Mateusz Pietryka
http://orcid.org/0000-0003-3124-1053
University of Warsaw
p.mateusz1990@gmail.com
DOI: 10.35765/HP.2566

Horyzonty Polityki
2024, Vol. 15, N° 52
OPEN ACCESS

War mediated by satellites. US drone warfare and its socio-political consequences

Abstract

RESEARCH OBJECTIVE: Analysis of the mediation phenomenon in US drone warfare and its consequences for drone operators and for global politics.

THE RESEARCH PROBLEM AND METHODS: The primary issue is how the physical separation from the battlefield affects soldiers controlling unmanned vehicles and how technological dominance associated with drones impacts international law and perception of the enemy. The paper analyzes a broad range of sources, including academic literature, NGO reports, journalistic investigations, military textbooks, and personal accounts from drone operators. The theoretical framework draws from Carl Schmitt's books, "Nomos of the Earth" and "Theory of the Partisan".

THE PROCESS OF ARGUMENTATION: In the first part, the study examines the mechanics of drone warfare and analyzes the personal experiences of drone operators. In the second part, the focus shifts to the realm of geopolitics, exploring the transformations it undergoes due to the impact of remote warfare.

RESEARCH RESULTS: Workers in the unmanned warfare program exhibit symptoms similar to those experienced by soldiers on the battlefield. The precise and "humanitarian" elimination of enemies can be counterproductive, potentially leading to the dehumanization of the enemy and radicalization on both sides of the conflict.

Suggested cittation: Pietryka, M. (2024). War mediated by satellites. US drone warfare and its socio-political consequences. *Horizons of Politics*, *15*(52), 283–300. DOI: 10.35765/HP.2566.

CONCLUSIONS, INNOVATIONS, AND RECOMMENDATIONS:
The fact of separation from the battlefield does not necessarily guarantee safety, precision, or humanitarian outcomes. On the contrary, in some instances, it can lead to soldiers' suffering, civilian casualties, and escalation of conflict intensity.

Keywords:
drone, drone warfare ethics, remote warfare, Unmanned Aerial Vehicle, War on Terror

INTRODUCTION

The roots of military drones trace back to World War I (Kreps, 2016, p. 10), but their actual origin is widely attributed to an American military program known as Hunter-Killer. The initiative launched in 2004 aimed to develop an efficient, effective, and affordable aerial combat tool prioritizing soldier safety (Fulghum, 2004). The result was MQ-1 Predator drone, succeeded by the improved MQ-9 Reaper, both of which quickly became indispensable assets in the U.S. military's arsenal (Moseley, as cited in Af.mil, 2006).

In 2007, the U.S. Department of Defense received directives from Congress to make drone technology a primary goal over manned aviation development (Kindervater, 2016, p. 9). Today, 90 military units in the U.S. utilize combat drones (Gettinger, 2020, p. 2017), and the infrastructure supporting their operation spans approximately 60 locations, including countries like Greece, Japan, Jordan, Niger, Italy, and Poland, where two Reaper models are stationed at the base in Mirosławiec (Maziarz, 2018). As of 2020, the U.S. military maintained 70 drone patrols (National Guard, 2020).

In one of the most significant monographs dedicated to military drones, Grégoire Chamayou (2015, p. 11) notes that the history of drones is a "history of the eye turned into a weapon". Thanks to the infrastructure of mediation technologies, precise attacks can be executed on targets located thousands of kilometers away, effectively overcoming the traditional space-time barriers of armed conflict. The flying machines themselves are merely the final element of an

extensive communication, navigation, and observation framework, which includes satellites placed into orbit, fiber optic internet technology, a global tracking infrastructure, and a complex set of hardware and software enabling drone control and target tracking.

This article specifically focuses on the United States and is divided into two parts, analyzing the ramifications of the drone warfare phenomenon on the micro-level, concerning the effects on drone operators, and the macro-level, concerning the socio-political effects. In the first part, I introduce the technical aspects of drone technology and characterize the work of their operators. Then I discuss the results of available studies regarding their emotional experiences, as well as operator testimonies available in the literature and the media. In the second part, I refer to the works of Carl Schmitt to demonstrate the meta-political threats arising from the verticalization and automation of military actions.

The US-centric focus of this article warrants particular emphasis, as the ways in which drones have been employed in recent years differ significantly from their use under the War on Terror doctrine I am highlighting. The key characteristics of drone usage by the U.S. military are, first, the physical separation of soldiers from the battlefield, and second, the conduct of military operations targeting specific individuals or groups rather than states, making it challenging to categorize these activities under international humanitarian law. In the case of conflicts such as the Russian invasion of Ukraine, the conditions of drone warfare are markedly different, as drone operators on both sides are directly exposed to danger, and the conflict itself is an interstate war.

