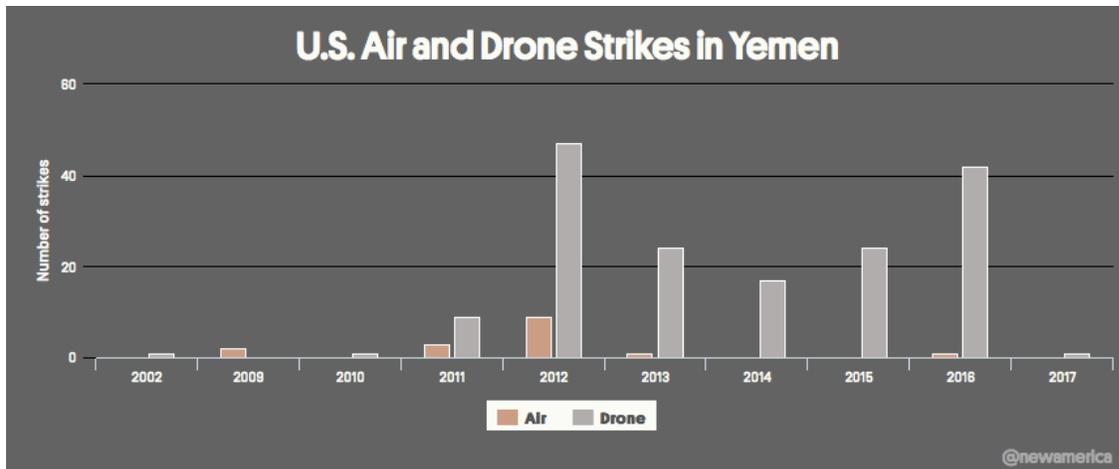
*Source: The Bureau of Investigative Journalism*

<sup>15</sup> Greg Miller and Bob Woodward, “Secret memos reveal explicit nature of U.S., Pakistan agreement on drones,” *Washington Post*, October 24, 2013.

<sup>16</sup> Declan Walsh, “WikiLeaks Cables: U.S. and Pakistan Play Down Impact of ‘Mischief’,” *The Guardian*, December 1, 2010.

<sup>17</sup> Azeem Ibrahim, “U.S. Aid to Pakistan—U.S. Taxpayers Have Funded Pakistani Corruption,” *Belfer Center Discussion Paper #2009-06, International Security Program, Harvard Kennedy School*, July 2009, Pg. 8.

<sup>18</sup> “Pentagon failed to disclose up to thousands of air strikes: report,” *Reuters*, February 5, 2017.



Source: New America Foundation

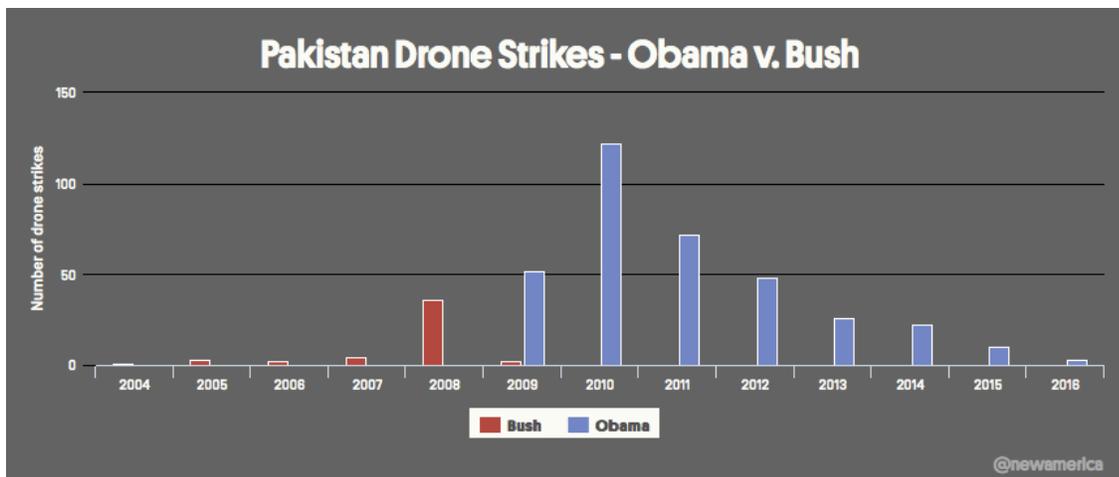
### Pakistan

Drone Strikes	Total Killed	Civilians Killed	Militants Killed	Unknown
403	2281-3672	255-315	1850-3079	176-278 <sup>3</sup>

Source: New America Foundation

Drones Strikes	Total Killed	Civilians Killed	Children Killed
424	2499-4001	424-966	127-207 <sup>4</sup>

Source: The Bureau of Investigative Journalism



Source: New America Foundation

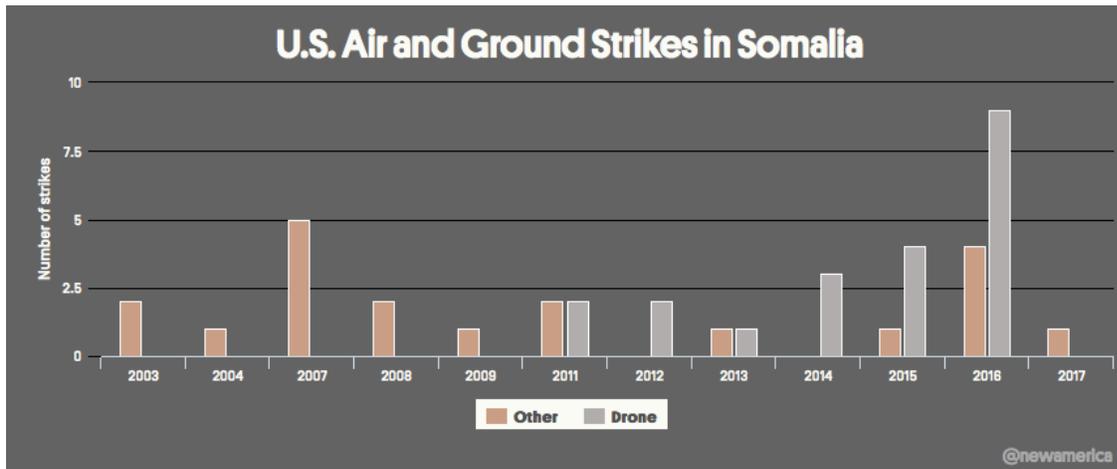
### Somalia

Drone Strikes	Total Killed	Civilians Killed	Militants Killed	Unknown
41	348-415	31-40	307-346	10-29 <sup>5</sup>

Source: New America Foundation

Drone Strikes	Total Killed	Civilians Killed	Children Killed
32-36	242-418	3-12	0-2
Other Covert Operations	Total Killed	Civilians Killed	Children Killed
10-14	59-160	7-47	0-2 <sup>6</sup>

Source: *The Bureau of Investigative Journalism*



Source: *New America Foundation*

### ***To Use or Not to Use: The Drone Debates***

Since the drone’s use became public knowledge, even before official acknowledgement from the White House, there has been an intense debate between scholars and policymakers over the effectiveness, legality, and ethics of the weapon.

