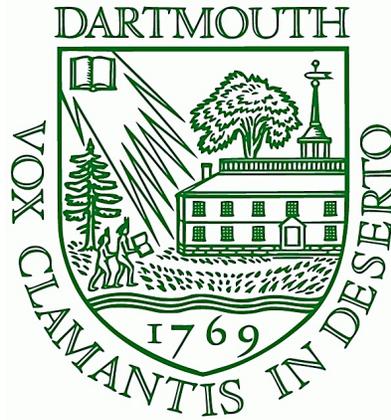# The Case for Drone Warfare

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I. Introduction

One day in September 2000, United States Air Force special operations pilot Scott Swanson was flying a Predator drone around a mud-walled compound in Afghanistan when he saw on his video screen a tall man in white robes that happened to be the FBI's most wanted terrorist at the time – Osama Bin Laden.[1] Swanson could not shoot him since Predator drones were not armed at the time, but the spotting was a driving factor in the development of armed Unmanned Aerial Vehicles (UAVs), commonly known as drones. [2] Since the attacks of September 11, 2001 and the declaration of war against terror, the United States government has been using drones for both surveillance on and lethal precision strikes against militant terrorists. With President Obama signing off on over 400 strikes from 2009 to 2013[4], he has called the use of drones an incredible success. Still, critics have begun to question drone-based warfare as the primary weapon of U.S. counterterrorism strategy, arguing that drones create terrorists, kill civilians, and violate international law. However, I assert that these concerns raised by critics are highly inaccurate and fail to consider the long-term benefits of drone warfare. I contend that drone strikes have been a successful counterterrorism mechanism due to their strike precision, cost efficiency, and ability to save lives of military personnel.

I argue both that drone critics are wrong and that drones successfully fight terrorism. As much of contemporary news and literature discusses the drawbacks and negative implications of drone warfare, in Section II I will first investigate and refute the following primary counterarguments against drones: (1) drones create more terrorists, (2) drones strikes kill and traumatize civilians, and (3) drone strikes violate international law. With each of these, I will first explain the reasoning behind the counterargument, and then proceed to argue why it is insignificant or invalid. Section III details my three reasons as to why drones have been successful in fighting terrorism. I assert that (1) drones have made the United States safer by killing thousands of militant terrorists with notable accuracy, (2) drone warfare is by far the least expensive counterterrorism weapon, accounting for less than one percent of Obama's 585 billion dollar defense budget in 2016,[5] and (3) the nature of drones allows them to be operated remotely, saving countless lives of military personnel. Finally, Section IV contains my concluding statements, in which I maintain that drone warfare has been extremely successful and is a net positive development in the war against terror.

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[1] Swanson 2014

[2] Sterio 2012, 197.

[4] Byman 2013, 32.

[5] Center for the Study of the Drone 2015.

II. Refuting Counterarguments – Why Drone Critics Are Astonishingly Wrong

    1. Drone Warfare Does Not Create Terrorists.

       The most pervasive argument against drone warfare is that drone strikes actually create more terrorists than they kill, as critics believe that civilians who fear drones and see terrorists killed by drones tend to join terrorist groups. For instance, retired Army lieutenant general Michael Flynn remarked that "when you drop a bomb from a drone… you are going to cause more damage than you are going to cause good."[6] Political analyst Abdul Ghani al Iryani has an even stronger view, stating that drone strikes could even account for a majority of terrorist recruits, since "the vast majority are people who are aggrieved by attacks on their homes that forced them to go out and fight."[7] Similarly, prominent drone critic Gregory Johnsen also argues that the strikes are driving recruits to terrorists organizations[8], and a joint study by Stanford and New York University Law Schools made comparable conclusions that drones "terrorize men, women, and children," warranting a "fundamental re-evaluation of current target killing practices." Critics also cite specific examples of the "Underwear Bomber," who attempted to bomb an American airplane in 2009[9], and the "Times Square Bomber," who tried to detonate a car bomb in 2010[10], as popular examples of terrorists who claimed to have been motivated by violence from drone strikes. These critics all primarily assert that fear and violence from drone strikes aids terrorist recruiting and makes drone warfare fundamentally counterintuitive to the global war against terror.

