

Drone Warfare and Civilian Protection under International Humanitarian Law: Distinction, Proportionality and Precautions in Attack

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Abstract

This article critically evaluates the compatibility of drone warfare with the principle of distinction under international humanitarian law (IHL), focusing on the structural implications of technologically mediated targeting practices. While unmanned aerial operations are often justified on the basis of enhanced precision and reduced operational risk, their increasing reliance on data-driven processes raises fundamental concerns regarding the reliability of target identification and the protection of civilian populations.

The analysis examines how core IHL principles—distinction, proportionality, and precautions in attack—operate within the context of remote warfare. It highlights a shift from direct human assessment to intelligence-based and behavioral forms of targeting, in which individuals are identified through patterns of activity rather than verified status. This transformation introduces a probabilistic logic into targeting decisions, heightening the likelihood of misclassification and expanding the scope of potential error.

Particular attention is given to the cumulative effects of repeated drone strikes and their interaction with complex operational environments, especially in urban settings, where proportionality assessments are complicated and precautionary measures are constrained. The article also explores how limited transparency and distributed decision-making structures obscure accountability.

It is argued that these challenges are structural in nature, requiring a reassessment of how IHL principles operate within increasingly automated warfare.

Keywords: Drone Warfare; International Humanitarian Law; Principle of Distinction; Civilian Protection; Targeted Killing; Autonomous Weapons Systems.

1. Introduction

Armed conflicts in the twenty-first century are increasingly characterized by the deployment of advanced military technologies, particularly unmanned aerial vehicles (UAVs), commonly referred to as drones. These systems enable both state and non-state actors to conduct remote military operations with extensive operational reach while significantly reducing risks to their own personnel. Although drones are frequently presented as precision weapons capable of minimizing collateral damage, growing evidence suggests a widening gap between their claimed accuracy and their actual humanitarian impact. In numerous contemporary conflicts, drone strikes have been conducted in or near densely populated areas, resulting in civilian casualties and damage to civilian infrastructure. These developments have intensified legal and scholarly debates concerning whether the use of armed drones complies with the fundamental rules of international humanitarian law (IHL).¹ International humanitarian law, also known as the law of armed conflict, comprises a body of rules designed to limit the effects of armed conflict for humanitarian purposes. It seeks to protect individuals who are not, or are no longer, participating in hostilities and to regulate the means and methods of warfare.² The core legal framework of IHL is derived primarily from the Geneva Conventions and their Additional Protocol I, which establish essential protections for civilians and civilian objects during armed conflict.³ At the heart of this framework lies the principle of distinction, which requires parties to an armed conflict to distinguish at all times between civilians and combatants, as well as between civilian objects and military objectives.⁴ Attacks may therefore be directed only against lawful military targets, while civilians and civilian objects must be protected from direct attack. Closely connected to this rule are the principles of proportionality and precautions in attack, which aim to limit incidental civilian harm and ensure that military operations are conducted with due regard for humanitarian considerations.⁵ However, despite the existence of a comprehensive legal framework, recent scholarship highlights persistent difficulties in the practical application of these principles in contemporary conflicts. In particular, the widespread reliance on remote targeting technologies, combined with the complexity of urban warfare environments, has blurred the distinction between civilian and military actors and heightened the risk of targeting errors.⁶ Drone operations frequently depend on surveillance data and intelligence-based assessments rather than direct human observation, which may result in the misidentification of individuals and objects. As a consequence, civilians may be mistakenly targeted or exposed to incidental harm, raising serious concerns regarding compliance with the principle of distinction and the adequacy of existing accountability mechanisms under IHL. Against this background, this article argues that, despite their perceived precision, drone strikes

¹ S S Korol'ov, A I Ignatieva and K S Romashova, 'Protection of Civilian Objects during Armed Conflicts' (2026) 3(1) *Analytical and Comparative Jurisprudence*.