Arguments in support of the drone have largely focused on either its technological capabilities or its operational effectiveness. The technical arguments largely revolve around the precision of the weapon. It is argued that the targeting capabilities of drones allows strikes to avoid any collateral deaths to a much greater extent than traditional air power or long range ordnance, such as naval cruise missiles that have been used alongside drone strikes in Yemen. In June 2011, John O. Brennan, President Obama’s counterterrorism advisor at the time and former CIA director, announced that over the previous year “there hasn’t been a single collateral death because of the exceptional proficiency, precision of the capabilities we’ve been able to develop.”<sup>19</sup> In January of the following year, President Obama added, “I want to make sure that people understand actually drones have not caused a huge number of civilian casualties. For the most part, they have been very precise, precision strikes against al Qaeda and their affiliates.”<sup>20</sup> This precision, according to legal scholars, can give the U.S. greater capabilities in complying with international laws governing both the proportionality of force and the distinction between combatants and non-combatants.<sup>21</sup> From a more political perspective, research relying on

<sup>19</sup> Scott Shane, “C.I.A. Is Disputed on Civilian Toll in Drone Strokes,” *New York Times*, August 11, 2011.

<sup>20</sup> David Jackson, “Obama Defends Drone Strikes,” *USA Today*, January 31, 2012.

<sup>21</sup> Geoffrey Corn, “Drone Warfare: How ‘Precision Engagement’ Enhances the Legal Dialogue,” *Georgetown Journal of International Affairs*, April 14, 2014.

experiments shows that the use of precision weapons increases public support for the use of force though also decreasing the public's tolerance for civilian casualties given expectations of the weapon's capabilities.<sup>22</sup>

In regards to the drones' operations, scholars have focused on the drones' effectiveness in degrading the short-term capabilities of terrorist groups and eliminating experienced leadership, all while keeping American troops out of harm's way.<sup>23</sup> Drones also have the added advantage of being more economical than traditional air power. Because the drone is able to target terrorist activity while keeping "boots off the ground", according to the philosophical argument, there is a moral imperative to use drone strikes, though assuming the campaign is necessary and just in the first place.<sup>24</sup>

Other scholars and policymakers, however, recognize that the use of drones is simply the best option available given the implausibility or illegality of direct military deployments and the unreliability of local law enforcement or ineffectiveness of local military campaigns.<sup>25</sup> Pakistani military operations in Waziristan, for example, have been plagued by a host of challenges in attempting to quell the activities of the Taliban, despite at times deploying as many as 100,000 troops to the region. The difficulty of the terrain and lack of traditional government authority amongst the population undermines the effectiveness of these military campaigns. Similar to the drone, they have resulted in civilian casualties and destruction of infrastructure as the military battles the various Taliban groups. Indeed, the military campaigns themselves have been a sour point of contention between the Pakistani state and the population of Waziristan and other tribal agencies in FATA, many of who see the presence of military forces as an occupation of their territory.<sup>26</sup>

The drone's detractors, on the other hand, largely focus on the illegality of the strikes, the impact on civilians, and the long-term negative impacts. These arguments challenge the fundamental assumptions that support of the drone is based on, such as the necessity of self-defense, and then look to the long-term implications. Legal scholars point out that even if the drone is effective from an operational standpoint that does not make it a legal action. They challenge the notion of the "field of battle," pointing to the fact that use of drones, a weapon of war, beyond the war zones of Afghanistan and Iraq is illegal under international law, particularly as a violation of national sovereignty. The strikes, especially against U.S. citizens, further represent a circumvention of individuals' legal rights such as due process.<sup>27</sup>

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<sup>22</sup> James Igoe Walsh, "Precision Weapons, Civilian Casualties, and Support for the Use of Force," *Political Psychology*, Vol. 36, No. 5, 2015, pgs. 507-523.

<sup>23</sup> Daniel L. Byman, "Why Drones Work: The Case for Washington's Weapon of Choice," *Foreign Affairs*, July/August 2013; Patrick B. Johnston and Anoop K. Sarbahi, "The Impact of U.S. Drone Strikes on Terrorism in Pakistan," *International Studies Quarterly*, Vol. 60, No. 2 (2016), pgs. 203-219; and W. Andrew Terrill, "Drones Over Yemen: Weighing Military Benefits and Political Costs," *Parameters*, 42(4)/43(1), Winter-Spring 2013, pgs. 17-23.

<sup>24</sup> Bradley Strawser, "Moral Predators: The Duty to Employ Uninhabited Aerial Vehicles," *Journal of Military Ethics*, Vol. 9, No. 4 (2010), pgs. 342-368.

<sup>25</sup> Byman, "Why Drones Work: The Case for Washington's Weapon of Choice"; C. Christine Fair, "For Now, Drones Are the Best Option," *New York Times*, January 29, 2013; and Jordan J. Paust, "Self-Defense Targetings of Non-State Actors and Permissibility of U.S. Use of Drones in Pakistan," *Journal of Transnational Law & Policy*, Vol. 19, No. 2, Spring 2010, pgs. 237-280.

