

# ARTIFICIAL INTELLIGENCE-GENERATED MILITARY DECISIONS AND LEGAL RESPONSIBILITY UNDER INTERNATIONAL HUMANITARIAN LAW

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## ABSTRACT

Artificial Intelligence (AI) is increasingly becoming a significant component of contemporary military operations, playing a vital role in intelligence data, surveillance, target identification, threat assessment and military decision-making and planning. AI technologies can help the military become better and more effective, but there are troubling societal, cultural, legal, and humanitarian issues too, especially the limited questions of accountability or adherence to International Humanitarian Law (IHL). This research aims to analyze the military decision making relating to AI and its legal responsibility under IHL by applying doctrinal legal research methodology. Research examines relevant legal documents, such as the Geneva Conventions, Additional Protocols, reports, academic literature as well as judicial precedents. It examines the possibility of distinguishing, proportionality, military necessity and precautions in attack regarding AI's role in making military decisions. It also addresses issues of responsibility that might arise in the event AI empowered capabilities are involved in illegal harm in armed conflict. The results show that the existing IHL treaties apply to military decisions made by AI, but there are serious issues that remain to be addressed, such as accountability, attribution of responsibility and requirement of meaningful human control. The report suggests that the legal framework governing military AI and accountability mechanisms need to be enhanced to guarantee that the development and use of such technology align with humanitarian principles and civilian protection.

**KEYWORDS:** Artificial Intelligence (AI), International Humanitarian Law, Military Decision Making, Legal Responsibility, Autonomous Weapons Systems.

## INTRODUCTION:

Artificial Intelligence (AI) represents one of the most significant technological advancements of the modern era, with the potential to fundamentally transform the conduct of warfare and defence operations. AI based usage of systems for surveillance, intelligence data, threat detection and target identification is now

employed by states. These technologies are capable of processing vast amounts of data at high speed and can enhance commanders operational decision-making capabilities by providing more efficient support compared to traditional methods (Davison, 2017; Lewis, Blum & Modirzadeh, 2016). The use of AI in the military has progressed beyond merely providing

technical support and has increasingly influenced decision-making processes concerning the use of force. AI-based systems can assist in target identification, prediction of adversarial movements, threat prioritization, and the overall targeting process. During armed conflicts, the enhanced precision, reduction of human error, and improved operational effectiveness offered by such systems are often considered potential advantages (Geneva Academy, 2025).

International Humanitarian law (IHL) is the law that governs the conduct of armed conflict and is designed to prevent and reduce unnecessary suffering and bring protection to civilians and civilian objects. Basic principles of distinction, proportionality and military necessity and precautions in attack are required under the Geneva Conventions and Additional Protocols and under customary IHL. These principles concern with the responsibility of the parties to an armed conflict to distinguish between civilians and combatants, and to take precautions in the conduct of hostilities which are likely to produce disproportionate civilian effects (ICRC, n.d.). All such law has always been expressed on the basis that man is the one making military decisions, and that he can be held legally liable for any illegal act. This traditional legal framework is challenged by the increasing use of AI in military decision making, whether it is to make decisions on its own or with assistance. Advanced AI systems can independently process data, form recommendations and influence targeting outcomes—and these algorithms may create challenges in understanding, predicting, and attributing responsibility for their outcomes. Some scholars argue that decisions regarding civilian status, proportionality assessments, and precautionary measures in armed conflict require contextual understanding and human judgment; therefore, AI systems may not always be capable of reliably performing such assessments. (Dorsey, 2025; Eklund, 2020). If this were to be overused, the legal safeguards provided by IHL could thus be compromised.

Another important question is concerns attribution of responsibility in the aftermath harm. In cases where an AI-generated system contributes to an unlawful attack or produces

unintended harmful effects, it remains unclear who should be held responsible: military commanders, States, programmers, manufacturers of weapons or any other actors involved in the design and implementation of such systems. This issue has been described in legal scholarship as the ‘accountability gap’ in autonomous and AI-enabled weapons systems. (Roff & Moyes, 2016; de Sio & Van den Hoven, 2018). Where the military consequences are adverse, but the responsibility cannot be clearly attributed, it raises concerns regarding the enforceability of laws and how civilians will be protected. Such concerns have been emphasized by international organizations and legal specialists. The laws of war apply to all weapons systems, but challenges with enhanced autonomy of military technologies affect predictability and human control and compliance with IHL (ICRC, 2025). Equally, the discussions at the Group of Governmental Experts on Lethal Autonomous Weapons Systems (LAWS) and the United Nations Convention on Certain Conventional Weapons (CCW) indicate that there is no global consensus on the regulation, permissible autonomy and responsibility for any military operations involving AI systems (UN CCW GGE, 2025).