       There are many problems, however, with the argument that drone strikes create more terrorists. First and foremost, this "drones create terrorists" blanket theory is unfalsifiable since it is hard to prove or disprove in practice, and related literature shows that scholars have come to different conclusions about the validity of this theory. In fact, many studies have found opposite claims, such as research papers by Christopher Swift on Yemen[11] and by Christine Fair on Pakistan[12], which assert that there is no widespread blowback against the United States caused by drone warfare. [13] Even Audrey Cronin, author of "Why Drones Fail: When Tactics Drive Strategy," admits that "there is no conclusive evidence that can prove whether drone strikes create more enemies than they kill."[14] Furthermore, it turns out that

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[6] Perkins 2015, 277.
[7] Scahill 2012.
[8] Johnsen 2013, 264.
[9] Raghavan, 2012.
[10] Adams, 2010.
[11] Swift 2012.
[12] Fair 2015.
[13] Cortright 2015, 114.
[14] Cronin 2013, 51.

terrorist recruiting actually stems primarily from poverty, religious extremism, and repressive governments; a study done by Botha and Abdile found that most people join extremist groups for economic (27%), both religious and economic (25%), religious (15%), or forced (13%) reasons.[15] Accordingly, the case studies cited by critics are both controversial and hypothetical; even if they were true, the large, quantifiable number of terrorist militants killed by drones would overshadow the few terrorists that may have been created by drones.

The second problem with this counterargument on terrorist recruiting is that it contains logical fallacies and fails to address the next-best alternative to drones. Critics say that drones create more terrorists, but this claim is so broad and unquantifiable that it could be argued that any action the U.S. takes creates more terrorists. For instance, one could also argue that economic sanctions, intelligence warfare, or even homeland security increases foreign animosity against the U.S. and aids terrorist recruiting. Furthermore, critics fail to both (1) realize that the U.S. will always need military engagement (2) provide an alternative solution that doesn't "create more terrorists." For instance, Robert Pape, author of "The Strategic Logic of Suicide Terrorism," argues that policy should shift from active military engagement to homeland defense[16], but he fails to explain how homeland defense can replace, not just complement, military engagement. The reality is that the United States will always need military engagement to defeat terrorist leaders and deter imminent attacks. Any opponent who argues that drones are not necessary must also contend that the United States should allow terrorist safe havens in remote parts of Pakistan and Yemen. With the next best drone alternative of sending more "boots on the ground," drones are significantly superior since they don't cost American lives, have low civilian casualty rates, and are 5-18 times less expensive than manned aircraft.[17] Critics blatantly lack the ability to consider the larger picture when they cite the cost of drones as a reason not to use them and fail to realize that drones are one of the largest net positive developments in the war against terrorism.

Finally, I would like to address the case made by the post-2006 Army Marine Counterinsurgency (COIN) manual, perhaps one of the strongest counterarguments against drones and U.S. counterinsurgency strategy. The manual states that the issue with the approach against terrorism is that soldiers fighting insurgents fail to win over local support since they reside in comfortable environments and do not share security burdens with the native population;[20] drone critics then contend that this phenomenon is also an error for drone pilots, who operate remotely from air forces bases in Nevada. In addition, Jason Llyall and Isaiah Wilson argue in a study titled "Rage against the Machines" that "the modern military's force structure inhibits soldiers from assuming the same risks [that populations

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[15] Botha 2014, 5.
[16] Pape 2003, 356-357.
[17] Thompson 2013; Saletan, 2013; Byman 2013, 32.
[20] "Counterinsurgency" 2006, C-4.

face], making it harder to recruit reliable collaborators, compounding information starvation."[21] However, while these claims may be true for traditional military warfare, they are not true for drone warfare and actually bolster the case for drones. First, the reasoning behind the COIN manual is that local populations do not want to cooperate with soldiers since they live and act as superior human beings – for drones this does not apply since local populations do not compare themselves to drones and would not resent a drone for being a machine. The study also asserts that soldiers must defeat insurgencies by disrupting their "center of gravity," which comprises of safe havens, freedom of movement, logistic support, and recruiting;[22] drone warfare accomplishes all of these objectives since the unpredictability and fear of strikes inhibits the operations of terrorist organizations.[23] Pertaining to the arguments of Llyall and Wilson, I would first like to note that their study measured mechanization through soldiers per motor vehicle,[24] a unit that fails to account for the effectiveness of drone warfare. As their study emphasizes the need to fight information starvation, drone warfare does exactly so – surveillance drones are able to hover over and track targets for periods of time significantly longer than any spy team could.[25] Military research studies such as these may expose weaknesses of traditional warfare, but I contend that these studies only apply to soldiers that are used for nation building, not drones, which are used for targeted strikes. Ideally, the US could send troops to work in close coordination with locals in as a supplement to fighting terrorist militants with drones.

