# UVU SECURITY REVIEW

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The *UVU Security Review* is Utah's first student-edited academic journal focused on national security issues. The *Review* is published twice annually—in April and December—and it is supported by the Center for National Security Studies (CNSS) at Utah Valley University (UVU). The *Review* publishes timely, insightful articles on critical national security matters, including topics relating to foreign affairs, intelligence, homeland security, terrorism, and national defense. The *Review* accepts articles from UVU students, alumni, faculty, staff, and administration. Submissions should be sent to the *Review* Editor-in-Chief at nationalsecurity@uvu.edu.

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The CNSS at UVU was established in January 2016. The Center is the first of its kind in the State of Utah. The CNSS is a nonpartisan academic institution for the instruction, analysis, and discussion of issues related to the field of US national security. The mission of the CNSS is twofold: to promote an interdisciplinary academic environment on campus that critically examines both the theoretical and practical aspects of national security policy and practice; and to assist students in preparing for public and private sector national security careers through acquisition of subject matter expertise, analytical skills, and practical experience. The CNSS aims to provide students with the knowledge, skills, and opportunities needed to succeed in the growing national security sector.

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## A Note from the Editor-in-Chief

I have been extremely grateful to work on the *UVU Security Review* this semester. It was an honor to be asked to lead this publication. I have had opportunity to reach out to many renowned practitioners in the security field and it broadened my horizons; these authors write about so many different topics, but all are of extreme importance to our society. These thought-provoking pieces will bring great discussion and information to those reading.

I would like to thank the many people who have worked with me to help this journal be what it is today. To my executive editor, Sam Peterson, and managing editor, Mitchell Kleinsmith, along with my content editors, thank you for your time and effort in helping support this journal. Thank you to my other managing editors, Katie Lewis and Addison Gardner, who, with Deb Thornton and their team of editors, spent so much of their time and energy on helping source check, copy edit, typeset, and so much more. This truly would not have been possible without each and every one of you. Thank you to faculty member, Mike Smidt, who assisted me in finding wonderful authors to publish and guiding the journal to where it is today.

Publishing the *UVU Security Review* is an experience I will never forget, and I am forever appreciative of the time I had and the people I met during this process. I hope every reader is able to enjoy this edition as much as I have.

Rebekah Bushlaev
Editor-in-Chief

# The Issues Autonomy Presents to the Principles of War

*Ben Udall*

Imagine your life being put in the hands of a robot. Many might warm up to the idea of a world run by robots, especially considering recent advancements in transportation technology and artificial intelligence (AI) in our homes. However, a weapons system that is entirely operated by itself with no oversight from anyone might not keep that warm feeling going. Think for a minute what a world like that would look like. What if the robots make a mistake? Would nuclear war be inevitable? Would an artificial defense system take into consideration the difference between a civilian and a combatant? These are questions being asked in the international community as the race for AI weapon supremacy continues. With the rise of China and its continued disregard for international law, cooperation, and morals, it seems a future with AI is inevitable. In fact, artificial intelligence and machine learning are already prevalent in our military defense systems. The first question the AI situation poses is whether artificial intelligence will be required to have human oversight of its actions? Secondly, if there is no human oversight/control, what issues does that raise for the law of armed conflict (LOAC)? This paper will discuss autonomous weapons, the challenge they present to the fundamental principles in the law of war, and what could potentially be done about it.

## Autonomous Weapons

Autonomous weapons as defined by the United Nations, US Department of Defense, International Committee of the Red Cross (ICRC), and Human Rights Watch are "weapon systems that, once activated, can select, and engage targets without further intervention by a human operator. The important element is that the robot has an autonomous 'choice' regarding the selection of a target and the use of lethal

force."[1] Autonomous technology is something that humans know very little about. Machine learning and its ability to adapt and grow its knowledge is incredible and alarming. Because of our militarily capable autonomous defense systems, it can be enticing to develop and use autonomous offensive systems. Some of our AI capabilities are outlined in a Congressional Research Service statement by Kelley M Saylor, who explains that

> narrow AI is currently being incorporated into a number of military applications by both the United States and its competitors, including but not limited to intelligence, surveillance, and reconnaissance; logistics; cyber operations; command and control; and semi-autonomous and autonomous vehicles. These technologies are intended to either augment or replace human operators, freeing the operators for more complex and cognitively demanding work. In addition, AI-enabled systems could both react significantly faster than systems that rely upon operator input and cope with an exponential increase in the amount of data available for analysis. AI could also enable new concepts of operations, such as swarming . . . that could confer a warfighting advantage by overwhelming adversary defensive systems.[2]

Autonomous weapons must abide by the law of armed conflict. However, because of the nature of autonomy and its ability to create its own decisions, we see questions being raised as to who would be held responsible if automated weapons systems mistakenly broke international law. Of course, any weapons system would have to abide by the law of armed conflict, but will autonomous weapons have the capability to follow all the rules outlined in our customary legal precedents?

## Distinction

Distinction is undoubtedly the biggest hurdle autonomous weapon

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1. Christof Heyns, "Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions," United Nations General Assembly, April 9, 2013, para. 38 (7–8), https://www.ohchr.org/sites/default/files/Documents/HRBodies /HRCouncil/RegularSession/Session23/A-HRC-23-47_en.pdf.

2. Kelley M. Sayler, "AI, UAVs, Hypersonics, and Autonomous Systems: Emerging Technologies and EuroAtlantic Security," January 22, 2020, Congressional Research Service, 30, https://www.congress.gov/116/chrg/CHRG-116jhrg39690 /CHRG-116jhrg39690.pdf.

systems have to jump in the LOAC. All other principles in the LOAC are moot if autonomous weapons cannot target and distinguish successfully. If we cannot have an autonomous system that successfully distinguishes, then it cannot legally operate in war. Distinguishing friend from foe is something even humans struggle with. Paul Scharre writes in his book *Army of None* about a very complex and confusing firefight he was involved in during his time in Iraq. He explains,

> During the entire year I was in Iraq I was never once in a situation where I could look down my rifle and say for certain that the person I was looking at was an insurgent. An autonomous weapon could certainly be programmed with simple rules, like 'shoot back if fired upon' but in confusing ground wars, such a weapon would guarantee fratricide.[3]

Article 48 of protocol 1 in the Geneva Conventions explicitly states,

> In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.[4]

A human's ability to distinguish between a civilian, combatant, a soldier surrendering, or an incapacitated enemy is what separates us from the machines. Our intuition or "gut feeling" if you will, allows us to perceive situations or make decisions that a robot never could. I try to imagine a robot trying to identify threats walking the streets of Afghanistan where Taliban members dress the same, look the same, and talk the same as every other citizen. Being able to successfully identify a threat and then distinguish what the best solution to that threat would be, while keeping in mind the principle of proportionality, is something even humans can have a hard time doing.

The principle of distinction can oftentimes be confusing, and there is no possible way to program code into an autonomous system to have

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3. Paul Scharre, *Army of None: Autonomous Weapons and the Future of War* (New York, W. W. Norton, 2019), 255.

4. United Nations, *V: Protocol Additional to the Geneva Conventions of 12 August 1949*, June 8, 1977, 264, https://www.un.org/en/genocideprevention/documents /atrocity-crimes/Doc.34_AP-I-EN.pdf.

a perfect answer for every situation. The main issue we see with autonomous weapons is their ability to distinguish between what is targetable and what is not. When an autonomous drone or radar system sees a human being in a combat zone, it cannot always accurately determine whether that human being is a combatant. It can tell what direction they are going in and how fast they are moving; it can even scan their face and search databases for a match, but it cannot determine their intention. This is the main issue I have with artificially intelligent machines.

Another hurdle autonomous weapons will have to consider is the principle of *hors de combat*. The Geneva Conventions state that a person is *hors de combat* if he or she is "(a) in the power of an adverse Party (b) he clearly expresses an intention to surrender, or (c) he has been rendered unconscious or is otherwise incapacitated by wounds or sickness, and therefore is incapable of defending himself."[5] Autonomous weapons being able to distinguish between soldiers who want to surrender or soldiers who are incapacitated is simply not possible yet. It is clear that autonomous systems do not have the capability to know someone's intentions whereas a commander can use his intuition to know if someone is going to surrender or give up. Scharre gives the following example:

Consider the Korean DMZ. There are no civilians living in the DMZ, yet fully autonomous anti-personnel weapons could still face challenges. North Korean soldiers crossing the DMZ into South Korea could be surrendering. People crossing the DMZ could be refugees. Soldiers guarding heavily armed borders might assume anyone approaching their position from enemy territory is hostile, but that does not absolve them of the IHL requirements to respect *hors de combat* and the principle of distinction. If an approaching person is clearly a civilian or a surrendering soldier, then killing that person is illegal.[6]

They are really good at what they do—sometimes better than humans—but they do not have the ability to distinguish. Human instinct cannot be programmed. Human instinct gives us the ability to distinguish friend from foe and right from wrong. It is the gut feeling we get in any given situation. You cannot program a gut feeling.

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5. United Nations, *V: Protocol*, 259.
6. Scharre, *Army of None*, 260.

## Proportionality

Proportionality is the mutualistic understanding in the law of war that each nation need not use excessive force in order to achieve its goals. In the simplest definition, proportionality means that protected persons need not be harmed unless absolutely necessary. Proportionality allows for the protection of noncombatants and ensures that both sides of a conflict must treat each other's citizens with respect. Proportionality goes back to the eighteenth century with the introduction of a more civilized relationship between civilians and their rulers.

The development of the concept of proportionality is inexorably linked to the Enlightenment of the eighteenth century and the notion of the social contract. These new developments viewed the relationships between citizens and their ruler in an entirely new light: It was the citizens who provided their ruler with powers—limited powers—and those powers were granted only if they would be used for the people's benefit, not the ruler's. These notions were echoed in the law.[7]

An example of proportionality could be an attack on a city that has enemy combatants hiding among civilians. If you bomb the entire city and kill hundreds of civilians in the process, that would be a violation of the principle of proportionality. For something to be proportional, there needs to be a reasonable argument for significant military advantage. For example, if Osama bin Laden was walking through a civilian-populated city, and a drone strike was performed to kill him, and ten civilians died in the crossfire, many would argue that those deaths are proportionate because of the value of the target. Because of the importance of civilian lives in wartime, there will always be a Judge Advocate General (JAG) officer to give the green light on whether operations fall within legal parameters and assess the proportionality of any given situation. In AP 1 article 85 (3) of the Geneva convention, it explains "launching an indiscriminate attack affecting the civilian population or civilian objects in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects is a grave breach"[8]. The principle of proportionality has been changed

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7. Aharon Barak, *Proportionality: Constitutional Rights and Their Limitations*, trans. Doron Kalir (Cambridge: Cambridge University Press, 2012), 175, https://doi .org/10.1017/CBO9781139035293.010.

8. United Nations, *V: Protocol*, states, "In addition to the grave breaches defined in Article 11, the following acts shall be regarded as grave breaches of this Protocol,

and constructed into law through the Geneva Conventions. We see evidence of this principle being used in international armed conflicts (IAC) and even non-international armed conflicts (NIAC). Regardless of nationality or conflict, those who use excessive force during times of armed conflict can be held responsible for their actions in an international court of law.

## Military Necessity

Military necessity grants armed forces the right to use any means they deem necessary to withhold their military strategy as long as it is within the parameters set forth in international law. ICRC cites Article 52 of the Geneva protocol 1:

1. Civilian objects shall not be the object of attack or of reprisals. Civilian objects are all objects which are not military objectives as defined in paragraph 2.
2. Attacks shall be limited strictly to military objectives. In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose, or use make an effective contribution to military action and whose total or partial destruction, capture, or neutralization, in the circumstances ruling at the time, offers a definite military advantage.
3. In case of doubt, whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used.[9]

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when committed willfully, in violation of the relevant provisions of this Protocol, and causing death or serious injury to body or health: (a) making the civilian population or individual civilians the object of attack; (b) launching an indiscriminate attack affecting the civilian population or civilian objects in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a) (iii); (c) launching an attack against works or installations containing dangerous forces in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a) (iii); (d) making non-defended localities and demilitarized zones the object of attack; (e) making a person the object of attack in the knowledge that he is hors de combat; (f) the perfidious use, in violation of Article 37, of the distinctive emblem of the red cross, red crescent or red lion and sun or of other protective signs recognized by the Conventions or this Protocol."

9. United Nations, *V: Protocol*, 266.

Autonomous weapons could easily be argued as a military necessity when it comes to defense, seeing that defending oneself from a missile attack does not put anyone else in danger. However, autonomous weapons used as means of targeting, identifying, and eliminating enemies without someone in the loop puts military necessity at risk.

## Humanity

The Principle of Humanity, otherwise known as Unnecessary Suffering, is one that almost all countries agree on. With the ban of chemicals and other inhumane weapons, we see a general consensus about what weapons should not be used in warfare. Additional Protocol 1, article 35 of the Geneva Convention states:

1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.
2. It is prohibited to employ weapons, projectiles, and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.
3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.[10]

In terms of autonomous weapons and how the international community views them, we see a growing concern that AI and autonomy could be a major threat to all. However, this shares little issue with the principle of humanity because there is a consensus about what weapons cannot be used. The problem does not reside with the weapon choice, it resides with the carrier or mechanism of injury that autonomous weapons can provide.

## The Issue

It is highly dangerous to be developing fully autonomous weapons because weapons and machines are not capable of valuing life. If we do not have a human in the loop, then we are at the mercy of whatever programming and learning the AI system has. This creates a gray area of responsibility. Who do we need to hold accountable in the event of a breach in the law of armed conflict? Because of the nature of Artificial Intelligence and its ability to adapt and discern for itself, it raises the question of who is to be held accountable in the event of a mistake. Is the software company to be held accountable in court? What about the

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10. United Nations, 258.

manufacturer of the parts? Or maybe it should be the military? These are questions currently unanswered on the world stage and could easily be addressed in the law of armed conflict with new legal precedent.

A *Washington Post* article recounts the terrible story of US autonomous weapons systems mistaking British pilots for enemy missiles:

> In March 2003, just days after the invasion of Iraq by the United States and its allies began, British air force pilot Derek Watson was screaming over the desert in his Tornado fighter jet. Watson, a squadron commander, was returning to Kuwait in the dead of night after bombing targets in Baghdad. Another jet, crewed by Kevin Main and Dave Williams, followed behind. Twenty thousand feet below, a U.S. Army Patriot missile battery's computer picked up one of the two jets and decided it was an enemy missile flying straight down toward it. The system flashed alerts in front of its human crew, telling them they were in danger. They fired. Watson saw a flash and immediately wrenched his plane to the right, firing off flares meant to distract heat-seeking missiles. But the missile wasn't targeting him. It shot up and slammed into Main and Williams's plane, killing them before they had time to eject.[11]

Even with a human being on the loop, accidents can still happen. Imagine there was not a human in the loop, and the weapons system detected an incoming missile from a foreign country, but instead of shooting the plane down with an anti-ballistic missile, it calculated that a counter strike would be necessary and fired nuclear warheads. An accident at that level is something the world cannot afford. Nuclear-capable systems should never be granted autonomy. Radar tracking is sufficient and will give enough time to the humans on the loop to make a decision. Even self-defense technologies, as we have seen from the

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11. Gerrit De Vynck, "The U.S. Says Humans Will Always Be in Control of AI Weapons. but the Age of Autonomous War Is Already Here," *Washington Post*, August 13, 2021. https://www.washingtonpost.com/technology/2021/07/07/ai-weapons-us-military/. The Pentagon says a ban on AI weapons is not necessary. But missiles, guns and drones that think for themselves are already killing people in combat and have been for years. Patriot missile crews were warned about operating on autonomous mode, but it took another friendly-fire incident almost two weeks later, when the system shot down and killed US Navy F-18 pilot Nathan Dennis White, for strict rules to be put in place that effectively stopped the missile batteries from operating for the remainder of the war.

previous quotation, can kill innocent men and women.

Fear of future AI warfare is not a concern that only I share; there are many who feel the ominous advancements of autonomous warfare. A Human Rights Watch article explains:

> Since 2013, a total of 97 countries have publicly elaborated their views on fully autonomous weapons in a multilateral forum. They have expressed a wide array of serious ethical, legal, operational, proliferation, moral, and technological concerns over removing human control from the use of force. Two-thirds are among the 125 High Contracting Parties ("states parties") to the Convention on Conventional Weapons. Most participated in CCW meetings on lethal autonomous weapons systems in 2014–2019. Their active engagement in the CCW talks on killer robots demonstrate growing awareness of and concerns about removing human control from the use of force. There is widespread acknowledgment that technological developments are enabling militaries to incorporate autonomy into weapons systems. China, Israel, Russia, South Korea, the United Kingdom, and the United States are investing heavily in the development of various autonomous weapons systems, while Australia, Turkey, and other countries are also making investments."[12]

If we look at the legality of the issue it comes down to distinguishability first. According to a statement published by the ICRC,

12. "Stopping Killer Robots," Human Rights Watch, August 10, 2020, https://www.hrw.org/report/2020/08/10/stopping-killer-robots/country-positions banning-fully-autonomous-weapons-and. At the Human Rights Council in May 2013, the United States said that lethal autonomous weapons systems raise "important legal, policy, and ethical issues" and recommended further discussion in an international humanitarian law forum.[263] A 2012 Department of Defense policy directive on autonomy in weapons systems was renewed without substantive amendments in 2018 for another five years[264]. The policy permits the development of lethal autonomous weapons systems, but the US insists that "it neither encourages nor prohibits the development of such future systems" [265]. The US is investing heavily in military applications of artificial intelligence and developing air, land, and sea-based autonomous weapons systems. In August 2019, the US warned against stigmatizing lethal autonomous weapons systems because, it said, they "can have military and humanitarian benefits" [266]. The US regards proposals to negotiate a new international treaty on such weapons systems as "premature" and argues that existing international humanitarian law is adequate [267]. The US participated in every CCW meeting on killer robots in 20142019.

