FMDB *Transactions on Sustainable Humanities and Society*

Law Artificial Intelligence in Warfare: Legal and Humanitarian Challenges Under International Humanitarian Law

Ali Zeineddine[1, *]

[1]Department of Political Studies, Intelligentsia Center for Research and Studies, Suite, Beirut, Lebanon.
ali.zeineddine87@outlook.com

Abstract: Artificial Intelligence (AI) is rapidly transforming modern warfare, presenting both opportunities and challenges for International Humanitarian Law (IHL). This paper explores the intersection of AI and IHL, focusing on the implications of AI on key humanitarian principles: distinction, proportionality, necessity, and humanity. By analyzing case studies and conducting a thorough legal analysis, the paper identifies significant gaps in the current legal frameworks governing the use of AI in armed conflicts. These gaps raise concerns about the potential for AI to undermine established IHL principles and the protection of human rights during warfare. The study further examines the ethical and legal responsibilities of states and non-state actors deploying AI technologies in combat. Based on these findings, the paper offers targeted recommendations for policymakers to adapt existing legal frameworks and develop new regulations to ensure that AI advancements in military applications are aligned with humanitarian principles. The ultimate aim is to promote the responsible use of AI in warfare, safeguarding human dignity and minimizing harm to civilians and combatants alike, in accordance with IHL.

Keywords: Artificial Intelligence (AI); International Humanitarian Law (IHL); Modern Warfare; Legal Frameworks; Humanitarian Principles; Military Ethics.

Received on: 16/09/2023, **Revised on:** 29/11/2023, **Accepted on:** 05/01/2024, **Published on:** 07/06/2024

Journal Homepage: https://www.fmdbpub.com/user/journals/details/FTSHS

DOI: https://doi.org/10.69888/FTSHS.2024.000263

Cite as: A. Zeineddine, "Law Artificial Intelligence in Warfare: Legal and Humanitarian Challenges Under International Humanitarian Law," *FMDB Transactions on Sustainable Humanities and Society*, vol. 1, no. 2, pp. 49–56, 2024.

1. Introduction

International Humanitarian Law, or IHL, also known as the law of armed conflict, seeks to limit the effects and damages of armed conflict for humanitarian reasons. It protects those who are not participating in the hostilities, or in other ways, who are not part of a conflict, and restricts the means and methods of warfare. In our world today, we see many armed conflicts, whether international or non-international and as a result of these conflicts, we reap many human and material losses. For sure, the big loser is humanity. The recent integration of Artificial Intelligence (AI) in military operations poses significant challenges. AI technologies, such as autonomous weapons systems and advanced surveillance tools, have the potential to revolutionize warfare but also raise profound legal and ethical questions, mainly on the part of IHL. For example, we have a lot, beginning from the Russian-Ukrainian war arriving to the Palestinian-Israelian war where the AI technology used in war had changed totally the nature of classic war. This paper aims to analyze the impact of AI on IHL and propose ways to address the emerging challenges and try to save humanity. The literature on IHL is extensive, covering its principles, historical evolution, and application in

*Corresponding author.

various conflicts. As we know, the main base for the IHL is the "Four Geneva Conventions" of 1948 and the additional protocols of 1977.

1.1. Overview of International Humanitarian Law

IHL, established through treaties such as the Geneva Conventions and customary international law, aims to protect individuals who are not or are no longer participating in hostilities and to regulate the conduct of hostilities. Its fundamental principles, distinction, proportionality, necessity, and humanity, are designed to balance humanitarian considerations with military necessity. Over time, IHL has evolved to address new methods and means of warfare. Still, the rapid evolution of AI technology presents novel challenges that existing frameworks are not fully equipped to handle [3]. The Geneva Conventions and their Additional Protocols are the main core of IHL, setting out rules to protect civilians, prisoners of war, and the wounded and sick, either on land or at sea [5].