Given the many definitions of the word "drone", I will refer this term to flying machines that are unmanned, can operate out of the operator's line of sight, and are intended for multiple uses (which disqualifies missiles). I will also use the term Unmanned Aerial Vehicle (UAV) interchangeably. By mediation technologies, I understand the infrastructure enabling the precise conduct of military operations from a distance that ensures the safety of the soldiers executing these actions.

INDIVIDUAL LEVEL

While a single military drone mission may involve up to 200 people, the ultimate decision to fire a missile and neutralize the target rests with the machine's operators, the pilot and the navigator (Deptula, 2015, p. 66), who are stationed at military bases in the United States, with one of the largest and most famous being Creech Air Force Base. The facility employs approximately 3,000 people, including not only military personnel but also service workers. It incorporates extensive social infrastructure, including shops, restaurants, fitness and recreation centers, a gas station, and medical and beauty services (Creech.af.mil, 2023). Soldiers stationed at the base often commute from the suburbs of Las Vegas, and their lifestyles are not markedly different from those of average citizens. They spend their free time at home with their families, and during work hours, they put on their uniforms, virtually relocating to battlefields in Africa or the Middle East.

From the moment of taking the drone operator's seat, which simulates a seat from traditional jet aircraft, mediation procedures commence. In front of the soldier is a set of monitors displaying views from drone cameras: standard video, infrared video, or thermal mode video, enabling observation around the clock, even when weather conditions are less than optimal. The operator also has access to a wide range of other tools that enable precise, remote military operations. These include laser rangefinders, GPS localization tools, and advanced software that allows automated tracking of targets (Crouse, 2007, p. 2; Chatterjee, & Stork, 2017), intercepting phone conversations, and algorithmically calculating the probability of civilian casualties in urban area (Mayer, 2009).

Fiber-satellite technology enables military operations to be conducted from a distance of 11,000 kilometers (Gettinger et al., 2014, p. 3). The drone sends data from its devices, including cameras, to satellites in orbit, which then communicate with the nearest military bases. The data are then transmitted via fiber-optic connections to the United States, allowing operators to observe the drone's view and manoeuvre it (Scahill, 2016b, p. 73). The control tools closely resemble gaming peripherals, like PlayStation or Xbox joysticks (Phelps, 2021). The view on the screens is also similar to that of a video game. As Matt Martin, an experienced Predator pilot, describes:

> Near my RPA [Remotely Piloted Aircraft] icon on the map screen appeared another icon representing the AC-130. On the HUD, my infrared picked up the flicker of machine-gun fire erupting from several windows (…) The suddenness of action played out long distance on computer screens left me feeling a bit stunned. A surreal experience. Almost like playing the computer game Civilization, in which you direct units and armies in battle. Except with real consequences (Martin, 2010, p. 31).

The army is aware of the similarities of drone technologies to video games, hence it conducts recruitment programs for unmanned warfare among computer gamers, and one of the free online games (Airforce.com) released by the military allows players to take on the role of a drone pilot. For these reasons, mediated war is considered by some military circles to be less honorable and heroic than direct combat with the enemy. Drone operators are referred to by other soldiers with terms such as "Playstation Warriors", "Nintendo Warriors", and "Chair Force" – a play on Air Force (Phelps, 2021).

However, available psychological studies and personal accounts suggest that physical separation from the battlefield does not mean a qualitative difference in psychological experiences. The attack on a person suspected of terrorism is often preceded by weeks of tracking him using drones, which observe the individual's life, daily habits, family relationships, and trips to work for several hours a day. As one pilot put it, "Targeting with RPAs is more intimate. It is war at a very intimate level" (Rothenberg, 2015, p. 113). Soldiers involuntarily experience immersion in the private world of the observed target (Power, 2013).

> We watch people for months. We see them playing with their dogs or doing their laundry. We know their patterns like we know our neighbors' patterns. We even go to their funerals (Abé, 2012).

All this means that the moment of killing can be associated with a certain level of empathy (Phelps, 2015). The process of assessing political involvement in terrorism takes place at an investigative level, facilitated by the combined efforts of algorithms and intelligence personnel. However, the drone operators are detached from this process. They only have access to the daily, private life of the target, which often seems routine and "normal" – so the person to be killed do not necessary appear as "evil".