2. *Drones are Accurate and Keep Civilians Safe.*

The same critics of drone warfare who assert that drones create more terrorists often also argue that drone strikes are highly inaccurate and kill a large number of civilians. Though drone studies and statistics typically vary due to the confidential nature of the drone program, The Bureau of Investigative Journalism estimated that an astounding 380 to 801 civilians have been killed by inaccurate drone strikes from 2009-2015, with a civilian casualty rate (civilians killed as a fraction of total casualties) of somewhere from 14 percent to 29 percent.[26] In addition, a joint Stanford – New York University study found that even when drones are not firing missiles, they "terrorize men, women, and children, giving rise to anxiety and psychological trauma among civilian communities."[27] In fact, critics have even argued that the strikes are scaring local civilians so much that civilians have started the drones terrorism. Mullah Zabara, a tribal sheikh from southern Yemen, reflected on the terror caused by drones: "The U.S. sees al-Qaeda as terrorism, and we consider the drones terrorism.

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[21] Llyall 2009, 75.
[22] "Counterinsurgency" 2006, 3-13.
[23] Burke 2016; Ingersoll 2013; Byman 2013, 33; Byman 2015. See Section II, Subsection 1.
[24] Llyall 2009, 76.
[25] Finn 2012, 186.
[26] Serle, 2016.
[27] Stanford University and New York University 2012, 73.

The drones are flying day and night, frightening women and children, disturbing sleeping people. This is terrorism."[28] In addition, one U.S.-based scholar with firsthand experience argues that "drones wreck the positive views that people in places like Pakistan and Yemen have towards the U.S."[29] With a substantial and indisputable number of civilians killed by inaccurate drone strikes, critics contest that drones are not only ineffective but also immoral.

The first issue with the argument that drones have large civilian casualty rates is that critics fail to place these statistics in context of civilian casualty rates of other wars. As seen in *Table 1*, World War II civilian deaths were estimated to be 67 percent. In more recent wars, such as the Korean War, the Afghanistan War, and the Iraq War, civilian causality rates were respectively 70 percent, 31 percent, and 74 percent.

Table 1: Civilian Casualty Rates (Civilians Killed as a Fraction of Total Casualties) of World War II, Korean War, War in Afghanistan, Iraq War, and Drone Warfare.

	Military Casualties	Civilian Casualties	Civilian Casualty Rate
World War II	21 - 25 million	50 - 55 million	67%
Korean War	793,000	2,730,000	70%
War in Afghanistan	66,000	26,000	31%
Iraq War	39,900	134,000	74%
Drone Warfare	2,436-2,753	380-801	14% - 29%

Source: Spiegel 2000, 2204; Deane 1999, 149; Watson Institute for International & Public Affairs 2016; Iraq Body Count 2012; Serle 2016.

When viewed not just as a raw statistic, drone warfare is actually by far the most accurate form of warfare, with a 14 − 29 percent civilian casualty rate, compared to other wars that had an average rate of 50 percent civilian deaths. Drone proponent William Saletan remarked, "[Drones] are the worst form of warfare in the history of the world, except for all the others."[35] In addition, drone warfare is also safer than other alternative military engagement methods such as Bombings by F-16s or Tomahawk cruise missile salvos, since drones can loiter above targets for extended periods of time, striking at the ideal moment and minimizing civilian casualties.[36] With drones killing a fewer percentage of civilians than any other form of military engagement, they are not just the most effective counterterrorism weapon, but the only effective counterterrorism weapon.

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[28] Cohn 2014.
[29] Rezvani, 2016. "Fox Presentation Remarks."
[35] Saletan 2013.
[36] Byman 2013, 34.