Moreover, these Conventions and their Additional Protocols are international treaties that contain the most important rules limiting the barbarity of war [6]. The International Committee of the Red Cross (ICRC) plays a key role in promoting and interpreting IHL, providing guidance on its application in contemporary conflicts [1]. The integration of AI in military operations has been a subject of intense study and debate. Many researchers have explored various aspects of AI, including its potential to enhance decision-making, its use in autonomous weapons systems, and the ethical implications of delegating lethal force to machines. Key studies highlight both the potential benefits of AI, such as increased precision and reduced risk to human soldiers, and the risks, including the possibility of malfunction, misuse, and the erosion of human accountability. What are the consequences, military, political, moral, and legal, of giving machines the capacity to select targets and destroy them without direct human guidance [4].

This is the main question and the essential base for analyzing the impact of AI on IHL. AI in warfare can enhance operational efficiency by processing vast amounts of data, enabling real-time decision-making and predictive analytics. However, the reliance on algorithms introduces the risk of errors and biases, potentially leading to unlawful actions. The ethical implications of AI in warfare are also significant, raising questions about the role of human judgment and the potential for dehumanization of conflict [8].

1.2. The Principles of International Humanitarian Law

IHL is founded on four core principles: distinction, proportionality, necessity, and humanity. These principles mandate that parties to a conflict must always distinguish between combatants and civilians and between military objectives and civilian objects. Only combatants and military objectives can be lawfully targeted. This principle is enshrined in the Additional Protocols to the Geneva Conventions and is a cornerstone of IHL. It aims to protect civilian populations and civilian infrastructure from the ravages of war [2]. Distinction requires the accurate identification of targets to prevent civilian casualties. Autonomous systems, however, may struggle to make such distinctions, especially in complex environments where combatants and civilians are intermingled. The risk of misidentification is heightened by the reliance on imperfect algorithms and data inputs, leading to potential violations of IHL [3].

The principle of proportionality prohibits attacks against military objectives that are expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated [27]. In other words, the principle of proportionality seeks to limit the damage caused by military operations by requiring that the effects of the means and methods of warfare used must not be disproportionate to the military advantage sought. Military actions must be necessary to achieve a legitimate military objective and must be directed toward that objective [28]. This principle ensures that force is used only when absolutely required to achieve a military goal, minimizing unnecessary destruction and suffering [29]. It is closely linked to the concepts of military necessity and humanitarian considerations, aiming to limit the use of force to what is strictly required [30].

Necessity requires a careful assessment of whether an attack is essential to achieve a specific military objective. AI systems, however, may not be able to make these assessments with the required level of understanding and judgment [31]. The reliance on pre-programmed algorithms and data inputs can lead to decisions that fail to meet the necessity criterion, resulting in unnecessary harm [3]. The principle of humanity, and its absence during the battle of Solferino of 1859, was the central notion that inspired the founder of the International Committee of the Red Cross (ICRC), Henry Dunant. The principle stipulates that all humans have the capacity and ability to show respect and care for all, even their enemies.

IHL, the principles of which can be found in all major religions and cultures, sets out only basic protections but demonstrates some common sense of and respect for humanity even during armed conflict. Modern IHL accepts that harm, destruction, and death can be lawful during armed conflict. The law seeks to limit harm, and the principle of humanity is very much at the heart

of this ambition. This notion inspires many rules of IHL; specifically, those setting out protections for the wounded and sick require that the means and methods of warfare should not cause unnecessary suffering. It encompasses the prohibition of superfluous injury and the imperative to treat all persons humanely. The Martens Clause provides a moral and legal baseline for conduct during war, emphasizing that even in the absence of specific legal prohibitions, the dictates of public conscience must guide behaviour [3].

1.3. The Role of AI in Modern Warfare

AI technologies are increasingly integrated into military operations, ranging from autonomous weapons systems (AWS) to sophisticated surveillance and reconnaissance tools. These systems can select and engage targets without human intervention. Examples include the Israeli Harpy drone and the U.S. Navy's Sea Hunter. AWS has the potential to enhance battlefield efficiency and reduce human casualties. Still, it also poses significant risks, including the possibility of malfunction, unintended escalation, and ethical concerns about machines making life-and-death decisions [4].