The attack itself is a highly stressful situation, as pilots feel the pressure to accomplish their task while concurrently dealing with the uncertainty associated with the presence of civilians. Insight into the attack process is provided by the media-revealed record of a conversation in a drone control center during one of the drones strikes in Afghanistan, where a series of misinterpretations resulted in the killing of 23 civilians (Zulaika, 2020, p. 9–11). The operator team encountered significant difficulty in determining whether the individuals seen on the screen were adults or 12-13-year-old children, and whether the object they held was a weapon. The conversation demonstrates that mediation technologies do not always provide comfortable conditions for situation analysis. Continuous observation of enemy territories may induce pilots to seek threats even when none exist (Lewis, & Vavrichek, 2016, p. 142; Khan, 2021).

Mediated war is closely related to the situation discussed in psychology and economics as "moral hazard". Such behavior is referred to when the application of factors that reduce the risk associated with a given action paradoxically leads to riskier behavior, precisely because of the sense of security. An example is the persistently high number of skiing accidents that occur despite the use of increasingly safe equipment – one explanation for this situation is that the awareness of being protected by a high-class helmet leads to more risky activities (Kreps, 2023, p. 381). Similarly, the isolation from the battlefield and the conduct of warfare from a base near one's family home creates a literal and psychological protective layer, both for the operators themselves and their superiors, creating the illusion of full control (Gates, 2014). A 2004 Red Cross report warned that

> people find it difficult to kill their fellow human beings at close range (…) Conflicts in which recourse is had to advanced technologies which permit killing at a distance or on the computer screen prevent the activation of neuro-psychological mechanisms which render the act of killing difficult (Muñoz-Rojas, & Frésard, 2004, p. 10).

A 2019 study (Chappelle et al., 2019, p. 89) involving 715 drone operators found that about 6% of respondents showed symptoms of post-traumatic stress disorder (PTSD), a similar percentage as in the case of soldiers fighting on the battlefield. These include experiences such as sleep disorders, concentration problems or outbreaks of aggression.

Negative psychological and physical phenomena were markedly intensified in people who participated in actions in which civilians died, regardless of whether the deaths were completely accidental or whether collateral damage was expected earlier (Chappelle et al., 2019, p. 90). The occurrence of PTSD was also facilitated by issues related to the quality of work. Since the working day of a drone operator often lasts 12 hours, this is associated with the risk of exhaustion – drone program employees working upwards of 51 hours a week met the criteria for PTSD 2.34 times more often than those with a number of working hours closer to the national average (Chappelle et al., 2019, p. 90). The working conditions as a factor affecting the psychophysical state of drone operators were also confirmed by a study published in 2021, conducted on a sample of 571 operators. Drone program employees declared that their well-being is influenced by staff shortages, communication problems and long working hours. From 25 to 37% of respondents (depending on the position held) showed signs of high exhaustion, 18% showed high level of cynicism, and 15% showed psychological distress (Bryant-Lees, 2021, pp. 788–792).

Another study that provides insight into the psychophysical condition of drone operators was conducted Wayne Phelps, a retired lieutenant colonel who had previously been employed in the drone program. Among the 254 operators surveyed, 26% experienced flashbacks of the moment of killing (no distinction was made between the killing of civilians and militants), 17% had recurrent waking memories of event of killing, 16% reported feeling detached or numb, and 15% had sleep problems (Phelps, 2015). At the same time, a significant portion, as much as 75% of operators, identified the killing of an enemy with a sense of fulfilled mission, 51% with a sense of satisfaction, and 44% with a sense of pride – these feelings occurred regardless of later psychological consequences. From 5 to 7% of respondents felt negative effects during the mission itself, such as shame and terror.

Insights into the experiences of the drone program staff are also offered by the subject literature and journalistic investigations. I will particularly focus on the recurring theme of a pivotal event in military service, which led to a psychological breakdown, often resulting in resignation from further career.

Brandon Bryant was an experienced drone operator, participating in 6000 hours of flights (Abé, 2012). His career ended with the

accidental killing of a civilian. The time between the release of a missile and its impact on the ground is a few to several seconds. Bryant authorized the attack, but before the missile reached its target, a child entered the scene. After the accident the operator began to suffer from serious sleep disorder, and when he did fall asleep, he dreamed his dreams in an infrared-like view, reminiscent of the view on the monitor in the drone cockpit. As a result of mental problems, his relationship fell apart. Doctors diagnosed him with PTSD. Bryant recalls walking into the cockpit one day asking his colleagues, "Which son of a bitch is going to die today?" (Zulaika, 2020, p. 118). Reflecting on these words, he eventually became an anti-war activist, and today he calls himself a "war criminal" (Zulaika, 2020, pp. 148–149).