<sup>26</sup> Ahmed, *The Thistle and the Drone*; Ahmed and Akins, "Wayward in Waziristan"

<sup>27</sup> William C. Banks, "Regulating Drones: Are Targeted Killings by Drones Outside Traditional Battlefields Legal?,"

The right to act in self-defense against an imminent threat overrules concerns of due process. The U.S., however, provides no clear criteria for what constitutes an imminent threat in the context of the use of drones, relying only on the ambiguity of the AUMF's guidance. Philip Alston, the former United Nations Special Rapporteur on extrajudicial, summary, or arbitrary executions, additionally commented on the covert drone program, "There is no meaningful domestic accountability for a burgeoning program of international killing."<sup>28</sup> According to Alston's analysis, this lack of oversight and accountability undermines any claims from the White House that U.S. drones comply with international law and meets the requirements of self-defense. Given the lack of transparency and an ambiguous definition for the "battleground" in the war against al Qaeda, the field of battle in which drones would be legal under U.S. law can essentially encompass the whole world.<sup>29</sup>

In the wake of the U.S. drone campaign, there were also a series of reports and studies that came out that challenged the White House's narrative concerning the level of civilian casualties.<sup>30</sup> These high number of civilian casualties result from both collateral deaths in targeted strikes as well as the great uncertainty over who is killed in signature strikes, a tactic which essentially defines any military aged male in a designated area as a "combatant" without intelligence to support this designation. This tactic makes the "precision" of the weapon irrelevant in terms of avoiding collateral deaths.<sup>31</sup>

In a 2012 interview for Akbar Ahmed's study *The Thistle and the Drone*, Brigadier Abdullah Dogar, a former military commander of Pakistani forces in North Waziristan, said there was almost no coordination between military forces on the ground and the U.S. in assessing targets. Brigadier Dogar recounted a March 2011 signature strike on a tribal Jirga in Datta Khel, North Waziristan convened in the middle of the day to resolve a business dispute involving mining rights, a meeting he was informed of ten days in advance. When the drone's missiles struck the Jirga, killing over 40 people, Brigadier Dogar was only ten kilometers away and quickly sent his aides to figure out what the explosion was in the distance. In the interview, he stated, "They were totally innocent. I could name each one."<sup>32</sup> Brigadier Dogar's interview directly contradicts Brennan's June 2011 claim that there had not been a single civilian death from drone strikes over the previous year. In May 2013, even President Obama publicly

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*Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 129-159; and Mary Ellen O'Connell, "Drones Are Illegal Beyond the Battlefield," *New York Times*, April 24, 2015.

<sup>28</sup> Tara McKelvey, "Defending the Drones: Harold Koh and the Evolution of U.S. Policy," *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pg. 200

<sup>29</sup> McKelvey, "Defending the Drones: Harold Koh and the Evolution of U.S. Policy"

<sup>30</sup> Ahmed, *The Thistle and the Drone*; James Cavallaro, Stephan Sonnenberg, and Sarah Knuckey, *Living Under Drones: Death, Injury and Trauma to Civilians from U.S. Drone Practices in Pakistan*, Stanford: International Human Rights and Conflict Resolution Clinic, Stanford Law School; New York: NYU School of Law, Global Justice Clinic, 2012; *Death by Drones: Civilian Harm Caused by U.S. Targeted Killings in Yemen*, Open Society Justice Initiative, April 2015 (<https://www.opensocietyfoundations.org/sites/default/files/death-drones-report-eng-20150413.pdf>); and Chris Woods, "Covert drone strikes and the fiction of zero civilian casualties," *Precision Strike Warfare and International Intervention: Strategic, ethico-legal, and decisional implications*, Mike Aaronson, Wali Aslam, Tom Dyson, and Regina Rauxloh, eds. (Abingdon: Routledge, 2015), pgs. 95-113.

<sup>31</sup> Ahmed, *The Thistle and the Drone*; and Woods, "Covert drone strikes and the fiction of zero civilian casualties"

<sup>32</sup> Ahmed, *The Thistle and the Drone*, pg. 86.

acknowledged the “hard fact that U.S. strikes have resulted in civilian casualties”. He quickly followed this statement with the reminder that this is “a risk that exists in every war” and the use of drones is a better alternative than more traditional military strikes involving “far less precise” airpower or troops.<sup>33</sup>

Beyond the civilians killed, aid groups operating in these areas reported on the widespread psychological, social, and economic impact on the local inhabitants caused by the ever-present buzzing of the drones. A staff attorney for Reprieve, a legal nonprofit organization that has represented the victims of drone strikes and their families, stated in December 2012, “Drones terrorize the civilian population. They subject whole communities to the constant threat of random annihilation. People imagine that drones fly to a target, strike with surgical precision, and return to a U.S. base hundreds or thousands of miles away. The truth is nothing of the sort. For the communities in Waziristan, drones are nearly as common as the clouds in the skies. As many as six of them hover over villages at any one time... This constant fear and the inability to make oneself safe is destroying the very fabric of communities in Waziristan. Parents are afraid to send their children to school. Women are afraid to meet in markets. Families are afraid to gather at funerals for people wrongly killed in earlier strikes. The fabric of daily life is ripped to shreds.”<sup>34</sup>

The effect of these civilian deaths and the terrorizing of entire communities is creating greater resentment against the United States and the central governments allied with them, which then increases the recruitment efforts of terrorist groups operating in these areas.<sup>35</sup> In March 2010, Admiral Michael Mullen, then the Chairman of the Joint Chiefs of Staff, acknowledged, “Each time an errant bomb or a bomb accurately aimed but against the wrong target kills or hurts civilians, we risk setting our strategy back months, if not years. Despite the fact that the Taliban kill and maim far more than we do, civilian casualty incidents such as those we’ve recently seen in Afghanistan will hurt us more in the long run than any tactical success we may achieve against the enemy.”<sup>36</sup> While drone strikes may kill senior leadership, these groups’ lower level ranks swell with new recruits that then increases the capabilities for attacks against local government targets. Indeed, many of the groups targeted by drones grow out of the conflict between these tribal peripheries and central governments.<sup>37</sup> The drone only exacerbates this conflict as targeted communities seek revenge for drone strikes, especially when innocent civilians or even children are caught in the blast. In one 2009 attack, the Tehreek-e-Taliban Pakistan based in Waziristan killed 36 people, among them 17 children, in a mosque in Rawalpindi. The attackers were grabbing children and heard yelling, “Now know how it feels when other people are killed in the bombings!”<sup>38</sup>

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<sup>33</sup> Barack Obama, “Remarks by the President at the National Defense University,” Speech at the National Defense University, Fort McNair, Washington, DC, May 23, 2013, (<https://obamawhitehouse.archives.gov/the-press-office/2013/05/23/remarks-president-national-defense-university>).