AWS can operate at speeds and with precision that far exceeds human capabilities, potentially transforming the nature of warfare. However, the lack of human oversight raises concerns about compliance with IHL principles, particularly in terms of distinction and proportionality. AI enhances capabilities in data analysis, pattern recognition, and decision-making. For instance, AI-driven drones and satellites can process vast amounts of data to identify potential threats. These technologies improve situational awareness and operational effectiveness, but they also raise privacy concerns and the potential for misuse in targeting decisions. AI-driven surveillance systems can monitor large areas continuously, providing valuable intelligence for military operations. The use of AI for surveillance raises ethical and legal issues, particularly concerning privacy rights and the potential for abuse. The integration of AI in reconnaissance also necessitates robust oversight to ensure compliance with IHL [3].

Another topic here is to give a clear and sufficient insight into AI and its newest impact in recent warfare. Now, we will talk about the cyber war and operations used to automate cyber defences and conduct offensive operations, raising concerns about the attribution and escalation of cyber conflicts. AI-driven cyber tools can quickly identify and exploit vulnerabilities, making cyber warfare more dynamic and potentially more destructive. The lack of clear legal frameworks governing cyber operations complicates the application of IHL principles [3]. Cyber operations conducted by AI can disrupt critical infrastructure, leading to significant civilian harm. The difficulty in attributing cyber-attacks further complicates the enforcement of IHL. Ensuring that AI-driven cyber operations adhere to IHL principles requires the development of new legal standards and frameworks. Case studies such as the use of AI in drone warfare in the Middle East and the deployment of autonomous systems in the South China Sea illustrate the transformative impact of AI on modern military tactics and strategies.

1.4. Cyber Warfare and International Humanitarian Law Principles

Cyber warfare represents a significant shift in the methods and means of warfare, introducing a complex landscape that challenges existing International Humanitarian Law (IHL) principles. As states increasingly incorporate cyber capabilities into their military arsenals, the need to examine the implications of cyber warfare on IHL becomes paramount. Cyber warfare involves the use of computer networks to disrupt, disable, destroy, or maliciously control information systems or to degrade the infrastructure and resources reliant on those systems [9]. Unlike traditional kinetic warfare, cyber-attacks can be launched remotely, often without clear attribution, and can affect both military and civilian infrastructures simultaneously.

The principle of distinction is a cornerstone of IHL, requiring parties to distinguish between combatants and non-combatants and between military objectives and civilian objects [10]. In cyber warfare, this principle is particularly challenging due to the dual-use nature of many cyber infrastructures. For example, a cyber-attack targeting a military communication network could inadvertently disrupt civilian communications that share the same infrastructure [11]. Here, we can mention an illustrative case, which is the Stuxnet worm, which targeted Iran's nuclear facilities but also infected civilian industrial systems globally. This case underscores the difficulty in ensuring that cyber-attacks are strictly confined to legitimate military targets and do not spill over into civilian domains.

2. Principle of Proportionality

Cyber operations complicate the application of this principle because the effects of a cyber-attack can be unpredictable and widespread. For instance, the 2007 cyber-attacks on Estonia targeted government, banking, and media websites, causing significant disruption to civilian life [12]. Although these attacks were relatively non-violent, they raised questions about the proportionality of disrupting civilian infrastructure to achieve political or military objectives.

2.1. Principle of Precaution

In the cyber domain, this principle demands rigorous planning and the use of precise methods to mitigate the risk of unintended consequences. One example of precaution in cyber warfare is the careful selection of targets and the timing of attacks to minimize civilian impact. For instance, cyber operations might be conducted during times when civilian use of targeted infrastructures is minimal. The integration of cyber capabilities into military operations presents unique challenges for the application of IHL. These challenges include the difficulty of attribution, the dual-use nature of cyberinfrastructure, and the potential for widespread, unintended effects.

2.2. Intersection of AI and IHL

AI's integration into warfare presents several challenges to IHL: Autonomous systems may struggle to accurately distinguish between combatants and non-combatants, particularly in complex urban environments where civilians are intermixed with military targets. Misidentification could lead to unlawful attacks on civilians. AI systems rely on data inputs and algorithms that may not fully capture the nuances of human judgment required to make these distinctions, increasing the risk of errors [4].