Pilot Matt Martin (2010, p. 3) recalls that during attacks he "felt like God hurling thunderbolts from afar". Similar to Bryant, he experienced the unintentional killing of two children who reminded him of his own sister (Martin, 2010, pp. 212–213). He recounts a traumatic event when, after the dust had settled, he saw the sight of a completely destroyed truck, the distorted bodies of the children, and an overturned bicycle they had been riding, its wheel still spinning. Martin viewed civilian casualties as an unfortunate necessity that sometimes could not be avoided. He concluded in his memoirs that "what happened would never vanish from my soul" (Martin, 2010, p. 213).

Carla (fictional name), a drone pilot, initially had a neutral attitude towards the selective elimination program (Zulaika, 2020, p. 122). Her stance changed under the influence of an incident that made her aware of the banality of the act of killing. This occurred when one of the teams at her base carried out a assassination of a group of terrorists. Several hundred people gathered at the base to celebrate the successful mission. Carla recalls that the live image from the battlefield was treated like a sporting event, with soldiers resembling fans celebrating the victories of their team. This association elicited a deep aversion to drone warfare and resulted in her quitting her job.

Christopher Aaron was not a soldier, he worked in the drone program as a CIA analyst, conducting reconnaissance (Press, 2018). He recalls that participating in the attacks led to a strong sense of excitement, and upon hitting the target, people in the cockpit would give each other high-fives. Part of an analyst's job is to observe the

events following an attack to gather further information, so Aaron watched funerals of the victims of the attack recorded by drones. It was only this situation led him to reflect and question the justification of drone warfare. Over time, he began to suffer from a sense of fatigue and numbness of the body: "headaches, night chills, joint pain. Soon, more debilitating symptoms emerged – waves of nausea, eruptions of skin welts, chronic digestive problems" (Press, 2018). As with other drone warfare workers, he started having nightmares referring to brutal war situations. In 2021, Aaron publicly apologized to the citizens of Afghanistan for his participation in the drone program (DemocracyNow!, 2021).

(GEO)POLITICAL LEVEL

No exposure of pilots and little exposure of equipment eliminates the psychological and political barriers to engaging in military action. Therefore the government does not have to consider public opinion as heavily as they would in the case of traditional warfare. For this reason, military commanders may tend to carry out strikes under circumstances where they would not decide to attack without drones. Furthermore, in the case of operations in urban areas, it is much easier to decide on a precise drone strike than a destructive artillery attack. In other words, the undeniable advantage of drones, namely the ability to limit ground warfare, is narrowed by the frequency of their use. When drone patrols run out of fuel, they are immediately replaced by other ones, which enables uninterrupted image transmission to the monitors in military bases (Gregory, 2011, p. 193).

Warfare becomes possible in the territories of countries with which the United States is not at war. The legal infrastructure for conducting rapid, pinpoint attacks is provided by the concept of the "kill box". The military manual defines this term as "a three-dimensional permissive fire support coordination measure with an associated airspace coordinating measure used to facilitate the integration of fires" (Department of Defense, p. 125). The kill box allows the creation of a small space in any place, within which constraints imposed on military actions are lifted or limited (Chamayou, 2015, p. 54–55). The advantage of this solution is the ability to eliminate terrorists

anywhere, regardless of restrictions such as international law. As stated by General Richard P. Formica (2004, as cited in MacGregor, 2004, pp. 43–44),

> Kill boxes enable us to do what we have wanted to do for years (…) Now with automation technology and USAF employment of kill boxes, you really have a very flexible way of delineating battlespace both in time and on the ground.

What is pragmatic at the military tactical level becomes problematic from a geopolitical perspective. The technological capability to carry out armed intervention anywhere risks disrupting one of the fundamental principles of international humanitarian law – the separation of war zones from peace zones (Gunneflo, 2016, p. 107). The battlefield is replaced by transient interventions that resemble police pacification actions more than warfare. From the perspective of local populations, this may be beneficial, as temporary air strikes of relatively low destructive power seem less burdensome than the permanent presence of foreign military forces, military camps, and heavy equipment. However, despite the declared precision of drones, their liberal use leads to relatively high number of civilian casualties. As a result of unmanned airstrikes, between 300 and 909 civilians were killed in Afghanistan between 2015 and 2020, between 174 and 225 in Yemen between 2002 and 2019, and between 424 and 969 in Pakistan between 2004 and 2018 (The Bureau of Investigative Journalism, 2020). Field studies in areas of particularly intense attacks have also shown very negative effects on the lives of local populations, leading to the disintegration of local tribes and social decay (Cavallaro et al., 2012).