The discussion over AI decision-making in the military thus becomes not just about technology, but about law and humanity. While AI has the potential to provide operational advantages, it raises concerns about legitimate targeting and human control and accountability for violations of IHL. A significant portion of the current legal regime has been developed during an era focused on human decision making in war, and the effectiveness of the existing laws for regulating increasingly autonomous military systems is not clear.

This study critically analyzes the decisions made by Artificial Intelligence concerning military operations and their legal aspects with regard to IHL. The study examines the compatibility of AI-generated and autonomous military decision-making with the principles of IHL and the capacity of existing international legal frameworks to deal with issues of responsibility in the event of unlawful harm caused by AI

influenced military decision-making. This paper aims to explore regulatory gaps and offer legal recommendations to guarantee accountability and humanitarian protection in the era of AI-powered warfare through doctrinal legal research drawing on conventions, customary law, case law, institutional reports, and academic scholarship.

#### RESEARCH QUESTIONS:

1. What is the existing legal framework governing the use of Artificial Intelligence in making or assisting in military decision-making Under the International Humanitarian Law?
2. What about the fundamental principles of IHL, like distinction, proportionality, necessity and precautions of attack, and how do they apply to AI decision making in military operations?
3. What are the legal and practical challenges to attributing responsibility in situations where AI technologies are deployed in combat scenarios where they inflict unlawful harm?
4. Whether existing IHL has legal systems in place to deal with accountability and responsibility for military decisions made with the help of AI, and/or whether legal and regulatory frameworks are needed.

#### LITERATURE REVIEW:

The debate regarding Artificial Intelligence (AI) in war has been increasing for the last 20 years in the legal and academic fields. The literature mostly focuses on autonomous weapons systems, military decision making, International Humanitarian Law (IHL) and actors responsible for wrongful acts. Many scholars have noted the strategic and operational benefits of AI in times of armed conflict, but they have differed in their opinions about whether existing legal frameworks are adequate to govern AI-produced military decisions and identify the appropriate legal liability when these rules are breached.

The most important, and earliest, discussion of military AI concerns the ethics and laws of autonomous weapons. Sharkey (2010) is quite emphatic in decrying the idea that machines might be able to autonomously make lawful targeting decisions. In a battlefield environment, things are very dynamic and unpredictable, and

he thinks that it's indeed very challenging for an autonomous system to reliably distinguish between civilians and combatants. Sharkey says that machines are missing the human skills of understanding and emotional intelligence and discerning judgment required for lawful military action. He warns that turning AI systems over to life and death decisions could have major humanitarian implications.

In a parallel fashion, Asaro (2012) dismisses the notion that a system that operates independently of human control can supplant human decision making in war. His research focuses on the ethical and legal aspects of lethal force decisions and that these decisions are not easily quantifiable. Human accountability is at the core of humanitarian law and handing over lethal force to machines, according to Asaro, could compromise that accountability. The question, from this point of view, is not just one of technological possibility, but for human moral agency to be preserved in the event of war.

The other major trend in literature is legal responsibility and accountability. The Crotof (2015) tackles the question of autonomous military technologies and the conventional attribution and responsibility theory. New technologies could make it harder to determine legal responsibility, she says, because "benign actions" can have "detrimental results" due to "complex operational environment, software, operators, and commanders. Her analysis suggests that the existing concepts and frameworks in the law provide some answers, but not necessarily clear answers, to the question of who is responsible if a self-governing system is going wrong or if it operates in an abnormal way.

This debate is extended by Chengeta (2016) who is particular on Accountability under International Humanitarian Law. But AI and autonomous weapons may challenge the notion of legal responsibility as machines lack criminal intent and legal personality, says Chengeta. Consequently, in cases where autonomous systems take part in decision making, it is hard to pinpoint the liability. He argues that international law should be providing more regulatory guidance in order to prevent gaps in accountability.

There is a related literature which discusses the notion of meaningful human control. Santoni de Sio and Mecacci (2021) argue that even though they may be in control of a process, the symbolic involvement is not always the case, but rather they are capable of monitoring, understanding and engaging with autonomous processes. Their research demonstrates the need for human control of military systems for responsibility. The analysis they gave reveals that the role of meaningful human control is two-fold: a moral constraint and a legal necessity.

Likewise, in their discussion on responsibility for autonomous military technologies, Amoroso and Tamburrini (2020) conclude that there are various actors that have to be held responsible. They don't believe the simplistic concept that the responsibility lies with the people operating the military. Instead, they propose more general systems of accountability involving commanders, states, developers and manufacturers. This perspective recognizes that military operations with AI are technology-driven and coordinated in nature.