The core legal obligations for a commander or operator in the use of weapon systems include the following: To ensure the distinction between military objectives and civilian objects, combatants and civilians, and active combatants and those *hors de combat*; to determine whether the attack may be expected to cause incidental civilian casualties and damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated, as required by the rule of proportionality; and to cancel or suspend an attack if it becomes apparent that the target is not a military objective or is subject to special protection, or that the attack may be expected to violate the rule of proportionality, as required by the rules on precautions in attack.[13]

It is clear that autonomous weapons just simply do not have the capability to know the difference between combatants and civilians, weigh the consequences of attacking objects and towns, or and be able suspend an attack if it becomes apparent that a target is not a military objective. These are all rules under the principle of proportionality. These are huge issues that have even bigger consequences if they are not solved correctly. Many nations are currently developing and deploying autonomous weapons systems, so the issue continues to grow and become more complex.

## Potential Solution

Many argue for a complete ban on developing autonomous weapons. However, I believe that there are benefits to autonomy that would be sorely missed if a ban was put in place. There are some potential uses "where fully autonomous weapons would be both militarily valuable and capable of conforming to the requirements of international humanitarian law." For example, "not every battlespace contains civilians" and "fully autonomous weapons could be used lawfully under 'limited circumstances.' . . . Regulations could come in the form of a legally binding instrument or a set of gradually developed, informal

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13. ICRC, "Autonomous Weapon Systems Under International Humanitarian Law," January 31, 2018, https://www.icrc.org/en/document/autonomous-weapon-systems-under-international-humanitarian-law; Neil Davison, "A Legal Perspective: Autonomous Weapon Systems under International Humanitarian Law, " ICRC, https://www.icrc.org/en/download/file/65762/autonomous_weapon_systems_under_international_humanitarian_law.pdf.

standards."[14] I believe nations will develop these weapons regardless of what limitations there may be in the law. Therefore, I think the better approach would be to amend our customary law known as the law of armed conflict. We can do this either through additional protocols in the Geneva Conventions or a unilateral treaty agreed to by all member states. Similar to how the Nuremberg trials set a legal precedent, this new standard of law will set an autonomous weapons precedent for all nations to look to. This precedent, if agreed upon by the majority of nations, will set a similar precedent and make countries think twice about employing autonomous weapons systems in warfare. Artificial intelligence and autonomy are still very new. We do not know their full capabilities yet, and we must openly recognize the risks we may be taking as the human race regarding the effects these technologies may have for all of us. Adequate regulation and a strong legal footing for what parties take responsibility is fair, balanced, and crucial.

## Conclusion

Should countries continue to develop autonomous weapons systems before more laws are in place? Will the United States be behind the curve if it does not follow suit? These questions can only be answered in time by the actions of countries that choose to adopt these technologies into their military. Regardless of rules and laws passed by the international community, there will always be those who push the boundaries of warfare and what is possible through autonomy. However, I believe if a new legal precedent is set forth within the law of armed conflict, we may be able to save future lives from autonomy. Preemptive action is the only solution to protecting us from the unknown damage that autonomous weapons could inflict in the future. The law of armed conflict has become customary law that everyone benefits from. I believe that everyone would benefit from a new legal precedent set forth in the law of armed conflict that clarifies who is held responsible for what mistakes autonomy creates. Countries should be held accountable for what their military systems do regardless of whether autonomy is at play or not. Time will tell what will happen with these countries that choose to put their lives in the hands of machine learning.

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14. "Mind the Gap: The Lack of Accountability for Killer Robots," Human Rights Watch, April 9, 2015, https://www.hrw.org/report/2015/04/09/mind-gap /lack-accountability-killer-robots#.

# Understanding the War on Terror:
## A Post-9/11 Retrospective

*Kyle Scherer*

## Abstract

The general public's understanding of the events surrounding the September 11th terrorist attacks and the subsistent invasion of Iraq, paint the picture of a nation blindsided by an extremist religious group. This understanding depicts a history where these attacks caused the United States to retaliate and bring these terrorists to justice. However, this paper explains that such a view fails to understand the nuance of how Islamic nations reacted to the September 11 attacks and the storied history of Western involvement in the Middle East. This paper does so by drawing primarily on the memoirs of former CIA operatives and Taliban leaders to better explain the events that lead to the invasion of Afghanistan and subsequent War of Terror. This paper also provides a retrospective analysis of the effects of Western involvement in the Middle East and offers the perspective of former Afghan government officials on how to best stabilize the Middle East and prevent such extremist attacks from ever happening again.

In the last century, the Middle East has been torn apart by the constant military involvement of foreign nations. A storied history of foreign influence in the Middle East has led to constant conflict and the toppling of legitimate Middle Eastern governments. In some cases, these governments had been terrible dictatorships—as with the US invasion of Iraq and removal of Saddam Hussein[1]—but others have been popularly, democratically elected governments—as with the British and

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1. USAICoE Command History Office, "Operation RED DAWN Nets Saddam Hussein," U.S. Army, accessed December 9, 2021, https://www.army.mil /article/116559/operation_red_dawn_nets_saddam_hussein.

US instrumentation of the Iran 1953 Coup.[2] Because of these constant foreign involvements and wars in the Middle East, the region is now in a state of perpetual crisis. These crises have not only defined the last century of Middle Eastern society but also directly impacted the modern West.

The September 11th terror attacks on the United States were directly caused by the growing Middle Eastern unrest with the West, due to US oil policies in Saudi Arabia and the Soviet invasion of Afghanistan in the 1980s. Specifically, the invasion had left the Afghan people picking up the pieces of a nation shattered by war. Their fledgling Taliban government sought a return to traditional Afghan values, which they believed would help stabilize the nation. However, radicalized by years of Western involvement in the Middle East and the West's blatant lack of respect for and understanding of the Middle East, Taliban values skewed heavily towards fundamentalist beliefs.[3]

This essay will utilize sources from both Western and Middle Eastern scholars and government officials to examine key events in the Middle East during the last century and offer a moderate, retrospective critique of the War on Terror's inciting incident: the attacks of September 11th. It will use this examination to offer a synthesis of these views in order to understand how the Afghanistan and United States governments failed each other with respect to the capture and trial of Osama Bin Laden. However, to achieve this, this essay must first offer an explanation of the basics of Islam for a Western audience. This will be a necessary starting point for this paper as Islam is at the core of Middle Eastern politics and its people. This, however, will only be the briefest of overviews to add the necessary context that is needed for understanding this essay's key arguments. A broader and more nuanced understanding of Islam can be found in Raza Aslan's, *No god but God*.

Following the overview of the Islamic religion, an examination of the American response leading up to and following the attacks of September 11th from the perspective of then President George W. Bush and his principal officers will explain how the War on Terror escalated so drastically, and how a more moderate response from the United

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2. Bruce Riedel, "Ricochet: When a Covert Operation Goes Bad," *Studies in Intelligence* 62, no. 4 (2018): 15–20.

3. Bernard Lewis and Buntzie Ellis Churchill, *Islam: The Religion and the People* (Hoboken: Upper Saddle River Pearson Education, 2011), 161–62.

States may have led to a timelier capture of Osama bin Laden and a less radicalized Middle East. Finally, this essay will present the perspectives of various Middle Eastern scholars and government officials and synthesize their perspectives with those of the United States government.

Islam is a relatively modern religion. It was founded by the prophet Muhammad around 610 C.E. when it is said that he received revelation from God.[4] This revelation was that of the Quran (also Romanized as Qur'an or Koran), the word of God. The Quran is in many ways like the Christian Bible in that they are both texts that profess the will of God and are meant to guide the people of their faith.[5] However, for the Muslim people, the Quran is much more than a holy book. The Quran, unlike the Bible, is the exact, holy word of God. Revelation of God's exact words through the prophet Muhammad recorded as text. To the Muslim people the Quran is not merely a holy book, "it is, in the most literal sense, divine."[6] Contained within the Quran is the will of God. It is the core of Muslim society, the base from which their social, political, and economic structures are built. Standing upon this base are the five pillars of Islam: Shahada, Salat, Zakat, Sawm, and Hajj.

Each of these five pillars is a tenet of the Islamic faith, and by following these tenets one follows Islam. Shahada is the declaration of faith. It consists of two unambiguous sentences that define the line between a Muslim and an unbeliever. It is translated as, "I testify that there is no God but Allah. I testify that Muhammad is the Prophet of Allah."[7] Where Allah translates literally from Arabic to "the God."

Salat is the ritual prayer that must be recited at specific times: dawn, midday, early afternoon, sunset, and evening.[8] These ritual prayers can be done individually but are most often a communal event and are a strict duty of each Muslim. Missing prayer is a serious offense with much debate about how one should repent for missed prayer and the efficacy of doing such.

Zakat is the charitable, religious tax levied on all Muslims. This tax is meant to give back to the community and be used to help the poor

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4. Reza Aslan, *No god but God: The Origins, Evolution, and Future of Islam* (New York: Random House, 2011), 34–35.

5. Lewis and Churchill, *Islam*, 25.

6. Lewis and Churchill, 25.

7. Lewis and Churchill, 13.

8. Lewis and Churchill, 14.

and others in need.[9]

Sawm is the ritual fasting primarily observed during the month of Ramadan. However, in addition, fasting outside of Ramadan "may be required or offered as atonement for some offense."[10]

Finally, Hajj is the religious pilgrimage to the holy city of Mecca that is "incumbent on every Muslim who can afford it at least once in their lifetime."[11] By following these Pillars of Islam, you follow Islam. As such, Islam is a simple religion, but as with all things, complexity comes from nuance.

Following the Prophet Muhamad's death, there arose a power struggle to determine who would succeed the Prophet. Although many groups arose out of this struggle, to put it most broadly, there were two factions, the Shi'a and the Sunni.[12] The Shi'a "believed that the succession belonged by right to the Prophet's family."[13] Whereas the Sunni believed that by allowing succession to be given to the Prophet's family, it would too greatly alter the balance of political and religious power within their society.[14] Ultimately, the Sunni won this struggle for power and become the majority group within Islam, which they still maintain to this day. In modernity, many smaller sects have branched out from the Sunni and Shi'a traditions, some of which are more radical in their beliefs than others.

Wahhabism, for example, is a sect within the Sunni tradition which has greatly influenced the Taliban and bin Laden's socio-political doctrine.[15] Wahhabism is a radical Islamic sect that is a reaction "against those Muslims who sought to meet the threat of the advancing West by adopting Western ways, so as to defeat the Western enemy with its own weapons."[16] Some parts of the Islamic world were perceived as becoming westernized by becoming more industrialized, adopting Western economic practices, and electing democratic governments in order to gain a greater presence within the global political sphere. Wahabists

9. Lewis and Churchill, 14.

10. Lewis and Churchill, 16–17.

11. Lewis and Churchill, 17.

12. Lewis and Churchill, 61–69.

13. Lewis and Churchill, 61.

14. Aslan, *No god But God*, 119.

15. M. J. Gohari, *The Taliban Ascent to Power* (New York: Oxford University Press, 2002), 53–55.

16. Lewis and Churchill, *Islam*, 157.

believe that this is "a betrayal of Islam and believe that the only remedy for their problems is a return to authentic, pristine Islam."[17] They are a radical conservative sect of Islam whose adherents' practice, among other things, mandatory veiling, public stoning, and denial of education to women.[18]

However, because the only requirement of the Islamic faith is the observation of the Five Pillars, the interpretation of the Five Pillars, Quran, and the hadiths—Islamic law and doctrine—has caused these radical sects to appear and led to deeply disagreeing factions forming within Islam.

Osama bin Laden, considered to be one of the most radical Islamic fundamentalists of the past century, spent a significant portion of his early life fighting in the Soviet-Afghan war as part of a militia known as the Mujahideen. The invasion, coupled with his belief that the West was corrupting his people, would ultimately lead to him forming the terrorist organization al Qaeda.[19] These Mujahadeen militia forces were also the same groups that the Taliban grew from to later become a governmental body within Afghanistan.[20]

Interestingly, despite both al Qaeda and the Taliban being considered Wahhabist groups, and both having grown out of the Soviet–Afghan War, bin Laden and the Taliban leaders deeply disagreed with each other on many key Islamic values. For example, the Taliban saw bin Laden as an extremist, with Mullah Osmani, a senior Taliban leader, calling bin Laden "a great problem,"[21] These deep disagreements between the vocal, radical factions of Islam might make up only a small part of the greater Islamic world, but when examining how the West and Middle East came to blows, such groups are the best place to start.

In the years leading up to the September 11th attacks, the name Osama bin Laden was not unknown to the United States government. In fact, Osama bin Laden had already been traced back to many attacks on the United States, such as the 1998 bombings of the US embassies

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17. Lewis and Churchill, 157.

18. Gohari, *The Taliban*, 107–08.

19. Peter L. Bergen, *The Rise and Fall of Osama bin Laden* (New York: Simon & Schuster, 2021), 53.

20. Abdul Salam Zaeef, *My Life with the Taliban*, ed. Alex Strick van Linschoten and Felix Kuehn (New York: Columbia University Press, 2010), 27.

21. Bergen, *Osama bin Laden*, 195.

in Nairobi, Kenya, and Dar es-Salaam, Tanzania.[22] The United States response towards these attacks was lukewarm. While the United States did launch retaliatory cruise missile strikes against several al Qaeda training camps, the missiles ultimately missed their targets.[23] President Clinton then demanded that the Taliban turn over bin Laden, who was suspected to be in Afghanistan under Taliban protection, but they refused.[24] Ultimately, the Clinton administration would come to an end with little being done about bin Laden.

By the start of George W. Bush's presidency, the threat of bin Laden's al Qaeda had not been forgotten, but it had been much subdued due to the change in administration. George W. Bush had other things on his mind when he first entered the presidency, so he left the Middle East and bin Laden to the CIA.[25] George Tenet, the then director of the CIA, believed bin Laden to be one of the greatest current threats to US national security,[26] having received an alarming number of security intercepts about planned attacks related to bin Laden and al Qaeda.[27] Though many of these attacks would never materialize, his fear would be affirmed on the morning of September 11th, 2001.

September 11th caught the United States off guard. Such an attack illustrated that even the world's supposed superpower was still vulnerable. And with so many having been murdered in the attacks, there was a great amount of anger and fear from the United States' citizens; tens of thousands had been sent to an early grave.[28] Fears grew for their loved ones and their own safety. No one was more acutely aware of this than the resident, who was faced with an attack from an enemy that he did not immediately know. It was not only an attack against the military. It was an attack against the American people–civilians. Seeing his people calling for him to act, the President decided that he needed to move swiftly, otherwise the American people would begin to panic.

22. Robert L. Grenier, *88 Days to Kandahar: A CIA Diary* (New York: Simon & Schuster, 2015), 44; "East African Embassy Bombings," FBI, accessed December 9, 2021, https://www.fbi.gov/history/famous-cases/east-african-embassy-bombings.

23. Grenier, 44.

24. Grenier, 44.

25. Grenier, 45.

26. Grenier, 45.

27. Bob Woodward, *Bush at War* (New York: Simon & Schuster, 2002), 2.

28. Mitja D. Back, Albrecht C. P. Küfner, and Boris Egloff, "Emotional Timeline of September 11, 2001," Psychological Science 21, no. 10 (August 2010): 1417–19, https://doi.org/10.1177/0956797610382124.

On the morning of September 11th, the President was reading to second graders to help promote the First Lady's literacy campaign. Upon being informed that a second plane had crashed into the World Trade Center, he quickly excused himself after a brief remark to the press.[29] The President would spend the day moving from location to location aboard *Air Force One*, until he arrived at Offutt Air Force Base in Nebraska. Upon arrival, the President met with his National Security Council, whereupon George Tenet "reported with near certainty that bin Laden was behind the attacks. Passenger manifests showed three known al Qaeda operatives had been on American Airline Flight 77, which had plowed into the Pentagon."[30] Nine days later at a joint session of Congress, the President addressed the nation and declared that "the evidence we have gathered all points to a collection of loosely affiliated terrorist organizations known as al Qaeda."[31] As the President concluded his speech, he declared that the United States would engage in a War on Terror. Specifically, the President singled out Afghanistan and the Taliban. The President stated that "the leadership of al Qaeda has great influence in Afghanistan and supports the Taliban regime in controlling most of that country."[32] This assertion illustrated the President's haste and lack of understanding of the situation in Afghanistan.