For example, during operations in densely populated areas, AI systems may misidentify civilian vehicles or buildings as military targets. The reliance on pattern recognition and data analysis can result in false positives, leading to unlawful attacks and significant civilian casualties. Ensuring that AI systems can accurately distinguish between lawful and unlawful targets is crucial for compliance with IHL.AI systems must make real-time assessments of proportionality, weighing military advantage against potential civilian harm. The complexity of such calculations and the potential for algorithmic bias raise concerns about compliance with proportionality requirements.

In a hypothetical scenario, an AI system might determine that an attack on a military target is proportionate based on data inputs but fail to account for the presence of civilians nearby. This could lead to excessive civilian harm, violating the principle of proportionality. The challenge lies in programming AI to make nuanced judgments that balance military necessity with humanitarian considerations [3]. The ethical implications of AI in warfare are multifaceted, encompassing issues such as the potential for reduced accountability, the moral responsibility of programmers and operators, and the broader societal impacts of delegating lethal decisions to machines. Addressing these ethical concerns requires a comprehensive approach that integrates legal, moral, and technological perspectives [4].

3. Accountability

Determining accountability for unlawful acts committed by autonomous systems is challenging. Traditional legal frameworks assume human intent and control, which may not be directly applicable to AI-driven decisions. The chain of responsibility in the development, deployment, and operation of AI systems must be clearly defined to ensure accountability. For instance, if an autonomous weapon system unlawfully kills civilians, it is unclear who should be held accountable: the programmer, the operator, or the military commander. This ambiguity complicates efforts to enforce IHL and ensure justice for victims. Developing clear guidelines for accountability is essential to address this issue [3]. In the section on Legal and Ethical Considerations, the current legal frameworks governing AI in warfare are underdeveloped. Key instruments include the Geneva Conventions and the Convention on Certain Conventional Weapons (CCW), which address some aspects of weapon use but do not specifically regulate AI.

So, we arrive at a legal gap, viewing that IHL treaties were not designed with AI in mind, leading to significant gaps in regulation. For instance, there is no clear guidance on the deployment of autonomous systems or the accountability mechanisms for AI-driven decisions. This regulatory vacuum poses challenges to ensuring compliance with IHL principles and protecting civilians in conflict zones [3]. To address these gaps, the international community must consider developing new treaties or amending existing ones to specifically address the challenges posed by AI in warfare. Now, taking the ethical debate topic, we notice that Scholars and practitioners debate the morality of autonomous weapons, with arguments ranging from the potential for reduced human casualties to the risks of dehumanization and loss of accountability [4]. Ethical debates also focus on the potential for AI to change the nature of warfare, making it more detached and less human-centred. The use of AI in lethal decision-making raises questions about the erosion of moral responsibility and the potential for increased violence. Addressing these ethical concerns requires a multidisciplinary approach that incorporates legal, moral, and technological perspectives [3].

3.1. AI and Drones in Modern Warfare: Russian-Ukrainian War

As we said before, Artificial Intelligence (AI) has rapidly advanced and been integrated into various military applications, significantly impacting modern warfare. The Russian-Ukrainian war provides a critical example to study on the utilization of AI, particularly through the deployment of drones, and the resultant implications for International Humanitarian Law (IHL).

This example will clarify how these technologies have been employed in the conflict and assess their influence on adherence to IHL principles. AI-enhanced drones have revolutionized military strategies by offering advanced surveillance, precision targeting, and autonomous operation capabilities [4]. In the context of the Russian-Ukrainian war, both sides have utilized drones for reconnaissance and combat purposes, leading to significant strategic advantages and challenges.

3.2. Application in the Russian-Ukrainian Conflict

The use of drones by Russia and Ukraine has been extensive. Russia has deployed sophisticated drone technologies to enhance its artillery accuracy and conduct surveillance operations. Ukraine, despite its relatively smaller resources, has effectively used commercial drones for reconnaissance and coordinating attacks. These applications illustrate the growing role of AI in shaping contemporary conflict dynamics and changing the oldest war strategies. The integration of AI in military operations raises critical questions about compliance with IHL. Key principles of IHL include distinction, proportionality, and precaution. The principle of distinction, as we said before, requires combatants to differentiate between military targets and civilians. At the same time, proportionality prohibits attacks that cause excessive civilian damage relative to the anticipated military advantage.