² International Committee of the Red Cross, *What is International Humanitarian Law?* (ICRC Advisory Service 2004).

³ Protocol Additional to the Geneva Conventions relating to the Protection of Victims of International Armed Conflicts (Additional Protocol I) 1125 UNTS 3.

⁴ Additional Protocol I (n 3) art 48.

⁵ Additional Protocol I (n 3) arts 51–57.

⁶ Andrés Eduardo Fernández-Osorio, 'Drones and Fifth Generation Warfare: Humanitarian Implications in the Colombian Conflict' (2025) 17(2) *Revista Logos Ciencia & Tecnología* 32.

structurally increase the risk of misidentification of targets, leading to civilian harm and undermining consistent compliance with the principle of distinction under international humanitarian law. This article begins by outlining the legal framework governing the protection of civilians under international humanitarian law, with particular reference to the Geneva Conventions and Additional Protocol I. It then examines the characteristics of drone warfare and their humanitarian implications. The analysis subsequently evaluates how the principles of distinction, proportionality, and precautions in attack apply specifically to drone operations. Finally, the article addresses challenges of accountability arising from drone warfare, including the role of the International Criminal Court.

2. Legal Framework

The legal framework governing drone warfare is derived primarily from international humanitarian law (IHL), particularly the four Geneva Conventions of 1949, Additional Protocol I, and customary international humanitarian law.⁷ These sources regulate the conduct of hostilities and establish legal protections for civilians and civilian objects during armed conflict. In addition to treaty obligations, customary international humanitarian law recognizes many core IHL principles as binding on all states regardless of treaty ratification.⁸ Considered together, these rules provide the legal basis for evaluating the lawfulness of contemporary military operations, including the deployment of armed drones.

A central rule within this framework is the principle of distinction, codified in Article 48 of Additional Protocol I, which obliges parties to an armed conflict to differentiate between civilians and combatants, in addition to distinguishing civilian objects and military objectives.⁹ Under this principle, attacks may only be directed against legitimate military targets, while civilians and civilian infrastructure remain protected from direct attack. The principle of distinction therefore functions as one of the essential safeguards intended to reduce the humanitarian consequences of armed conflict.

The protection afforded to civilians is further elaborated in Articles 50 and 51 of Additional Protocol I. Article 50 defines civilians as persons who do not belong to the armed forces of a party to the conflict,¹⁰ while Article 51 provides that they are entitled to general protection against dangers arising from military operations and must not be made the object of attack.¹¹ However, such protection is not absolute and may cease where individuals directly participate in hostilities. In present-day conflicts, particularly those involving remote military technologies, determining when individuals satisfy this threshold has become increasingly complex. Modern targeting practices frequently depend on surveillance systems, behavioral analysis, and intelligence-based evaluations rather than direct battlefield observation. Consequently,

⁷ Additional Protocol I (n 3).

⁸ Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law* (Vol I, Cambridge University Press 2005).

⁹ Additional Protocol I (n 3) art 48.

¹⁰ Additional Protocol I (n 3) art 50.

¹¹ Additional Protocol I (n 3) art 51.

identifying lawful targets may involve significant uncertainty, increasing the risk of misidentification and incidental civilian casualties.

International humanitarian law also extends protection to civilian objects. Article 52 of Additional Protocol I provides that civilian objects must not be attacked unless they qualify as lawful military objectives.¹² This protection applies to homes, schools, hospitals, religious sites, and infrastructure essential to civilian life. Nevertheless, such objects may lose protection where they make an effective contribution to military action and where their destruction offers a definite military advantage. In contemporary conflicts, particularly within urban environments, distinguishing between civilian and military objects is often highly difficult because military activities may occur close to civilian infrastructure. These challenges are further intensified in unmanned operations, where target identification depends heavily on remote surveillance and indirect intelligence gathering.