The view of humanitarian advocacy literature is even more limited. If lethal autonomous weapons ever came to be widely used, they should be banned, Docherty says, as quoted by Human Rights Watch (2012). Thus, autonomous systems are too dangerous to trust: they may work in ways that have unforeseen humanitarian consequences, and they may grow beyond our capacity to control them. Advocacy literature highlights the need for precautionary regulation and the uncertainty itself as a valid argument for greater international regulation.

The debate also involves a legal question about the technology's adaptability of the existing international law. As the law of IHL focuses on the principles that are supposed to govern conduct, and not specific weapons, Boothby (2016) believes that IHL is applicable in the digital age. Operational use and meeting the legal requirements are the bases of legality, he says. But Boothby admits that there are practical enforcement challenges to the technologies of AI and it requires legal attention.

Today, a trend of a balanced attitude towards scholarships has replaced simply supportive or

prohibitive attitudes. Rather than focusing on if AI is lawful, there is a need to consider under which conditions AI could be used consistently with humanitarian protection, argues Schwarz (2018). Regulation needs to be transparent, predictable, accountable and have a limitation of operation rather than assuming a total ban or total acceptance," Schwarz said.

Policy-level discussions, such as those under way at international level on Lethal Autonomous Weapons Systems (LAWS), are growing in concern. There is still a lack of consensus among the states with regard to regulation and legal standards as evidenced by reporting through Article 36 and other legal policy fora. There is still no significant agreement on the extent of the legality and military autonomy in these talks.

The literature in this field, in general, has been informative and insightful regarding AI, autonomous systems and IHL. However, some experts argue that AI could help to improve compliance on the battlefield, while others point out that there are several major concerns about civilian protection and responsibility. The ethical aspects of these are the subject of much preexisting research, as are questions of autonomy and meaningful human control. However, there is still a relatively small body of literature concerning legal responsibility for specifically military decisions taken by AIs. Much of the scholarship has been directed at autonomous weapons, as a whole, and hasn't fully considered how law should be attributed when AI influencing military decision making leads to unlawful harm. It is an argument that is ongoing and one that needs to be explored further in terms of legal liability under International Humanitarian Law.

#### **RESEARCH GAP:**

While large amounts of research have been done on AI, autonomous weapons and warfare, but there is still significant gaps in the literature. The majority of research on autonomous weapon systems, however, is oriented around the ethical implications and feasibility as to whether or not these weapons should even be deployed (Arkin, 2009; Sharkey, 2010; Asaro, 2012). While these studies give us some insight, they are more

focused on the legality and human ethical considerations of autonomous weapons than the global one of AI generated military decision making. In addition, while scholars have written more broadly about accountability and responsibility gaps, they have dedicated little attention to how analytical legal responsibility (i.e., who ought be held legally responsible when an AI influenced military decision results in unlawful harm) should actually be assigned (Crootoof 2015; Santoni de Sio & Mecacci 2021). Besides that, scholarly works focus more on autonomous weapons systems than AI assisted targeting, intelligence analysis and decision support systems working during contemporary warfare. No clear scholarly consensus on the question, however, currently exists as to whether contemporary International Humanitarian Law (IHL) is capable of appropriately governing AI generated military decisions or if novel legal frameworks are needed. This study aims to bridge this gap through an analysis of AI produced military decisions (and accompanying legal ramifications) under international humanitarian law (IHL), emphasizing responsibility and accountability, the attribution of criminal liability, and the adequacy of existing domestic and international litigation frameworks.

#### RESEARCH METHODOLOGY:

This study uses a legal doctrinal research method, as the issues being studied are mostly legal and normative issues. This study categorically analyzes and critically examines the legal principles, conventions, case law, academic publications and institutional documents regarding Artificial Intelligence decision-making in military operations and International Humanitarian Law (IHL) and legal responsibility. Doctrinal legal research is considered proper because it is not an empirical research; rather it is a research which involves interpretation, evaluation and application of the law and its rules (Hutchinson & Duncan, 2012).

The study is based on mainly secondary sources of data. These are international law instruments such as the Geneva Conventions and Additional Protocols, customary International Humanitarian Law and other applicable law instruments in

relation to armed conflict. The research also explores policy documents and reports produced by international organizations, the International Committee of the Red Cross (ICRC), United Nations (UN) discussions on Lethal Autonomous Weapons Systems (LAWS) and other institutional documents on military AI and civilian protection.

Additionally, existing debates and legal uncertainties are identified by reviewing the scholarly books and peer-reviewed journal articles, as well as previous laws and legal studies addressing issues of Artificial Intelligence, autonomous weapons, military decision making, accountability and meaningful human control. The material is gathered and presented, serving as materials for a critical analysis, both doctrinal and comparative legal analysis. The study assesses whether current international law adequately manages accounting for when military measures (including decisions to use AI) cause unlawful harm and whether existing concepts of IHL such as distinction and necessity in war, and precautions in attack, could govern the use of AI to inform military decisions. By this method, the research aims to determine the legal lacunae and recommendations to enhance the accountability and humanitarian protection in the light of AI empowered war.