As for the argument that drones scare and traumatize civilians, I contend that the opposite: drone strikes are carried out in collaboration with local governments and make civilians safer. Though it is often assumed that drone strikes are carried out against the will of foreign governments, it turns out that both Pakistani and Yemeni governments support U.S. drone strikes as a mechanism for fighting domestic terrorist threats. In Pakistan, former President Asif Ali Zardari said of drones: "…collateral damage worries you Americans. It doesn't worry me,"[37] while in 2013, former president Pervez Musharraf revealed his secret deal with the U.S. that authorized drone strikes when the Pakistani military was unavailable.[38] In Yemen, former president Ali Abdullah Saleh reported covered for U.S. drone strikes by telling the public it was the Yemeni air force,[39] while current president Abdu Rabbu Mansour Hadi publicly endorses drones, remarking that "they pinpoint the target and have zero margin of error."[40] Critics who often view drone strikes as secretive ploys with heavy collateral damage are wrong; drones are sanctioned by foreign governments and are more accurate than any military alternative. Finally, as for the counterargument that drones "wreck positive views towards the U.S.," I employ the refutation technique of "biting the bullet." While it may be true that uninformed populations dislike Americans because of drones, military engagement is absolutely necessary in deterring terrorist operations, and drones are more accurate than any other alternative. Furthermore, ending drone strikes would not fix the problem of anti-American sentiment, or as political science professor Avery Plaw stated, it is highly unlikely that "ending drone strikes would substantially reduce anti-Americanism in the Islamic world or put a dent in radical recruitment."[41] While drones may temporarily disrupt local populations, their role in deterring domestic terrorism is more important, and they actually protect citizens in the long run.

3. Drone Strikes are Legal Under International Law

The third pervasive argument against drone warfare claims that the strikes frequently violate both international laws; drone strikes do seemingly violate a large number of U.N. charters and war protocols. There is a first set of critics, who believe that the war against terrorism is like the "war on drugs" or "war on crime", and is not a true war. They turn to Article 2(4) of the U.N. charter, which states that U.S. targeted killings are only allowed if either the host state consents, or if killings are in self-defense "in response to an armed attack or imminent threat."[42] Stanford and NYU scholars then argue that Pakistani officials have declared that these killings are illegal, and that many drone strikes are not carried out with

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[37] Bhutto 2011.
[38] Robertson 2013.
[39] Byman 2013, 38.
[40] Bergen 2015, 274.
[41] Plaw 2012.
[42] Alston 2010, 12.

the purpose of self-defense. [43] The second set of critics who do admit to a war against terrorism look to the international wartime guidelines of *jus ad bellum*, contending that the precision strikes do not meet the requirements that the use of force is both necessary and proportionate. [44] For instance, Cornell scholar Andrew Orr asserts "al Qaeda's campaign against the United States does not trigger the right of self-defensive force…because al Qaeda has not launched a full scale military offense." [45] International law academic Milena Sterio also argues "because the CIA operates the drone program in Pakistan in secrecy, it is impossible to determine conclusively whether the program meets the proportionality requirement of *jus ad bellum*." [46] Global human rights organization Amnesty International also takes a comparable stance, condemning the civilian killing of Mamana Bibi and referring to the drone strikes as "unlawful killings that may constitute extrajudicial executions or war crimes." [47]

However, the argument that drones violate international law contains many flaws. First, the United States is quite clearly fighting a true war against terror, and is justified in using precision strikes to kill enemy leaders. President Bush declared the war against terrorism shortly after the 9/11 attacks, the U.S. has been in an armed conflict against terror ever since. [48] The Obama administration has further affirmed the global war against terror, specifying the enemies as "al-Qaeda, the Taliban, and associated forces." [49] In fact, the U.S. government has spent 1.778 trillion dollars between 2001 and 2017 fighting Islamic extremist militants "until every terrorist group of global reach has been found, stopped, and defeated." [50] So for critics such as Sterio who claim that the US is merely "chasing terrorists," [51] I suggest they reach out to and assert their views on the 2,977 victims who died in the 9/11 attacks [52], 4,500 soldiers killed in the Iraq War, 2,100 soldiers killed in the War in Afghanistan, and 2.5 million members of the Army, Navy, Marines, Air Force, Coast Guard, and National Guard deployed against terror. [53] Critics who downplay the war on terror for the sake of argumentation fail to understand the extent to which the U.S. military has fought Islamic militants, and consequently their "not a true war" and related UN charter arguments are at best an interesting school of thought, at worst entirely invalid. And even under their cited UN Charter requirements, drones can be justified by both host-state consent and self-defense. Pakistan, Somalia, and Yemen have consented to U.S. drone warfare, [54] and killing terrorist