AI in drones can potentially enhance the ability to distinguish between combatants and non-combatants. Advanced algorithms allow drones to identify targets with higher precision, theoretically reducing collateral damage. However, the reliability of AI in making these distinctions remains contentious. Erroneous targeting due to flawed algorithms or inadequate training data can lead to violations of IHL and cause harmful damages. AI technologies particularly challenge the principle of proportionality. Autonomous drones can execute attacks without human intervention, raising concerns about the ability to assess proportionality dynamically during combat. AI systems based on non-human intervention might lack the nuanced judgment required to evaluate complex and hard situations, potentially resulting in disproportionate harm to civilians.

Precautionary measures are essential to minimize harm to civilians with the aim of protecting and applying the IHL. AI can aid in this by providing enhanced situational awareness and predictive analytics to anticipate enemy movements and civilian presence [7]. However, the delegation of critical decision-making to AI systems may undermine human oversight, leading to ethical and legal dilemmas. Several incidents in the Russian-Ukrainian war highlight the complexities of AI's impact on IHL. For instance, reports of drones striking civilian infrastructure raise questions about the accuracy and decision-making processes of AI systems used in these operations. These incidents and their results underscore the need for stringent regulatory frameworks to govern the deployment of AI in warfare. The integration of AI in drones has profound implications for IHL. While AI offers potential benefits in enhancing precision and reducing collateral damage, it also poses significant challenges in ensuring compliance with IHL principles.

The Russian-Ukrainian war gives a clear view of the double-edged nature of AI in terms of the opportunities and risks associated with it in military operations. Moving forward, it is imperative to develop a legal and ethical guideline to manage, organize, and govern the use of AI in warfare, ensuring the full respect of IHL and its principles. Another example of using AI and drones in recent warfare is taking place during the Palestinian-Israeli war, where we see the remarkably increasing use of drones and AI technologies influencing the strategies and outcomes of warfare. These advancements have significant implications for International Humanitarian Law (IHL), as we mentioned in the paragraph before, which seeks to regulate the conduct of armed conflicts and protect non-combatants.

AI-enhanced drones have been pivotal in the Israeli military strategy, providing capabilities such as real-time surveillance, precision strikes, and autonomous operations. The Palestinian factions or sections have also utilized drones, though with less sophistication, for reconnaissance and improvised attacks. So, as a result, this technological disparity underscores the complex dynamics of modern asymmetrical warfare. Also, we should not forget to mention several incidents during the recent Israeli-Palestinian conflict that illustrate the complexities of AI's impact on IHL. For instance, AI-driven drones were used in targeted strikes that resulted in civilian casualties, raising questions about the algorithms and intelligence inputs guiding these operations.

3.3. The IHL Respect Before AI Integration in Warfare

The advent of Artificial Intelligence (AI) in warfare represents a clear shift in military operations, significantly impacting the adherence to International Humanitarian Law (IHL). Historically, the respect for IHL has been a cornerstone in mitigating the humanitarian impact of armed conflicts. Before the integration of AI, warfare was predominantly manual, with human soldiers making real-time decisions on the battlefield. The principles of IHL distinction, proportionality, and precaution—were upheld through human judgment and decision-making processes [10]. Compliance with IHL was largely dependent on the training, discipline, and ethical considerations of military personnel.

4. Distinction

Traditionally, the principle of distinction required soldiers to differentiate between combatants and civilians. This was often challenging due to the fog of war and the limitations of human perception. For example, during the Vietnam War, the inability to clearly distinguish between Viet Cong fighters and civilians led to significant civilian casualties, as evidenced by the My Lai Massacre [14].

4.1. Proportionality

The principle of proportionality aimed to limit collateral damage by balancing military objectives against potential civilian harm. In conventional warfare, this principle was frequently violated due to the lack of precise targeting capabilities and the broad impact of explosive ordnance. The bombing campaigns during World War II, such as the firebombing of Dresden, highlighted the difficulties in maintaining proportionality, resulting in extensive civilian casualties and destruction [13].

