



Combat Drones & Legal Framework : A Military Revolution Yet to be Regulated

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Abstract: *The development of combat drones has brought a military revolution in the modern era, enabling military operations with global reach, high precision, and minimal risk to human personnel. However, this innovation raises serious legal challenges, as international humanitarian law (IHL) and traditional norms of warfare have yet to specifically regulate the use of autonomous weapons and long-range strikes. This study employs a qualitative approach based on document analysis, conflict case studies, and legal literature to explore the interaction between military operational logic and international legal principles. The findings indicate that legal boundaries in the use of combat drones often exist in a gray area, where considerations of military necessity and operational effectiveness may conflict with principles of civilian protection and proportionality. Furthermore, the legitimacy of drone use is influenced by public opinion, diplomatic pressure, and international accountability. This article emphasizes that the use of combat drones necessitates adjustments in international law and regulation, as well as a multidisciplinary approach integrating law, technology, and military sociology.*

Keywords: *Autonomous Weapons Regulation; Combat Drones; International Humanitarian Law; Military Necessity; Modern Conflict.*

1. INTRODUCTION

The advancement of modern military technology has significantly transformed the character of armed conflict. One of the most transformative innovations is the combat drone, which enables high-precision military operations with minimal risk to human personnel. These drones are employed for long-range strikes, strategic reconnaissance, and cross-border counter-terrorism operations, thereby presenting new challenges to international humanitarian law (IHL), which was traditionally designed to regulate conventional conflicts between states (Kaldor, M., 2012: 2-6).

The law of armed conflict establishes limiting principles such as distinction, proportionality, and military necessity to protect civilians and minimize suffering during hostilities. In practice, however, interpretations of these principles often diverge between legal logic and military logic. Military logic emphasizes effectiveness, speed, and achieving strategic objectives, whereas legal logic emphasizes restrictions and humanitarian protection. This divergence becomes increasingly complex in the context of drone usage, which can create “legal gray areas” and uncertainties regarding accountability (Dinstein, Y., 2016: 1-5).

Most literature still focuses on normative analysis of treaty texts, while the sociological and political aspects of drone usage are rarely examined. Public opinion, political legitimacy, and international pressure play significant roles in determining the legality and ethical acceptability of drone operations. Therefore, this article aims to analyze the legal boundaries

of combat drone usage from a socio-legal perspective, focusing on the interaction between humanitarian legal principles, military logic, and global power relations. The novelty of this study lies in emphasizing that the limits of modern warfare are not determined solely by legal texts, but also by negotiations over legality influenced by politics, technology, and public perception (Schmitt, M. N., 2010: 795–839).

2. THEORETICAL REVIEW

This theoretical review discusses three main concepts relevant to understanding the use of combat drones and their legal regulation: military logic, the principles of international humanitarian law (IHL), and the socio-legal perspective on legitimacy and power.

Military Logic and Military Necessity

Combat drones enable the military to conduct operations with high precision and minimal risk to personnel. Military logic emphasizes efficiency, the achievement of strategic objectives, and rapid decision-making under complex conflict conditions. The principle of military necessity provides a rational framework for the use of force, whereby military actions are considered lawful if necessary to achieve strategic goals (Robinson, P., 2019). However, interpretations of what is “necessary” often depend on the judgment of military actors, potentially creating conflicts with legal logic, which prioritizes restrictions and humanitarian protection.

Principles of International Humanitarian Law

International humanitarian law establishes core principles such as distinction, proportionality, and humanity to limit suffering during armed conflict. Combat drones pose specific challenges to these principles, as long-range operations may create uncertainty in target identification, risk of erroneous strikes, and accountability dilemmas (Henckaerts, J.-M., & Doswald-Beck, L. (2005: 3-8). Henckaerts and Doswald-Beck emphasize the importance of contextual interpretation of IHL principles to ensure their relevance in the face of evolving military technologies.

Socio-Legal Perspective and Military Legitimacy

Legal sociology highlights that law does not operate in a vacuum but functions within fields of power, legitimacy, and public perception. Zegveld asserts that the accountability of armed actors, including states and opposition groups, often depends on social legitimacy and international political pressure, rather than mere compliance with formal legal texts (Zegveld, L., 2019). Therefore, the use of combat drones should be viewed as a phenomenon involving the interaction of law, military operations, and global public perception.