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[43] Stanford University and New York University 2012, 106.
[44] Ratner 2002, 907.
[45] Orr 2011, 737,
[46] Sterio 2012, 204.
[47] Amnesty International 2013.
[48] Vogel 2010, 107.
[49] Koh 2010.
[50] Amadeo 2016.
[51] Sterio 2012, 204.
[52] CNN Library 2016.
[53] Adams 2016.
[54] Foust 2012, 3.

militants threatening the United States is legal under the international law of anticipatory self-defense, as seen in the Caroline Doctrine, UN Charter Article 51.[55]

In addition, I contend that drone warfare does indeed satisfy the requirements of necessary and proportionate clauses of the *jus ad bellum* guidelines. To satisfy the "necessary" element of *jus ad bellum,* Sterio says "a state resorting to force must prove its decision to resort to such force was a result of an armed attack and necessary to respond to such attack."[56] Under her own definition, terrorists first attacked the United States on September 11th 2001, and the U.S. has indeed been fighting to deter and defeat terrorism since 2001[57]. As for the "proportionate" component, Sterio states that the secretive nature of the drone program does not allow for proof of "use of force proportionate to military campaign's objective."[58] However, I disagree, as the military selects targets through robust procedures that find them legitimate only if they are belligerent members of an enemy group in a war with the United States,[59] and it would be against U.S. interests for the government to reveal the extent of and information pertaining to their knowledge of specific terrorists. In addition, government secrecy is weak contention since conspiracy or unsubstantiated corruption could be used as a blanket argument against any action any government choses to take.

III. Why Drones Successfully Fight Terrorism

1. The Strike Precision of Drones allows them to Decimate Terrorist Groups

First, I assert that the technical abilities of drones make drone warfare outstandingly precise and effective, allowing drones to decimate terrorist groups. The two primary types of drones, pure surveillance drones and attacking drones, both have unique technical advantages that allow them to effectively fight terrorism.[60] Surveillance drones are typically used in reconnaissance missions, where they circle around targets for many hours and collect data for months, often outstripping the amount of intelligence that a manned spy team could gather.[61] Offensive drones use this surveillance to employ targeted killing, in which specific terrorists are identified, targeted, and killed. Compared to manned aircraft strikes, in which pilots are miles in the sky and only have instrumental data, all drones have live situational awareness, allowing them to pinpoint targets and strike terrorist militants at ideal times.

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[55] Guiora 2008, 1.
[56] Sterio 2012, 203.
[57] Vogel 2010, 107.
[58] Sterio 2012, 204.
[59] Koh 2010.
[60] Anderson 2013, 16.
[61] Finn 2012, 186.

With such technical advantages, it becomes obvious how the Obama Administration has used drones so effectively in the war against terror. According to the Bureau of Investigative Journalism, the most updated source on drone warfare and casualties, drones have killed 2,075 – 3,005 terrorists in Pakistan, 2,111 – 2,708 terrorists in Afghanistan, 516 – 747 terrorists in Yemen, and 231 – 408 terrorists in Somalia.[62] Among these terrorists, which included passport forgers, bomb makers, recruiters, and fundraisers, were over 50 senior leaders of al-Qaeda and the Taliban. In fact, al-Qaeda's second-ranking figure, Atiyah Abd al-Rahman, was killed in the Waziristan region of Pakistan by a drone operated by the CIA.[63] Though Osama Bin Laden was killed by a Navy SEAL raid and not a drone strike, it turns out that drones also played a crucial role in his assassination, as high-resolution video recording of the compound he was hiding in was captured by a stealth drone aircraft known as the RQ-170 Sentinel,[64] providing a "secret and vital piece of the intel puzzle."[65] In terms of both low-ranking terrorists and the most important extremist leaders, drones have played a crucial role in directly decimating terrorist populations.