Even where a legitimate military objective has been identified, attacks remain subject to the principle of proportionality. Article 51(5)(b) of Additional Protocol I prohibits attacks expected to cause incidental civilian harm that would be excessive in relation to the anticipated military advantage.¹³ This principle requires commanders to balance military necessity against humanitarian considerations before authorizing attacks. In practice, proportionality assessments are frequently complicated by uncertainty regarding civilian presence, limitations in available intelligence, and rapidly changing operational conditions. Accordingly, accurately predicting the humanitarian impact of attacks may prove particularly difficult in remote forms of warfare.

In addition to distinction and proportionality, parties to an armed conflict are required to take precautions in attack. Article 57 of Additional Protocol I imposes obligations to verify military objectives, select methods of warfare that minimize civilian harm, and suspend attacks where doubts concerning legality arise.¹⁴ Advance warnings must also be provided where feasible. Although advanced technologies may enhance monitoring and surveillance capabilities, the effectiveness of precautionary measures depends largely on the reliability of available information and the accuracy of operational assessments. In many situations, rapid decision-making processes and dependence on indirect intelligence may limit the practical implementation of these safeguards.

Viewed together, the principles of distinction, proportionality, and precautions in attack form the core legal framework governing civilian protection during armed conflict. While international humanitarian law establishes clear legal standards regulating the use of force, the operational characteristics of drone operations continue to create substantial challenges for the consistent application of these rules. The growing reliance on remote targeting technologies

¹² Additional Protocol I (n 3) art 52.

¹³ Additional Protocol I (n 3) art 51(5)(b).

¹⁴ Additional Protocol I (n 3) art 57.

and intelligence-based evaluations raises persistent concerns regarding civilian protection under contemporary conditions.

3. Drone Warfare in Modern Armed Conflict

The development of unmanned aerial vehicles (UAVs), commonly referred to as drones, has significantly reshaped the nature of modern armed conflict. Initially developed for reconnaissance and intelligence-gathering purposes, drones gradually evolved into multifunctional systems capable of conducting surveillance and offensive strike operations. Their increasing use reflects a broader transformation in military strategy, where technological systems play a central role in operational planning and battlefield coordination. In recent conflicts, especially in Ukraine, drones have enhanced situational awareness through real-time intelligence collection and rapid target identification, thereby improving coordination between military units and accelerating operational decision-making.¹⁵

In contemporary warfare, armed drones are widely employed for intelligence, surveillance, reconnaissance (ISR), and precision strike missions. Their ability to remain airborne for extended periods enables continuous monitoring of designated areas without exposing military personnel directly to hostile environments. This capability has altered traditional methods of warfare by allowing states to conduct operations remotely while maintaining persistent observation over potential targets. As military operations increasingly depend upon data collection and remote assessment, the conduct of hostilities has become progressively influenced by technologically mediated forms of engagement rather than conventional battlefield interaction.¹⁶

A defining characteristic of drone warfare is its reliance upon remote targeting and persistent surveillance capabilities. Drone operations depend heavily on intelligence, surveillance, and reconnaissance systems to identify, monitor, and track potential military objectives. Modern drone platforms are capable of maintaining prolonged aerial observation over specific locations, enabling military operators to collect and analyze information before conducting strikes. This form of loitering surveillance has become central to contemporary targeting practices because it facilitates continuous monitoring of individuals, vehicles, and infrastructure while enhancing situational awareness across the battlespace.¹⁷

Notwithstanding these technological capabilities, drone operations remain highly dependent upon the interpretation and reliability of collected intelligence. Targeting decisions are frequently based upon behavioral patterns, aerial surveillance, and remote observation rather than direct physical verification. This creates substantial risks of misidentification, particularly in conflicts involving non-state actors where distinguishing civilians from combatants is often

¹⁵ Dominika Kunertova, 'The War in Ukraine Shows the Game-Changing Effect of Drones Depends on the Game' (2023) 79(2) *Bulletin of the Atomic Scientists* 95.