4.2. Precaution

Precautionary measures in traditional warfare involved planning and executing operations with the intent to minimize civilian harm. However, the unpredictable nature of combat often led to unintended consequences. The NATO bombing of Yugoslavia in 1999, for instance, included incidents where precision-guided munitions still caused civilian casualties due to errors in intelligence and targeting. After the mention of the IHL before AI, a comparison is mandatory between pre-AI and post-AI integration in warfare, which reveals both improvements and challenges with respect to IHL.

The improvement in precision is so important that AI technologies have markedly improved targeting precision, reducing the likelihood of civilian casualties compared to traditional methods. This is a significant advancement in upholding the principles of distinction and proportionality. Otherwise, the introduction of AI has added layers of complexity to military operations. While AI can enhance compliance with IHL, it also introduces new variables and potential points of failure, such as algorithmic biases and software vulnerabilities. The more important hint is the shift from human-centric decision-making to AI-driven operations, which underscores the need for a precise oversight mechanism. Ensuring that AI systems operate within the bounds of IHL requires continuous monitoring and the ability to intervene when necessary. After all, the legal and ethical frameworks governing the use of AI in warfare are still evolving. Establishing clear norms and standards is essential to address the unique challenges posed by AI technologies and to ensure accountability for violations of IHL.

4.3. A glance at the Future of Human Presence in Parallel with AI Development

While we are talking about IHL, it is critical to highlight the future of humans in parallel with the increasing AI. The rapid advancement of artificial intelligence (AI) is profoundly transforming various sectors, leading to significant implications for human presence in the workforce and society. As AI technologies continue to evolve, the dynamics between human labour and AI systems are expected to undergo substantial changes, fostering both opportunities and challenges. One of the most prominent areas where AI is making a significant impact is the workplace.

AI technologies, such as machine learning algorithms, robotic process automation, and natural language processing, are increasingly being integrated into business operations to enhance efficiency and productivity [15]. These technologies can perform repetitive and mundane tasks with higher accuracy and speed than humans, allowing employees to focus on more complex and creative tasks. However, this shift also raises concerns about job displacement. According to a report by Frey and Osborne [16], nearly 47% of jobs in the United States are at risk of being automated within the next two decades. This potential for widespread job displacement necessitates a re-evaluation of workforce strategies, emphasizing the importance of upskilling and reskilling workers to adapt to new roles that complement AI systems. In parallel with the displacement of certain job categories, AI is also creating new opportunities for human presence in emerging fields. The development and maintenance of AI systems require a skilled workforce proficient in AI and data science.

The roles that involve critical thinking, emotional intelligence, and creative problem-solving are expected to remain predominantly human, as AI cannot replicate these uniquely human traits effectively [20]. Therefore, the future workforce will likely see a blend of AI-driven automation and human-centric roles, necessitating a collaborative coexistence between humans and AI [21]. The integration of AI into healthcare is another domain where the interplay between human presence and AI development is particularly noteworthy. AI technologies are revolutionizing diagnostics, treatment planning, and patient care [22]. For instance, AI algorithms can analyze medical images to detect diseases with higher precision than human doctors, thereby improving early diagnosis and treatment outcomes [19]. However, the empathetic and interpersonal aspects of patient care remain irreplaceable by AI. Human healthcare providers are essential for delivering compassionate care, understanding

patient needs, and making complex ethical decisions that AI systems are not equipped to handle [23]. Hence, the future of healthcare will involve a synergistic relationship where AI enhances clinical capabilities while humans provide empathy and ethical oversight [24].

Education is another sector that is transforming due to AI. AI-powered personalized learning systems can adapt to individual student needs, providing tailored educational experiences that enhance learning outcomes [17]. These systems can identify areas where students struggle and offer customized support, allowing educators to focus on fostering critical thinking and creativity [25]. However, the human presence in education remains vital for mentoring, inspiring, and motivating students. The role of teachers as facilitators of social and emotional learning is irreplaceable, highlighting the need for a balanced integration of AI in educational settings [26]. The ethical considerations surrounding AI development also underscore the importance of maintaining human oversight. AI systems can perpetuate biases present in their training data, leading to unfair and discriminatory outcomes [18]. Ensuring ethical AI development requires human intervention to identify and mitigate biases, develop transparent AI systems, and establish regulations that protect individual rights. Human oversight is crucial for making ethical decisions that align AI technologies with societal values and norms.