Global Disparities in Law Enforcement

Enforcement of IHL violations is not always consistent across states. Politically powerful or influential countries tend to have the capacity to minimize accountability, whereas weaker states or non-state actors are more vulnerable to international legal actions. This condition underscores that the boundaries of modern law are dynamic and shaped by the global configuration of power.

3. RESEARCH METHODOLOGY

This study employs a qualitative approach to analyze the interaction between the use of combat drones, the principles of international humanitarian law (IHL), and military logic. This approach enables an in-depth exploration of complex phenomena, including the dynamics of legitimacy, public perception, and international policy concerning autonomous weapons. Primary data were collected from official military documents, international conventions, reports from global institutions, as well as academic articles and media sources addressing the use of drones in contemporary conflicts (Krippendorff, K., 2018).

The analysis was conducted through case studies and document analysis, focusing on identifying tensions between military logic and legal principles, as well as potential regulatory gray areas. The case studies include conflicts in which combat drones have been used extensively, particularly in counter-terrorism operations and long-range precision strikes. This method facilitates a contextual understanding of how IHL principles are interpreted and applied in practice, including challenges related to accountability and legal uncertainty (Ragin, C. C., & Becker, H. S. (1992).

Furthermore, this research applies source and perspective triangulation to enhance the validity of its findings. By comparing legal, military, and international public perspectives, the study aims to provide a holistic understanding of the legal boundaries governing the use of combat drones and the factors influencing negotiations over legality in modern conflicts. This approach also incorporates sociological and global political dimensions, emphasizing that the legality of warfare is not determined solely by legal texts, but also by legitimacy, public opinion, and international diplomatic pressure (Bennett, W. L., & Segerberg, A., 2013).

4. FINDINGS AND DISCUSSION

The Evolution of Combat Drones in Modern Conflict.

The use of combat drones has become one of the most transformative innovations in contemporary military practice. Drones enable long-range precision strikes, strategic reconnaissance, and counter-terrorism operations without placing pilots at direct risk. This technology has evolved from simple surveillance platforms into armed semi-autonomous weapon systems capable of executing missions based on algorithms and intelligence data. In practice, drones are frequently employed to target individuals or groups deemed security threats, including terrorist networks or armed militants, often in cross-border operations (Kaplan, A. M., & Haenlein, M., 2010: 59-68).

The primary advantages of drone deployment include precision targeting, cost efficiency, and the reduction of military casualties. However, drones also generate significant legal and ethical challenges. Remote strikes may entail risks of misidentification, potential collateral damage, and complex questions of accountability. By operating within legal “gray areas,” combat drones enable states to conduct militarily effective yet legally and socially controversial actions (Farrell, T., & Gordon, A., 2009).

The Dialectics of Military Logic and Legal Logic.

The use of combat drones reveals an inherent dialectic between military interests and the principles of international humanitarian law (IHL). Military logic prioritizes efficiency, rapid decision-making, and the attainment of strategic objectives. In contrast, legal logic emphasizes the limitation of violence, civilian protection, and adherence to the principles of distinction and proportionality.

The principle of military necessity serves both as a point of convergence and tension. Drones are deployed to accomplish missions considered “necessary” by military commanders; however, interpretations of necessity often conflict with legal assessments concerning risks to civilian populations. Case studies of drone operations in various states demonstrate that decisions to deploy drones are influenced not only by risk assessments and strategic calculations but also by domestic political pressures, public opinion, and international accountability mechanisms (Tuck, H., 2020: 221-245).

Accordingly, the legal boundaries governing drone use are relative and dynamic rather than absolute. This underscores that the legality of modern warfare is not solely a matter of textual compliance with legal norms but also involves ongoing negotiations over legality in practice.

Legal Boundaries, Accountability, and Legitimacy

The deployment of combat drones raises critical questions concerning legal limits, accountability, and legitimacy. Normatively, international humanitarian law (IHL) and international human rights law establish frameworks of responsibility for states and armed actors. The principle of distinction requires a clear differentiation between combatants and civilians, while the principle of proportionality prohibits attacks expected to cause excessive civilian harm in relation to the anticipated military advantage.