Under international humanitarian law, the type of conflict most closely aligned with the nature of drone warfare is described in Article 3 of the Geneva Convention I (1949, p. 36–37), concerning "armed conflict not of an international character". The quoted passage states that individuals not actively engaged in combat, including former or current soldiers who are not under arms, should be treated humanely, "without any adverse distinction". No conviction or punishment should be imposed against such individuals, even if found guilty, unless their case is first heard by an impartial and independent court. In addition, Article 6 mandates that the acused

be informed of the charges against them and provided with the right to trial. The unique of drone warfare, however, do not make it clear whether drone-fighted terror suspects (without definitive proof of their involvement and without trial) are subject to Article 3. Their status could potentially be governed by Additional Protocol II (1977, p. 314), which applies "to all armed conflicts which are not covered by Article 1 of the Protocol Additional to the Geneva Conventions of August 12 1949". However, a legal loophole allows the avoidance of this protocol's application by citing its exemption for "isolated and sporadic acts of violence (...) not being armed conflicts".

The issue of modern war technologies and the consequences of their application was addressed by the German jurist and political scientist Carl Schmitt in his post-war work. The author of "Nomos of the Earth" warned as early as 1950 that the means of verticalization of warfare transform war "into a police action against troublemakers, criminals, and pests, justification of the methods of this 'police bombing' must be intensified" (Schmitt, 2006, p. 321). Airstrikes allow for a spatio-temporal compression, manifested in the separation of those waging the war from the territory in which it is being waged. This breaks the relationship with the enemy and questions the principles of *Ius ad bellum* and *Ius in bello*. The law of war, despite many ambivalences, creates a kind of partnership between the two sides of the conflict, granting them equal statuses, rights, and obligations. A situation where an attack can occur unexpectedly anywhere on earth, in areas not formally at war, radically transforms this approach. Mediated means of warfare limit the interaction with enemy to two choices, killing or not killing (Johnson, pp. 44, 51).

According to Schmitt (2006, pp. 265–266), criminalization of the enemy is further reinforced by the drastic inequality between the forces of conflict caused by the technological domination. Mutual recognition of legality involves relative comparability of forces – "Once that ceases to be the case, the opponent becomes nothing more than an object of violent measures" (Schmitt, 2006, p. 320). The weaker party then resorts to brutal, symbolic acts of revenge like terrorist attacks, while the stronger party strengthens its cause thanks to the dominance provided by technology (Schmitt, 2006, pp. 322–323). The German jurist's argument is not about recognizing terrorist organizations as legitimate adversaries, but about exposing the problem

that absolute criminalization leads to a mutual increase in hatred that distances rather than brings the solution closer, as it, "opens the abyss of an equally destructive legal and moral discrimination" (Schmitt, 2006, p. 321). The dominant side begins to adopt methods more characteristic of guerrilla warfare than regular warfare. Therefore, drone attacks are unpredictable, irregular, and targeted. The adversary becomes an absolute and timeless evil, and actions against him are carried out within a defensive narrative of defending one's own values against the threat (Arrigo, 2017, p. 9).

A decade after "Nomos of the Earth", the German jurist publishes "Theory of the Partisan". This is a period when a wave of anti-colonial guerrilla wars spreads around the world – probably for the first time in history, Western national armies clashed on a large scale with irregular rebel units. The figure of the partisan was known to Western tradition at least since the 19th century, and its features consisted of irregular combat, political engagement, mobility, and telluric character, i.e., attachment to the land (Schmitt, 2007b, pp. 14–22). This last element causes the enemy not to have an absolute character (like the partisan-terrorist of the 20th century) – the land limits the scope of demands to a specific territory, therefore, there is no absolutization of the enemy (Mikusek, 2020, pp. 62–63). Destruction of the enemy should take place not because he is completely deprecated, but rather contrary –

> The enemy is on the same level as am I. For this reason, I must fight him to the same extent and within the same bounds as he fights me, in order to be consistent with the definition of the real enemy by which he defines me (Schmitt, pp. 322–323).

The fact that guerrilla rebellion is tied to the land leads to its deradicalization.

This "conciliatory" limitation does not apply to the case of transborder nature of ideological jihad. The potential for terrorist attack to occur anywhere fuels development of warfare technologies of mediation that allow to intervene against their opponent on any territory. From the perspective of remote drone warfare, the enemy is deprived of identity and reduced to his activities, registered by computerized tracking systems (Shoker, 2021, p. 137). What the drone eyes track is not even a specific person, but rather his digital footprint, like a signal

from a cell phone or GPS device – as noted by Gen. Michael Hayden, former head of the National Security Agency, "We kill people based on metadata" (John Hopkins University, 2014). The groundbreaking nature of this change lies in the fact that the enemy is "recognized" in detachment from his individual or socio-historical identity, he becomes ephemeral and disconnected from the land, what evades the traditional division into militants and civilians.