#### DISCUSSION:

##### 1. Legal Responsibility for AI Generated Military Decisions under International Humanitarian Law

As Artificial Intelligence (AI) increasingly becomes a part of military operations, there are also legal concerns about the responsibility and accountability that come with armed conflicts. As AI is growing in its use in intelligence analysis, target identification, surveillance and battlefield assessment, and operational decision support, IHL remains a requirement to ensure that all military operations remain compliant with the pre-established humanitarian principles. Since there is no international treaty governing the use of AI for military decision making, various international legal instruments can be looked at: the Geneva Conventions (1949), Additional Protocol I (1977), Customary International

Humanitarian Law (IHL) and international responsibility (Schmitt, 2019).

IHL is based on the doctrine of distinction. Article 48 of the Additional Protocol provides that parties to an armed conflict must distinguish between civilians and combatants, as well as between civilian objects and military objectives. Hence, lawful targets should be identified accurately, and in advance to be predicated on or informed by AI, for all military operations. But researchers have doubted the need for AI systems to have the contextual knowledge to do this. According to Heyns (2013) the challenge may be for the autonomous and/or AI-powered system to distinguish between civilians and combatants, particularly when the civilian population and military targets are heavily integrated. These worries raise doubts regarding the ability of AI systems to independently carry out humanitarian promises.

The principle of proportionality is an additional challenge. There is also Article 51(5) of Additional Protocol I, which prohibits "excessive" civilian damage relative to the "military advantage sought. Proportionality assessments are not always mathematical, they are legal judgments, military experience and contextual judgment. While systems of AI may be able to process information efficiently, they are still not able to fully replicate a human's ability to balance the military need with humanitarian concerns, as noted by Gless, Silverman, and Weigend (2016). So, over-dependence on AI generated recommendations can increase the risk of unlawful military action.

When harm is done in an unlawful manner, matters of accountability get even more complicated. Traditionally, the notions of humanitarian law have been based on the notions of responsibility of human actors. The doctrine of command responsibility has been recognized numerous times in the International Criminal Law. In the case of *Prosecutor v. Bemba*, the ICC Trial Chamber held command responsibility is a separate (sui generis) mode of responsibility and not necessarily less serious than the other modes of responsibility. This principle is that despite having an AI system involved in operational decision making, this

does not absolve a commander of her legal liability. Similarly, In *Prosecutor v. Bemba*: the Appeals Chamber concluded that the law places a responsibility on commanders in effective control of their troops to prevent and reprimand crimes, for which they cannot be held accountable if they say nothing while the crimes are being committed. Furthermore, the Trial Chamber has ruled that a superior can also be held criminally liable under Article 28 if he fails to apply his or her due diligence and care in the exercise of his or her effective authority and control over forces under his or her command. Also, in the case of *Prosecutor v. Ongwen*, the court determined that Article 28 introduces a new type of liability, under which a superior will be held responsible for crimes committed by his or her subordinates if he/she "neglects the duty to prevent or repress unlawful acts" or "fails to bring them before competent authorities"

State responsibility also has a high relevance. According to the International Law Commission (ILC) Articles on Responsibility of States for Internationally Wrongful Acts (ARSIWA) a state is responsible for internationally wrongful acts when conduct of which the existence is imputable to the state by reason of its official organs causes a breach of an international obligation. Therefore, even if the AI-equipped weapon systems of state armed forces are autonomous, violations of International Humanitarian Law may be attributed to the state, which uses them.

In addition to commanders and states, the role of the programmer, of the software developer and that of the defence manufacturers is increasingly discussed. As Tsagourias (2020) argues, the modern military AI systems have been the result of co-operation between military institutions and private technological actors. Any defects in coding, algorithm design, training data or even system architecture, can significantly impact the functionality of the system. However, there are little to no guidelines in the existing International Humanitarian Law (IHL) on the responsibility of civilian developers and tech companies in the development of military AI.

Predictability, human control and accountability are key ways to ensure compliance with

International Humanitarian Law, as noted in recent reports by the Stockholm International Peace Research Institute (SIPRI) and the International Committee of the Red Cross (ICRC). With increasing autonomy of weapons, the responsibility and how to safeguard civilians will not be easily managed (SIPRI & ICRC, 2020). The analysis shows that IHL does not lose its applicability when military decisions are taken by the use of AI. In this respect it continues to be significant that the old principles of distinction, proportionality, military necessity and command responsibility apply. However, with the increasing complexity of AI systems, there are significant issues related to responsibility, transparency of decision making and accountability for illegitimate harm in AI. In the face of ongoing developments of military technologies, the need for the establishment of a more precise legal framework and more robust regulatory mechanisms could be required to ensure technological advancement does not compromise humanitarian protection in times of armed conflict.