¹⁶ Ann Rogers, 'Investigating the Relationship Between Drone Warfare and Civilian Casualties in Gaza' (2014) 7(4) *Journal of Strategic Security* 94.

¹⁷ Stefan Borg, 'Assembling Israeli Drone Warfare: Loitering Surveillance and Operational Sustainability' (2021) 52(5) *Security Dialogue* 401.

exceptionally difficult. As Lattimer demonstrates in the context of Israeli drone operations over the Gaza Strip, ongoing surveillance technologies expand military control over civilian spaces while simultaneously growing concerns regarding intelligence reliability and the potential misidentification of legitimate targets.¹⁸

The increasing accessibility and relatively low operational cost of drones have further contributed to their widespread use. Unlike conventional military aircraft, UAVs can be deployed repeatedly and at comparatively limited expense, enabling sustained patterns of engagement over prolonged periods of conflict. The growing availability of drone technology has also expanded its use beyond state militaries to include non-state actors and armed groups. This proliferation has altered the strategic landscape of contemporary warfare by lowering the threshold for the use of force and increasing the number of actors capable of conducting technologically sophisticated operations.¹⁹

Recent conflicts further demonstrate the humanitarian implications associated with drone operations. Iranian drone and missile strikes across Gulf states have reportedly endangered civilian populations by damaging residential buildings, airports, hotels, and financial centres. Such attacks illustrate the continuing risks posed by remote warfare technologies to civilian infrastructure and protected civilian objects during contemporary armed conflict.²⁰

Additional concerns arise from the dependence of drone warfare upon remote assessment and technologically mediated targeting processes. Although drone operations are frequently presented as highly precise, the accuracy of strikes remains closely linked to the reliability of intelligence and the interpretation of collected data. Restrepo argues that drone warfare presents significant epistemological concerns because operators may rely upon patterns of behaviour rather than direct confirmation of combatant status. As a result, civilians may be mistakenly identified as military targets, particularly where targeting decisions are based upon incomplete or ambiguous information.²¹

In Afghanistan and Pakistan, drone campaigns have generated criticism concerning civilian casualties, psychological distress, and social disruption within affected communities. Reports indicate that persistent drone activity has created an atmosphere of continuous fear among civilians living in conflict zones, particularly where individuals remain uncertain whether they may be perceived as potential targets. These operational realities illustrate that, despite their

¹⁸ Connor Lattimer, 'Flight of the Drone: Geopolitical Analysis of Drone Warfare over the Gaza Strip' (31 May 2012) <<https://www.e-ir.info/2012/05/31/flight-of-the-drone-geopolitical-analysis-of-drone-warfare-over-the-gaza-strip/>> accessed 6 April 2026.

¹⁹ Valeri Modebadze, 'The Importance of Drones in Modern Warfare and Armed Conflicts' (2021) 1(2) *KutBilim Journal of Social Sciences and Arts* 89.

²⁰ Human Rights Watch, 'Iran: Unlawful Strikes Across Gulf Endanger Civilians' (17 March 2026) <<https://www.hrw.org/news/2026/03/17/iran-unlawful-strikes-across-gulf-endanger-civilians>> accessed 5 April 2026.

²¹ Daniel Restrepo, 'Naked Soldiers, Naked Terrorists, and the Justifiability of Drone Warfare' (2019) 45(1) *Social Theory and Practice* 103.

reputation for precision, drone operations do not eliminate the risks posed to civilian populations during armed conflict.²²

4. Legal Analysis

The application of the principle of distinction to remotely conducted attacks remains one of the most contested issues within contemporary international humanitarian law. Although unmanned aerial systems are frequently described as highly precise technologies capable of reducing incidental harm, precision alone does not guarantee lawful targeting decisions. Contemporary targeting practices frequently depend upon remote monitoring technologies and intelligence-based evaluations instead of direct physical verification of targets. Within complex civilian environments, particularly urban areas, these methods may complicate efforts to determine whether individuals qualify as lawful military objectives.