<sup>34</sup> Ahmed, *The Thistle and the Drone*, pg. 84.

<sup>35</sup> Christopher Swift, “The Boundaries of War?: Assessing the Impact of Drone Strikes in Yemen,” *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 71-88.

<sup>36</sup> Admiral Mike Mullen, Chairman of the Joint Chiefs of Staff, Remarks at the Kansas State University Landon Lecture Series, Kansas State University, March 3, 2010 (<https://www.k-state.edu/landon/speakers/michael-mullen/transcript.html>).

<sup>37</sup> Ahmed, *The Thistle and the Drone*

<sup>38</sup> Zahid Hussain, *The Scorpion’s Tail: The Relentless Rise of Islamic Militants in Pakistan—And How it Threatens*

## *U.S. Export Policy for Armed Drone Technology*

In the mid-19<sup>th</sup> century following in the wake of Napoleon's march across Europe, the Prussian state worked to re-organize its military and to great effect integrated new technology, such as the railroad, telegraph, rifled guns, and artillery, into their military tactics. The success of these new military methods, especially in the Wars of German Unification, became a model of warfare that quickly spread to other European and non-European states.<sup>39</sup> There is this tendency in history for new military technologies and tactics developed by a dominant state to filter into the military strategies of other states and actors in the international system.<sup>40</sup> We are seeing this same process today with the proliferation of drone technology.

Peter Bergen and Jennifer Rowland provide an exhaustive list of 82 countries that are developing or have acquired drone technology.<sup>41</sup> The vast majority of these drone programs are, however, focused on developing drones for the purposes of surveillance, with only Israel, the U.S., the U.K., China, France, and Iran having any domestic production capabilities for armed drones. Many countries are also pursuing the development of smaller drones for non-military applications, such as data collection in areas where human access is limited.

The U.S., in recognition of the potential hazards of the proliferation of specifically armed drones and countries growing interest in acquiring them, attempted to regulate their use through access to the technology itself. In February 2015, the U.S. State Department announced its "U.S. Export Policy for Unmanned Aerial Systems [UAS]", which allowed for the first time the export of armed drone technology, which was previously only available to the U.K., to other states to be reviewed on a case-by-case basis.<sup>42</sup> It supplements the Department of Commerce's Export Administration Regulations, which governs all U.S. commercial transfers with foreign entities. This policy also falls under the 1987 Missile Technology Control Regime (MTCR), for which the U.S. is a signatory, regulating the international transfer of military and commercial systems. For sales that fall into the MTCR Category 1, that is UAS that have a range of more than 300 kilometers and a payload of at least 500 kilograms, the government must have a "strong presumption of denial" for exporting that technology.

Approval for the sale of drone technology is inextricably linked to restrictions on its use. The policy is meant to ensure that these sales and the ultimate use of the drones are used "lawfully and responsibly" and are consistent with the U.S. national security and foreign policy priorities and interests. Recipients of U.S.-based drone technology will be required to fulfill the following criteria:

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*America* (New York: Simon and Schuster, 2010), pg. 179.

<sup>39</sup> See Geoffrey L. Herrera and Thomas G. Mahnken, "Military Diffusion in Nineteenth-Century Europe: The Napoleonic and Prussian Military Systems," *The Diffusion of Military Technology and Ideas*, Emily O. Goldman and Leslie C. Eliason, eds. (Stanford University Press, 2003), pgs. 205-242.

<sup>40</sup> See Robert Gilpin, *War and Change in World Politics* (Cambridge University Press, 1981).

<sup>41</sup> Peter L. Bergen and Jennifer Rowland, "World of Drones: The Global Proliferation of Drone Technology," *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 300-341; See also Ulrike Esther Franke, "The global diffusion of unmanned aerial vehicles (UAVs), or 'drones'," *Precision Strike Warfare and International Intervention: Strategic, ethico-legal, and decisional implications*, Mike Aaronson, Wali Aslam, Tom Dyson, and Regina Rauxloh, eds. (Abingdon: Routledge, 2015), pgs. 52-72.

<sup>42</sup> Missy Ryan, "Obama administration to allow sales of armed drones to allies," *Washington Post*, February 17, 2015.

- Recipients are to use these systems in accordance with international law, including international humanitarian law and international human rights law, as applicable;
- Armed and other advanced UAS are to be used in operations involving the use of force only when there is a lawful basis for use of force under international law, such as national self-defense;
- Recipients are not to use military UAS to conduct unlawful surveillance or use unlawful force against their domestic populations; and
- As appropriate, recipients shall provide UAS operators technical and doctrinal training on the use of these systems to reduce the risk of unintended injury or damage.<sup>43</sup>

This new policy, according to the State Department announcement, “is part of a broader UAS policy review which includes plans to work with other countries to shape international standards for the sale, transfer, and subsequent use of military UAS”. So far, only Italy has been approved for the purchase of U.S.-based drone technology under the new export policy.

### ***China and the Global Proliferation of Drones***

Since the U.S. implemented its policy on the exporting of U.S. armed drone technology, the number of countries that now possess armed drones doubled from six to twelve. The progress that China has made with its own domestic drone production, and the government’s willingness to export these drones, has severely undermined any U.S. efforts to control this technology’s proliferation. States who desire their own fleet of armed drones now need not worry about the bureaucratic loopholes and on-going oversight that the U.S. demands. They can now simply turn to China.

Saudi Arabia, the United Arab Emirates, Egypt, Pakistan, Nigeria, and Iraq have all reportedly purchased armed drones from China. It was also reported that a Chinese drone crashed in Algeria while its military was testing it out ahead of purchase.<sup>44</sup> With the market for armed drones expected to reach more than \$10 billion by 2024, it is anticipated that the number of countries possessing drones will continue to grow, especially with China, who is not a signatory to the MTCR, positioning itself to be the global provider.<sup>45</sup> China is an attractive option given that its drones are available at a fraction of the cost of U.S. drones (the Chinese version of the Predator drone is a quarter of the price of its U.S. counterpart), and without needing to adhere to agreements restricting their use, especially given China’s long history of disregarding human rights.

The drones that China has thus far exported, the Caihong and Wing Loong, bear resemblance in size and payload to the U.S. Predator and Reaper drones, though without the same operational capabilities. Chinese corporations are continuing to advance research and development with between 75 and 100 companies focused on UAV-related manufacturing in China.<sup>46</sup> In June 2016, according to the Xinhua News Agency, the Chinese demonstrated for the

<sup>43</sup> “U.S. Export Policy for Military Unmanned Aerial Systems,” Diplomacy in Action Fact Sheet, U.S. Department of State, February 17, 2015.