Furthermore, this problem has also been discussed at the international level with autonomous weapons. As use of Artificial Intelligence increases with regard to military matters, concerns have increased regarding accountability, civilian protection, and adherence to the appropriate principles of International Humanitarian Law. In response, information has been provided on the platform of the United Nations Convention on Certain Conventional Weapons (CCW), via the group of governmental experts on lethal autonomous weapons systems (LAWS). These conversations deal with issues of law, ethics and humanities in the matter of turning over control of a traditionally manned system to an autonomous system. Up to now, however, there is still no agreement on the adequacy of existing IHL to govern the use of autonomous weapons systems or if a legally binding international instrument is required (UN CCW GGE, 2025).

A problem of many aspects to the humanitarian risks associated with the increasing autonomy with regard to the use of force has also captured much of its attention, at the hands of the

International Committee of the Red Cross (ICRC). ICRC does not think that use of force should be taken to an extreme edge under existing force; decisions on use of force – in particular for human life – should remain in human rule and judgment. Autonomous systems may also find it difficult to make context-specific legal decisions, and determine complex battlefield situations and civilian-involvement under International Humanitarian Law. In this regard, ICRC has called for more international action to ensure that new military technologies are compliant with the humanitarian principles and well-being of civilians (ICRC, 2021).

Other variables that also need to be taken into account when evaluating the use of autonomous military technologies legally are predictability, accountability and human control, says the Stockholm International Peace Research Institute (SIPRI). As weapons are made more automated, there will be even more difficulties in pointing your finger at someone if illegal harm has fallen on you, SIPRI writes, while "many will remain silent if it is not their damage centers that faced the brunt of it. This uncertainty may lead to existing accountability mechanisms being undermined and may drive challenges to Implementing International Humanitarian Law (IHL) (SIPRI & ICRC, 2020).

In spite of these apprehensions, there are some scholars that have pointed out military benefits that Artificial Intelligence can provide. According to Scharre (2018) AI systems can be more efficient in operations, provide a better situational awareness and process information faster than people. In the military, there too is a belief that an AI system would minimize human errors resulting from emotional stress, fear, stress, fatigue and so on. As such, AI could be employed to increase the efficiency of warfare and reduce accidental civilian casualties in some instances. But people do not seem to be satisfied with it. Battlefields are extremely dynamic, and battlefield aware machines are not capable of making good, reliable targeting decisions as humans are, as claimed by Sharkey (2010). Likewise, much as in Asaro 2012, questions of lethal action are moral, legal and contextual and not amenable to algorithmic approaches. This

means that there is a possible and contentious application for AI within the framework of International Humanitarian Law (IHL), and the possibilities for a machine to self-govern in accordance with it are massive and may come in very handy. This means that, so far, the regulation of autonomous military technologies has been one of the most pressing issues in IHL today, as it remains unclear to the scholars, international institutions and States what measures should be taken.

An important development on the literature was with regard to which liability to be attributed to AI systems that are involved in illegitimate consequences of war. As weapons systems grow more autonomous, says Heyns (2013), there is potential for bad stuff to happen but "no suspected party responsible for the bad stuff. International law is based on a principle of responsibility and accountability and as soon as any new technology appears on the horizon, he says, "you do not want the international legal responsibility barrier to be compromised. As AI takes on more and more of a role in military decision-making, it is increasingly difficult to determine who regarding any undesirable illegal effects is responsible.

Likewise, Roff & Moyes (2016) make the point that in military engagements involving autonomous technologies there is a need for meaningful human control for continuing to have responsibility. The responsibility should not be detached from humans that make decisions," they say, "and cannot be delegated to machines legal, and ethical responsibility. They found that the replacement of relying on autonomous systems with a reliance on international human rights might erode their accountability mechanisms as well as generate uncertainty about responsibility for IHL's violations.

Besides, Boulanin and Verbruggen (2017) highlight the trends of weapon systems being able to operate independently is a huge challenge to transparency and predictability. In fact, these complex algorithms may be performed by advanced AI systems, the operators and commanders of which may find themselves unable to grasp one each time," they write in their study. Therefore, it would take a more

involved process to investigate an abnormal use of force - particularly when a decision is made to do so against an algorithm instead of an actual decision maker. This can make addressing tested, established rules and laws, which can be applied with a human decision-maker, problematic.