The Taliban were not in league with al Qaeda. Some of the people of Afghanistan did harbor resentment against Western nations,[33] but the President's suggestion that al Qaeda had great influence over Afghanistan's government was a wild misrepresentation. Nevertheless, the President made his hasty push onward, and less than a month later, with the support of US allies[34] and the United Nations,[35] The United

29. George W. Bush, "Remarks by the President After Two Planes Crash into World Trade Center" (Speech, Emma Booker Elementary School Sarasota, FL, September 11, 2001), https://georgewbush-whitehouse.archives.gov/news/releases/2001/09/20010911.html.

30. Woodward, *Bush at War*, 23.

31. George W. Bush, "Address to a Joint Session of Congress and the American People" (Speech, United States Capitol Washington, DC, September 20, 2001), https://georgewbush-whitehouse.archives.gov/news/releases/2001/09/20010920-8.html.

32. Bush, "Address to Congress."

33. Zaeef, *My Life*, 141–43.

34. Imperial War Museums, "What Was the British Role in Afghanistan?" accessed December 9, 2021, https://www.iwm.org.uk/history/what-was-the-british-role-in-afghanistan.

35. Security Council Resolution 1386, S/RES/1386, December 20, 2001,

States invaded Afghanistan.

The President's decision to go to war in Afghanistan seemed like an extreme decision, even considering the American people's desire for him to act. The United States knew that Osama bin Laden and al Qaeda had been responsible for the 9/11 attacks, but war with Afghanistan was akin to setting one's house on fire to kill a spider. The President had demanded that the Taliban turn over bin Laden, but the Taliban refused. This, likely, was the major turning point in the War on Terror. If the Taliban had not refused to surrender bin Laden, then the invasion of Afghanistan may have been stopped altogether. However, It is clear that invading Afghanistan was not a last resort for the President; it appeared to be his goal. Given evidence presented by Afghanistan's then ambassador to Pakistan Abdul Salam Zaeef, the Taliban did not refuse to surrender bin Laden in order to protect him; they refused because "Afghanistan had made no legal agreement with America that would oblige it to hand over individuals."[36] It was not Afghanistan trying to spite the US. It was simply a legal matter that could have been resolved.

Afghanistan was a country caught between the United States—a nation wounded by a national tragedy, now looking for revenge—and their own political sovereignty. Afghanistan did not have any legal obligations to turn bin Laden over. In the Taliban's eyes, the United States was trying to use the threat of war to bully them into submission. Hence, the Afghanistan government decided to try to keep their sovereignty and seek other options to deal with bin Laden and the US.[37]

Before the US invasion, Abdul Salam Zaeef discussed with the US ambassador three possible avenues for the trial of Osama bin Laden. These avenues would not circumvent international legal practices, enabling Afghanistan to both keep their sovereignty and allowing for the trial of bin Laden.

The first of Zaeef's planned courses of action would be to have the United States supply evidence that bin Laden had been responsible for the bombings of US embassies in Nairobi and Tanzania. The Islamic Emirate of Afghanistan would then legally summon Osama bin Laden to court where he would be tried for his crime.[38]

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https://undocs.org/S/RES/1386(2001).

36. Zaeef, *My Life*, 131.
37. Zaeef, 152.
38. Zaeef, 136.

If the United States did not find this to be a suitable option, Zaeef's second suggestion was that a new court be formed. This court would be chaired by the Attorney Generals of three Islamic countries, the proceedings of which would be held in a fourth Islamic country. America would then present its evidence in this court and make its case against Osama bin Laden.[39]

Finally, Zaeef suggested that if the US did not find either of the above options suitable, the Afghanistan government could strip bin Laden off all his communications equipment and otherwise ensure that bin Laden did not use Afghanistan to conduct terrorist activity against another country.[40]

The United States refused each of these options and instead went to war. The President's claim that the Taliban and al Qaeda were a cohesive unit, now seem less plausible, given Zaeef's explanation that the Taliban did offer the United States' many avenues to convict bin Laden. The United States were the ones who stifled the negotiations for the trial of Osama bin Laden, and refused to take opportunities to avoid war. Their decision would once again bring war to Afghanistan and devastate the Middle East for decades.

Two decades later, the War in Afghanistan has only just ended. Osama bin Laden was killed by US troops in 2011,[41] and US troops withdrew from Afghanistan in 2021.[42] During those years the United States "violated international human rights law and international humanitarian law,"[43] including the many well documented, disgraceful, and abhorrent violations in Guantánamo Bay.[44] Afghanistan's former ambassador to Pakistan describes his own illegal arrest—which had been made in blatant disregard for international law—and imprisonment

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39. Zaeef, 136.

40. Zaeef, 136.

41. FBI, "Most Wanted," FBI, accessed December 9, 2021, https://www.fbi.gov/wanted/topten/topten-history/hires_images/FBI-456-UsamaBinLaden.jpg/view.

42. Joe Biden, "Remarks by President Biden on the End of the War in Afghanistan" (Speech State Dining Room, Washington, D.C., August 31, 2021), https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/08/31/remarks-by-president-biden-on-the-end-of-the-war-in-afghanistan/.

43. Human Rights Watch, "Enduring Freedom: Abuses by U.S. Forces in Afghanistan," accessed December 9, 2021, https://www.hrw.org/report/2004/03/07/enduring-freedom/abuses-us-forces-afghanistan#.

44. Human Rights Watch, "United States: Guantánamo Bay Detainees," accessed December 9, 2021, https://www.hrw.org/legacy/wr2k3/us.html.

in Guantánamo:

> Despite all my documents—the protection I should have
> had under international law, even the letter from the United
> Nations stating that "the bearer of this letter should not be
> harmed due to his status of representation"—three vehi-
> cles pulled up at my door at midnight.[45] . . . Each and every
> [prisoner] was shaved—their beards, hair and eyebrows. Ev-
> ery single hair was gone. This was the worst form of pun-
> ishment. In Islam it is forbidden to shave one's beard. It is
> considered a sin in the Hanafi faith. It is better to be killed
> than to have one's beard shaved. I was in the next group
> that was led away to the barber. I asked the barber not to
> shave my beard; he replied with a hard slap to my head. I
> did not open my eyes for several minutes while the pain
> rushed through me. Later, when a doctor asked me what
> had happened to my face and I complained about the bar-
> ber, I received another slap from the doctor, telling me I
> should not complain about the American invaders. [46]

It is no secret that many Afghans hold a certain amount of disdain
for the United States. Given the United States' nonobservance for the
due process of law, it's flagrant disregard for human rights, and it's
complete lack of understanding and respect for Islam—the core of
Middle Eastern politics and its people—it is understandable that the
Afghan people might feel this way. As stated before, the Middle East
has been radicalized by years of Western involvement. If Afghanistan
is ever to find a path forward and away from such radical belief, it will
take time and it must come from within the nation.

Shahmahmood Miakhel, Chief of Party in Afghanistan for the US
Institute of Peace, former Governance Advisor for the United Nations
Assistance Mission in Afghanistan, and former Deputy Minister of the
Interior in the Government of Afghanistan, believes that the "key to
success in Afghanistan is understanding the Afghan mindset. . . . A
successful outcome in Afghanistan requires balancing tribal, religious
and government structures."[47] Years of failed wars and invasions have

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45. Zaeef, *My Life*, 168.
46. Zaeef, 184.
47. Shahmahmood Miakhel, "Understanding Afghanistan: The Importance of
Tribal Culture and Structure in Security and Governance," http://www
.pashtoonkhwa.com/?page=books.

shown that Western powers do not understand the Afghan mindset.

The Afghan people have a life that is intertwined with Islam. Although the Taliban is radical and many of its practices oppress and harm it's people, Western involvement will only exacerbate these issues. More than anything, the Afghan people need time to create a leadership that will support their needs. History has shown that the Middle East has been radicalized as a consequence of unwanted, foreign involvement. If the region is ever to be deradicalized, it must happen from within and without foreign powers trying to shape the region in their own image.

That is not to say that the West should do nothing. Shahmahmood Miakhel supports foreign aid but points out that foreign aid programs most often rely on foreign consultants that do not understand the sociocultural and political milieu of Afghanistan. "Many of these experts and consultants hold the belief that there has never been a functional government in Afghanistan."[48] Thus they design their aid based on Western necessities that they think the Afghan people need and not what the Afghan people actually need. This then brings pushback from the Afghan people and reinforces their belief that the West are only trying to westernize the Middle East. It is a vicious cycle. Foreign aid programs that will bring real, lasting, and meaningful change to Afghanistan "should be led and implemented at the local level."[49]

Afghanistan is not a nation for the West to govern. Foreign powers trying to seize the Middle East is what has caused such radical practices to become so prevalent. Although heavily criticized, The United States' withdrawal from Afghanistan is a good first step towards establishing true and lasting peace in Afghanistan.

The purpose of this essay was to offer a moderate, retrospective critique of the War on Terror's inciting incident, the attacks of September 11th, and a synthesis of how the governments of Afghanistan and the United States failed each other with respect to the capture and trial of Osama bin Laden. This essay has shown that the past century has been a time fraught with never ending conflict in the Middle East. It has shown that Islam is not a dangerously radical religion, but that

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48. Shahmahmood Miakhel, "A Plan to Stabilize Afghanistan," in The Afghanistan Papers, no. 4 (May 2010): 5, https://www.cigionline.org/publications/plan-stabilize-afghanistan/.

49. Miakhel, 6.

Western involvement in the Middle East has pushed the belief that a return to fundamental Islam will be a remedy for the problems facing the Middle East. It has shown that the hasty decisions made by the United States government following the September 11th attacks led to the United States refusal of the peaceful trial of Osama bin Laden, and instead, the pursuit of war. It has shown that the United States violated international human rights law and international humanitarian law during their invasion of Afghanistan. Lastly, it has shown that true change in Afghanistan must come from understanding its people and their culture.

When I first set out to research this essay, I did not understand much of what had happened during the War in Afghanistan. I am someone who has lived through 9/11, the War, and the US withdrawal from Afghanistan. But as an average American it was something that happened in my periphery. It has not impacted me in any way nearly as significantly as the people of Afghanistan. Having researched this essay, I can say that I do not have all the answers for solving the crisis in Afghanistan. But, I can say that the United States has made many decisions that failed the Afghan people. America is a nation that prides itself on freedom and the pursuit of peace. But in Guantánamo and with their decision to go to war. There was no freedom. There was no peace.

# The Potential Military Applications of Human Augmentation

*Maggie Hutchens*

The modern world is filled with technological innovations that are truly unprecedented. From flying cars to the iPhone, technology has been seamlessly integrated into the everyday lives of American citizens. While these advancements have drastically improved our quality of life, they also present new and unique challenges. These challenges vary in the level of impact they have on the United States (US), but one difficult challenge is whether or not the US military can keep up with these technological advancements. The US government has implemented numerous programs in an attempt to keep its military at the forefront of the global arena, and while it remains largely successful, an emerging science has the potential to severely alter the international balance of power.

Integrating science with a military application is not a new area of interest for the US military. This country has an extensive history of utilizing biology to enhance a variety of its military capabilities. Biological weapons gained momentum in the mid-twentieth century, which resulted in its very own set of international regulations and the subsequent disbandment of a US bioweapons program.[1]

Biological weapons have remained largely out of modern warfare, but the field of human augmentation has generated more chatter in the bio-defense industry than it has seen in almost fifty years.[2] The revolutionary science of human augmentation has the potential to change the course of this country and humanity as a whole. This paper will delve into the scientific concept of human augmentation, its progress mili-

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1. The Biological Weapons Convention (1972) will be covered later in this paper.

2. The metric of fifty years was used as it is generally agreed that the US bioweapons program was terminated in the late 1960s to early 1970s.

tarily in the US and other nations, its legal and ethical standing, and how its science could play into the future of warfare.

## The Scientific Concept of Human Augmentation

Human augmentation is a broad science that lacks a universal definition. Scientist Pete Moore defines the field as

> any attempt to temporarily or permanently overcome the current limitations of the human body through natural or artificial means. It is the use of technological means to select or alter human characteristics and capacities, whether or not the alteration results in characteristics and capacities that lie beyond the existing human range.[3]

Many other definitions exist that cover a spectrum of associated terms and complex verbiage,[4] but a simpler description includes any attempt to enhance human productivity or capability. An associated term, "human enhancement"[5]—an equally broad field covering several disciplines from electrical or mechanical engineering to genetic engineering—is seen by some to be different from human augmentation, but for the purposes of this paper, the terms are synonymous in both definition and scope.

A pertinent question associated with human augmentation is why it has taken so long for the field to gain momentum in a military capacity, at least in the United States. The simplest answer is that of international competition; a more complex explanation is elucidated through a political science principle known as the security dilemma. Essentially, the United States has only recently (over the past decade or so) allocated greater defense funding to human augmentation research because it has only recently seen near-peer competitors do so. What human augmentation would explicitly look like on the battlefield remains largely unknown, and several nations are expanding research efforts in the field. It is important to note that not every country involved in human augmentation research is developing it in tandem with their associated military. Independent and private research facilities dominate this field

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3. Roope Raisamo, Ismo Rakkolainen, Päivi Majaranta, Katri Salminen, Jussi Rantala, and Ahmed Farooq, "Human Augmentation: Past, Present, and Future," *International Journal of Human-Computer Sciences* 131 (November 2019): 132, https://doi.org/10.1016/j.ijhcs.2019.05.008.

4. Raisamo et al., 132.

5. Raisamo et al., 132.

for a multitude of reasons and motives that do not involve any military aspirations. That said—and this may be from a lens of international realism and slight cynicism—if developments in human augmentation prove successful and could benefit a state's military, that state would be remiss to not attempt military integration.

## Human Augmentation Progress in the United States

In 2014, President Barack Obama famously quipped that the US military was building "Iron Man."[6] All joking aside, he was announcing a real military project that marked one of the first instances the US publicly advertised an active human augmentation program of that magnitude. The "Iron Man" suit he was referring to is the Tactical Assault Light Operator Suit (TALOS), which was intended to aid the US Army with superhuman strength and perception.[7] The proposed suit showcased immense promise, but the program was terminated in 2019 because the physical prototype did not live up to the initial concept.[8] This project did not yield the intended output, but it did yield extensive technical knowledge that could bolster other exoskeleton projects such as Lockheed Martin's ONYX Exoskeleton.[9] While these examples of human augmentation are fairly anticlimactic, they showed a movement away from conventional means and methods toward a future where the military application of human augmentation could be taken seriously.

A significant display of structural shifts toward utilizing human augmentation is evident in the creation of new research and development departments under the military. For example, the Office of the Under Secretary of Defense for Research and Engineering established

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6. Jacob Kastrenakes, "Obama Jokes About Creating 'Iron Man,' But the Military Is Already Doing It," *The Verge*, February 27, 2014, https://www.theverge.com /2014/2/27/5454602/obama-iron-man-joke-military-actually-building-talos-armor.

7. Kastrenakes.

8. Jared Keller, "The Inside Story Behind the Pentagon's Ill-Fated Quest for a Real-Life 'Iron Man' Suit," *Task & Purpose*, July 11, 2021, https://taskandpurpose .com/military-tech/pentagon-powered-armor-iron-man-suit/.

9. Jared Keller, "SOCOM's Iron Man Suit Is Officially Dead," *Task & Purpose*, February 15, 2019, https://taskandpurpose.com/news/talos-iron-man-suit-dead/. The ONYX Exoskeleton is a pair of "robot legs" that "ultimately reduces the energy needed to cross terrain, squat, or kneel." Brad Howard, "This Powered Exoskeleton Is Here to Make Ruck Marching a Breeze," *Task & Purpose*, June 27, 2018, https://taskandpurpose.com/military-tech/onyx-powered-exoskeleton-ruck -marching/.

the DOD Biotechnologies for Health and Human Performance Council (BHPC) to lead this charge. More specifically,

> The BHPC group assesses scientific advances for improved health and performance with potential military application; identifies corresponding risks and opportunities and ethical, legal, and social implications; and provides senior leadership with recommendations for mitigating adversarial threats and maximizing opportunities for future US forces.[10]

In 2019, the group published a report titled "Cyborg Soldier 2050: Human/Machine Fusion and the Implications for the Future of the DOD." The report identified potential and feasible areas of improvement, or enhancement and offered capabilities beyond current military systems, specifically within the field of human augmentation. Four vignettes were identified as being "technically feasible" by 2050 or earlier:

> (1) ocular enhancements to imaging, sight, and situational awareness; (2) restoration and programmed muscular control through an optogenetic bodysuit sensor web; (3) auditory enhancement for communication and protection; and (4) direct neural enhancement of the human brain for two-way data transfer.[11]

Within the four categories, the report emphasizes that the development of direct neural enhancements for two-way data transfer could revolutionize the military and its capabilities.[12] The goal of this technology would be to facilitate read/write capabilities "between humans and machines through brain-to-brain interactions."[13] This could allow warfighters to directly communicate with unmanned, autonomous systems to "optimize command and control systems and operations."[14] This capability would achieve a multitude of benefits for the efficiency of tactical warfighter communications and could ultimately "improve target acquisition and engagement and accelerate defensive and offensive

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10. Peter Emanuel, Scott Walper, Diane DiEuliis, Natalie Klein, James B. Petro, and James Giordano, *Cyborg Soldier 2050: Human/Machine Fusion and the Implications for the Future of the DOD*, October 2019, https://community.apan.org/wg/tradoc -g2/mad-scientist/m/articles-of-interest/300458/.