Not only do drones directly kill terrorist militants and leaders, but the threat of drone strikes also undercuts recruiting and communication abilities of extremist organizations. In fear of armed U.S. drones, Bin Laden warned his negotiators not to leave their houses "except on a cloudy overcast day,"[66] and a tip sheet found among jihadists in Mali revealed that militants were advised to "avoid gathering in open areas."[67] As such, drone strikes effectively prevent large scale new-recruit training, as leaders do not want to risk the possibility of a strike wiping out an entire group of new recruits.[68] In terms of communications, terrorist groups are also hindered in that they cannot use technological devices in fear of drones tracking their location. For instance, militants are often advised to avoid drones by maintaining "complete silence of all wireless contacts," and some top terrorist leaders have become so scared of drones that they don't use any form of technological communications equipment at all.[69] These accounts of terrorist advice and anecdotes show that drones drastically hinder the operations of terrorist networks in addition to killing terrorist militants.

Though the numbers and case examples of terrorist deaths are typically undisputed, critics nonetheless attempt to downplay the effectiveness of drone warfare. One of the most commonly cited counterarguments is the position of critics such as Council of Foreign Relations policy scholar Micah Zenko, who argue that killing one terrorist leader merely means

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[62] The Bureau of Investigative Journalism, 2016. The U.S. government has not recently released statistics pertaining to their drone programs.
[63] Mazzetti 2011.
[64] Miller 2011.
[65] Darack 2016.
[66] Burke 2016.
[67] Ingersoll 2013.
[68] Byman 2013, 33.
[69] Byman, 2015.

that another will rise to take his place.[70] Conservative writer Kristofer Steven has even started calling drone warfare a "high-tech game of whack-a-mole," observing that "ISIS is still chugging along" despite drone killings.[71] However, it turns out that this theory only holds true for larger recognized entities such as nations; captured communications have revealed that extremist groups actually have substantial trouble finding qualified operational commanders since there are so few of them.[72] In addition, a study of leadership decapitation found that "terrorist groups that suffer the loss of their top leaders are far more likely to collapse than groups that do not."[73] In reality, when terrorist leaders are killed, extremist organizations face extraordinary setbacks in terms of structure and leadership, as even Bin Laden himself worried about "the rise of lower leaders who are not as experienced, and this would lead to the repeat of mistakes."[74] Critics who downplay the effectiveness of drone warfare fundamentally misunderstand the nature of terrorist networks and fail to recognize the impact of drone warfare in deterring terrorist operations.

2. Drones are Outstandingly Cost-Effective in Fighting Terrorism

My second and perhaps most straightforward contention asserts that drones are an exceptionally cost-effective form of warfare against terror, compared to both manned aircraft and "boots on the ground." First, drones are much less expensive in terms of cost per flight hour compared to manned aircraft with similar functions. The two most common drones, the MQ-1B Predator and the MQ-9A Reaper, cost only $3,679 and $4,762 to operate per flight hour, while the most common military fighters, the F-16C Viper, F-15C Eagle, and F-35A Lighting II cost approximately $22,514, $41,921, and $42,169 per hour, and the most common bombers, the B-1B Lancer Bomber and B-52H Stratofortress, cost $57,807 and $67,005 per hour (*Figure 1*). As such, drones are actually anywhere from 5 to 18 times less expensive than their comparable alternatives.