<sup>44</sup> Adam Rawnsley, “Meet China’s Killer Drones,” *Foreign Policy*, January 14, 2016.

<sup>45</sup> “Drone market to hit \$10 billion by 2024,” *Agence France-Presse*, October 3, 2015.

<sup>46</sup> Rawnsley, “Meet China’s Killer Drones.”

first time the ability to use satellites to fire a drone's missiles, with the pilot in the test located over 1,000 kilometers away.<sup>47</sup> This expands the deployment potential of Chinese drones, which had previously had to rely upon line of sight communications. In January 2017, the Aviation Industry Corporation of China, unveiled a new stealth drone called the Lijian, or "Sharp Sword," able to carry 4,400 pounds of munitions, dwarfing both the Predator's and the Reaper's payloads. It is estimated the "Sharp Sword" will become operational within three years.

While the Chinese make improvements in their emerging drone technology, other states have purchased the existing Chinese drones that are adequate for use against short range or domestic targets; operations that are prohibited by the U.S. export policy. In 2015, Iraq acquired three Chinese-made Caihong drones for use in military operations in Anbar Province against Islamic State forces, with the first strike occurring in December 2015 against an encampment. In the following month, a second Iraqi drone strike mis-identified its target and killed nine members of a pro-government militia.<sup>48</sup> In February 2016, a Chinese-made Caihong drone buzzing over the Sambisa Forest of northeastern Nigeria launched its missiles at a large gathering of vehicles suspected of being an ammunition dump for Boko Haram. This was the first confirmed drone strike by Nigeria. In early September 2015, Pakistan deployed for the first time its own domestically produced drone, partly based on a Chinese design, to strike at a terrorist compound in the Shawal Valley of North Waziristan, as part of military operations against the Taliban. There are reports that Pakistan is currently in talks with China to expand its fleet of drones, evidenced by the June 2016 crash of a Wing Loong drone in Pakistan's Punjab Province.<sup>49</sup>

Thus far, these drone strikes have all occurred in the midst of military campaigns involving both ground troops and traditional air power against domestic terrorist groups on the rugged periphery of the state. Within these campaigns, in their tactics and target selection, however, these states have largely replicated the ways in which the U.S. has deployed its own drones, even in using traditional air power, based on targeting behavior with limited intelligence. In one such example from January 2017, a Nigerian military jet mistook a refugee camp for a terrorist encampment in the northeastern Borno State where Boko Haram is active, killing 52 people and injuring a further 200 with its bombs.<sup>50</sup>

For a long time, China has been positioning itself to play a greater role as a global leader and push the forces of globalization more towards a Chinese model, especially as the United States begins to turn inward in its economic policies under President Donald Trump. During a speech at the January 2017 World Economic Forum in Davos, Switzerland, Chinese President Xi Jinping said, "Pursuing protectionism is just like locking oneself in a dark room. While wind and rain may be kept outside so are light and air. No one will emerge as a winner in a trade war."<sup>51</sup> He was communicating to the world that China would now become the protector of economic globalization and free trade. He was demonstrating that China was prepared to step into the void

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<sup>47</sup> Jeffrey Lin and P.W. Singer, "Chinese Drones Make Breakthrough, Firing on Command by Satellite," *Popular Science*, June 8, 2016.

<sup>48</sup> "Iraqi Drone Strike Mistakenly Kills Nine Fighters," *Radio Free Europe*, January 10, 2016.

<sup>49</sup> Franz-Stefan Gady, "Is Pakistan Secretly Testing a New Chinese Killer Drone?," *The Diplomat*, June 22, 2016.

<sup>50</sup> "Nigeria air strike error kills dozens in refugee camp," *BBC News*, January 17, 2017.

<sup>51</sup> Peter S. Goodman, "In Era of Trump, China's President Champions Economic Globalization," *New York Times*, January 17, 2017.

left by new mercantilist policies set by the Trump Administration. Drones are just one such area in which China is taking the lead, laying the groundwork for the potential proliferation of other military technology.

### *The Future of Drone Warfare*

How the international drone landscape will look in the years and decades to come remains uncertain. With the continued development and proliferation of drone technology from China and expectations that the United States and other states will continue to deploy the weapon, it is safe to assume that drones will continue to be an integral part of global counterterrorism efforts in the future. There are even reports emerging of non-state groups, such as Hamas, Hezbollah, and the Islamic State, using extremely rudimentary versions of this weapon against government targets.

As conflict increasingly emerges along domestic fault lines in weak states, it is expected that the spread and deployment of drones will grow as these regimes will look to them as lower risk and cheaper alternatives to traditional air power, especially for smaller scale fighting against domestic non-state actors. Given the nature of minimized risk and reduced costs inherent in the technology, scholars have argued that drones are an enabling technology, lowering ethical thresholds and encouraging increased use.<sup>52</sup> Drones thus have the potential to increasingly exacerbate conflicts in these weak states, which will have international ramifications in the context of global counterterrorism efforts. The greatest challenge rests in how drones are used over civilian population areas both within and beyond declared zones of war, alongside other remote technology. Without serious efforts to regulate their use, ethically and legally suspect, and ultimately counterproductive, drone campaigns will continue to spread unchecked around the world.

For the United States, the problem of how to effectively deal with this issue exists on two levels: domestic and international. On the domestic level, as the fight against terrorism has evolved to see new groups, new conflicts, and new priorities emerge, the United States has continued to rely on the same legal arguments—the notion of self-defense against al Qaeda and its affiliates in a global war zone—to justify its continued use of drones and other counterterrorism measures.

The nature of the enemy has, however, transformed. In 2014, the SOCOM commander, Admiral William McRaven, reported to the House Armed Services Committee on the greatly diminished threat that al Qaeda poses, especially high-end threats.<sup>53</sup> Three years prior to this at a conference in Washington, DC, Peter Bergen, a journalist and media commentator on terrorism, similarly argued that al Qaeda is “not ten feet tall” and “their bench has been obliterated.” In his presentation, he argued that the transnational force of al Qaeda that the United States declared war on in the days following 9/11 no longer exists. Many of the al Qaeda groups that the U.S. has been engaging in the past few years and interpreting through the same transnational frame, such

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<sup>52</sup> Conway Waddington, “Drones: Degrading moral thresholds for the use of force and the calculations of proportionality,” *Precision Strike Warfare and International Intervention: Strategic, ethico-legal, and decisional implications*, Mike Aaronson, Wali Aslam, Tom Dyson, and Regina Rauxloh, eds. (Abingdon: Routledge, 2015), pgs. 114-132.