11. Emanuel et al., v.

12. Emanuel et al., v.

13. Emanuel et al., v.

14. Emanuel et al., v.

systems."[15]

    While the potential for direct neural enhancements could revolutionize the way the military functions on a tactical level, the three other vignettes pose significant benefits for warfighters and would have a profoundly positive impact on US Armed Forces as a whole. The second vignette—ocular enhancements—would mean a variety of things for the soldier. Enhanced individuals would have enabled sensory perception beyond the normal visible spectrum, which would translate to the ability to "analyze images from various wavelengths to discriminate targets and allow identification in complex and cluttered environments."[16] This technology is thought to present itself in one of two ways, with one being much less invasive than the other. The first manifestation, which may be in production by the year 2030, involves a process used in ongoing research for advanced retinitis pigmentosa.[17] Essentially, an ocular enhancement system would overlay the existing ocular tissue and alter the retinal tissue. The intended effect is "such that other wavelengths could be interpreted to include infrared regions and beyond."[18]

    The second and much more invasive manifestation, which could mature by the year 2050, involves replacing the entire eyeball. This option is obviously more complex than the former, but its intended effect would involve the ability to process "any manner of sensory data and feed it directly to the brain for interpretation."[19] If either one of these manifestations come to fruition, it would greatly advance warfighters' capabilities on the battlefield and could potentially benefit anyone who is visually impaired.

    The third vignette, optogenetic bodysuit sensor webs, are comparable to the intended effects of other states' research in exoskeleton-like body armor. While the intended purpose may be similar, the technical

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15. Emanuel et al., v.

16. Emanuel et al., 3.

17. Retinitis pigmentosa is a "group of rare, genetic disorders that involve a breakdown and loss of cells in the retina—which is the light sensitive tissue that lines the back of the eye. Common symptoms include difficulty seeing at night and a loss of side (peripheral) vision." National Eye Institute, "Retinitis Pigmentosa," July 10, 2019, https://www.nei.nih.gov/learn-about-eye-health/eye-conditions-and-diseases/retinitis-pigmentosa.

18. Emanuel et al., *Cyborg Soldier 2050*, 4.

19. Emanuel et al., 4.

description is completely different. In this scenario, small optical sensors would be implanted subcutaneously in the associated areas that would need protection or are likely to be controlled. These sensors would be connected to muscle and would only stimulate nerve bundles when a given motion would need to utilize the muscle below. The full operational process consists of other technicalities, but, in essence, the effect would "decrease injury and mortality rates for soldiers."[20]

The fourth and final vignette is that of auditory enhancement, which would be achieved "through direct replacement or modification of the middle-ear bones and the cochlea."[21] The ultimate goal of this enhancement is to "protect or filter overexposure and increase sensitivity to low-amplitude sounds,"[22] but this science could eventually advance to accommodate components of neural signaling for covert speech and other communication advancements.[23]

In conclusion, there are many areas of potential benefit for implementing human augmentation into the US military. While fully integrating these enhancements would take decades, the outcomes could keep the military at the forefront of the global stage and remain the strongest competitor.

## Human Augmentation Progress in Nations Outside of the United States

Human augmentation research in other countries has been steadily increasing over the past couple of decades. While no known specific incident caused the United States to ramp up their own programs in the field, it can be generally agreed that it was a culmination of efforts by allies and adversaries alike. The level of progress varies by state, but some of the leading contributors in addition to the US are China and Russia, with some more surprising contenders ranging from France to Denmark.

Former Director of National Intelligence, John Ratcliffe, identified that the greatest threat pertaining to human augmentation comes from China.[24] This is not surprising as China presents itself as the overall

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20. Emanuel et al., 5.
21. Emanuel et al., 6.
22. Emanuel et al., 6.
23. Emanuel et al., 5.
24. John Ratcliffe, "China Is National Security Threat No. 1," *Wall Street Journal*, December 3, 2020, https://www.wsj.com/articles/china-is-national-security-threat

greatest threat to US hegemony in general, but their work in human augmentation is truly cutting edge. As an authoritarian government, China typically operates with fewer ethical limitations than those of the West, thus increasing the potential severity of any threat originating from that nation.

One of the most recent developments from Chinese scientists was a successful DNA alteration in the embryos of twin girls that resulted in Human Immunodeficiency Virus (HIV) immunity.[25] While this does not directly impact the US military, it does inspire the plausibility of further gene-editing with more significant, military-related results. Some analysts see China's recent gene-editing efforts as a direct response to a US-led initiative in genetic extinction research.[26] China also has a government-funded program for biological interdisciplinary sciences and technology.[27] This program, which is specifically designed for military innovation, "includes projects on military brain science, advanced biomimetic systems, biological and biomimetic materials, and human enhancement."[28]

China is not the only nation interested in gene-editing. Russia has been seen making preparations to adjust its laws to be more compatible with integrating gene-editing technology into normal society.[29] Ironically, Russian President Vladimir Putin is on record cautioning against super soldiers, claiming their impact would be worse than that of a nuclear bomb.[30] Invasive and permanent operations such as gene-editing

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-no-1-11607019599.

25. Thom Poole, "The Myth and Reality of the Super Soldier." BBC News, February 8, 2021, https://www.bbc.com/news/world-55905354. It is important to note that this operation was not legally condoned, even in China, and resulted in the incarceration of a scientist involved. China has backpedaled on many stances throughout history, which would make it feasible to assume that China could support this science at a later date.

26. Poole, "The Myth and Reality."

27. Elsa B. Kania, "Minds at War: China's Pursuit of Military Advantage through Cognitive Science and Biotechnology," *PRISM* 8, no. 3 (January 2020): 85, https://ndupress.ndu.edu/Portals/68/Documents/prism/prism_8-3/prism_8-3_Kania_82-101.pdf.

28. Kania, "Minds at War," 85.

29. "France Joins China, Israel, Denmark and the US in Super Soldiers Arms Race," *Biohackinfo News*, December 16, 2020, https://biohackinfo.com/news-super-soldiers-enhanced-bionic-france-nato-usa-china-gmo-crispr/.

30. Rob Waugh, "Vladimir Putin Warns of Genetic Super-Soldiers 'More Deadly than a Nuclear Bomb,'" *Yahoo! News*, October 24, 2017, https://www.yahoo

seem to be more ethically questionable than wearable super-soldier-like armor, but attempting to understand the reasoning behind Vladimir Putin's decisions is not the purpose of this paper. Regardless of reasoning, Russia is desperately trying to diminish its "technological lag," as the President of the Russian Academy of Sciences, Alexander Sergeyev, views super soldiers as the main threat to Russia's national security.[31] In its attempt to achieve lasting military superiority, it is prioritizing efforts in the fields of bioinformatics, neural monitoring, and regenerative medicine. While these efforts are seen to be in preliminary stages, they are quickly progressing with a focus on military applications.

Russian military personnel already use bioinformatics: the identification of an individual's strengths and weaknesses.[32] This science is not innately invasive, but it can be combined with continual neural monitoring to maximize a soldier's efficiency:

> In the short term, neural monitoring could be used to understand how trainee's brains are processing their given task, thus providing instructors with insights to guide student development. In the future, brain interfaces could be used not just to monitor, but also to enhance training by precisely stimulating the areas of the brain relevant to the task.[33]

The science itself is currently being implemented as Russia plans to develop "genetic passports" for all of its military.[34] These passports would essentially find significant genetic predispositions or innate skills, which would allow them to be properly oriented according to perceived applicable talents.[35] Augmentation efforts were exacerbated by a decree signed by Putin that emphasized the importance of institutionalizing

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.com/news/vladimir-putin-warns-genetic-super-soldiers-deadly-nuclear-bomb -092124906.html.

31. "Президент РАН: Науку Не Сделать в Изоляции" [President of the Russian Academy of Sciences: Science Cannot Be Done in Isolation], *ТАСС НАУКА*, June 6, 2019, https://nauka.tass.ru/interviews/6513972.

32. Ministry of Defence, *Human Augmentation: The Dawn of a New Paradigm. A Strategic Implications Project* (Bristol: UK Ministry of Defense, May 2021), 66.

33. Ministry of Defence, 66.

34. Zak Doffman, "Russia Will Genetically Test Soldiers to Identify the Best Fighters and Thinkers," *Forbes Magazine*, June 10, 2019, https://www.forbes.com /sites/zakdoffman/2019/06/08/russias-new-genetic-military-passports-will-sort -the-fighters-from-the-thinkers.

35. Doffman, "Russia Will Genetically Test."

these concepts by and after 2025.[36]

In addition to neural monitoring and bioinformatics, Russia has had immense success regenerative medicine. While this science would also be used on civilians, it has resulted in a direct military advantage. Neural monitoring and bioinformatics are used in tandem to identify individuals most likely to excel in military training; these same sciences could be used to identify those most likely to benefit from regenerative medicine's success. Thus far, Russian Federation scientists have seen success in bone and cartilage equivalents and the treatment of defects and dysfunction of different organs such as the urethra, bladder, heart, central nervous system, liver, gut, pancreas, eye, teeth, hair follicle, and more.[37] These successes have the potential to revolutionize Russia's ability to hasten healing and would greatly strengthen its military.

In contrast to Russia and China, France has no interest in gene-editing. According to French Minister of Defense Florence Parly, the country has no interest in genetically enhancing its soldiers and explicitly stated that "gene-editing is completely off limits."[38] In fact, France is increasing its own research into human augmentation with the hopes of improving the "physical, cognitive, perceptive, and psychological" capacities of its soldiers.[39] Israel and Denmark are also performing research pertaining to cybernetic enhancements, similar to those of the US initiative toward optogenetic bodysuit sensor webs research.[40]

Human augmentation research is limited only by the imagination of those involved. This has caused different states' work in the field to vary greatly, as nations prioritize certain initiatives over others, deciding which science best fits their associated military. One of the few areas of common interest is that of enhancement by way of pharmaceuticals. Utilizing pharmaceuticals in a military context can result in a variety of intended effects; it also happens to be one of the earliest proliferated implementations of human augmentation. This is exemplified by the drug modafinil, which can be used in militaries to promote

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36. "Putin Signs State Policy Framework on Chemical and Biological Security," *TASS*, March 11, 2019, https://tass.com/defense/1048174.

37. Elena Apleeva, Yury Sukhanov, and Ekaterina Vorotelyak, "Almost 40 Years of Tissue Engineering in Russia: Where Are We Now?" *Biomedicines* 8, no. 2 (February 5, 2020): 25, https://doi.org/10.3390/biomedicines8020025

38. "France Joins."

39. "France Joins."

40. "France Joins."

wakefulness and concentration.[41] It is commonly used, and research into the drug for military purposes has been performed by the US, Canada, China, Taiwan, the Netherlands, Singapore, and many other countries.[42] While this is a minor case of human augmentation, it showcases how easily the technology can proliferate when it proves successful.

## The Legal and Ethical Considerations for Human Augmentation and Its Future in War

It is beyond evident that the military application of human augmentation is increasing in relevance and could be introduced on the battlefield in the near future. Many questions remain as to whether or not human augmentation is technically legal in international humanitarian law (IHL), as it can be argued that the science violates the Hague Conventions (1899 and 1907), Geneva Conventions (1949 and Additional Protocols I, II, and III),[43] Biological and Toxin Weapons Con-

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41. "Modafinil: Medlineplus Drug Information," MedlinePlus, US National Library of Medicine, https://medlineplus.gov/druginfo/meds/a602016.html.

42. William Saletan, "The War on Sleep," *Slate*, May 29, 2013. http://www.slate.com/articles/health_and_science/superman/2013/05/sleep_deprivation_in_the_military_modafinil_and_the_arms_race_for_soldiers.html.

43. Article 36 of the Geneva Conventions, Additional Protocol I of 1977, specifies: "In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party." It is important to note that the United States is technically not legally bound to adhere by Additional Protocol I (API) as it is not a signatory. However, the US does implement API in its domestic policy, directives, and instruction for military purposes, thus making itself obligated to follow the law. Because of this law, human augmentation qualifies as a weapon because it could directly cause harm. Thus, it is in direct violation of the law unless an updated provision is added to allow augmented human beings.

vention (1972),[44] Chemical Weapons Convention (1993), and more.[45] At present, IHL does not seem to have stopped even the most "ethical" of countries from experimentation and potential implementation.

The primary arguments against human augmentation—other than violating international law—are the ethical concerns the science presents. Some theories about futuristic implementations of this science include forcing civilians to undertake experimental procedures or clinical trials. This would likely never happen in the US, but China has already outlined that this could be a possibility in the future. A pair of scientists in Canada published a report titled, "Ethical Analysis on the Application of Neurotechnology for Human Augmentation in Physicians and Surgeons."[46] The report was targeted towards the medical application of human augmentation, specifically in cognitively enhancing medical personnel. While they hypothesized potential benefits from implementing this science—especially during the COVID-19 pandemic—they eventually concluded that the potential negative risks outweigh the possible benefits. But even genuine ethical concerns may not be enough to halt the military application of human augmentation.

While countries are continuing to develop human augmentation programs, the US is attempting to set an example of applying foresight to real-world applications. The BHPC report, "Cyborg Soldier 2050: Human/Machine Fusion and the Implications for the Future of the DOD," outlines seven recommendations to accompany an implementation of

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44. The first article of the Biological and Toxin Weapons Convention (BTWC) states that

"Each State Party to this Convention undertakes never in any circumstances to develop, produce, stockpile or otherwise acquire or retain: (1) microbial or other biological agents, or toxins whatever their origin or method of production, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes; (2) weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict." It could be successfully argued that humans qualify as biological agents, which would make them illegal in armed conflict.

45. Patrick Lin, "Could Human Enhancement Turn Soldiers into Weapons That Violate International Law? Yes," *The Atlantic*, January 4, 2013, https://www .theatlantic.com/technology/archive/2013/01/could-human-enhancement-turn -soldiers-into-weapons-that-violate-international-law-yes/266732/.

46. Soaad Hossain and Syed Ishtiaque Ahmed, "Ethical Analysis on the Application of Neurotechnology for Human Augmentation in Physicians and Surgeons," (arXiv, 2020), 1, https://arxiv.org/pdf/2006.16925.pdf.

its findings.[47] The recommendations are as follows:

1. DOD personnel must conduct global assessments of societal awareness and perceptions of human/machine enhancement technologies.

2. US leadership should use existing and newly developed forums (e.g., NATO) to discuss impacts to interoperability with allied partners as we approach the year 2050. This will help develop policies and practices that will maximize interoperability of forces.

3. DOD should invest in the development of dynamic legal, security, and ethical frameworks under its control that anticipate emerging technologies.

4. Efforts should be undertaken to reverse negative cultural narratives of enhancement technologies.

5. DOD personnel should conduct tabletop wargames and targeted threat assessments to determine the doctrine and tactics of allied and adversarial forces.

6. The US government should support efforts to establish a whole-of-nation approach to human/machine enhancement technologies versus a whole-of-government approach.

7. The DOD should support foundational research to validate human/machine fusion technologies before fielding them and to track the long-term safety and impact on individuals and groups.

These recommendations were a result of the BHPC's projection that introducing augmented human beings into the general population, DOD active duty personnel, and near-peer competitors will lead to "imbalances, inequalities, and inequities in established legal, security, and ethical frameworks."[48] While it seems inevitable that human augmentation will create unique challenges to the frameworks of society, the recommendations in this report propose a way to implement augmented human beings as safely and seamlessly as possible. They emphasize societal awareness and international cooperation to ensure the best conditions for success in the field. Prioritizing international cooperation is much easier said than done, and if implementing human augmentation methods follow the same trends as other military technology, it will soon be followed by international regulation.

It is beyond evident that this scientific field contains immense

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47. Emanuel et al., *Cyborg Soldier 2050*, vi–vii.
48. Emanuel et al., vi.

promise for a military application, and while it is not the purpose of this paper to estimate exactly when it will be used on the battlefield, it can be reasonably inferred that it will occur in the near future.

# The Legality of Commerce Raiding

*David R. Snapp, V*

## Abstract

With another conventional war of peer status coming over the horizon with two great powers, questions that have generally not appeared in the public mind for the last forty years will once again come into focus. One question is the legality of attacking enemy merchant ships to starve the enemy war machine of essential materials. History has shown that this tactic can be effective in crippling the enemy's ability to wage war, to the point that nations have tried to civilize it with treaties. In accordance with these treaties, preventing supplies from reaching an enemy can be conducted in a legitimate setting provided one follows international law.