Contemporary military operations further demonstrate the risks associated with erroneous target assessments despite advances in surveillance and precision-strike capabilities. Investigations into remotely conducted strikes have revealed instances in which civilians, including women and children, were killed following failures to correctly assess civilian presence or accurately identify the intended objective. These incidents illustrate the continuing practical difficulties associated with implementing the principle of distinction during modern military operations.²³

These concerns become even more considerable in urban battlefields where armed groups commonly operate among civilian infrastructure. During military operations in Gaza, targeting processes were shaped by continuous monitoring and rapid intelligence assessments intended to identify threats in real time. Nevertheless, the presence of civilians within crowded neighbourhoods created persistent ambiguity regarding the status of individuals and surrounding structures. Even where operators possessed advanced observation capabilities, ambiguity concerning civilian presence could not always be eliminated. As a result, the legal requirement of distinction was consistently challenged by the realities of asymmetric warfare and remote observation.²⁴

The principle of proportionality similarly raises serious legal questions regarding the use of remotely piloted force. Under international humanitarian law, incidental civilian harm must not be excessive in relation to the concrete and direct military advantage anticipated from an attack. Supporters of advanced targeting technologies frequently argue that improved surveillance systems and precision-guided weapons diminish collateral damage. However, this

²² Abdul Manan Bazai, Muhammad Usman Tobawal and Kaleemullah Bareach, 'Impacts of the US Drone Strikes in FATA' (2016) 50(2) *Grassroots* 147.

²³ Oona A Hathaway and Azmat Khan, "'Mistakes' in War" (2024) 173(1) *University of Pennsylvania Law Review* 1, 4–5.

²⁴ Kristina Benson, "'Kill 'em and Sort it Out Later:' Signature Drone Strikes and International Humanitarian Law" (2014) 27(1) *Pacific McGeorge Global Business & Development Law Journal* 17, 36.

assumption has increasingly been questioned by legal scholars and humanitarian commentators. Critics have argued that secrecy surrounding operational procedures, intelligence standards, and casualty assessments limits meaningful external scrutiny. Without transparency, it becomes difficult to determine whether attacks complied with the principles of distinction, proportionality, and precautions in attack under international humanitarian law.²⁵

The humanitarian consequences of these operations are particularly visible in densely populated territories such as Gaza, where civilians remain continuously exposed to surveillance and recurring strikes. Precision weaponry may reduce the scale of destruction compared with indiscriminate bombardment, yet repeated attacks within urban environments continue to generate substantial civilian suffering. Furthermore, the perception that advanced technologies are inherently humane risks lowering the operational threshold for the use of force. This creates a paradox in which increased precision may contribute to the expansion rather than the limitation of military violence.²⁶ Research examining military campaigns in the region demonstrates that civilian casualties were not merely accidental consequences of isolated targeting errors but were often structurally connected to the broader conduct of hostilities.²⁷

Questions concerning precautions in attack further complicate the legality of contemporary targeting practices. International humanitarian law obliges parties to verify military objectives, select means capable of minimizing incidental harm, and suspend operations where civilian risks become disproportionate. Remotely operated aircraft undeniably provide important surveillance advantages because they permit persistent observation of potential targets before engagement. Continuous monitoring theoretically allows operators to assess patterns of movement, identify civilian presence, and reconsider planned attacks where doubt exists. However, technological capability alone cannot ensure compliance with precautionary obligations. As Krebs demonstrates, prolonged aerial surveillance and drone imagery may still produce major interpretive limitations despite advanced monitoring capabilities. Investigations into remotely conducted strikes have revealed that operators may incorrectly interpret civilian behaviour as hostile activity due to confirmation bias, incomplete contextual awareness, and technological mediation.²⁸

The expanding integration of artificial intelligence and automated data analysis within military targeting processes has exacerbated these concerns. Modern systems progressively assist in identifying suspicious activity and prioritizing potential objectives, yet algorithmic assessments remain vulnerable to errors and misinterpretation. Where operators depend heavily upon automated recommendations, there is a danger that human judgment becomes secondary to technological efficiency. Accountability may consequently become diluted because

²⁵ Charles M Rowling, Jason Gilmore and Penelope Sheets, 'The Named and the Nameless: A Comparative Analysis of US and UK News Coverage of Civilian Deaths Caused by US Drone Strikes, 2009–2016' (2025) 18(1) *Media, War & Conflict* 122, 134–135.