<sup>53</sup> John Grady, “SOCOM Chief: Threats from Al Qaeda Have Diminished In Last Five Years,” *USNI News*, February 27, 2014.

as al Qaeda in the Arabian Peninsula and al Qaeda in the Islamic Maghreb, are actually local groups that have simply re-branded themselves as “al Qaeda” and are fighting for local reasons.<sup>54</sup> In regards to terrorist attacks in Europe and the United States after 9/11, even if claiming a tenuous connection to groups like al Qaeda, the Taliban, or the Islamic State, these attacks were committed by homegrown terrorists, often citizens or long-term residents of the country that they are attacking. European citizens were responsible for the 2015 Denmark shooting, the 2015 Paris attack, and 2016 Brussels bombing. Similarly in the United States, many of the attacks, such as the 2015 Chattanooga shooting, the 2016 Orlando shooting, and the 2016 Ohio State attack, were perpetrated by lone wolf attackers who were either U.S. citizens or U.S. permanent residents with no demonstrated links to terrorist groups. With this in mind, the nearly 16 year old legal argument of self-defense for the use of drones against al Qaeda and al Qaeda affiliated combatants is perhaps no longer valid.

Despite this trend, the United States has continued to use the same logic of attack. In President Obama’s 2013 speech at the National Defense University, he stated, “Under domestic law, and international law, the United States is at war with al-Qaida, the Taliban, and their associated forces. We are at war with an organization that right now would kill as many Americans as they could if we did not stop them first. So this is a just war—a war waged proportionally, in last resort, and in self-defense.”<sup>55</sup> Following the first drone strikes under President Donald Trump in January 2017, a Pentagon spokesman cited the threat of al Qaeda and self-defense as justification for the strike, stating, “(Al Qaeda) is using the unrest in Yemen to provide a haven from which to plan future attacks against the U.S. and its interests.” He added, “We remain committed to defeating (al Qaeda in Yemen) and denying it a safe haven.”<sup>56</sup>

Moreover, the United States, as President Obama alluded to in his 2013 comments, has continued to not only use the same legal argument but the same law, the 2001 Authorization for Use of Military Force (AUMF), to authorize its drone program and other actions taken against terrorist groups. The original wording of this act states, “the President is authorized 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.”<sup>57</sup>

The ambiguity of the 2001 AUMF, an equivalent to a declaration of war with non-state actors, was the legal authorization used to invade Afghanistan and Iraq, conduct drone strikes in Pakistan, Yemen, and Somalia, and begin to conduct strikes in Libya and Syria. Its ambiguity has defined an indefinite global war that pushes the U.S. to pour billions of dollars into ongoing and emerging regional conflicts that are often escalated by U.S. presence. This lends greater importance to the legal questions about whether these new groups borrowing the al Qaeda brand and emerging within local conflicts actually fall within this same legal framework, especially if groups have made no demonstrated attempts against the United States. Further, by essentially

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<sup>54</sup> Ahmed, *The Thistle and the Drone*, pg. 317.

<sup>55</sup> Mary Louise Kelly, “When the U.S. Military Strikes, White House Points to A 2001 Measure,” *NPR News*, September 6, 2016.

<sup>56</sup> Barbara Starr and Ryan Browne, “U.S. orders first drone strikes under Trump,” *CNN*, January 24, 2017.

<sup>57</sup> Authorization for Use of Military Force, Section 2(a), PL. 107-40 [S.J.Res 23], 107<sup>th</sup> Congress (2001).

authorizing preventive wars, there is the danger of U.S. counterterrorism efforts becoming a self-fulfilling prophecy by actually promoting acts of terrorism, which are then used as justification for the original military action and future strikes.<sup>58</sup>

There needs to be a re-conception of the enemy and goals in U.S. counterterrorism efforts. The first step is to replace the 2001 AUMF with a more nuanced and detailed understanding of what groups constitute a threat to the United States and provide limits to the use of force. This needs to go beyond the debate in Congress about amending the AUMF to apply to the Islamic State, a group that many are simply substituting for al Qaeda in the same arguments for collective self-defense. Any group that merely adopts the title of “al Qaeda” or includes anti-U.S. rhetoric in their messaging but does not take any concrete actions to target the United States should not be covered by an authorization of military force. This new legislation needs clear legal definitions for targeted killings unambiguously distinct from illegal assassinations, a clear definition of “enemy combatants” de-linked from al Qaeda, and guidance on where recognized combatants are susceptible to attacks by drones, linking the geographic scope of drone operations to authorized U.S. military operations. As the law currently stands, drones are largely operating in a gray area due to the ambiguity of the AUMF. New legislation needs a clearer legal framework defining and limiting the deployment of armed drones.

In addition to re-defining when the use of armed drones is authorized, there needs to be put into place a system of greater oversight to help ensure that drones are used in accordance with the new law and that agencies remain accountable for their use, especially related to civilian deaths. There has been a stalled process of transferring the control of drones over from the CIA to Pentagon control in the hopes of providing greater oversight for the use of drones through the military hierarchy and accompanying legislative procedures. Even a partial transfer of the drone program to military authorities resulted in a decline in the number of drone strikes.<sup>59</sup> The efficacy of this has been questioned given that the covert JSOC would run the drone program.<sup>60</sup> The drone program should rather be placed under the authority of traditional military command, as legal authorization of the use of the drone also shifts to the umbrella of traditional military force within declared war zones.

Besides amending the legal framework within the United States for the use of the drone, many of the more pressing concerns reside in the continued proliferation of the technology to more and more states, especially to states deploying the drone against their own populations. Rather than relying on treaties or agreements, standards for the use of drones are established through precedent set by state practice, particularly the U.S. The U.S. needs to work with other major powers, especially those with the capabilities for domestic drone production, to develop a multilateral treaty governing both the proliferation and use of drone technology. As discussed earlier, the U.S. cannot hope to regulate drones unilaterally. It must work with other nations and through international institutions to develop a standard of use against which to hold other states accountable.