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[70] Shane 2015.
[71] Harrison 2016.
[72] Anderson 2013, 18.
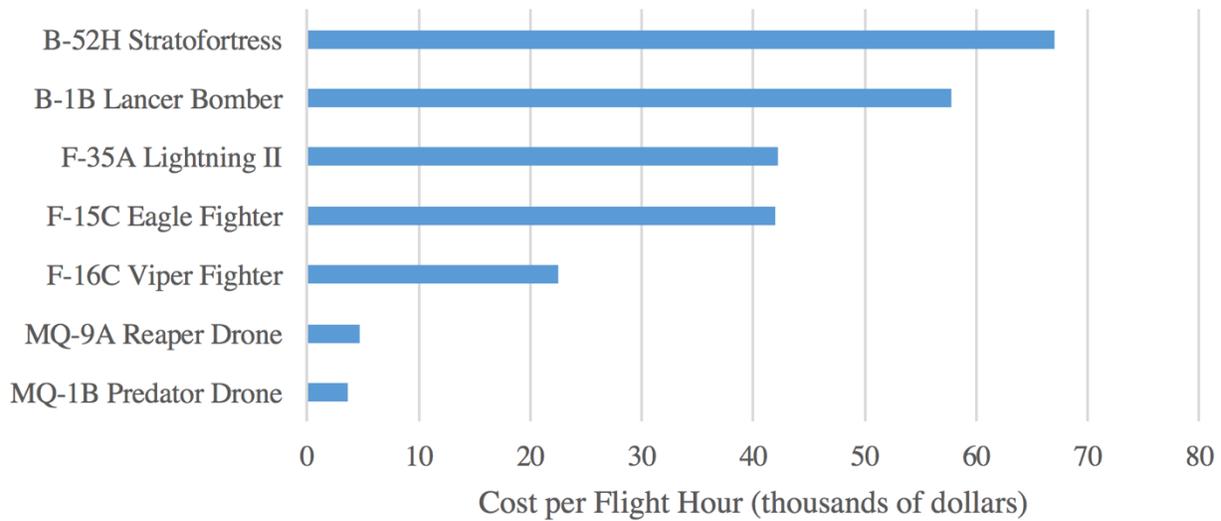[73] Staeheli 2010, 14.
[74] Schmitt 2012.

Figure 1. Cost per Flight Hour of Drones, Military Fighters, and Military Bombers.
Source: Thompson 2013; Drew 2016.

Drone warfare is not only less expensive than manned aircraft, but it is also cheaper than the other military alternative, "boots on the ground." In 2014, the cost per service member deployed to Afghanistan was 2.1 million dollars.[75] In addition, there are also medical expenses for veterans and those wounded in the battlefield, costs that are nonexistent for drone warfare. From 2004 to 2009, the US government spent $8,300 per patient on first year PTSD treatment, $13,800 per patient on first year Traumatic Brain Injury treatment, and $136,000 per patient on first year polytrauma treatment.[76] In total, future medical costs of the 2.5 million veterans[77] from the Iraq and Afghan missions are estimated to be $836.1 billion,[78] or $334,000 per veteran. Now in terms of the cost of drones, the Department of Defense plans to spend 4.483 billion dollars on drones in 2017;[79] given that this number stays the same, just the medical costs of Iraq and Afghan veterans would be enough to fund the drone warfare program for the next *186* years. In fact, even though drones are often described as "Obama's weapon of choice," they accounted for less than one percent of Obama's 585 billion dollar defense budget in 2016.[80] In other words, the Obama Administration's primary counterterrorism policy is funded by less than one percent of military spending.

Despite these statistics, critics may pose several counterarguments against the cost-effectiveness of drones. At first glance, skeptics may try to claim that drones actually have

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[75] Harrison 2013.
[76] Congressional Budget Office 2012.
[77] Ifill 2014.
[78] McLean, 2014.
[79] Gettinger 2016.
[80] Center for the Study of the Drone 2015.

hidden costs of operation due to remote ground station costs. However, I refute this claim by referring to my cost per flight hour figures, which actually include this significant infrastructure requirement.[81] Others may contend that manned military aircraft may have more military capacities and drop more destructive bombs, but this argument is also flawed. First, having larger bombing capacities may mean more deaths, but many of those deaths are likely civilians, since manned aircraft cannot loiter and wait for the target to be isolated like drones can.[82] In addition, the U.S. government spent $9.7 billion on the F-35 Joint Fighters program alone,[83] more than twice the budget of drones. Yet drone warfare, not the F-35 Joint Fighters program, is the Obama Administration's main counterterrorist weapon. Finally, some may argue that the United States is a wealthy country and can afford to spend extravagant amounts of money on their military. While this may be true, I want to bring to light that al-Qaeda spent five-hundred thousand dollars executing the 9/11 attacks, and in response the U.S. spent 3.3 trillion dollars the next decade fighting terrorism. [84] Based on this figure, the U.S. government spent 7 million dollars for every dollar al-Qaeda spent, an extremely disproportionate amount that I would argue is not consistent with U.S. economic interests. Regardless of any tangentially related counterarguments that critics may cite, I contend that the drone program is so cost-effective that even if it doubled in price, it would still be significantly cheaper than manned aircraft or boots on the ground.