5. Conclusion

As technology continues to evolve, so too must the frameworks governing AI use. International cooperation is essential to develop norms and standards that ensure AI technologies enhance compliance with IHL rather than undermine it. This includes investing in research to improve the accuracy and reliability of AI systems, implementing rigorous testing and validation protocols, and fostering transparency in the development and deployment of these technologies. While AI and drones have the potential to revolutionize military operations by enhancing precision and operational efficiency, their deployment in conflict scenarios such as the Russian-Ukrainian and Israeli-Palestinian wars underscores the urgent need for ethical and legal frameworks, and here we should not forget the cyber war and its impact and effects. Ensuring compliance with IHL requires a balanced approach that leverages the benefits of AI while addressing its inherent risks. Through international cooperation and a commitment to humanitarian principles, it is possible to harness the power of AI in a manner that respects and upholds the laws of war, ultimately contributing to a more humane and just conduct of armed conflict.

In conclusion, AI is a double-edged sword; it has the power to positively change life on all sides and give humans the opportunity to ameliorate their lives, and on another side, it can be a lethal weapon that can destroy not only the IHL but all the humanity on earth, and our days are full of live examples as we see in Palestine now and before in the Russian-Ukrainian war where the AI and drones are being an essential element who kill without mercy. Moreover, AI offers both opportunities and challenges for International Humanitarian Law. As we mentioned before, AI can enhance military capabilities, but it also raises significant legal and ethical issues that must be addressed to ensure compliance with IHL principles. By reforming legal frameworks, developing ethical guidelines, and strengthening accountability mechanisms, the international community can better manage the impact of AI on warfare and uphold humanitarian values. Finally, humanity faces a big challenge represented by AI, and it can be either a destructive threat to the IHL and all about humanity or helpful and give a hand to all the humanitarian believers and workers; it is up to the manner of using and implementing the AI into our life. This latest idea is still pending, and the response to it still needs more years or probably decades to see the results and the impact of this savage beast called “AI”.

Acknowledgement: I am deeply grateful to Intelligentsia Center for Research and Studies, Suite, Beirut, Lebanon, for their expertise and dedication, which greatly enriches this work.

Data Availability Statement: The data for this study can be made available upon request to the corresponding author.

Funding Statement: This manuscript and research paper were prepared without any financial support or funding.

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

Ethics and Consent Statement: This research adheres to ethical guidelines, obtaining informed consent from all participants. Confidentiality measures were implemented to safeguard participant privacy.

References

1. Autonomous Weapons Systems: Law, Ethics, Policy. Cambridge University Press, 2016.
2. Autonomous Weapon Systems: Implications of Increasing Autonomy in the Critical Functions of Weapons. 2019.