This detachment combined with vertical dominance on the battlefield according to Schmitt (2007b, p. 13) results in the emergence of an auto-referential cycle of violence – "In the vicious circle of terror and counter-terror, combat against partisans is often only a mirror image of partisan warfare". The method of selecting targets in drone warfare is described by the army and intelligence services with a Find-Fix-Finish-Exploit/Analyze scheme (Scahill, 2016a, p. 52). The Find phase means identifying the target, Fix is finding it, Finish is neutralizing it through an attack, and Exploit/Analyze means using the acquired information to start the process again. As a result, the more the fight against terrorism intensifies, the longer the lists of individuals suspected of terrorism gets (Weber, 2015). This brings to mind the statement by Bruce Riedel (2012, as cited in Miller, 2012), former Obama administration anti-terrorism advisor, who said, "The problem with the drone is it's like your lawn mower (...) The minute you stop mowing, the grass is going to grow back". The perpetrators of most notorious terrorist attacks in Western countries and would-be terrorists plotting attacks openly claimed that their actions were retaliation for the deaths of civilians caused by drones (Calhoun, 2015, p. 228).

CONCLUSIONS

In the late 1980s, Paul Virilio (1989, p. 4) stated that

> alongside the 'war machine', there has always existed an ocular (…) 'watching machine'. From the original watch-tower through the anchored balloon to the reconnaissance aircraft and remote-sensing satellites, one and the same function has been indefinitely repeated, the eye's function being the function of a weapon.

Through militarized Unmanned Aerial Vehicles, the "eye" function merges fully with the "weapon" function and becomes indistinguishable. A sufficiently dense network of drone patrols enables to effectively observe entire metropolises or geographic areas for months, making it possible to spot not only the enemy's movements, but also, with the help of algorithmic systems, to digitally replicate his daily life (Shaw, 2013, pp. 540–543). The observer becomes simultaneously an attacker, and the observation tool is equipped with systems for destroying the enemy.

Although soldiers remain perfectly safe during unmanned missions, many suffer long-term effects from their work. Group studies and personal accounts of drone warfare workers show that some of them experience problems such as remorse, sleep disturbances or anxiety, hence symptoms characteristic of those participating directly in warfare actions, including those suffering from PTSD.

The illusion of complete security has led to increased drone usage, creating two major risks: undermining international law through micro-interventions and dehumanizing the enemy, potentially escalating conflicts. As Carl Schmitt warned, physical separation of both sides of a conflict, combined with absolute technological dominance of one side, may yield outcomes contrary to expectations. Addressing this problem calls for the development of clearer legal frameworks governing the use of drone warfare, particularly in counter-terrorism operations, both on national and international levels. The complex nature of terrorism requires broader diplomatic and political strategies rather than relying on selective elimination program that is ethically and legally problematic for both drone operators and their victims.

References

I Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, August 12, 1949, 75 U.N.T.S. 31. Retrieved from: https://ihl-databases.icrc.org/assets/treaties/365-GC-I-EN.pdf (accessed on: 23th December 2023).

Abé, N. (2012, 14th December). *Pain continues after war for American drone pilot*. DER SPIEGEL. Retrieved from: https://www.spiegel.de/international/world/pain-continues-after-war-for-american-drone-pilot-a-872726-2.html (accessed on: 23th December 2023).

Arrigo, G.M. (2017). Islamist Terrorism in Carl Schmitt's Reading. *InCircolo – Rivista di Filosofia E Culture*, *4*, 1–12.

Bryant-Lees, K.B., Prince, L., Goodman, T., Chappelle, W., & Thompson, B. (2020). Sources of Stress and Psychological Health Outcomes for Remotely Piloted Aircraft Operators: A Comparison Across Career Fields and Major Commands. *Military Medicine*, *186*(7–8), 784–795. DOI: 10.1093/milmed/usaa257.

Calhoun, L. (2015). *We kill because we can: From Soldiering to Assassination in the Drone Age*. London: Zed Books.

Cavallaro, J., Sonnenberg, S., & Knuckey, S. (2012). *Living Under Drones: Death, Injury and Trauma to Civilians from US Drone Practices in Pakistan*. Stanford: International Human Rights and Conflict Resolution Clinic.

Chamayou, G. (2015). *A theory of the drone*. New York: The New Press.