## Introduction

Napoleon Bonaparte once supposedly said that an army marches on its stomach. However apocryphal that statement may be, it is a true reflection of the realities of warfare. Wars and campaigns throughout history have been won or lost by either having enough supplies to keep fighting or by not having enough food, ammunition, and fuel to keep offering resistance. While there exist many methods to attack an enemy's supply lines, one that has existed even before the time of modern industrialized warfare is the tactic of commerce raiding: when merchant ships are targeted by agents of a foreign government, and they attack either military or private citizens on the high seas. However, with the difficulties of targeting within a modern war scenario, there comes the question of when, or even if, a belligerent nation can target enemy merchant ships on the high seas. By looking at history and the law, this paper will show that there are instances in which targeting merchant

ships ranges from being completely legal, possibly legal, and complete-
ly illegal. Three hypothetical scenarios illustrate the differences.

## Brief History of Commerce Raiding

Attacking enemy merchant ships can be traced back to the 16th
century with individuals such as Sir Francis Drake being issued docu-
ments known as "letters of marque," a contract between a private citi-
zen and the sovereign of his or her nation in which the private citizen
would raid vessels belonging to enemy nations and give a portion of
their loot to the government.[1] Privateers included such individuals as
Sir Drake, who was knighted for his efforts against Spain in the late
1500s, when he raided Spanish ships and towns along both coasts of
South America. However, because Sir Drake and others were not mem-
bers of the military, they were generally considered to be pirates by the
opposite power and were treated as pirates upon capture.

As a general rule, privateering went out of style among most Euro-
pean nations following the Crimean War, which ended with the Decla-
ration of Paris. The Declaration states:

1.  Privateering is, and remains, abolished;
2.  The neutral flag covers enemy's goods, with the exception
    of contraband of war;
3.  Neutral goods, with the exception of contraband of war,
    are not liable to capture under enemy's flag;
4.  Blockades, in order to be binding, must be effective, that is
    to say, maintained by a force sufficient really to prevent
    access to the coast of the enemy.[2]

Some nations, such as the United States and Spain, continued to
hold onto privateering to offset their limited naval capacity. With the
rise of more powerful national navies, by 1908 the US and Spain agreed
that privateering should be illegal. When privateering came to an end,
naval strategists in France came up with the idea of commerce raiding
with regular military forces rather than private or contracted forces.
However, this line of thought was eventually pushed aside by naval

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1. Thomas M. Truxes, "The Breakdown of Borders: Commerce Raiding during
the Seven Years' War, 1765–1763," in *Commerce Raiding: Historical Case Studies,
1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College
Press, 2013), 12, https://apps.dtic.mil/sti/pdfs/ADA591580.pdf.

2. International Committee of the Red Cross, "Declaration Respecting Maritime
Law. Paris, 16 April 1856," https://ihl-databases.icrc.org/ihl/INTRO/105.

strategists and theorists, such as Alfred Thayer Mahan in the late 1800s, who claimed that "commerce raiding was an indecisive strategy used by weaker nations."3 Individuals like Mahan argued instead for decisive fleet battles where entire battle fleets would face and batter each other on the high seas until one fleet withdrew. For example, during the Battle of Jutland in 1916 in the First World War, the British Home Fleet engaged the German High Seas Fleet in what can be described as the last traditional line battle, with ships from both sides squaring off and bombarding each other with broadsides until the German fleet withdrew from the battle.

However, despite the prevailing academic theory that most naval leadership took, there remained countries that saw commerce raiding as an effective way to bridge the gap between their naval capacity and that of their enemies. Despite having a largely modern navy at the outbreak of the First World War, the Imperial German navy adopted commerce raiding as a tactic almost from the outset. Germany had a favorable degree of success with cruisers such as the *Emden* wreaking havoc, until the cruisers were hunted down by the numerically superior British navy.[4] However, when most individuals think of German commerce raiding during the First World War, the image that comes to mind would be that of the German Unterseeboot, or U-boat, sinking ships on the high seas with no warning.

While this image certainly rings true later in the war, in the beginning, German U-boats did not sink by surprise. At the start of hostilities in 1914, German submarines operated under the same rules for commerce raiding that cruisers and other surface ships such as *Emden* operated under: the Prize Rules, which had been a component of international law since before the outbreak of hostilities.[5] These rules would mean that a submarine would surface upon sighting a possible target, come alongside the merchant ship, and tell them to stop their engines

3. John B. Hattendorf, "Foreword," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013).

4. Paul G. Halpern, "*Handelskrieg mit U-Booten*," The German Submarine Of fensive in World War I," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013), 137.

5. David H. Olivier, "Two Sides of the Same Coin: German and French Maritime Strategies in the Late Nineteenth Century," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013), 103.

and prepare to be boarded. The submarine would send a small boarding party that would inspect the ship's papers and the cargo hold, and upon seeing that the ship was loaded with contraband (war materials), provisions would be made for the crew's safety such as putting them into lifeboats, giving them supplies, or directing them toward shore.[6]

However, when the British introduced Q-ships, or ships that were merchant ships but outfitted with hidden guns and crewed by naval personnel, as well as a blockade of German ports by the British navy, the German Admiralty decided to introduce an exclusion zone around the British Isles and announced that any ship entering the zone would be liable to being sunk on sight without warning.[7] While this order was originally rescinded due to political and moral objections received from neutral nations such as the United States, it was reinstituted in time for an event that eventually helped propel the United States into the First World War: the sinking of the British passenger liner *R.M.S. Lusitania* with just over one thousand individuals losing their lives, including 128 American citizens.[7]

This sinking, along with many others, turned public opinion in the United States, Great Britain, and other countries against commerce raiding after the First World War. During the period between the First World War and the Second World War, American submarine commanders and their crews were trained to operate as a part of the main battle fleet, being utilized as advanced scouts ahead of the main battle line that would pick off enemy ships before and after the great battles proposed by Mahan.[8] While a lot of this started to change during the Spanish Civil War, the big change came when Europe was thrown into the Second World War.

While German submarines were under orders to abide by the prize rules to prevent another *Lusitania* incident, and as Adolf Hitler hoped that the Western Allies would back out of the war, the sinking of the liner *S.S. Athenia* changed Hitler's adherence to the prize rules. With war having been declared on Germany only a few hours earlier, *Athenia*

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6. International Committee of the Red Cross, "Treaty for the Limitation and Reduction of Naval Armaments (Part IV, Art. 22, relating to Submarine warfare). London, 22 April 1930," https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Article .xsp?action=openDocument&documentId=05F68B7BFFB8B984C12563CD 00519417.

7. Halpern, "*Handelskrieg*," 139.

8. Truxes, "Foreword."

was sighted by the German submarine U-30 who mistook it for an armed merchant cruiser, an auxiliary type of warship, and therefore proceeded to torpedo the *Athenia* without warning. Although Hitler consequently ordered that no passenger ships were to be torpedoed, even if they were in a convoy, unrestricted submarine warfare again entered the equation.[9]

With the United States' declaration of war against Japan, the US Navy immediately adopted a campaign of unrestricted submarine warfare against the Japanese merchant marine. Prior to the declaration of war, submarines were used only as scouting forces for the main battle fleet. After what can only be described as a very shaky start by the US-Navy Submarine Force Pacific that lasted until the early middle of 1943, the US submarine service eventually accounted for just a little over half of the Japanese Merchant Marine sunk during the war. This had the effect of taking the rug out from under the Japanese industrial complex. Combined with firebombing conducted by the US Army Air Forces, it was nearly impossible for the Japanese Empire to continue the fight in the Pacific and impossible for the Japanese military to re-supply its island garrisons. This allowed the US to easily capture some of the Japanese islands.[10]

After the Second World War, there was little full-blown naval warfare until the 1980s, when Iraq invaded Iran and kicked off a nearly ten-year war that eventually led to Desert Storm. As a part of their war strategies, both Iran and Iraq began targeting each other's merchant ships, especially petroleum tankers, to undercut each other's military procurement requirements. Iraq declared a war zone in the northern part of the Persian Gulf, and Iran effectively ordered all third-party vessels not destined for Iranian ports to register with the Iranian Naval Command before entering the Gulf.[11]

Eventually, it devolved into a shoot-on-sight policy regarding all oil

9. "Sinking of the SS Athenia," uboataces, http://www.uboataces.com/battle-athenia.shtml.

10. Joel Holwitt, "Unrestricted Submarine Victory: The U.S. Submarine Campaign against Japan," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013), 225, 226, 227, 228, 230, 234, 235, 236.

11. George K. Walker, "*Guerre de Course* in the Charter Era: The Tanker War, 1980-1988," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013), 240.

tankers, especially on the Iraqi side. In addition, Iraqi missile operators were not waiting for visual identification before opening fire, even though neutral countries such as the United States and Great Britain sent naval vessels to escort neutral shipping through the warzone.[12] The Iranians began to search any foreign ship traveling through the Straits of Hormuz. This led to issues with the international community, such as the planting of naval mines, as well as the Iranians firing on the frigate *U.S.S. Stark*, which led to the unfortunate incident of the *U.S.S. Vincennes* shooting down an Iranian passenger aircraft. Eventually, with the establishment of a ceasefire between Iraq and Iran, attacks on commercial shipping by both nations ceased, though Iran did say that they would continue to inspect shipping during the cease-fire talks. By October 1988, the United States had ceased its escort operations and the war itself concluded in 1989.[13]

## Legal Aspects

Generally, before the Treaty of Paris that outlawed privateering activity during war time, for a privateer to be considered legal in the international community, they needed to have a prize court adjudicate decide whether a captured vessel was a valid enemy ship and target. If the prize court ruled that the privateer had made a legal seizure, the privateer was allowed to then sell both the captured vessel and cargo for a profit. This system continued to be in place even after the Declaration of Paris in 1856, when the European powers agreed to refrain from the use of privateers. The British and subsequently all the major European powers decided to close their ports to armed vessels delivering prizes during the American Civil War. This limited Confederate privateers from being able to deliver their prizes to prize court adjudicates, meaning that they could not seek legal protection from being considered pirates.[14]

Another portion of international law regards the conversion of merchant ships into warships, meaning that there is no ambiguity as to their ability to be legally targeted in times of war. There were many instances of arming civilian vessels prior to this, such as the first Amer-

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12. Walker, 241.
13. Walker, 249.
14. Spencer C. Tucker, "CSS *Alabama* and Confederate Commerce Raiders during the U.S. Civil War," in *Commerce Raiding: Historical Case Studies, 1755–2009*, ed. Bruce A. Ellman and S. C. M. Paine (Newport: Naval War College Press, 2013), 75.

ican navy during the American Revolution and the Confederate States of America during the American Civil War. However, during the 1870 Franco–Prussian war, the King of Prussia attempted the same tactic, and because Prussia was a European power, there was debate as to whether it was a violation of the Declaration of Paris from 1856.[15]

The Convention VII of the Hague in 1907 finalized that merchant ships were allowed to be outfitted as warships. It stated that, "A merchant ship converted into a war-ship cannot have the rights and duties accruing to such vessels unless it is placed under the direct authority, immediate control, and responsibility of the Power whose flag it flies."[16] It also states:

> Merchant ships converted into war-ships must bear the external marks which distinguish the war-ships of their nationality; The commander must be in the service of the State and duly commissioned by the competent authorities. His name must figure on the list of the officers of the fighting fleet; The crew must be subject to military discipline; Every merchant ship converted into a war-ship must observe in its operations the laws and customs of war; A belligerent who converts a merchant ship into a war-ship must, as soon as possible, announce such conversion in the list of war-ships.[17]

So thus, if they were identified and followed the previous Hague conventions for identifying individuals as armed combatants, countries could convert merchant ships into naval auxiliaries.

A key aspect of the legal side is that some nations end up incorporating their traditional civilian merchant marine arm into their armed forces upon declaration of war or otherwise. The United States is a leading example in this regard, as the United States has a statute in place known as the Merchant Marine Act of 1936. The policy states: "It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine . . . capable of serving as a naval and military auxiliary in time

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15. International Committee of the Red Cross, "Convention (VII) Relating to the Conversion of Merchant Ships into War-Ships, The Hague, 18 October 1907," https://ihl-databases.icrc.org/ihl/INTRO/210.
16. International Committee of the Red Cross.
17. International Committee of the Red Cross.

of war or national emergency."[18] This is in accordance with The Hague Convention of 1907 related to auxiliary ships. The United States even equipped ships in its merchant marine during the Second World War with anti-aircraft and anti-ship weaponry, which allowed these merchant ships to fend off enemy aircraft and even enemy surface vessels, as evidenced by the American merchant ship *SS Stephen Hopkins* sinking a German commerce raider, the *Stier*, in 1942 after a long battle that saw both ships sinking by the end of the day.[19]

One major aspect of the law would be the conclusion of hostilities once an enemy ship, or ships, had been sunk. As a consequence of the brutal battles at sea during the Second World War, the 1949 Geneva Convention Additional Protocol One had a specific section related to the protection of shipwrecked individuals. Article 10 of the Convention states: "All the wounded, sick and shipwrecked, to whichever Party they belong, shall be respected and protected."[20] It further declares, "In all circumstances they shall be treated humanely and shall receive, to the fullest extent practicable and with the least possible delay, the medical care and attention required by their condition. There shall be no distinction among them founded on any grounds other than medical ones."[21] Article 10 made it illegal to kill survivors in the water and ruled that all efforts should be made to take care of shipwrecked enemy individuals, including providing medical assistance if it is possible.

## Hypothetical Examples

The commander of a nuclear hunter-killer submarine from country A is on a war patrol in the Pacific Ocean during an international armed conflict against country B. Through reconnaissance satellites, Country A's intelligence service detects a convoy of what they believe to be merchant ships escorted by armed warships, which left country B's primary naval base and is heading towards one of country B's isolated island outposts in the central Pacific Ocean. Repeated satellite

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18. United States Merchant Marine. Merchant Marine Act, 1936 (1936).

19. "Gallant Liberty Ship SS Stephen Hopkins Sinks a German Raider," USMM, http://www.usmm.org/hopkins.html.

20. International Committee of the Red Cross, "Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977," https://ihl-databases .icrc.org/ihl/INTRO/470.

21. International Committee of the Red Cross.

coverage shows they are headed there, and this is confirmed by the submarine commander's observations while the submarine has shadowed the enemy convoy. The commander's own observations show that all the merchant ships in the convoy, being cargo and tanker ships, are under country B's flag just like the warships, and the merchant ships appear to have anti-ship missile launchers mounted on their decks as well as other deck cargo of a military nature. Is it legal to attack this convoy?

The answer in this hypothetical scenario would most certainly be yes. One key fact is that all the vessels involved are flying the flag of an enemy combatant, meaning that there are no neutral vessels in the convoy. Thus, these vessels are not under the protection of the Declaration of Paris in 1856. Second, the presence of anti-ship missile launchers on the deck in the open, the military deck cargo, and the presence of enemy warships in an escort position, eliminates the possibility that these ships are enacting civilian purposes, as shown by The Hague regarding converting merchant ships for war. These ships are also on course towards an enemy controlled location, showing their intent to resupply the enemy forces that are on that island. Thus, it is perfectly legal to attack this convoy of merchant ships without any sort of warning.

The next scenario is a cruiser commander from country X who is participating in a naval blockade of country Y in the Atlantic Ocean. During their patrol, helicopter reconnaissance launched from the cruiser shows that a passenger liner has been sighted entering the exclusion zone inside country Y's territorial waters and is heading towards a prominent port on country Y's coastline. While the vessel is shown to be flying country Y's flag, the helicopter pilot reports that there is no observable evidence of war contraband onboard the passenger liner. However, country X's intelligence services suspect that country Y is supplying their war industry by using both neutral flagged ships and passenger liners. Would it be legal to sink the passenger liner?

This scenario would be more tricky to manage. The cruiser commander from country X could not simply sail up next to the passenger liner and order it to be sunk without any warning. However, one legal option is to sail alongside the passenger liner and send a boarding party to search it for war contraband. If there is no war contraband found onboard, then the cruiser commander would be legally obligated to send the vessel on its way. However, if there is war contraband found

onboard, then the cruiser commander would be allowed to order everyone on the passenger liner into the lifeboats and sink the liner to prevent the war materials from making their way into enemy hands.

In addition, the cruiser commander must follow the Geneva Convention of 1949, Additional Protocol 1, which states that medical attention should be administered to shipwrecked individuals when practical, which in the case of a surface ship it would be. If the commander from country X was in command of a submarine in this scenario, medical attention would be much more difficult to accomplish. They would most likely have to signal someone else to come in and provide medical attention. However, if no one needs medical attention, then the commander from country X would merely be under the legal requirement to not molest the survivors in the water.

The final scenario is the commander of a patrol boat from country A patrolling an exclusion zone as part of the naval blockade of their enemy, country B, located in the Persian Gulf. During their patrol, radar contact is made with a tanker in international waters. Both country A and country B have been targeting each other's merchant ships, particularly tankers, to starve each other's military forces of fuel; however, neutral tankers continue to make their way through the exclusion zone in international waters and deliver to both countries' ports and neutral ports. Would it be legal for the patrol boat commander to attack this radar contact?