3. N. -Melzer, International Humanitarian Law: A Comprehensive Introduction. International Committee of the Red Cross. 2016.
4. P. Scharre, Army of None: Autonomous Weapons and the Future of War. W. W. Norton & Company, 2018.
5. International Committee of the Red Cross, "International humanitarian law and the challenges of contemporary armed conflicts," International Committee of the Red Cross, 31-Oct-2015.
6. Militaryreview.com. [Online]. Available: https://www.militaryreview.com/ukraines-drone-war/. [Accessed: 30-May-2023].
7. F. Sauer and N. Schörnig, "Killer drones: The 'silver bullet' of democratic warfare?," Secur. Dialogue, vol. 43, no. 4, pp. 363–380, 2012.
8. Warontherocks.com. [Online]. Available: https://warontherocks.com/2021/06/ai-and-the-future-of-warfare-the-case-of-israel/. [Accessed: 30-May-2023].
9. K. Roth, "Israel and Palestine," Human Rights Watch, 14-Dec-2021. [Online]. Available: https://www.hrw.org/world-report/2022/country-chapters/israel/palestine. [Accessed: 30-May-2023].
10. J.-M. Henckaerts and L. Beck, Customary International Humanitarian Law: Volume I: Rules. Cambridge University Press, 2005.
11. K. E. Eichensehr, "Tallinn Manual on the International Law Applicable to Cyber Warfare. Edited by Michael N. Schmitt. Cambridge, New York: Cambridge University Press, 2013.
12. S. Herzog, "Revisiting the Estonian cyber attacks: Digital threats and multinational responses," J. Strat. Secur., vol. 4, no. 2, pp. 49–60, 2011.
13. A. C. -Grayling, Among the Dead Cities: The History and Moral Legacy of the WWII Bombing of Civilians in Germany and Japan. Walker & Company, 2007.
14. S. M. -Hersh, "My Lai 4: A Report on the Massacre and Its Aftermath," 1970.
15. E. -Brynjolfsson and A. Mcafee, The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W.W. Norton & Company, 2014.
16. C. B. Frey and M. A. Osborne, "The future of employment: How susceptible are jobs to computerization?," Technol. Forecast. Soc. Change, vol. 114, no.3, pp. 254–280, 2017.
17. R. -Luckin, Machine Learning and Human Intelligence: The Future of Education for the 21st Century. UCL IOE Press, 2018.
18. O' Neil, Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Crown Publishing Group, 2016.
19. E. -Topol, Deep Medicine: How Artificial Intelligence Can Make Healthcare Human Again. Basic Books, 2019.
20. H. J. -Wilson and P. R. Daugherty, Human + Machine: Reimagining work in the Age of AI. Harvard Business Review Press, 2018.
21. M. Hasan, "A Metaphorical & Visual Analysis of Gender in Al Jazeera & BBC Coverage of Afghanistan After the Taliban Takes Over," Indiana Journal of Humanities and Social Sciences, vol. 3, no. 5, pp. 38–43, 2022.
22. J. Cruz Ángeles, The guardians of access to the metaverse. (Re)thinking the Competition Law of the European Union, Cuad. Transnational law, vol. 15, no. 1, p. 275-296, 2023.
23. J. Cruz Ángeles, The legal-community obligations of the large digital service provider platforms in the metaverse era, Cuad. Transnational law, vol. 14, no. 2, p. 294-318, 2022.
24. K. M. Ashifa and P. Ramya, "Health afflictions and quality of work life among women working in fireworks industry," International Journal of Engineering and Advanced Technology, vol. 8, no. 6S3, pp. 1723-1725, 2019.
25. K. M. Ashifa, "Developmental initiatives for persons with disabilities: Appraisal on village-based rehabilitation of Amar Seva Sangam," Indian Journal of Public Health Research and Development, vol. 10, no. 12, pp. 1257-1261, 2019.
26. M. Mahato and K. Gaurav, "Collegiate cheating: Understanding the prevalence, causes, and consequences," SocioEconomic Challenges, vol. 7, no. 3, pp. 152–163, 2023.
27. M. Mahato and P. Kumar, "Emotional Labor - An Empirical Analysis of the Correlations of Its Variables," Eur. J. Bus. Manag., vol. 4, no. 7, pp. 163–168, 2012.
28. M. Mahato, "Performance Analysis of High, Medium and Low Companies in Indian Pharmaceuticals Industry," IUP J. Manag. Res., vol. 10, no. 3, pp. 52–70, 2011.
29. M. Modekurti-Mahato and P. Kumar, "Organizational Role Stress - Empirical Evidences from India during Economic and Political Resentment," Purushartha - A J. Manag., Ethics and Spirituality, vol. 7, no. 2, pp. 30–39, 2014.
30. M. Modekurti-Mahato, P. Kumar, and P. G. Raju, "Impact of emotional labor on organizational role stress – A study in the services sector in India," Procedia Econ. Finance, vol. 11, no.1, pp. 110–121, 2014.
31. P. G. Raju and M. M. Mahato, "Impact of longer usage of lean manufacturing system (Toyotism) on employment outcomes - a study in garment manufacturing industries in India," Int. J. Serv. Oper. Manag., vol. 18, no. 3, p. 305, 2014.