²⁶ Frédéric Mégret, 'The Humanitarian Problem with Drones' (2013) *Utah Law Review* 1283, 1300.

²⁷ Rogers (n 16) 101.

²⁸ Shiri Krebs, 'Above the Law: Drones, Aerial Vision and the Law of Armed Conflict – A Socio-Technical Approach' (2023) 105 *International Review of the Red Cross* 1.

responsibility is distributed between commanders, analysts, and technological systems. These developments challenge traditional understandings of legal responsibility under international humanitarian law and raise concerns regarding the adequacy of existing regulatory frameworks governing emerging military technologies.²⁹

The legal debate surrounding targeted killing practices also demonstrates broader accountability difficulties associated with remote warfare. Critics have argued that secrecy surrounding operational procedures, intelligence standards, and casualty assessments limits meaningful external scrutiny. Without transparency, it becomes difficult to determine whether attacks complied with distinction, proportionality, and precautionary obligations under international humanitarian law. Concerns have additionally emerged regarding strikes against rescuers and gatherings where the presence of civilians was highly foreseeable. Such incidents have amplified international criticism and contributed to growing doubts concerning the consistency of legal compliance during counterterrorism operations.³⁰

Overall, these developments show that the challenges posed by remotely conducted attacks extend beyond isolated operational mistakes. The integration of continuous surveillance, algorithmic assistance, and high-speed precision targeting has altered the conduct of hostilities in ways that complicate the practical application of humanitarian principles. While advanced systems may improve situational awareness and reduce certain forms of indiscriminate violence, they do not remove the legal and ethical difficulties associated with identifying lawful objectives and protecting civilian populations. Contemporary operations therefore reveal a sustained tension between technological capability and humanitarian restraint. Additionally, the expanding use of drone strikes has generated continuing debate regarding the interaction between international humanitarian law, international human rights law, and the comprehensive legal framework governing the use of force across borders.³¹ Rather than guaranteeing compliance with international humanitarian law, remote warfare often exposes the structural limitations involved in applying distinction, proportionality, and precautionary obligations within modern armed conflict.

5. Accountability

Accountability in drone warfare remains one of the most difficult issues within contemporary international humanitarian law. Although remotely operated systems are frequently defended as capable of improving precision and reducing civilian harm, drone strikes may nevertheless

²⁹ Lucy Dibsdaile, 'Beyond Human Judgment – The Morality of Machines: A Critical Examination of the Ethical and Moral Dimensions of Autonomous and AI Weapon Systems in Modern Warfare' (2025) 12(2) *Journal of Global Faultlines* 129.

³⁰ Tony Nasser, 'Modern War Crimes by the United States: Do Drone Strikes Violate International Law? Questioning the Legality of U.S. Drone Strikes and Analyzing the United States' Response to International Reproach Based on the Realism Theory of International Relations' (2014) 24 *Southern California Interdisciplinary Law Journal* 289.