Although drones enable remote and high-precision strikes, new dilemmas arise because targets may be identified through intelligence assessments, algorithmic systems, or remote observation, yet the risk of erroneous attacks and collateral damage persists (Gross, M. L., 2015).

Within the framework of international law, several legal instruments are particularly relevant:

- a. The 1949 Geneva Conventions and their Additional Protocols, which emphasize the protection of civilians, prisoners of war, and persons not actively participating in hostilities. Drone strikes directed at civilian targets without valid military justification would constitute violations of these rules (International Committee of the Red Cross. (1949). *Geneva Conventions*. ICRC).
- b. Customary international law, as articulated by Henckaerts and Doswald-Beck, affirms that the principles of proportionality, precaution in targeting, and civilian protection constitute universal legal obligations that remain applicable despite technological developments (Henckaerts, J.-M., & Doswald-Beck, L., 2005: 3-8).
- c. The principle of individual accountability, including provisions under the Rome Statute of the International Criminal Court (ICC), establishes that individuals whether military commanders, drone operators, or those issuing orders may be held responsible for serious violations of IHL, including intentional attacks against civilians (Cassese, A. (2013: 63-89).

Legal challenges arise particularly when drone operations occur within “gray zones,” such as in third states’ territories or in areas not formally recognized as active war zones. In such situations, legal responsibility becomes blurred: should accountability rest with the operating state, the field commander, the drone operator, or even the programmers of autonomous systems?

Case studies indicate that most states emphasize state responsibility as the primary legal framework, while individual accountability is often difficult to enforce due to the remote and technologically complex nature of drone operations (Gross, M. L., 2015).

Moreover, international legitimacy and global public opinion play significant roles in constraining military discretion. Drone operations conducted without clear legal frameworks or perceived as ethically controversial may trigger international condemnation, diplomatic sanctions, or investigations by the ICC. Global media actors play a strategic role in shaping public narratives concerning the legality of such operations, prompting states to adjust operational procedures to preserve legitimacy (Entman, R. M., 2004).

This demonstrates that the legality of drone warfare is both normative and social in character. Compliance with formal legal texts must be accompanied by considerations of legitimacy and international political dynamics. Several states have attempted to develop internal policy guidelines governing drone use, referring to interpretations of IHL, target identification procedures, and collateral damage assessments. For example, the United States Air Force has issued a “Targeting Handbook” integrating legal, ethical, and operational considerations. However, such internal documents lack binding international force, leaving continued legal uncertainty for other states and non-state actors adopting similar technologies (Krulak, C., 1999). Accordingly, the use of combat drones requires a more adaptive legal framework integrating:

- a) The principles of IHL and international human rights law;
- b) State and individual accountability mechanisms;
- c) Social legitimacy and public scrutiny;
- d) Transparent and verifiable internal operational standards.

This subsection demonstrates that modern legal boundaries are not merely normative texts but the result of interaction between formal law, military practice, and global legitimacy. Absent more specific regulatory frameworks, combat drone deployment will remain situated within legal gray zones, posing risks of IHL violations and generating complex ethical dilemmas.

Ethical and Social Implications

Beyond raising legal and accountability concerns, the use of combat drones carries significant ethical and social implications that require attention from military, legal, and societal perspectives. Drones transform the conduct of warfare by enabling remote operations, allowing operators to strike targets without being physically present on the battlefield. This condition gives rise to the phenomenon of “moral detachment,” in which decisions to take

human life become emotionally distanced from their immediate consequences (Winslow, D., 1998).

From an ethical standpoint, drone deployment presents dilemmas when strike decisions are based on imperfect intelligence data or semi-autonomous algorithms. Misidentification of targets may result in substantial civilian harm, raising questions regarding proportionality and precaution. Slim emphasizes that although drone strikes are often considered efficient, the risk of collateral damage persists, and the psychological consequences for civilian populations including chronic trauma and a pervasive sense of insecurity may produce long-term societal effects (Slim, H., 2019).