The answer to this one would be a resounding no. Without making positive visual contact to determine whether the tanker is either an enemy vessel or a neutral vessel, the patrol boat commander runs the chance of striking a neutral, non-combatant vessel, which would be illegal under the Declaration of Paris. Add to this the fact that the tanker is in international waters, with no clear indication as to where the tanker is headed, meaning that it cannot be proven that the tanker is headed to an enemy port. What the patrol boat commander should do in this scenario is shadow the radar contact and try to close the distance to get a visual identification.

If a visual identification shows that the tanker is from country B, then sinking the tanker would be legal if the tanker left international waters and the crew's wellbeing is taken care of. If it proved to be a neutral vessel, then while the vessel is in international waters, it would be illegal to stop the vessel. If the vessel were to enter the exclusion

zone, then the tanker would be liable to a search, and if any registered war contraband is found, then the tanker can be sunk after the crew is taken off.

## Conclusion

While limiting an enemy's ability to both supply their military forces with food, fuel, and equipment has proven to be a successful military tactic throughout history, in a modern sense it can be a loaded question for JAG officers and legal advisors. Many would question if interfering with international commerce would be a wise move because freedom and navigation issues could crop up in the fog of war if neutral ships get involved. Others would argue that commerce raiding is largely ineffective, since both times Germany tried to implement a commerce raiding strategy it failed. First, the United States could manufacture vessels faster than the German navy could sink them, and, second, British naval superiority drove German commerce raiders to the bottom of the sea. However, as this paper has shown, commerce raiding when properly executed according to the law can be completely moral and legal in a modern sense. While an international armed naval conflict has not been fought since the Second World War, with a constantly evolving geopolitical landscape, nations must carefully review the law and be prepared for such naval warfare scenarios.

# Evolution of the War on Terror in Egypt: EAF Policies Against Wilayat Sinai in the Sinai Peninsula

*Andrew Paull Jensen*

On February 9, 2018, the Egyptian government launched Comprehensive Military Operation Sinai 2018 to combat the rise in terrorism in the Sinai province of Egypt. The Egyptian Armed Forces (EAF), in conjunction with police forces and state institutions, was deployed against the ISIS-affiliated insurgency group, Ansar Bair al-Maqdis, more commonly known as Wilayat Sinai, but Operation Sinai later expanded to include the diminishing foothold maintained by the Muslim Brotherhood and other recognized terror groups in the region.

The current repressive and kinetic approaches, those that include the use of military force, by the Egyptian military are not effective in countering the Sinai insurgency and have only served to increase the volatility of the conflict. Non-kinetic and soft power approaches, strategies that encourage action through persuasion and appeal, will better integrate Egyptian military and intelligence groups with the local Bedouin tribes, affording the government and tribal groups an opportunity to work together more comprehensively to reduce insurgent conflict in the area. Comprehensive Military Operation Sinai 2018 has created an ongoing and unmanageable conflict with a high propensity for increasing violence and further regional destabilization. The heavy-handed response by the EAF has not supplied sustainable conflict transformation in Northern Sinai. For a more effective approach, the Egyptian government must embrace an ethno-centric approach that seeks to integrate the local populations in military operations.

## Background

The Egyptian military campaign against the insurgency in the Sinai Peninsula is the largest deployment of the EAF since the 1973 war with

Israel. The initial contingency was deployed to fight against Wilayat Sinai, but as the conflict evolved, the Egyptian government embarked on a more comprehensive and expansive military operation to root out the insurgency, with operations expanding deeper into the Sinai and west of the Suez. The Comprehensive Military Operation Sinai deployments occur within three primary districts: El-Arish, Sheikh Zuweid, and Rafah. With a combined population of about 300,000,[1] the impacted area represents a substantial portion of the Sinai, since the Northern Sinai Governorate has a population of only 430,000.[2]

EAF military operations in Sinai are primarily against the terrorist group Wilayat Sinai, which emerged as an extremist terrorist group following the ousting of President Hosni Mubarak during the initial stages of the Arab Spring in 2011.[3] The government's focus on confronting the popular uprising gave a wide berth for Wilayat Sinai to create disruptions and gather members from across the Sinai Peninsula. Following the emergence of the Islamic State in 2014, Wilayat Sinai declared allegiance to the caliphate, allowing the group to receive significant logistical support, as well as a more developed command and control structure from the larger terrorist organization.[4] Since 2014, Wilayat Sinai has claimed responsibility for attacks across Egypt, including an attack in October 2015 against a Russian airplane that killed 224 people, a December 2016 attack on a Coptic chapel in Cairo, April 2017 attacks against churches in Tanta and Alexandria, and the infamous November 2017 attack against a mosque in Al-Rawda that killed 311 people in Sinai.[5] The Al-Rawda attack is the deadliest attack in Egyptian history and represents the second deadliest terrorist attack in 2017 worldwide.[6] In the years since, Wilayat Sinai has not launched large-scale, high-profile attacks, but has maintained a significant cadence of

1. Omar Ashour, "Sinai's Insurgency: Implications of Enhanced Guerilla Warfare," *Studies in Conflict and Terrorism* 46, no. 6 (2019): 542.

2. Ashour, "Sinai's Insurgency," 541.

3. Islamic State—Sinai Province," Mapping Militants, Center for International Security and Cooperation, Stanford University, updated December 2018, https://cisac.fsi.stanford.edu/mappingmilitants/profiles/islamic-state-sinai-province.

4. "Islamic State—Sinai Province."

5. "Islamic State—Sinai Province."

6. Adam Taylor, "How Parts of Egypt's Rugged Sinai Peninsula Have Become a Terrorist Hot Spot," *Washington Post*, November 27, 2017, https://www.washingtonpost.com/news/worldviews/wp/2017/11/24/how-parts-of-egypts-rugged-sinai-peninsula-have-become-a-terrorist-hot-spot/.

smaller-scale terrorist attacks, most recently against a natural gas pipe-line and military encampment.[7] It is important to note that while the attacks may be smaller and in different forms, Wilayat Sinai is still very much active in the Sinai region and actively launching attacks against military and civilian targets. Since 2017, the Egyptian military, alongside Israeli partners, have launched coordinated military operations against Wilayat Sinai throughout the Sinai Peninsula and along the border of the Gaza Strip. The largest operation to date is Comprehensive Operation Sinai 2018, launched by the EAF to remove the foothold maintained by Wilayat Sinai in the Sinai Peninsula.

The Egyptian military reports that the operation has been largely successful, saying "it has killed over 7,000 militants and arrested 27,000 fighters—a stunning number considering that most estimates put the active membership in the Wilayat Sinai (WS) . . . at about 1,000."[8] The Egyptian military has consistently maintained these claims that counterterrorism operations have been successful in the Sinai. Despite having killed seven times the estimated number of fighters, the heavy-handed response from the Egyptian government and armed forces has done little to actually reduce the cadence or number of attacks by Wilayat Sinai. To understand more about why these operations have failed, this paper will explore the different kinds of operations and tactics employed by the EAF and government forces.

The Egyptian government's response from 2011 to 2022 has been varied and used to justify a wide range of military tactics to establish security on the Sinai Peninsula. Despite increased evidence of rights abuse, torture, and other forms of repression utilized by the Egyptian military, the operations have nearly unconditional support in the military and parliament.[9] According to the Tahrir Institute, Egyptian military behavior from the last several years indicates that "rather than frequent but random and spontaneous violence that often erupted from

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7. Tomer Naveh and Yoram Schweitzer, "Islamic State Province in Sinai Changes its Strategy: Are Israel and the Suez Canal in the Crosshairs?" The Institute for National Security Studies, December 3, 2020, https://www.inss.org.il/publication/sinai-isis/.

8. David E. Thaler and Yousuf Abdelfatah, "Making Headway Against the Sinai Insurgency," The RAND Blog, August 12, 2019, https://www.rand.org/blog/2019/08/making-headway-against-the-sinai-insurgency.html.

9. Maged Mandour, "Egypt's Comprehensive Military Operation," *Sada*, February 15, 2018, https://carnegieendowment.org/sada/75556.

protests under duress, violence increasingly became a tool of offense against the state, rather than a defensive mechanism, taking on a premeditated, organized, and political character."[10] This represents the changing character of the conflict since the formation of Wilayat Sinai in 2011.

The response by the Egyptian government and armed forces has been further exacerbated by the enactment of a continuous state emergency since April 2017, which has created "a scenario by which Egyptians have lived in a continuous state of legal exception, granting the executive sweeping and extraordinary powers to maintain national security."[11] The changing system of prosecution for national security reasons in Egypt led "to the emergence of what can be described as a parallel justice system."[12] This new parallel justice system could have a significant role in fostering anti-government and anti-military sentiment throughout Egypt, further contributing to the continuing crisis in the Sinai.

Clearly, the operations and legislation embraced by the Egyptian government and military for the alleged good of national security has not had a significant impact on terrorism throughout Sinai. The following sections will seek to understand current military operations and where specifically those operations might be failing, with the goal to better understand how the Egyptian government and military can better implement sustainable conflict transformation policies.

## Comprehensive Military Operation Sinai

Following the deadly 2017 terrorist attacks by Wilayat Sinai, the Egyptian military launched Comprehensive Military Operation Sinai 2018. Statements from the EAF and other government leaders provide an effective resource to understand the effectiveness of the operation in Sinai:

> The law enforcement troops started on Friday 9/2/2018 morning implementing a plan for comprehensive confrontation of all terrorist organizations and elements in Central

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10. The Tahrir Institute for Middle East Policy, "Five Years of Egypt's War on Terror," *Egypt Security Watch*, July 27, 2018, https://timep.org/wp-content/uploads/2018/07/TIMEP-ESW-5yrReport-7.27.18.pdf.

11. The Tahrir Institute, "Five Years."

12. Amnesty International, *Permanent State of Exception: Abuses by the Supreme State Security Prosecution* (London: Amnesty International, 2019).

and North Sinai along with other areas in the Egyptian Del-
ta and western Nile Valley, with the aim to tighten control
of the external borders of the Egyptian State, all strategic
directions, and the clearance of areas where there are ter-
rorist elements."[13]

The state government further describes the mission of the Com-
prehensive Military Operation Sinai 2018, stating that the mission of
the operation was "launched to purge terrorism from Sinai and put an
end to this threat that has been on the rise since the Egyptian people
sparked their June 30, 2013 Revolution to topple the Muslim Brother-
hood rule and break apart their alliance with all terrorist and extremist
groups,"[14] referencing the coup that occurred in 2013 against former
President Mohamed Morsi. Comprehensive Military Operation Sinai
2018, as a joint operation between the EAF and law enforcement forc-
es, likely included a series of individual Counterterrorism (CT) and
Counterinsurgency (COIN) operations and exercises designed to pro-
mote collaboration between various military and intelligence groups, as
well as prepare state institutions for ongoing militarized operations. In
an analysis of the ongoing operations, the EAF said the operations was
designed to "protec[t] the homeland, safeguar[d] its security and pre-
serve the integrity of its territories."[15]

## Post- 2018 Government Response: The Election of President Abdel Fatah el-Sisi

The period of 2011–2013 was marked by violent protest from the
Egyptian people that sought to overthrow President Hosni Mubarak
and President Mohamed Morsi. Following the ousting of President
Morsi, a new president, President Abdel Fatah al-Sisi, won by a land-
slide in the 2014 Egyptian elections. After President Abdel Fatah al-Si-
si won a second term in 2018, he passed laws that worked to combat
extremism but also increased government control to unprecedented
levels as earlier referenced. This led to increased complications between

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13. "Comprehensive Operation Sinai 2018," Egypt State Information Service,
February 11, 2018, https://www.sis.gov.eg/Story/124521/Comprehensive
-Operation-Sinai-2018?lang=en-us.

14. "Analytical Report by the State Information Service," Egypt State Informa-
tion Service, February 11, 2018, https://www.sis.gov.eg/Story/124537/Analytical
-Report-by-the-State-Information-Service?lang=en-us.

15. "Analytical Report."

government and residents in the Sinai Peninsula.

The Tahrir Institute reports that President al-Sisi magnified the earlier repressive tactics in the Sinai, by issuing broad anti-terror legislation that allowed wide-ranging indiscriminate arrests by the EAF and state police, and broad powers for prosecutions and operations against terrorist fighters, especially those in the Sinai Peninsula.[16] In 2019, Sisi was approved to extend his term and run in 2024, thereby expanding his own power as well as guaranteeing that the counterterrorism and counterinsurgency tactics currently used by the EAF will likely continue throughout the coming years.

Despite the heavy-handed response by the EAF and repressive anti-terror legislation embraced by the Sisi administration, the Sinai Peninsula has continued to suffer from ongoing terrorist attacks, which has led the EAF to create and maintain strategic priorities and policies around containment rather than elimination of the terrorist groups. In recent years, terrorist attacks in Northern Sinai have been reported slightly less frequently than between 2015 and 2016, but the reports state that "just over 14 attacks reported on average per month."[17] With a shift toward a policy of containment, the EAF has made little progress in rooting out whole terrorist groups from Sinai. Allison McManus, an analyst at the Carnegie Endowment for International Peace, writes that "sustaining a military presence [in Sinai] is costly: the military continues to sustain nearly daily casualties, the local population suffers and is susceptible to militant recruitment, and militants have sporadically penetrated and attacked the mainland."[18]

## The Failure of Current Policies

Since the inception of the heavy-handed EAF tactics to counter insurgency movements in Northern Sinai, there has been no definitive success or defeat. The Egyptian government has given no official update on the progress of Comprehensive Operation Sinai since March of 2019, when a military spokesperson stated that "anti-terror troops killed 46 terrorists and destroyed 15 hideouts in northern and central

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16. The Tahrir Institute, "Five Years."
17. The Tahrir Institute.
18. Allison McManus, "The Egyptian Military's Terrorism Containment Campaign in North Sinai," *Sada*, June 30, 2020, https://carnegieendowment.org/sada/82218.

Sinai."[19] The Tahrir Institute reported that the "Egyptian army both downplayed the scale and significance of Wilayat Sinai attacks and amplified the security forces' achievements."[20] A lack of updates or reviews of success over the past several years seems to signal that government counterterrorism and counterinsurgency tactics continue to be unsuccessful. The EAF continues to move towards policies of containment and attrition rather than addressing the root causes of the conflicts.

The Comprehensive Military Operation Sinai 2018 represents a new wave of strategic heavy-handed military responses that have become regularly utilized by the EAF in Northern Sinai. The utilization of these scorched earth policies, military policies and doctrines which are designed to leave devastation and large casualty numbers in their wake, were developed as a strategy to respond to some types of guerilla groups within a country, however, this success has yet to be realized in the Sinai Peninsula.[21] According to analysts from the RAND corporation, "despite brutal methods and substantial military effort, the Egyptian government has little to show from the past five-plus years of counterinsurgency operations in the Sinai aside from the hundreds of military and civilian casualties and an undeterred adversary."[22] Reports have signaled that the fighting has "caused nearly 100,000 of the Sinai's 1.4 million residents to become displaced and has left over 400,000 in need of humanitarian aid."[23]

Furthermore, the scorched earth tactics embraced by the EAF have led to mass destruction of civilian property throughout the Sinai. According to Human Rights Watch, "Between late 2013 and July 2020, the army destroyed at least 12,350 buildings, mostly homes, most recently in the al-Arish area. The army has also razed, ruined, and closed off approximately 6,000 hectares of farmland."[24] In the analysis of the

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19. "Military Spokesman: 46 Terrorists Killed, 15 Hideouts Destroyed in Northern, Central Sinai 2019," Egypt State Information Service, March 12, 2019, https://www.sis.gov.eg/Story/137985/Military-Spokesman-46-terrorists-killed%2c-15-hideouts-destroyed-in-northern%2c-central-Sinai?lang=en-us.

20. Amer Mohamad, "Superficial Gains, but No Lasting Success in Sinai 2018," The Tahrir Institute for Middle East Policy, February 7, 2019, https://timep.org/commentary/analysis/superficial-gains-but-no-lasting-success-in-sinai-2018/.

21. Ashour, "Sinai's Insurgency."

22. Thaler and Abdelfatah, "Making Headway."

23. Thaler and Abdelfatah.

24. "Egypt: Massive Sinai Demolitions Likely War Crimes: Army Destroys Thousands of Homes, Livelihoods," Human Rights Watch, March 17, 2021,

destruction of civilian property, the Human Rights Watch went so far as to say that the "continuing home demolitions and forced evictions during the armed conflict in North Sinai governorate are violations of international humanitarian law, or the laws of war, and likely amount to war crimes."[25]

Scorched earth doctrine and policies are designed to defeat the will of terrorist and insurgent groups by razing infrastructure to the ground. In the Sinai Peninsula, these policies and doctrines have been deployed largely against civilians, rather than Wilayat Sinai, which has only increased anti-Egyptian sentiment among the local Bedouin population. With increasing displacement and impoverishment, allegations of violations of the international law of war, and a lack of substantial change in the number of terrorist attacks, it becomes clear the operations launched by the Egyptian government and military are ineffective.