Chappelle, W., Goodman, T., Reardon, L., & Prince, L. (2019). Combat and operational risk factors for post-traumatic stress disorder symptom criteria among United States air force remotely piloted aircraft "Drone" warfighters. *Journal of Anxiety Disorders*, *62*, 86–93. DOI: 10.1016/j.janxdis.2019.01.003.

Chatterjee, P., & Stork, C. (2017). *Drone, INC.: Marketing the Illusion of Precision Killing*. CorpWatch. Retrieved from: http://www.killchain.org/uploads/1/1/3/3/113345549/droneinc.pdf (accessed on: 23th December 2023).

Creech Air Force Base (n.d.). Retrieved from: www.creech.af.mil (accessed on: 23th December 2023).

Crouse, J.D. (2007). *Development of Cursor-on-Target Control for Semi-Autonomous Unmanned Aircraft Systems*. Air University. Retrieved from: https://apps.dtic.mil/sti/pdfs/ADA469942.pdf (accessed on: 23th December 2023).

DemocracyNow! (2021, 3rd September). *A CIA Drone Analyst Apologizes to the People of Afghanistan* [Video]. YouTube. Retrieved from: https://youtu.be/PkO1FO0OEw8 (accessed on: 23th December 2023).

Department of Defense (2021). *Dictionary of Military and Associated Terms*. Retrieved from: https://irp.fas.org/doddir/dod/dictionary.pdf (accessed on: 23th December 2023).

Drone Warfare (n.d.). The Bureau of Investigative Journalism. Retrieved from: http://www.thebureauinvestigates.com/projects/drone-war (accessed on: 23th December 2023).

Fulghum, D.A. (2004, 20th September). New Concepts have emerged for USAF unmanned Hunter-Killer aircraft. *Aviation Week Network*. Retrieved from: http://aviationweek.com/awin/new-concepts-have--emerged-usaf-unmanned-hunter-killer-aircraft (accessed on: 23th December 2023).

Gates, R. M. (2014, 7th January). Bush and Obama's secretary of defense had to wage war in Iraq, Afghanistan — and today's Washington. *The Wall Street Journal*. Retrieved from: https://www.wsj.com/articles/SB10001424052702304617404579306851526222552 (accessed on: 23th December 2023).

Gettinger, D. (2020). *Drone Databook Update March 2020*. The Center for the Study of the Drone at Bard College. Retrieved from: https://dronecenter.bard.edu/files/2020/03/CSD-Databook-Update-March-2020.pdf (accessed on: 23th December 2023).

Gettinter, D., Michell, A.H., Pasternack, A., Koebler, J., Musgrave, & S., Ranking, J. (2014). The Drone Primer. A Compendium of Key Issues. *New York, Center for Study of the Drone*. New York: Bard College.

Gregory, D. (2011). From a view to a kill. *Theory, Culture & Society*, *28*(7–8), 188–215. DOI: 10.1177/0263276411423027.

Gunneflo, M. (2016). *Targeted Killing: A Legal and Political History*. Cambridge: Cambridge University Press.

Johns Hopkins University (2014, 7th April). *The Johns Hopkins Foreign Affairs Symposium Presents: The Price of Privacy: Re-Evaluating the NSA* [Video]. YouTube. Retrieved from: https://youtu.be/kV2HDM86XgI (accessed on: 23th December 2023).

Johnson, B.T. (2018). Coded Conflict: Algorithmic and Drone Warfare in US Security Strategy. *Journal of Military and Strategic Studies*, *18*(4), 36–71.

Khan, A. (2021, 19th December). *The Human Toll of America's Air Wars*. The New York Times. Retrieved from: https://www.nytimes.com/2021/12/19/magazine/victims-airstrikes-middle-east-civilians.html (accessed on: 23th December 2023).

Kindervater, K.H. (2016). The emergence of lethal surveillance: Watching and killing in the history of drone technology. *Security Dialogue*, *47*(3), 223–238.

Kreps, S.E. (2016). *Drones. What everyone needs to know*. Oxford: Oxford University Press.

Lewis, L., & Vavrichek, D.M. (2016). *Rethinking the Drone War: National Security, Legitimacy and Civilian Casualties in U.S. Counterterrorism Operations*. Marine Corps University. DOI: 10.56686/9780997317435.

MacGregor, J.W. (2004). *Bringing the Box into Doctrine: Joint Doctrine and the Kill Box*. Fort Leavenworth: School of Advanced Military Studies, United States Army Command and General Staff College.

Martin, M.J., & Sasser, C.W. (2010). *Predator: the remote-control air war over Iraq and Afghanistan: a pilot's story*. St. Paul: Zenith Press.