³¹ Stuart Casey-Maslen, 'Pandora's Box? Drone Strikes under Jus ad Bellum, Jus in Bello, and International Human Rights Law' (2012) 94(886) *International Review of the Red Cross* 597.

constitute war crimes where attacks intentionally target civilians or are conducted in disregard of humanitarian principles. Under international humanitarian law, civilians are protected against direct attack unless they take direct part in hostilities. As a result, intentionally directing attacks against civilians or launching operations expected to cause excessive incidental harm may result in criminal responsibility. These concerns become particularly significant in remotely conducted operations where targeting decisions often rely upon surveillance data, behavioral analysis, and intelligence assessments rather than direct battlefield observation. As Chehtman indicates, the operational structure of drone warfare complicates traditional understandings of lawful force and creates significant legal difficulties concerning responsibility for unlawful attacks.³²

The Rome Statute of the International Criminal Court provides an important framework for assessing criminal liability arising from unlawful drone strikes. Article 8 classifies intentionally directing attacks against civilians as war crimes during armed conflict. Similarly, launching attacks with knowledge that incidental civilian harm would be clearly excessive in relation to the anticipated military advantage may also constitute a war crime. These provisions are especially relevant in densely populated environments where remotely conducted operations create substantial risks for civilians. Signature strikes illustrate this concern because targeting decisions may depend upon patterns of behaviour rather than verified combatant identification. In such circumstances, civilians risk being incorrectly classified as legitimate military objectives despite the continuing obligation to distinguish civilian persons from combatants.

Questions concerning liability become more complex where advanced technologies and autonomous systems are incorporated into military targeting processes. Modern drone operations increasingly involve algorithmic analysis capable of identifying suspicious behaviour and prioritising potential objectives. However, automated systems remain vulnerable to technical errors and flawed intelligence assessments. Sterio observes that the growing use of autonomous weapon systems presents significant accountability challenges because existing international humanitarian law frameworks were primarily developed to regulate human decision-making in armed conflict.³³ Where operators rely heavily upon automated recommendations, determining individual responsibility becomes increasingly difficult. Liability may potentially extend across commanders, drone operators, intelligence analysts, programmers, and state authorities involved in the targeting process.

The responsibility of military commanders represents another central issue within accountability debates surrounding drone warfare. Under the doctrine of command responsibility, military superiors may incur liability where they knew or should have known that subordinates were committing violations of international humanitarian law and failed to prevent or punish such conduct. This principle becomes particularly important within remotely conducted operations involving fragmented decision-making processes. Kerrigan observes that the growing participation of contractors within intelligence and operational support functions

³² Alejandro Chehtman, 'The ad bellum Challenge of Drones: Recalibrating Permissible Use of Force' (2017) 28(1) *European Journal of International Law* 173.

³³ Milena Sterio, 'Autonomous Weapons Systems and the Need to Update International Humanitarian Law?' (2025) 57 *Case Western Reserve Journal of International Law* 301.

creates additional oversight difficulties because civilian actors may contribute to targeting procedures without being fully integrated into traditional military accountability systems.³⁴ Thus, identifying responsibility for civilian casualties or unlawful attacks becomes significantly more complicated where authority is dispersed across multiple institutional actors.

State responsibility also arises where unlawful drone strikes violate international humanitarian law. Contemporary drone programs often involve overlapping authority between military institutions and intelligence agencies, creating accountability challenges due to the application of distinct legal authorities and oversight frameworks.³⁵ The secrecy surrounding such operations may restrict meaningful external scrutiny and limit the ability of courts or international institutions to assess compliance with humanitarian obligations.

Despite the existence of legal frameworks governing armed conflict, considerable obstacles continue to undermine effective accountability in drone warfare. Whetham highlights that oversight mechanisms regulating drone strikes remain underdeveloped despite the growing normalization of targeted killing operations.³⁶ Operational secrecy, confidential casualty assessments, and national security concerns commonly restrict independent investigations into civilian harm. Benjamin further observes that remote technologies create forms of autonomy and anonymity that distance operators from the immediate realities of violence, potentially weakening transparency within military decision-making processes.³⁷ These factors contribute to accountability deficits in which operational failures and civilian casualties may stay insufficiently investigated.