Additional social impacts arise from public perception and state legitimacy. Global media actors play a strategic role in shaping public opinion concerning the legality and morality of drone use. Controversial reporting on drone strikes, particularly those resulting in civilian casualties, may intensify diplomatic pressure, influence domestic public policy, and compel states to adjust their operational procedures. Consequently, the legality and legitimacy of drone operations are interactive in nature, grounded not only in formal legal compliance but also in social acceptance and international public response (Entman, R. M., 2004).

Furthermore, drones create new asymmetries in armed conflict. States or armed actors possessing advanced technological capabilities can conduct operations without direct risk, while adversaries lacking comparable technology remain in more vulnerable positions. This imbalance may affect perceptions of fairness and generate widespread social grievances, potentially contributing to conflict escalation or the radicalization of groups that perceive themselves as threatened. These implications demonstrate that legal regulation alone is insufficient; a multidisciplinary approach integrating law, ethics, technology, and military sociology is essential (Gross, M. L. (2015).

The discussion on new regulatory frameworks and legal adaptation has therefore become increasingly urgent. Some scholars and military practitioners advocate for the development of specific international protocols governing drones and autonomous weapons, incorporating IHL principles, individual accountability, transparency, and rigorous target risk-assessment procedures. Such initiatives aim to ensure that drone deployment is not only legally justified but also ethically defensible and socially acceptable, while minimizing adverse impacts on civilian populations and global stability (Schmitt, M. N., 2010: 795-839).

In sum, the use of combat drones must be understood as a phenomenon encompassing three interrelated dimensions: legal, ethical, and social. Drones transform both the physical battlefield and moral perception, necessitating adjustments in international legal regulation and a holistic approach to ensure that military innovation does not result in human rights violations or systemic social injustice.

5. CONCLUSION

Based on the analysis presented in Chapter 4, several principal conclusions can be drawn regarding the use of combat drones and international legal regulation:

Transformation of Modern Warfare and Combat Drones

Combat drones have revolutionized military operations through their capacity for long-range strikes, precision surveillance, and semi-autonomous missions. While this technology enhances military effectiveness, it simultaneously creates legal gray zones, particularly as strikes may be conducted across national borders and involve non-state actors.

Legal Boundaries and Accountability

The legality of drone deployment is not determined solely by the textual provisions of international humanitarian law (IHL), but also by military interpretation, social legitimacy, and global political pressures. Core IHL principles—such as distinction, proportionality, and military necessity—remain applicable. However, field practices demonstrate that both individual and state accountability are often difficult to enforce, especially when operations occur in territories not formally recognized as war zones.

Ethical and Social Implications

Drone use raises moral dilemmas concerning collateral damage, operator moral detachment, and the psychological impact on civilian populations. Furthermore, global media and public opinion play a significant role in shaping the legitimacy of military operations. The legality of drone warfare is therefore interactive in nature, combining formal legal compliance with ethical considerations and social acceptance.

Overall, combat drones demonstrate that the boundaries of modern warfare are not static normative constructs, but rather the product of complex interactions among law, technology, military strategy, and international socio-political legitimacy.

Recommendations

Based on the findings above, several policy recommendations are proposed for military practice and international legal development:

Development of Specific International Regulations on Drones

States and the international community should formulate new protocols or conventions governing the use of combat drones and autonomous weapons. Such regulations should reaffirm IHL principles, clarify state responsibility, and establish transparent procedures for target identification and decision-making processes.

Strengthening Accountability and Transparency

Drone operators, military commanders, and operating states should be subject to clear accountability mechanisms, including structured target-risk assessments, operational documentation, and public reporting measures to maintain international legitimacy.

Integration of Ethics into Military Training

Military personnel and drone operators should receive comprehensive ethical training concerning the lawful use of force, proportionality, and civilian protection. Such training is essential to mitigate moral detachment and ensure that operational decisions remain aligned with humanitarian legal standards.

Collaboration with Media and Public Communication

States should manage public narratives transparently through accurate communication with media outlets, clearly explaining the legal frameworks and strategic objectives underlying drone operations. This approach can help preserve legitimacy and reduce the risks of misinterpretation or social discontent.

With the implementation of these recommendations, the use of combat drones may remain militarily effective while being legally, ethically, and socially regulated, thereby reducing the risk of violations of international humanitarian law and enhancing international legitimacy.

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