Even after years of military operations and supposed elimination of targets, the Egyptian government has only marginal success to show against Wilayat Sinai and other terrorist groups. The curtailing of human rights by President al-Sisi, and the adoption of containment policies, have not effectively eliminated terrorist threats but have instead increased the number of civilians arrested and killed. The initial goal of eradication of these terrorist groups in Sinai has been reduced to more realistic goals of containment and attrition. Allison McManus writes "the reasons for this more modest strategy are multifold: although there may be an earnest desire to rid the province of the militant threat, the nature of the Egyptian Armed Forces' dual role as political and military actor create constraints that prevent it from either formulating a dynamic force able to combat the threat or carrying out the necessary political "soft power" strategy to prevent militants' recruitment."[26] The continued threat of insurgency and terrorism, despite the decade of continued military operations, represents the unsustainability of a purely military response.

## Other COIN & CT Tactics: Soft Power and a Rights-Based Framework

With the current effectiveness of the government's response in

https://www.hrw.org/news/2021/03/17/egypt-massive-sinai-demolitions-likely -war-crimes.

25. "Egypt: Massive Sinai Demolitions Likely War Crimes."

26. McManus, "Egyptian Military's."

question, there are other counterinsurgency and counterterrorism policies that may better aid the EAF in rooting out the terrorist threat in the Sinai Peninsula. Primarily, the most pressing problem with the current situation is a lack of information or reporting. Since 2015, non-state journalism and reporting has been banned in the Sinai.[27] The policy continues through today, severely restricting the flow of information coming from the Sinai Peninsula. Sparse information outside of official government updates and some non-state research is available—much of which is available at a second- or third-hand account—essentially turning the Sinai into a black hole for information and research. The lack of information available in the Sinai is probably representative of a larger issue in the EAF's tactics. It is unlikely that the EAF has a comprehensive intelligence and information-gathering operation, relying instead on military and law enforcement intelligence. Good intelligence requires a mix of both, taking external resources and melding those with internal resources. The lack of information contributes to the lack of viable intelligence operations by the Egyptian military, which can complicate efforts to run CT or COIN operations. With more accurate information and intelligence, the EAF may be able to target terrorists and prevent further attacks in the Sinai more effectively.

Secondly, deferring kinetic tactics for a soft power approach that involves enveloping the local Bedouin population is likely to reduce support for the insurgency groups among local populations, and drive down group recruitment and mobility. The key to this is understanding the importance of navigating tribal and clan politics, which the Egyptian government and military has been unable to do. The Egyptian counterterrorist strategies and policies have undoubtedly "alienta[ted] much of the local Bedouin population—the group that could most effectively assist the government in countering the militants given their intimate knowledge of the Peninsula and famed ability to provide intelligence."[28] This alienation has come as a result of historical ethnocentric discrimination against the local Bedouin populations in the Sinai Peninsula. Despite representing 70% of the population of the Sinai,[29]

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27. Patrick Keddie, "Sinai: Reporting Egypt's 'War on Terror,'" *Aljazeera*, March 7, 2016, https://www.aljazeera.com/news/2016/3/7/sinai-reporting-egypts-war -on-terror.

28. Thaler and Abdelfatah, "Making Headway."

29. Sahar Aziz, "De-securitizing Counterterrorism in the Sinai Peninsula," Brookings, April 30, 2017, https://www.brookings.edu/research/de-securitizing

the Bedouins "have been at odds politically, economically, and socially with [Egypt's] central government . . . [who] has often ignored [the Bedouin population] or treated them as second-class citizens."[30] The incapacity for the government—especially in military and intelligence operations—to work with the local Bedouin population has been on full display throughout the Sinai Peninsula.

Wilayat Sinai and other Islamic State-affiliated groups have been able to supersede military and government capacities, "prov[ing] adept at navigating the region's complex tribal politics."[31] Many tribes in the Sinai Peninsula have become hotbeds of recruitment for fighters[32] by providing Sinai residents steeped in displacement and poverty with the opportunity to earn money and fight back against a repressive government. Despite working with elements of the Egyptian military and intelligence, the local tribal and Bedouin populations have yet to realize any benefits from helping Egyptian armed forces. The Bedouin have long been excluded from the Egyptian system, and instead of responding to Bedouin concerns, the government has precipitated more grievances against the Bedouins, including enforcing a "lack of political representation of the Bedouin, denial of land rights, and exclusion from the Sinai's tourist industry."[33] These policies have only served to further "long-standing economic, social and political policies which serve to discriminate against and marginalise [sic] the Bedouin."[34]

Despite continuing to discriminate against the Bedouin population, the Egyptian armed forces continue to utilize Bedouin tribe and clan members to gather intelligence, which is unlikely to foster an ongoing and beneficial relationship. Failing to deliver on vast economic development and self-governance promises to the Bedouins has likely only served to further alienate Bedouin populations. As the EAF has increasingly perpetuated more violent operations that have increased Bedouin collateral—in civilian casualties, displacement and impoverishment, and regional infrastructure—tribe members have likely been

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30. Thaler and Abdelfatah, "Making Headway."

31. Thaler and Abdelfatah.

32. Thaler and Abdelfatah.

33. Iffat Idris, "Sinai Conflict Analysis," KD4 Helpdesk Report, Institute of Developmental Studies, February 3, 2017, https://reliefweb.int/sites/reliefweb.int /files/resources/049 Sinai Conflict Analysis (new K4D template).pdf.

34. Idris, "Sinai Conflict Analysis."

pushed further from the reach of the central government and exacerbate the conflict. It is worth noting, however, that there are clear divides among the Bedouin tribal population of the Sinai Peninsula, since "almost every Northeastern tribe and clan has members and supporters of the insurgency and supporters, informants, and pro-incumbent armed tribesman."[35]

Analysts with the RAND corporation have claimed that if the Egyptian government "fails to productively engage the local Bedouin population, the insurgency will continue to fester and expand."[36] If the EAF wants to more effectively deal with the conflict in the Sinai Peninsula, the government and military must seek to institute a strategy that examines and addresses the root of the conflict in Northern Sinai, rather than only seeking to contain and eliminate these groups. Allison McManus writes that this would "mean that a more holistic strategy be adopted, one informed by the realities on the ground, which would require both a soft and hard power approach."[37] A more holistic framework should integrate soft-power strategies with non-kinetic methods. The Tahrir Institute further supports this idea, saying that after four years of data collection and research, "only a rights-based framework can establish long-term security and stability,"[38] coupled with a "strategy of disarmament, demobilization, and reintegration"[39] that strengthens the rule of law.

The realignment of counterinsurgency and counterterrorism policies that Egypt needs should be focused on the use of soft and other non-kinetic types of power. Thaler and Abdelfatah have stated, "Rather than relying solely on its traditional approach emphasizing lethal force and mass arrests, the Egyptian government could work to address the underlying factors that have turned the Sinai into fertile ground for insurgents."[40] The United States government and other regional allies have expressed clear support for this new approach. The former Deputy Assistant Secretary of Defense for the Middle East, Mick Mulroy, has affirmed that the United States and Egypt "share the importance of a population-centric approach, even if it takes longer to

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35. Ashour, "Sinai's Insurgency," 542.
36. Thaler and Abdelfatah, "Making Headway."
37. McManus, "Egyptian Military's."
38. The Tahrir Institute, "Five Years."
39. The Tahrir Institute.
40. Thaler and Abdelfatah, "Making Headway."

be successful."[41] Recognition that geopolitical forces like the United States support this approach lend credence to a necessary reform of the kinetic and repressive approaches currently utilized in the Sinai peninsula.

## Conclusion

The current counterinsurgency tactics in Northern Sinai pursued by the EAF are not working to quell the lasting insurgency. The current policies are only alienating local Bedouin populations and increasing popular discontent against the Egyptian government. The solution to the current conflict and path forward incorporates an important series of steps. First and foremost, as a foundational element to this strategy, is a hard- and soft-power framework that embraces necessary kinetic approaches with restraint, as well as soft-power non-kinetic approaches where possible. In this way, the framework is more comprehensive, and it integrates best practices from COIN and CT strategies. Next, the Egyptian government should begin to rebuild relationships with Sinai insurgents and terrorists, offering paths to reintegration for moderate Bedouins, including programs that allow them to work in Egypt, move about freely, and speak openly without fear of government retaliation. Next, the Egyptian government should capitalize on reintegration to rebuild relationships with Bedouin tribe leaders and members, increasing the intelligence capacity of military and intelligence units to pre-2011 levels. From there, working with tribes and clans, the Egyptian government and military—and security community writ large—can work to close the information gap, effectively target terrorist groups, and limit the influence of terrorists and insurgents in the Sinai Peninsula. Though limited, this strategy offers a path forward in Egypt, building on the research available in the region, and can set the stage for more meaningful conflict transformation throughout the region.

Though the research that supports this policy and strategy is clear, it is unlikely that the Egyptian government will work to adjust its COIN or CT policies to embrace these approaches. Allison McManus further writes that "acknowledging any expression of grievances is viewed as politically risky for a government that sees openness as a threat to its

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41. Jack Detsch, "Pentagon Pushes Egypt to Fight Counterinsurgency Campaign in Sinai," Al-Monitor, July 31, 2019, https://www.al-monitor.com /originals/2019/07/pentagon-push-egypt-fight-counterinsurgency-campaign-sinai .html#ixzz5vJ8nYMY2.

power."[42] As highlighted earlier, President al-Sisi, alongside military and other political leaders, has enjoyed widespread support among parliamentary and government voices in Egypt, and is unlikely to relinquish any power through easing the repressive and highly kinetic tactics embraced by the EAF and others in the Sinai. There is unlikely to be any significant reprieve to the conflict in the coming years, and the threat to the Egyptian people is far from over.

Throughout 2020 and beyond, Wilayat Sinai and other terrorist and insurgent groups have continued to launch attacks in the Sinai Peninsula. This conflict has the potential to spill over into other regions and exacerbate ongoing conflicts in Libya and Israel. Another harrowing conclusion is that a destabilized Northern Sinai could provide a harbor for Islamic State and al-Qaeda militants to launch attacks worldwide, with few other governments having any influence in the region. In order to more effectively address the insurgency in Sinai, the EAF should embrace ethno-cultural soft power tactics that work to integrate local populations into the strategic and operational priorities of the EAF.

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42. McManus, "Egyptian Military's."

# The Boston Marathon Bombing:
## A Case Study

*Spenser A. Clark*

## Abstract

On April 15, 2013, two homemade pressure cooker bombs, made by Tamerlan and Dzhokhar Tsarnaev, exploded near the finish line of the Boston Marathon. Three people were killed and hundreds injured, leading to an unprecedented manhunt. This paper draws upon government, academic, and journalistic sources to offer a review of four elements of the Boston Marathon bombing: the history of the terrorists and investigations prior to the bombing, the events immediately preceding the bombing, the bombing itself, and the subsequent emergency response. This paper offers a brief analysis of the failures and successes of national security and law enforcement entities. Systemic changes influenced by the bombing are also briefly mentioned.

## Events Prior to the Bombing

In 2002, Anzor Tsarnaev and his wife Zubeidat Tsarnaeva immigrated to the United States from Kyrgyzstan with their son Dzhokhar Tsarnaev. Their eldest son and two daughters—Tamerlan, Bella, and Ailina—arrived later in 2003. All eventually became Lawful Permanent Residents.[1] The family settled into an apartment in Cambridge.[2]

### The Tsarnaev Brothers

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1. Inspectors General of the Intelligence Community (IGIC), Central Intelligence Agency, Department of Justice, Department of Homeland Security, *Unclassified Summary of Information Handling and Sharing Prior to the April 15, 2013. Boston Marathon Bombings, United States Intelligence Community*, 2, https://oig.justice.gov/reports/2014/s1404.pdf.

2. Scott Helman and Jenna Russell, *Long Mile Home: Boston Under Attack, the City's Courageous Recovery, and the Epic Hunt for Justice* (Farmington Hills: Thorndike Press, 2014), 32.

Dzhokhar thrived in school, having been deemed the brains of the family. He would later go on to become an honor student in high school and was one of 45 students awarded a small scholarship for college. While appearing to be a model citizen, Dzhokhar maintained more extreme views against American foreign policy, one time suggesting that acts like those of 9/11 were justified because of US government actions around the world. In college, Dzhokhar began to engage in more reckless behaviors. He became known as a prominent pot dealer on campus, making as much as $1,000 per week, and used this money to go to clubs, buy expensive clothes, and get psychedelic drugs.[3] Meanwhile, he seems to have grown even more opposed to America during this time, tweeting in his freshman year of college, "A decade in America already. . . . I want out."[4]

Tamerlan, as the firstborn son, was idolized by his parents. They were hopeful that his amateur boxing profession would be successful, perhaps taking him to the Olympics. He was known for his eccentricities, especially with his wardrobe in and out of the ring. Though he was an avid reader, Tamerlan did not do well in school, spending most of his time listening to music and smoking pot with friends.[5] Significantly, Tamerlan at some point confided in his mother that "he felt like there were two people living inside him," and explained to a friend that the voice "had become more demanding with age, ordering him to do things, though he never said what."[6]

Along with the rest of his family (minus Anzor, their father), Tamerlan became more religious as the stresses of their lives compounded. In an interview conducted after the bombings, an ex-girlfriend claimed that Tamerlan had begun to shift toward radical Islam between 2006 and 2009 with the intention to pursue jihad.[7] In 2010, Tamerlan was denied participation in the Golden Gloves national tournament due to not being a citizen, and, with that, his boxing career ended. Without a future prospect in boxing, Tamerlan devoted himself more fervently to his religion.[8]

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3. Helman and Russell, 52–53.
4. Helman and Russell, 65.
5. Helman and Russell, 59.
6. Helman and Russell, 35.
7. IGIC et al., *Unclassified Summary*.
8. Helman and Russell, *Long Mile Home*, 60.

*Tamerlan Tsarnaev Investigated*

In March 2011, the Russian Federal Security Service (FSB) sent a memorandum to the FBI Legal Attaché (LEGAT) in Moscow claiming that Tamerlan Tsarnaev and Zubeidat Tsarnaeva were adherents of radical Islam. It also claimed that Tamerlan intended to join bandit underground groups in Dagestan and Chechnya. The FSB shared information about Tamerlan and Zubeidat and asked for more information about them, specifically regarding potential travel to Russia. The information was forwarded to both the FBI's Counterterrorism Division (CTD) and the FBI Boston Field Division with instructions to investigate and return information for LEGAT. This information was not shared with the CIA.[9]

The Boston Joint Terrorism Task Force (JTTF) began an assessment into Tamerlan that included drive-bys of his residence, database searches, interviews of Tamerlan and his parents, and other methods to gather information on him. The Department of Justice Office of the Inspector General (DOJ OIG) later assessed that the FBI Special Agent (CT Agent) in charge of the assessment did not take certain steps to acquire relevant information on Tamerlan, including interviewing an ex-girlfriend whom Tamerlan had been arrested for assaulting in 2009. The DOJ OIG also ascertained that the CT Agent failed to obtain relevant information from the interviews he conducted with Tsarnaev and his parents, including asking about travel plans to Russia. The assessment was closed on June 24, 2011, concluding that there was no link between Tamerlan and terrorism. Following the assessment, the LEGAT in Moscow sent two letters to the FSB containing information produced from the FBI assessment, requesting additional information from the FSB about Tamerlan, though none was returned.[10]

In September 2011, the National Counter Terrorism Center created a record in the Terrorist Identities Datamart Environment (TIDE) for Tamerlan Tsarnaev. Despite there being no significant link between Tamerlan and terrorism, he was put on a watchlist. His watchlist records were included in the Customs and Border Protection's (CBP) TECS information system. Due to conflicting information, four varying versions of his record were submitted.[11]

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9. IGIC et al., *Unclassified Summary*, 7–8.
10. IGIC et al., 1–2.
11. IGIC et al., 1, 10, 13.

*Trip to Russia*

On January 21, 2012, Tamerlan Tsarnaev did travel to Russia. Vetting Tamerlan's travel information against the TECS database alerted a Customs and Border Protection (CBP) Officer of his travel. It is unclear whether the CBP Officer notified the counter terrorism (CT) Agent in charge of Tamerlan's initial assessment of his travel. Both the CBP Officer and CT Agent claim to have no specific memory of the sharing of that information; however, the CBP Officer did say that "he believes he followed his usual process in this instance and that the CT Agent would have told him that the lead was closed and that there was no interest in Tsarnaev's travel."[12]

In Dagestan, Tamerlan visited with his mother's cousin, Magomed Karthashov, a leader of an Islamic group called "Union of the Just."[13] A member of the group, Zaur M. Zakaryayev, reported that Tamerlan arrived speaking about jihad and that Karthashov attempted to convince him against joining a militant cell in the area.[14] Investigative reporter Michele McPhee noted that Tamerlan also visited William Plotnikov, a Russian Canadian boxer and member of the Islamist insurgent organization "Caucasus Emirate."[15] A Russian newspaper, *Novaya Gazeta*, citing a local security agent, claimed that Plotnikov and Tsarnaev had communicated online and that Plotnikov was one of Tsarnaev's contacts in the area, who allegedly wanted to join the group.[16] An article in a publication by The Jamestown Foundation, a DC defense policy think tank, claimed that the *Novaya Gazeta* article was a stretch and its claims were highly unlikely.[17] Interestingly, Tamerlan left Russia two days after Plotnikov and other militants were killed in a raid.[18]

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12. IGIC et al., 13.