The United Nations Institute for Disarmament Research (UNIDIR) has also been worried about autonomous military technology's ethical and legal issues. With the ever growing use of autonomous systems in war combat, there are significant questions raised pertaining accountability, civilian protection and adherence to the International Humanitarian Law (IHL) (UNIDIR, 2015). The report urges appropriate technology and provision of laws and regulations ensuring that in every military operation, the humanitarian aspects should be considered.

Overall, it is reflected from current research that, while AI might be able to render operational asset in today's wars, it is creating essentially relevant legal uncertainty because of the issues of responsibility, transparency and accountability in AI. Therefore, a lot of questions of the legal liability in relation to military decisions made with the use of AI and its compatibility with the current international humanitarian law have emerged.

## **2. What about the fundamental principles of IHL, like distinction, proportionality, necessity and precautions of attack, and how do they apply to AI decision making in military operations?**

International Humanitarian Law (IHL) is built on core principles that regulate the conduct of hostilities, and these principles remain fully applicable to emerging technologies, including Artificial Intelligence (AI)-enabled military systems. The principles of distinction, proportionality, military necessity, and precautions in attack form the legal foundation for assessing the lawfulness of any attack, regardless of whether the decision is made by humans, AI-assisted systems, or autonomous tools.

The principle of distinction requires parties to a conflict to distinguish at all times between civilians and combatants, and between civilian objects and military objectives, directing

operations only against lawful military targets (Additional Protocol I, Article 48). In the context of AI, systems used for targeting must be capable of reliably differentiating between protected persons and objects and lawful targets. However, concerns arise because algorithmic systems may rely on pattern recognition and probabilistic data, which may not fully capture complex contextual realities required by IHL (ICRC, 2019).

The principle of proportionality prohibits attacks where expected incidental civilian harm would be excessive in relation to the anticipated concrete and direct military advantage (Additional Protocol I, Article 51(5)(b)). AI systems may assist commanders by processing large datasets to estimate collateral damage, but proportionality assessments involve inherently qualitative judgments that are difficult to fully automate. As noted by legal scholars, proportionality requires human value judgments that may not be reducible to computational models (Schmitt, 2013).

The principle of military necessity permits only those measures that are necessary to achieve a legitimate military objective and are not otherwise prohibited by IHL. While AI may improve operational efficiency, any use must still be confined within lawful military purposes and cannot justify violations of humanitarian protections (ICRC, 2021).

The principle of precautions in attack requires constant care to spare civilians, including verifying targets, choosing means and methods of warfare that minimize harm, and cancelling or suspending attacks if excessive civilian harm is expected (Additional Protocol I, Article 57). AI-assisted systems may enhance target verification and real-time analysis, but also raise concerns about opacity, error margins, and the risk of over-reliance on automated recommendations.

Overall, while AI may support compliance with IHL by improving data processing and decision support, it does not replace the requirement for human legal judgment. The effectiveness of these principles in AI-driven warfare ultimately depends on maintaining meaningful human control over targeting decisions and ensuring accountability for their outcomes (ICRC, 2021; UNIDIR, 2020).

### **3. What are the legal and practical challenges to attributing responsibility in situations where AI technologies are deployed in combat scenarios where they inflict unlawful harm?**

International Humanitarian Law (IHL) is structured on the premise that responsibility for violations can be attributed to States and individuals. However, the deployment of Artificial Intelligence (AI) in combat scenarios introduces complex legal and practical challenges to this attribution framework, particularly when unlawful harm occurs.

Legally, one key challenge is the fragmentation of responsibility across multiple actors. AI-enabled weapon systems typically involve designers, programmers, manufacturers, military commanders, and the State itself. When an unlawful attack occurs, it becomes difficult to determine whether responsibility lies with the operator who deployed the system, the commander who authorized its use, the State that employed it, or the developers who designed the algorithm. Traditional IHL doctrines of State responsibility (Articles on State Responsibility, 2001) and individual criminal responsibility (Rome Statute, Article 25) were not designed with autonomous or semi-autonomous decision-making systems in mind, creating what scholars describe as an “accountability gap” (Scharre, 2018).

Another legal challenge arises from causation and foreseeability. AI systems, particularly those using machine learning, may produce outputs that are not fully predictable or explainable. This raises difficulties in establishing the required causal link between human conduct and the resulting unlawful harm. If the system’s behavior cannot be fully anticipated, it becomes harder to prove negligence, intent, or effective control, all of which are central to attributing liability under IHL and international criminal law.

Practically, the challenge of opacity (“black box” problem) further complicates investigations. Many AI systems do not provide transparent reasoning for their decisions, making post-incident assessments difficult. Without clear audit trails or explainability, reconstructing why a target was selected or why an attack occurred

becomes technically and legally challenging. Additionally, the issue of delegation of decision-making authority creates uncertainty regarding “meaningful human control.” If humans rely heavily on AI recommendations or operate in high-speed environments where intervention is limited, it becomes difficult to determine whether responsibility remains with the human operator or shifts toward the system itself—something current legal frameworks do not recognize as an independent legal subject.