Mayer, J. (2009, 26th October). *The Predator War. What are the risks of the C.I.A.'s covert drone program?* The New Yorker. Retrieved from:

https://www.newyorker.com/magazine/2009/10/26/the-predator--war#ixzz0bW1COjbm (accessed on: 23th December 2023).
Maziarz, M. (2018, 15th August). *Żniwiarz na niebie*. Magazyn67. Retrieved from: http://www.magazyn67.pl/zniwiarz-na-niebie/ (accessed on: 23th December 2023).
Miller, G. (2012, 23th October). *Plan for hunting terrorists signals US intends to keep adding names to kill lists*. Washington Post. Retrieved from: https://www.washingtonpost.com/world/national-security/plan-for--hunting-terrorists-signals-us-intends-to-keep-adding-names-to-kill--lists/2012/10/23/4789b2ae-18b3-11e2-a55c-39408fbe6a4b_story.html (accessed on: 23th December 2023).
Moseley, M. (2006, 14th September). *Reaper' moniker given to MQ-9 unmanned aerial vehicle*. Air Force. Retrieved from: https://www.af.mil/News/Article-Display/Article/129780/reaper-moniker-given-to-mq--9-unmanned-aerial-vehicle/ (accessed on: 23th December 2023).
Muñoz-Rojas, D., & Frésard, J-J. (2004). The roots of behaviour in war: Understanding and preventing IHL violations. *Revue Internationale de la Croix-Rouge/International Review of the Red Cross*, *86*(853), 189–206.
Phelps, W. (2021). *On Killing Remotely: The Psychology of Killing with Drones*. New York: Little, Brown and Company.
Power, M. (2013, 22th October). *Confessions of a Drone Warrior*. GQ. Retrieved from: https://www.gq.com/story/drone-uav-pilot-assassination (accessed on: 23th December 2023).
Press, E. (2018, 13th June). *The Wounds of the Drone Warrior*. The New York Times. Retrieved from: https://www.nytimes.com/2018/06/13/magazine/veterans-ptsd-drone-warrior-wounds.html (accessed on: 23th December 2023).
Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977, 1125 U.N.T.S. 609. Retrieved from: https://ihl-databases.icrc.org/assets/treaties/475-AP-II-EN.pdf (accessed on: 23th December 2023).
Rothenberg, D. (2015). It Is War at a Very Intimate Level. In P.W. Singer & A. Coleman (Eds.), *Drone Wars: Transforming Conflict, Law, and Policy* (pp. 113–117). Cambridge: Cambridge University Press.
Scahill, J. (2016a). Find Fix Finish. In J. Scahill (Ed.), *The Assassination Complex: Inside the Government's Secret Drone Warfare Program* (pp. 40–53). New York: Simon & Schuster.
Scahill, J. (2016b). The Heart of the Drone Maze. In J. Scahill (Ed.), *The Assassination Complex: Inside the Government's Secret Drone Warfare Program* (pp. 68–83). New York: Simon & Schuster.

Schmitt, C. (2006). *The nomos of the earth in the international law of the jus Publicum Europaeum*. New York: Telos Press Publishing.
Schmitt, C. (2007a). *The Concept of the Political*. Chicago: University of Chicago Press.
Schmitt, C. (2007b). *Theory of the partisan: Intermediate commentary on the concept of the political*. New York: Telos Press Publishing.
Shaw, I.G.R. (2013). Predator Empire: The Geopolitics of U.S. Drone Warfare. *Geopolitics*, 18(3), 536–559. DOI: 10.1080/14650045.2012.749241.
Shoker, S. (2021). *Military-Age Males in Counterinsurgency and Drone Warfare.* London: Palgrave Macmillan.
Syracuse-based Airmen hit 60,000 hours of MQ-9 flight time. (2020, December 29). National Guard. Retrieved from: https://www.nationalguard.mil/News/Article/2458584/syracuse-based-airmen-hit-60000-hours--of-mq-9-flight-time/ (accessed on: 23th December 2023).
Vilirio, P. (1989). *War and cinema: The logistics of perception.* New York: Verso.
Weber, J. (2016). Keep adding. On kill lists, drone warfare and the politics of databases. *Environment and Planning D: Society and Space*, *34*(1), 107–125. DOI: 10.1177/0263775815623537.
Williams, B.G., & Deptula, D. (2015). The Drone Campaign against Al Qaeda and ISIS: Interview with Lt. General David Deptula USAF (Ret.). *Perspectives on Terrorism*, 9(3), 65–70. Retrieved from: http://www.jstor.org/stable/26297382 (accessed on: 23th December 2023).
Zulaika, J. (2020). *Hellfire from Paradise Ranch: On the Front Lines of Drone Warfare.* Oakland: University of California Press.