13. Michele McPhee, "Tamerlan Tsarnaev: Terrorist. Murderer. Federal Informant?" *Boston Magazine*, April 9, 2017, https://www.bostonmagazine.com/news/2017/04/09/tamerlan-tsarnaev-fbi-informant/.

14. "Dead Boston Suspect Tsarnaev 'Talked Jihad' in Russia," *BBC News*, May 10, 2013, https://www.bbc.com/news/world-us-canada-22478722.

15. McPhee, "Tamerlan Tsarnaev."

16. I. Gordienko, «Бостонский взрыватель» был давно заряжен. Novaya Gazeta, April 27, 2013, https://novayagazeta.ru/inquests/57925.html.

17. Mairbek Vatchagaev, "Why Tamerlan Tsarnaev Is Outside of Chechen Mentality," *Eurasia Daily Monitor* 10, no. 83 (May 2, 2013), https://jamestown.org/program/why-tamerlan-tsarnaev-is-outside-of-chechen-mentality-2/.

18. Alan Cullison, "Dagestan Islamists Were Uneasy about Boston Bombing Suspect," *Wall Street Journal Online*, May 9, 2013, https://www.wsj.com/articles

Tamerlan Tsarnaev returned to the United States on a flight from Moscow to New York on July 17, 2012. Again, a CBP Officer in Boston was alerted of Tsarnaev's upcoming travel, and it is unclear whether this officer alerted the CT Agent. The Department of Homeland Security Office of Inspector General (DHS OIG) concluded that the CBP Officer did access Tsarnaev's JTTF TECS record after his flight landed but could not locate any communication from the CBP Officer to the CT Agent.[19]

There are disagreements about the significance of Tsarnaev's travel to Russia. The CT Agent in charge of Tsarnaev's assessment said that he would not have done anything differently had he known about Tsarnaev's travels. The CT Supervisor, however, said that had he known about the travels, Tsarnaev's assessment would have been reopened, Tsarnaev would have been interviewed before departing for Russia, and the Russian FSB would have been informed of his travel plans.[20]

### Events Preceding the Attack

In August 2012, Tamerlan created a YouTube channel on which he later posted videos with jihadi themes. Further investigation revealed that he had obtained a significant amount of jihadi-themed content, including articles, videos, and issues of an online magazine, one of which detailed how to create a bomb like the ones used in the Boston Marathon bombings.[21]

In February 2013, Tamerlan purchased fireworks that contained eight pounds of explosive material. In March, Tamerlan and Dzhokhar went to a shooting range where they shot targets and purchased two-hundred rounds of ammunition. Later, Tamerlan purchased electronic components online. Perhaps following the instructions from the article found on Tamerlan's computer, the brothers crafted two homemade bombs some time before the Boston Marathon. According to Helman and Russel, the brothers considered multiple targets and eventually settled on the Boston Marathon on Patriot's Day. On April 7, 2013, Dzhokhar tweeted, "If you have the knowledge and the inspiration . . . all that's left is to take action."[22]

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/SB10001424127887324059704578473160866108832.

19. IGIC et al., *Unclassified Summary*, 22.
20. IGIC et al., 15.
21. IGIC et al.
22. Helman and Russell, *Long Mile Home*, 66.

At 2:37 p.m. on April 15, 2013, Tamerlan and Dzhokhar Tsarnaev were seen by a surveillance camera rounding a corner onto Boylston Street, where the bombings would take place.[23]

## The Bombing

At 2:49 p.m. on April 15, 2013, near the finish line of the Boston Marathon, an improvised pressure cooker bomb exploded. Approximately twelve seconds later and 200 yards back, another similar device detonated. Three people were killed instantly, dozens received potentially fatal wounds, and hundreds were injured.

### *Immediate Response*

On-scene first responders such as police, fire, and emergency medical personnel; doctors, nurses, EMTs, and medically capable war veterans; and runners, bystanders, and survivors of the attack rushed to aid the injured.[24] Victims began to be transported at 2:58 p.m., and at 3:37 p.m. 48 minutes after the initial explosion, the last critical patient was transported.[25]

A few factors allowed for the incredibly rapid immediate response to the attack: (1) the event planning was such that a large volume of medical personnel were gathered at the finish line to treat athletes suffering from a variety of injuries, and a significant amount of transport vehicles were on standby at the scene; (2) uniformed personnel and civilians with recent combat experience who had been trained to treat traumatic blasts injuries, and recent changes in civilian treatment protocols based on wartime experience, meant that available and improvised tourniquets were applied aggressively, and (3) the Patriot's Day holiday and traffic blocks for the marathon mostly eliminated the obstacle of traffic and allowed for the quick transportation of victims to trauma

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23. Helman and Russell, 85.

24. Herman B. Leonard, Christine M. Cole, Arnold M. Howit, and Philip B. Heyman, "Why Was Boston Strong? Lessons from the Boston Marathon Bombing," *Program on Crisis Leadership*, April 2014, 7, https://www.hks.harvard.edu/sites/default/files/centers/rappaport/files/BostonStrong_final.pdf.

25. Massachusetts Emergency Management Agency, Massachusetts Department of Public Health, City of Boston, City of Cambridge, Town of Watertown, Massachusetts Bay Transportation Authority Transit Police Department, Massachusetts National Guard & Massachusetts State Police, *After Action Report for the Response to the 2013 Boston Marathon Bombings* (Boston: Massachusetts Emergency Management Agency, 2014), 18, https://www.mass.gov/doc/after-action-report-for-the-response-to-the-2013-boston-marathon-bombings.

centers.[26]

## Ongoing Response and Investigation

In addition to the rapid emergency response to the attack, on Patriot's Day, Boston activates a coordination center between its Level I trauma centers that oversee the distribution of patients. These centers were notified of a mass casualty four minutes following the attack, and victims began arriving within minutes. Additionally, on the holiday, hospitals were fully staffed, so additional personnel were available due to the victims' arrival coinciding with a shift change at the hospitals, and others came after hearing reports of the attack in case additional help was needed.[27] The holiday also mandated no scheduled elective surgeries, leaving necessary operating rooms and equipment available for incoming patients. The more than sufficient availability of equipment and personnel allowed for each patient to be treated almost immediately upon arrival with essentially no need to triage patients.[28]

### *Law Enforcement Response*

Soon after the bombing, commanders and officers from various law enforcement agencies on the scene and nearby felt the need to form a joint command post to direct their response to the situation. Multiple participants described a feeling of immediacy to find their colleagues, and soon pairs of officials and officers began to absorb with others until a tactical command was formed. This command structure soon joined the unified command structure of agency heads which was set up in the nearby Westin Copley Place Hotel.[29] The organizations included in the command post were The Boston Police Department, the Massachusetts Bay Transportation Authority Police Department, the Massachusetts State Police, the National Guard, the Massachusetts Emergency Management Agency, the Massachusetts Department of Transportation, the Federal Bureau of Investigation (FBI), the United States Secret Service, the Bureau of Alcohol, Tobacco, and Firearms (ATF), and the police departments of various colleges and universities in the area.[30]

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26. Leonard et al., "Why Was Boston Strong?" 7–8.
27. Leonard et al., 8.
28. Leonard et al., 8.
29. Leonard et al., 10.
30. Leonard et al., 13.

According to the report by Leonard et al.,

> Essentially all of these tasks involved cooperation from and coordination among multiple agencies . . . including, among others: ensuring ongoing EOD clearance of the finish line area; deploying of personnel to secure the crime scene area; investigating and collecting evidence; securing sites regarded as potential secondary targets; clearing and securing the tens of thousands of gym bags runners had sent to the finish line; organizing transportation for tens of thousands of marathon spectators, departing Fenway Park baseball fans, and ten thousand or more runners still on the course or near the finish line who [then] needed to leave the impact area; and assessing intelligence about ongoing events in Boston and elsewhere to determine if they might be connected or required further investigation or action.[31]

As the command structure took form, specialized task groups were created from the various organizations to accomplish these tasks.[32]

During their coordinated response, the command had to make more strategic decisions, such as how to characterize the attack, to determine whether there might be more attacks, and to evaluate whether the current command structure was organized sufficiently to coordinate an effective response. Massachusetts Governor Deval Patrick, who joined this structure, also helped to shift the focus from tactical to strategic issues, including the drafting of a joint message to the public. The first press conference was held at 4:50 p.m., two hours after the incident.

During a third press conference later that day, it was announced that the FBI was taking charge of the investigation and would conduct it through their JTTF in Boston, which included agencies that had already been working together during the response. Later, the US Attorney's office took charge of the prosecution. Because local, state, and federal crimes had been committed, strong cooperation on all levels was necessary. In this case, the cooperation between the organizations from the senior level to the tactical level seemed strong.[33]

A significant portion of the investigation was dedicated to analyzing the photographic and video evidence from the bomb scene. A large

31. Leonard et al., 13.
32. Leonard et al., 13.
33. Leonard et al., 17.

volume of evidence was provided by spectators at the scene. The incredible number of images submitted by spectators increased the likelihood of finding useful evidence, but it also created the issue of not having enough personnel to analyze it all. Incoming leads and information from civilians both progressed the investigation and generated a massive amount of misinformation. Thus, a major challenge of the investigation was sorting through the torrent of information and evaluating what was relevant and credible.[34]

## Final Events

On April 18, 2013, MIT police officer Sean Collier had positioned his car to overlook a street that suspects of a recent armed robbery might traverse. At about 10:25 p.m., two men—Tamerlan and Dzhokhar Tsarnaev—approached Collier's vehicle from behind on the driver's side (there are conflicting reports of the timing of these events between Leonard et al. and Massachusetts Emergency Management Agency et al., but only by approximately five minutes). One of the men shot Officer Collier five times, then fled the scene after failing to procure his weapon.[35]

Around 11 p.m. that night, a man driving an SUV was carjacked. He later stated that the carjacker had claimed that he had shot a Cambridge police officer and carried out the marathon bombings. They drove around, picking up a second man who followed them in an older car. The men—the Tsarnaev brothers—then loaded heavy objects into the SUV and began driving back to Cambridge with the vehicle's owner still in the car. The owner was able to escape while they were parked at a gas station, making his way to another gas station, where he told the attendant to call 911. The Tsarnaev brothers left in the direction of Watertown. Soon after, a broadcast described the vehicle and the brothers possibly heading toward New York.[36]

At 12:41 a.m. on the next day, April 19, the GPS location of the vehicle was called out over the radio by Watertown Police Department dispatch. An officer responded and drove to the location, passing the vehicle and making eye contact with the driver. Having spotted the vehicle, he radioed in and received instructions from the supervisor who

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34. Leonard et al., 16.
35. Leonard et al., 19.
36. Leonard et al., 20.

was nearby to wait to approach the vehicle until he arrived. The officer turned around and followed the SUV with his vehicle's lights off. Suddenly, the SUV stopped, and the driver exited the vehicle, walked toward the officer, and began to fire a gun at him. The supervisor then arrived, and the suspect began to fire through the supervisor's windshield. A gunfight ensued and improvised explosives were thrown at the officers. The gun battle continued as officers arrived individually and did not seem to self-organize. Senior officials who later arrived at the scene made an effort to coordinate a more structured response.[37]

The battle concluded when Tamerlan Tsarnaev was reportedly shot by an officer and then tackled as he tried to run away. As multiple officers attempted to take him into custody, Dzhokhar drove the SUV toward them. The officers were able to dive out of the way while Tamerlan was run over and dragged about 30 feet by the SUV. The build-up of police cars blocked others from pursuing Dzhokhar for about 45 seconds, and the suspect managed to escape.[38]

Later that morning, Governor Patrick announced a "shelter-in-place," asking residents in and around Watertown to close their businesses and stay inside their homes for the day. The lockdown was perhaps helpful in law enforcement's search for Dzhokhar but was lifted that evening. At 6:42 p.m., approximately 20 minutes after the lockdown had lifted, Watertown police received a call from a man who reported finding a bleeding man hiding in his boat. Officers were on the scene 10 minutes later. An FBI Hostage Response Team arrived on the scene at about 8:02 p.m. and began to communicate with Dzhokhar. At 8:41 p.m., Dzhokhar exited the boat and was taken into custody.

## Changes Made after the Bombing

The events surrounding the Boston Marathon bombing and the lessons learned had a significant influence on law enforcement and national security. Some of that influence is difficult to quantify, such as the public perception of the legitimacy of a terrorist attack threat, but six subsequent systemic changes are noteworthy. First, the bombing site was meticulously recreated by the FBI in a nearby warehouse with surviving evidence. With a better overview of the incident, evidence

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37. Leonard et al., 21; Massachusetts Emergency Management et al., *After Action Report*, 6.
38. Leonard et al., 21–22.

was then prioritized and sent for further analysis. This method is now used as a model for investigating large-scale incidents.[39] Second, Tamerlan's having been on a watchlist in 2011 led to the implementation of more frequent reassessments of old cases, especially during high-threat periods such as holidays and anniversaries of terrorist attacks.[40] Third, the FBI's Hazardous Devices School, the center of bomb squad training and certification nationwide, included pressure cooker devices in their training. They had not been included until then because pressure cooker devices had typically been seen only in incidents overseas.[41] Fourth, the FBI and other agencies began to focus more on attacks by individuals and on soft targets following the marathon bombing.[42] Fifth, the FBI prioritized increasing its speed in analyzing photos and videos from the public.[43] Sixth, sporting and event venues began more extensive screening procedures, including allowing clear bags only, and some sites banned bags altogether.[44]

## Conclusion

On June 14, 2015, Dzhokhar Tsarnaev was given a death sentence.[45] Currently, Dzhokhar is waiting on a Supreme Court ruling that will determine whether his sentence will be carried through. Regardless, justice will be administered either through life in prison or a termination of his own.[46]

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39. Karen Anderson, "5 Years Later, Lessons Learned After Marathon Bombing Lead to Changes," *WCVB Channel 5 Boston*, April 13, 2018, https://www.wcvb.com/article/5-years-later-lessons-learned-after-marathon-bombing-lead-to-changes/19779452.

40. Anderson, "5 Years Later."

41. Ally Donnelly, "How the Boston Marathon Changed Bomb School Training," *NBC10 Boston*, April 4, 2018, https://www.nbcboston.com/news/local/how-the-boston-marathon-changed-bomb-school-training/48337/.

42. Bree Sison, "Counterterrorism Efforts Shift in 5 Years Since Boston Marathon Bombing," *WBRC Fox6 News*, https://www.wbrc.com/story/37935789/safety-precaution-changes-since-the-boston-marathon-bombing/.

43. Sison.

44. Sison.

45. Ann O'Neill, Aaron Cooper, and Ray Sanchez, "Boston Bomber Apologizes, Gets Death Sentence," *CNN*, June 25, 2015, https://www.cnn.com/2015/06/24/us/tsarnaev-boston-marathon-bombing-death-sentencing/.

46. Ariane de Vogue, "Supreme Court Conservatives Appear Ready to Endorse Death Sentence for Boston Marathon Bomber Dzhokhar Tsarnaev," *CNN*, October 13, 2021, https://www.cnn.com/2021/10/13/politics/boston-marathon-dzhokhar-tsarnaev-death-penalty/index.html.

A comprehensive evaluation of the events before, during, and after the bombing is beyond the scope of this paper, but there are a few points worth mentioning here. Contact was made with Tamerlan Tsarnaev prior to the bombings, and evidence linked him to terrorist ideology and behavior. Had certain reasonably expected actions taken place, the Boston Marathon bombing may have been a preventable incident. While it is impossible to determine with certainty what would have happened under different circumstances, it seems reasonable to conclude that the likelihood of the attacks being deterred would have been higher had the initial assessment of Tamerlan been more thorough and if there had been better information sharing among relevant agencies and departments.

While the events prior to the bombing perhaps represent a failure of intelligence, the actions taken in response to the attack showcase heroic bravery and expertise in the immediate response and treatment of the wounded, efficient and intelligent coordination and cooperation by many agencies and departments, rapid utility of citizen involvement in intelligence gathering, and incredibly fortuitous circumstances. The events can serve as a case study of what to do in similar incidents, and they reveal some weaknesses in emergency response systems that can be improved.

The history of the Tsarnaev brothers is a cautionary tale as it highlights some of the worst in human nature in response to unfortunate circumstances, including radical ideology, and, evidently, untreated mental illness.[47] However, the tragedy that occurred in Boston on Patriot's Day in 2013, while designed to induce terror, the aftermath of the bombing gave opportunity for the best in human nature, and the strength of a city, to manifest in a phrase that was born that day: Boston strong.

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47. Helman and Russell, *Long Mile Home*, 35, 41.

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