**4. Whether existing IHL has legal systems in place to deal with accountability and responsibility for military decisions made with the help of AI, and/or whether legal and regulatory frameworks are needed.**

International Humanitarian Law (IHL) does not contain AI-specific provisions, but its existing legal framework is generally considered technology-neutral, meaning it applies to all means and methods of warfare, including Artificial Intelligence (AI)-assisted and autonomous systems. Accordingly, rules on State responsibility, individual criminal responsibility, and command responsibility remain formally applicable to military decisions involving AI. However, significant gaps and uncertainties arise in their practical application.

Under current IHL and international law, States remain responsible for internationally wrongful acts committed through their armed forces, including when AI systems are used in operational decision-making, provided that the conduct can be attributed to the State (ILC Articles on State Responsibility, 2001). Similarly, individuals—including military commanders and operators—may incur criminal responsibility under international criminal law where required mental elements such as intent or negligence can be established (Rome Statute, Article 25). The doctrine of command responsibility further holds superiors liable if they knew or should have known about unlawful acts and failed to prevent or punish them (Rome Statute, Article 28). Despite these existing frameworks, scholars and international organizations argue that AI introduces significant accountability challenges. These include the diffusion of decision-making across human and machine actors, the “black

box” nature of many machine-learning systems, and difficulties in establishing foreseeability, intent, and effective control. As a result, it may be difficult in practice to determine whether legal responsibility lies with commanders, operators, programmers, manufacturers, or the State itself, particularly in cases involving autonomous or semi-autonomous targeting systems. Because of these challenges, there is an ongoing debate on whether existing IHL is sufficient or whether new regulatory frameworks are necessary. The International Committee of the Red Cross (ICRC) and several UN bodies emphasize that while existing law remains applicable, additional rules or interpretative guidance may be required to ensure meaningful human control, clearer standards of accountability, and enhanced transparency in the development and deployment of AI-enabled weapons systems (ICRC, 2021; UNIDIR, 2020).

In conclusion, while existing IHL provides a foundational legal structure for addressing responsibility in AI-assisted military decision-making, its application faces practical limitations. Therefore, many scholars and institutions support the development of supplementary regulatory frameworks or interpretive norms to address the accountability gaps created by AI in warfare.

**FINDINGS:**

In absence of an international treaty specifically dealing with military AI, the study considers International Humanitarian Law (IHL) to be still applicable to AI generated military decisions. Many of the key legal principles outlining how military operations are to be conducted in the future remain under the current legal instruments, such as the Geneva Conventions of 1949, Additional Protocol I of 1977, customary International Humanitarian Law and principles of international responsibility. So, the use of new technologies will also not absolve States or military forces of giving effect to accepted humanitarian commitments. Lastly, the study suggests that the criterion of distinction and proportionality will be likely much more problematic on decisions made on the basis of the factor used by the military, AI. While AI

systems can analyze vast quantities of data in a fraction of a second and help make operations more efficient, they do not necessarily have the context, legal analysis and situational interpretation needed to rely upon such interpretation to ensure humanitarian commitments are fulfilled. In complex battlefield scenarios, for example, whether a target is civilian or combatant or whether proportionality is met, are unclear AI systems that are capable of doing this.

The study also aims to find that there are immense issues when it comes to responsibility and blame in using AI in military combat. The existing rules with regard to command responsibility and state responsibility continue to be relevant for the attribution of responsibility to violations of IHL. Military commanders have an ongoing responsibility to prevent, to suppress and to act upon unlawful acts that are committed under their command, as confirmed in international case law, such as *Prosecutor v. Bemba* and *Prosecutor v. Ongwen*. With this, decisions in operations made by a decision support system based on artificial intelligence can't be a complete transfer of responsibility for a human.

Two implications of this work are that there are international obligations on the conduct of military systems that use AI and that domain knowledge must be integrated into AI systems. Elements of article on responsibility of states for internationally wrongful acts (ARSIWA) could be action that takes the responsibility of State organs that also helps to breach international obligations. As a result technological autonomy can never be an excuse by States to neglect its obligations under International Humanitarian Law (IHL).

This study also highlights a significant gap in responsibility related to the involvement of programmers and software developers, defence contractors and tech firms in developing military AI systems. The legislation different countries have now or will have in the future to regulate how these actors influence the behaviors and performance of AI technologies (coding, architecture, design of algorithm, selection of the training data) is not currently done in an evident

way. So, the question remains who will be held responsible for the growth of AI in the military and its utilization?