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<sup>58</sup> Joseba Zulaika, *Terrorism: The Self-Fulfilling Prophecy* (University of Chicago Press, 2009).

<sup>59</sup> Greg Miller, “Why CIA drone strikes have plummeted,” *Washington Post*, June 16, 2016.

<sup>60</sup> Naureen Shah, “A Move Within the Shadows: Will JSOC’s Control of Drones Improve Policy?,” *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 160-184; and Woods, “Covert drone strikes and the fiction of zero civilian casualties.”

The U.S., however, cannot view the international regulations of the drone as distinct from its domestic regulation. The two are inextricably linked. If the U.S. is able to reform its own domestic laws concerning drone use, especially in the area of target identification, proportionality of force, and authorized geographic scope, this can serve as a model for a multilateral treaty. Moreover, from a political perspective, it will be impossible to convince other states to limit their deployment of drones in line with any agreement if the U.S.'s actions violate the legal parameters of any potential treaty.

A new and unpredictable factor for the future of drone warfare will be the long-term foreign and counterterrorism policies of President Trump, largely gleaned through guesswork analysis of his "Twitter diplomacy" and the often-contradictory rhetoric coming out of his administration. Early in his Presidency, though, he has presented hardline and militaristic positions in relation to terrorism, further demonstrated by authorizing three drone strikes and a Navy SEAL raid in Yemen during his first week and a half in office.

Yet, with Trump's nativistic and inward-facing priorities combined with his hostile rhetoric and policies toward other states including traditional allies, there are serious questions surrounding the United States' ability to either project outward the kind of influence necessary to work towards any international agreement governing the use of drones or if the Trump administration would even have any interest in doing so. The newly emerging global order could see states in the developing world, especially the regions within which terrorism has been a long-term challenge, increasingly pivoting to China or Russia for military support and hardware and refusing to engage with an unpredictable Trump administration.

In either case, drones will continue to play a role in the counterterrorism and military arsenal of a number of states for years and decades to come. It is difficult to predict how drone technology will develop and what role they will play in the future of warfare. Despite this unpredictability, the U.S. should work to establish an international regime that helps set a standard of use before the proliferation of drones grows beyond control.

## **Works Cited**

Ahmed, Akbar, *The Thistle and the Drone: How America's War on Terror Became a Global War on Tribal Islam* (Brookings Institution Press, 2013).

Ahmed, Akbar and Harrison Akins, "Making Enemies in Yemen," *Al Jazeera*, May 5, 2013.

Ahmed, Akbar and Harrison Akins, "Wayward in Waziristan," *Foreign Policy*, March 15, 2013.

Authorization for the Use of Military Force, PL 107-40 [S.J.RES 23], 107<sup>th</sup> Congress (2001).

Banks, William C., "Regulating Drones: Are Targeted Killings by Drones Outside Traditional Battlefields Legal?," *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 129-159.

Becker, Jo and Scott Shane, "Secret 'Kill List' Proves a Test of Obama's Principle and Will," *New York Times*, May 29, 2012.

Bergen, Peter L. and Jennifer Rowland, "World of Drones: The Global Proliferation of Drone Technology," *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 300-341.

Bergner, Daniel, "The Killing of Warren Weinstein," *New York Times*, February 11, 2016.

Byman, Daniel L., "Why Drones Work: The Case for Washington's Weapon of Choice," *Foreign Affairs*, July/August 2013.

Cavallaro, James, Stephan Sonnenberg, and Sarah Knuckey, *Living Under Drones: Death, Injury and Trauma to Civilians from U.S. Drone Practices in Pakistan*, Stanford: International Human Rights and Conflict Resolution Clinic, Stanford Law School; New York: NYU School of Law, Global Justice Clinic, 2012.

"CIA 'killed al-Qaeda suspects' in Yemen," *BBC News*, November 5, 2002.

Corn, Geoffrey, "Drone Warfare: How 'Precision Engagement' Enhances the Legal Dialogue," *Georgetown Journal of International Affairs*, April 14, 2014.

*Death by Drones: Civilian Harm Caused by U.S. Targeted Killings in Yemen*, Open Society Justice Initiative, April 2015 (<https://www.opensocietyfoundations.org/sites/default/files/death-drones-report-eng-20150413.pdf>).

Dillow, Clay, "All of These Countries Now Have Armed Drones," *Fortune*, February 12, 2016.

Dillow, Clay, "China: A rising drone weapons dealer to the world," *CNBC.com*, March 5, 2016.

"Drone market to hit \$10 billion by 2024," *Agence France-Presse*, October 3, 2015.

"Drone Wars Pakistan: Analysis," *New America Foundation*, <http://securitydata.newamerica.net/drones/pakistan-analysis.html>, Accessed January 2017.

"Drone Wars Somalia: Analysis," *New America Foundation*, <http://securitydata.newamerica.net/drones/somalia-analysis.html>, Accessed January 2017.

“Drone Wars Yemen: Analysis,” *New America Foundation*, <http://securitydata.newamerica.net/drones/yemen-analysis.html>, Accessed January 2017.

“Enemy Combatants Memorandum,” William Haynes II, General Counsel of the Department of Defense to Members of the ASIL-CFR Roundtable, December 12, 2002.

Fair, C. Christine, “For Now, Drones Are the Best Option,” *New York Times*, January 29, 2013.

Gady, Franz-Stefan, “Is Pakistan Secretly Testing a New Chinese Killer Drone?,” *The Diplomat*, June 22, 2016.

“Get the data: Drone Wars,” *The Bureau of Investigative Journalism*, <https://www.thebureauinvestigates.com/category/projects/drones/drones-graphs/>, Accessed January 2017.

Gilpin, Robert, *War and Change in World Politics* (Cambridge University Press, 1981).

Goodman, Peter S., “In Era of Trump, China’s President Champions Economic Globalization,” *New York Times*, January 17, 2017.

Grady, John, “SOCOM Chief: Threats from Al Qaeda Have Diminished In Last Five Years,” *USNI News*, February 27, 2014.

Hussain, Zahid, *The Scorpion’s Tail: The Relentless Rise of Islamic Militants in Pakistan—And How it Threatens America* (New York: Simon and Schuster, 2010).

Hussein, Sara, @sarahussein Twitter, November 16, 2012 (<http://twitter.com/sarahussein/status/269669324652961792>).