3. Drones save Lives of American Military Personnel

Finally, one of the greatest militaristic and moral successes of drones is their ability to save the lives of American military personnel. By definition, drones are operated remotely, as most drones are deployed from air bases in Afghanistan and Pakistan but controlled by pilots at home in the United States.[85] Because pilots are not actually near the battlefield sites, they are at no risk of dying, regardless of whether drone missions are successful. U.S. troops are thus able to avoid profound risks such as firefights with tribal communities, land mines, explosive devices, snipers, and suicide bombers, and even attack terrorists in areas that are distant and environmentally unforgiving.[86] In addition, drones also save American lives in situations where there are both drones and boots on the ground. Because remote pilots can fly drones low without fear of death and study targets carefully instead of reacting in the heat of the moment,[87] U.S. troops are "three times safer from friendly fire attacks when deployed in war zones covered by drones compared with traditional warfare."[88] The benefits of allowing the United States military to fight terrorism from home are typically undisputed;

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[81] McLean, 2014.
[82] Byman 2013, 33.
[83] National Priorities Project 2011.
[84] Carter 2011.
[85] Bergen 2011, 13.
[86] Obama's Speech on Drone Policy, 2013.
[87] Saletan 2013.
[88] Weiner 2014.

because the U.S. government has a moral obligation to save the lives of military servicemen and women, it should use drone strikes whenever possible.

Though critics typically do not disagree with the concept of saving American military personnel, they usually disagree with the implications of fighting terrorism from home. One of the main arguments against fighting terrorism remotely is that pilots may start to see war through a "Playstation mentality,"[89] or as Army Chaplain Keith Shurtleff remarked, "as soldiers are removed from the horrors of war and see the enemy not as humans but as blips on a screen, there is a very real danger of losing the deterrent that such horrors provide." These critics argue that since it has become so much easier to fight terrorism, drone pilots become disconnected and are more likely to engage in unnecessary wars. However, while this argument could be valid, it turns out that this video game mentality theory is simply false. First, even though drone pilots reside in the U.S., they follow their targets for extended periods of time, tracking daily, intimate patterns in order to gather data and determine the ideal moment to strike.[90] In fact, Scott Swanson, the first drone pilot to kill a target with a Hellfire missile from a Predator drone described, "Mentally, the pilot is inside a Predator, though the drone is half a world away. Emotionally, he is at war."[91] Furthermore, much of the professional military also finds this claim bizarre, as it fails to account for other methods of military warfare. They note that manned aircraft pilots often attack from miles above the surface looking at coordinates on a tiny screen, and sailors typically fire cruise missiles from the below-decks of a ship, with no awareness of targets hundreds of miles away.[92] Because drones allow the U.S. to kill terrorist militants without risk of losing soldiers, drone warfare is not only the most efficient and most economical method of fighting terrorism, but the safest method of fighting terrorism.

IV. Closing Statements

This paper has both refuted anti-drone arguments and asserted why drones work. Critics of drones are wrong because drone warfare does not create terrorists, drone strike civilian casualty is low, and drones strikes do not violate any international laws. In addition, drone warfare has been successful in fighting terror because the strike precision of drones allows them to decimate terrorist groups, drones are a cost-efficient method of fighting terrorism, and drones strikes save the lives of American military personnel. By weighing the costs and benefits of drone warfare, it becomes apparent that drones have been outstandingly effective in deterring terrorist attacks and defeating extremist organizations.

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[89] Kravets 2014.
[90] Anderson 2014, 17.
[91] Swanson 2014.
[92] Anderson 2014, 16.

As our global economy is progressing technologically, the Obama administration has continued to employ precision drone strikes despite critical claims, and it is becoming increasingly important for the United States to maintain its role as a leader in remote technology warfare. The use of drone strikes has become a large part of our country's anti-terrorism strategy and will most likely continue to grow. Once critics of drones can reconcile with the long-run benefits of drone warfare, drone warfare as well as policy can be expanded to play a larger role in fighting extremist organizations. Though the war against terrorism has not been smooth or easy, the development of drone warfare has given us a substantial advantage in combatting terrorist militants and will potentially help us defeat terrorism permanently.

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