The study also points out the issues of transparencies and predictability that can be caused by increasing independence of military technology. Many of the very complex AI systems that process very complex algorithm processes aren't really comprehended by the operators and/or commanders, let alone the system developers. As a result, the settlement of specific military decisions might prove to be difficult, and afterwards, the investigation, legal prosecution and definition of legal responsibility in regards to illegal incidents difficult.

Additionally, it establishes that "reasonable human control" is still an important measure to guarantee adherence to International Humanitarian Law. Reports by the International Committee of the Red Cross (ICRC), the Stockholm International Peace Research Institute (SIPRI) and the United Nations Institute for Disarmament Research (UNIDIR) and discussions between the UN DPW have all emphasized the significance of the need for human control of weapon systems for which autonomous AI is also being used. Results show that in war situations, engaging with humans is necessary, not only to ensure accountability, but to promote civilian security, legal decision-making processes.

Lastly, the findings of this study come to a conclusion that even if the benefits of using Artificial Intelligence are sometimes apparent, it can provide some benefits such as increase in speed of information processing, increase in military forces, increase in operational efficiency or increase in situational awareness but many practical and legal issues can still be raised. Since there is no international consensus on the regulation of the use of autonomous military technologies, it may be necessary to further clarify and evolve current legal frameworks, particularly on the issues of accountability, transparency and civilian protection. However, regulations and legal principles must constantly be developed to keep technological innovations in warfare within the framework of the purposes and humanitarian nature of IHL.

### RECOMMENDATIONS:

Meaningful human control must be an essential requirement in all military uses of AI. AI's should not have the ability to make autonomous decisions regarding the use of lethal force, without human supervision and intervention. There is a need for international organizations and States to work towards more concrete regulations and guidelines governing the application of AI in military operations, such as accountability and transparency measures, as well as compliance with International Humanitarian Law (IHL). Prior to introduction, military institutions should have robust legal review processes for AI powered systems. Any such review should take into consideration the distinction, proportionality, military necessity and precautionary obligations under International Humanitarian Law. There needs to be transparency in the accountability of commanders, military operators, states, software developers and defense manufacturers when designing and deploying military AI systems. The importance of cooperation among nations within the United Nations and other multilateral contexts to set common principles for the military's AI and autonomous systems should be highlighted and encouraged. Finally, in the future the focus on the use of technology in armed conflict should be made more civilian and humanitarian.

### CONCLUSION:

Artificial Intelligence has become a game-changer technology that could revolutionize the way military activities and decisions are made in today's modern conflicts. Military decision making is more and more shaped by high-tech processes, particularly in Intelligence analysis, surveillance, target identification and operational planning, where there is a growing use of AI-driven systems. Although the introduction of these new advancements can have positive effects on military efficiency and operational effectiveness, these advancements also have enormous potential political and humanitarian repercussions that must not be overlooked. In this context, the study analyzed the legal implications of an AI supported military decision-

making process in International Humanitarian Law and the extent to which it can be responded to with existing legal frameworks in terms of responsibility and accountability. Three cardinal principles on which distinction, proportionality, military necessity and precautions in attack were checked, showed the basics continue to apply in military operations involving AI systems. Principles of state and command responsibility are among the main legal parameters concerning conduct in armed conflict that remain to be the Geneva Conventions, Additional Protocols, IHL and customary.

But the study also showed that the use of such aspects gets more complicated if there is any military decision to be taken based on autonomous or semi autonomous systems. AI systems cannot be considered human decision makers because they do not have "legal personality", moral judgment, and the ability to take full responsibility for unlawful behavior or action. Because of this, after the conclusion of such military acts under the influence of AI, it becomes much more difficult to identify who is responsible for the violation of IHL. The study also pointed to an "accountability deficit in terms of accountability for what the other does, between the programming, the software developer, the defense manufacturer and the military operators and operators" and the lack of "decoupling" between the states and the military. While current doctrines of command responsibility and state responsibility are still relevant, there is not a lot of guidance in the law as to the responsibility of non-traditional actors who will design and deploy military AI systems. This uncertainty can lead to a reduction in accountability structure and to problems with effective law enforcement.

Overall, the study finds that IHL is still able to set bounds to decisions made by military AI; however, it finds key legal and practical constraints in existing IHL frameworks, given the fast development of military AI. Thus, more effective international cooperation, more precise standards of accountability, more effective human control and more thorough legal review mechanisms are needed to ensure that technological advancements in warfare do not

impact the protection of humanity or the essential goals of International Humanitarian Law. However, going forward, with ongoing developments in AI technologies, the international community needs to maintain responsibility clear, and to ensure human dignity and, civilian protection stays at the heart of military decision making processes.

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