Ibrahim, Azeem, “U.S. Aid to Pakistan—U.S. Taxpayers Have Funded Pakistani Corruption,” *Belfer Center Discussion Paper #2009-06, International Security Program, Harvard Kennedy School*, July 2009, Pg. 8.

“Iraqi Drone Strike Mistakenly Kills Nine Fighters,” *Radio Free Europe*, January 10, 2016.

Jackson, David, “Obama Defends Drone Strikes,” *USA Today*, January 31, 2012.

Johnston, Patrick B. and Anoop K. Sarbahi, “The Impact of U.S. Drone Strikes on Terrorism in Pakistan,” *International Studies Quarterly*, Vol. 60, No. 2 (2016), pgs. 203-219.

Kelly, Mary Louise, “When the U.S. Military Strikes, White House Points to A 2001 Measure,” *NPR News*, September 6, 2016.

“Lawfulness of a Lethal Operation Directed Against a U.S. Citizen Who is a Senior Operational Leader of Al-Qa’ida or An Associated Force,” *Department of Justice White Paper*, [http://msnbcmedia.msn.com/i/msnbc/sections/news/020413\\_DOJ\\_White\\_Paper.pdf](http://msnbcmedia.msn.com/i/msnbc/sections/news/020413_DOJ_White_Paper.pdf), Accessed January 2017.

Lin, Jeffrey and P.W. Singer, “Chinese Drones Make Breakthrough, Firing on Command by Satellite,” *Popular Science*, June 8, 2016.

McKelvey, Tara, “Defending the Drones: Harold Koh and the Evolution of U.S. Policy,” *Drone*

*Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 185-205.

Miller, Greg, “Why CIA drone strikes have plummeted,” *Washington Post*, June 16, 2016.

Miller, Greg and Bob Woodward, “Secret memos reveal explicit nature of U.S., Pakistan agreement on drones,” *Washington Post*, October 24, 2013.

Mullen, Admiral Mike, Chairman of the Joint Chiefs of Staff, Remarks at the Kansas State University Landon Lecture Series, Kansas State University, March 3, 2010 (<https://www.k-state.edu/landon/speakers/michael-mullen/transcript.html>).

“Nigeria air strike error kills dozens in refugee camp,” *BBC News*, January 17, 2017.

Obama, Barack, “Remarks by the President at the National Defense University,” Speech at the National Defense University, Fort McNair, Washington, DC, May 23, 2013, (<https://obamawhitehouse.archives.gov/the-press-office/2013/05/23/remarks-president-national-defense-university>).

O’Connell, Mary Ellen, “Drones Are Illegal Beyond the Battlefield,” *New York Times*, April 24, 2015.

Paust, Jordan J., “Self-Defense Targetings of Non-State Actors and Permissibility of U.S. Use of Drones in Pakistan,” *Journal of Transnational Law & Policy*, Vol. 19, No. 2, Spring 2010, pgs. 237-280.

“Pentagon failed to disclose up to thousands of air strikes: report,” *Reuters*, February 5, 2017.

“Procedures for Approving Direct Action Against Terrorist Targets Located Outside the United States and Areas of Active Hostilities,” White House Policy Guidelines, May 22, 2013.

Rawnsley, Adam, “Meet China’s Killer Drones,” *Foreign Policy*, January 14, 2016.

“Resolution 1368,” United Nations Security Council Resolution, September 12, 2001.

Ross, Alice K., “Ten years on: Eyewitnesses describe the aftermath of the first Pakistan drone strike,” *The Bureau of Investigative Journalism*, June 17, 2014.

Ryan, Missy, “Obama administration to allow sales of armed drones to allies,” *Washington Post*, February 17, 2015.

Scahill, Jeremy, *Dirty Wars: The World is a Battlefield* (New York: Nation Books, 2013).

Shah, Naureen, “A Move Within the Shadows: Will JSOC’s Control of Drones Improve Policy?,” *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 160-184.

Shalal, Andrea, “U.S. government approves Italy’s request to arm its drones,” *Reuters*, November 4, 2015.

Shane, Scott, “C.I.A. Is Disputed on Civilian Toll in Drone Strikes,” *New York Times*, August 11,

2011.

Starr, Barbara and Ryan Browne, "U.S. orders first drone strikes under Trump," *CNN*, January 24, 2017.

Strawser, Bradley, "Moral Predators: The Duty to Employ Uninhabited Aerial Vehicles," *Journal of Military Ethics*, Vol. 9, No. 4 (2010), pgs. 342-368.

Swift, Christopher, "The Boundaries of War?: Assessing the Impact of Drone Strikes in Yemen," *Drone Wars: Transforming Conflict, Law, and Policy*, Peter L. Bergen and Daniel Rothernberg, eds. (Cambridge University Press, 2015), pgs. 71-88.

Terrill, W. Andrew, "Drones Over Yemen: Weighing Military Benefits and Political Costs," *Parameters*, 42(4)/43(1), Winter-Spring 2013, pgs. 17-23.

"U.S. Export Policy for Military Unmanned Aerial Systems," Diplomacy in Action Fact Sheet, U.S Department of State, February 17, 2015.

Waddington, Conway, "Drones: Degrading moral thresholds for the use of force and the calculations of proportionality," *Precision Strike Warfare and International Intervention: Strategic, ethico-legal, and decisional implications*, Mike Aaronson, Wali Aslam, Tom Dyson, and Regina Rauxloh, eds. (Abingdon: Routledge, 2015), pgs. 114-132.

Walsh, Declan, "WikiLeaks Cables: U.S. and Pakistan Play Down Impact of 'Mischief'," *The Guardian*, December 1, 2010.

Walsh, James Igoe, "Precision Weapons, Civilian Casualties, and Support for the Use of Force," *Political Psychology*, Vol. 36, No. 5, 2015, pgs. 507-523.

Woods, Chris, "Covert drone strikes and the fiction of zero civilian casualties," *Precision Strike Warfare and International Intervention: Strategic, ethico-legal, and decisional implications*, Mike Aaronson, Wali Aslam, Tom Dyson, and Regina Rauxloh, eds. (Abingdon: Routledge, 2015), pgs. 95-113.

Woods, Chris, "Moving the Drone Program from the CIA to the Pentagon Won't Improve Transparency," *Foreign Policy*, May 8, 2015.

Zulaika, Joseba, *Terrorism: The Self-Fulfilling Prophecy* (University of Chicago Press, 2009).