In combination, these developments demonstrate that accountability in drone warfare extends beyond isolated operational mistakes and reflects broader structural limitations within contemporary legal and institutional frameworks. Although advanced technologies may improve certain aspects of military targeting, they do not eliminate criminal responsibility arising from unlawful attacks against civilians. Modern drone warfare therefore reveals a persistent tension between technological capability and effective legal oversight.

³⁴ Sarah Kerrigan, 'Preventing Civilian Casualties: Accountability and Oversight for Drone Contractors' (2020) 49(4) Public Contract Law Journal 735.

³⁵ Michael E DeVine, Covert Action and Clandestine Activities of the Intelligence Community: Selected Definitions in Brief (CRS Report R45175, Congressional Research Service, 29 November 2022) 2–8.

³⁶ David Whetham, 'Targeted Killing: Accountability and Oversight via a Drone Accountability Regime' (2015) 29(1) *Ethics & International Affairs* 59.

³⁷ Garfield Benjamin, 'Drone Culture: Perspectives on Autonomy and Anonymity' (2022) 37(3) *AI & Society* 1039, 1045.

6. Conclusion

This article has examined the implications of drone warfare for the principle of distinction under international humanitarian law, demonstrating that the growing reliance on unmanned technologies presents significant challenges for the effective protection of civilians. While the existing legal framework—particularly the Geneva Conventions and Additional Protocol I—establishes clear obligations governing distinction, proportionality, and precautions in attack, the practical application of these rules within drone operations remains deeply constrained by the realities of contemporary conflict.

The analysis has shown that drone warfare fundamentally transforms the process of target identification. Instead of relying on direct human engagement, decisions are increasingly shaped by surveillance data, algorithmic interpretation, and behavioral analysis. This shift introduces constant uncertainty into the classification of individuals and objects, thereby undermining the consistent application of distinction. Practices such as signature strikes further illustrate how probabilistic assessments can expand targeting beyond clearly identified combatants, increasing the risk of error and civilian harm.

In relation to proportionality, the assumption that enhanced technological precision necessarily reduces incidental damage is not borne out in practice. Evidence suggests that repeated strikes and sustained operational methods, particularly in urban environments, generate expected risks for civilian populations. At the same time, limited transparency surrounding drone campaigns restricts meaningful evaluation of whether anticipated military advantages justify the harm inflicted. Similarly, although advanced systems enhance the capacity to implement precautionary measures, their effectiveness remains dependent on the reliability of intelligence and the constraints of real-time decision-making.

The article has also highlighted substantial obstacles to accountability. The diffusion of responsibility across multiple actors, including operators, commanders, engineers, and political authorities, complicates the attribution of liability. Increasing automation further obscures decision-making processes, weakening traditional mechanisms of legal responsibility and reducing the likelihood of enforcement. The ongoing conflict involving Iran demonstrates that although drone technology may enhance surveillance and precision-strike capabilities, it does not eliminate the humanitarian challenges associated with modern warfare. In particular, military operations conducted in or near populated areas continue to raise concerns regarding civilian protection, proportionality, and precautionary obligations. While parties to the conflict may issue warnings or rely on advanced targeting technologies, the effectiveness of such measures remains dependent on the ability of civilians, including children, elderly persons, and persons with disabilities, to respond and reach safety. The conflict therefore reinforces the importance of strict compliance with the principles of distinction, proportionality, and precautionary obligations under international humanitarian law, while highlighting the continuing need for transparency and accountability in the use of drones during armed conflict. Furthermore, the increasing prevalence of drone warfare in contemporary armed conflicts may contribute to the gradual development of customary international law governing the use of

emerging military technologies, making it increasingly important to ensure that evolving state practice remains consistent with the fundamental principles of international humanitarian law.

Taken together, these findings indicate that drone warfare does not simply create operational difficulties in applying IHL but reveals deeper structural limitations within its current framework. Ensuring meaningful civilian protection in technologically mediated conflict therefore requires not only improved compliance but also a critical re-evaluation of how legal norms are interpreted, applied, and adapted to evolving forms of warfare.

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