

Lethal Autonomous Weapons Systems Outside Armed Conflict: Legal Challenges
to the Right to Life



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"Lethal Autonomous Weapons Systems Outside Armed Conflict: Legal Challenges to the Right to Life"

I hereby submit this thesis to the Board of Examiners in fulfillment of the requirements for the Master's Thesis Examination at the Faculty of Law, Universitas Islam Indonesia. In relation thereto, I hereby declare that:

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Assalamu'alaikum Wr. Wb.

Alhamdulillahirabbil'alaamiin

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Abstract

AI has transformed every aspect of human life; one of the most prominent and controversial areas of AI application is its integration into the military and beyond armed conflict. Lethal Autonomous Weapon System (LAWS) is a system that can identify targets, select them, and attack them without human intervention. The use of LAWS outside armed conflict poses serious legal challenges to the protection of the right to life under International Human Rights Law (IHRL). This study examines the regulation of the use of lethal force under IHRL, as well as the legal challenges of the use of LAWS to the protection of the right to life in non-combat contexts such as law enforcement, border control, and counterterrorism. The right to life as a non-dereogable right and the prohibition of arbitrary deprivation of life are used as legal standards that the use of lethal force outside armed conflict must comply with principles of necessity, proportionality, legality, and precaution. This research analyzes binding international instruments, including ICCPR, regional human rights conventions, and soft law such as the UN Code of Conduct for Law Enforcement Officials and the UN Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, and UDHR, to explain governing legal frameworks. To answer the research questions, this research uses a normative and doctrinal legal research method to analyze legal documents, International judicial procedures, and interpretations of human rights monitoring bodies. The comparison between strict IHRL principles and the technical and functional characteristics of these LAWS allows this research to assess the extent to which these weapons comply with the requirements of international human rights law. The research's findings show that delegating lethal decisions to LAWS lacks contextual understanding, human judgment, and the ability to assess complex situations, resulting in arbitrary deprivation of life, because it cannot comply with the principle of necessity and proportionality. It also creates serious accountability gaps because responsibility is divided among different actors, such as designers, programmers, commanders, and states, which traditional systems of responsibility cannot adequately address. Use of LAWS outside armed conflict, such as law enforcement, counterterrorism, and border control, poses even more severe challenges due to misinterpretation of data, algorithmic bias, excessive use of force, and lack of transparency. In a legal context, although there are some non-binding laws to regulate the use of lethal force in peacetime, a crucial legal gap exists because of the lack of binding international frameworks to regulate the use of LAWS. Therefore, the use of LAWS in a non-combat context cannot comply with IHRL and poses a serious threat to the right to life and human dignity, without meaningful human control, accountability mechanisms, and clear and applicable law.

Keywords: The right to life, IHRL, LAWS, Meaningful human control, outside of armed conflict.

CHAPTER I

INTRODUCTION

1.1 Background

Technology has a wide and deep impact on every aspect of human life,¹ and AI is one of the most important and controversial areas of technological advancement in the 21st century, which has transformed human life in various ways.² Throughout history, with the end of trench warfare, battles moved to the digital realm. As these developments stalled, investment in scientific research increased, leading to the production of nuclear weapons, automation of military tasks, and the creation of information analysis and communication technologies beyond human capabilities. Technological advancements have been justified as a means of gaining superiority in warfare.³ One of the most prominent and controversial areas of application of artificial intelligence is its use in the military and security sector, which replaces humans in the areas of decision-making with algorithmic ones, and the use of deadly force. Algorithmic decision-making in many areas of society, such as law enforcement, faces profound ethical and legal challenges.⁴

Killer robots or lethal autonomous weapons systems (LAWS) are examples that can search for targets and make a decision whether to kill or not, but are unable to distinguish between friend and foe; their role in the design and development, and technical specifications shape warfare.⁵ AI's military integration remained a highly debated application,⁶ and the rise of LAWS has sparked

¹ Hektor Ruci, "lethal autonomous weapon systems (LAWS) enforcement of human rights by algorithms?," *Review of Legal and Related Contemporary Issues* 5 (2024): 1–17. accessed May 24, 2025, https://doi.org/10.56461/iup_rirc.2024.5.ch1. p.4

² Dino Pedreschi et al., "Human-AI Coevolution," *Nature Machine Intelligence* 5 (May 2024): p. 5, <https://doi.org/10.48550/arXiv.2306.13723>.

³ "The Evolution of War: How AI Has Changed Military Weaponry and Technology | Montreal AI Ethics Institute," accessed May 26, 2025, <https://montrealethics.ai/the-evolution-of-war-how-ai-has-changed-military-weaponry-and-technology/>.

⁴ Gökhan Güneysu, "Lethal Autonomous Weapon Systems and Automation Bias," *Yuridika* 39, no. 3 (September 25, 2024): 395–424, <https://doi.org/10.20473/ydk.v39i3.55188>. accessed May 26, 2025

⁵ Andreas Wilia and Diajeng Wulan Christiani, "The Use of Autonomous Weapon Systems in Armed Conflict: Legality and Challenges for Future Weapon Regulation," *Padjadjaran Journal of International Law*, vol. 3, 2019, https://www.sfu.ca/~andrewf/books/What_is_Philoso. p.278. accessed May 26, 2025

⁶ Hektor Ruci, "lethal autonomous weapon systems (LAWS) enforcement of human rights by algorithms?," *Review of Legal and Related Contemporary Issues* 5 (2024): 1–17. p.5 accessed May 24, 2025, https://doi.org/10.56461/iup_rirc.2024.5.ch1.

intense debate in international law recently.⁷ LAWS are systems that, after initial activation by a person, can independently identify, select, and target without human intervention.⁸ These systems use pre-programmed sensors and algorithms based on the general target profiles to decide whether to use force without a human determining the specific target, exact time, or location of the attack.⁹ So far, the focus of all discussions about lethal autonomous weapons systems has been on armed conflicts. Their use in non-combat situations, such as domestic law enforcement,¹⁰ surveillance,¹¹ counter-terrorism,¹² and border control,¹³ is expanded.¹⁴

In July 2016, Dallas police chief David Brown used an unusual method to end a violent conflict involving Micah Johnson, who had killed 5 police officers and injured several others. The police officer attached a pound of C4 plastic explosive to an F-5 Remote robot designed to defuse the bomb, and its intentional detonation resulted in Janson's death. This incident marked the first time that American forces deliberately used a robot equipped with lethal force.¹⁵ With this action, the landscape of law enforcement's use of force was permanently changed.¹⁶ As seen in this case, Micah Johnson was killed by a robot neutralizer to protect the safety of police officers. Sending a machine to kill the suspect saved the lives of the officers, but this action resulted in the intentional killing of a human by the machine. This murder is consistent with the concept of an outcast, a

⁷ Elliot Winter, "The Compatibility of the Use of Autonomous Weapons with the Principle of Precaution in the Law of Armed Conflict," *The Military Law and the Law of War Review* 58, no. 2 (December 2020): 240–73, p. 243 <https://doi.org/10.4337/mlwr.2020.02.18>.

⁸ John Lewis, "The Case for Regulating Fully Autonomous Weapons," *THE YALE LAW JOURNAL* 124, no. 4 (2015): 1314–15, <https://www.jstor.org/stable/43617052?seq=1>.

⁹ International Committee of the Red Cross, *ICRC Position on Autonomous Weapon Systems and the Element of Human Control*, Position and background paper (Geneva: ICRC, 2021), 1–4, https://www.icrc.org/sites/default/files/document_new/file_list/icrc_position_on_aws_and_background_paper.pdf.

¹⁰ Christof Heyns, "Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement," *Human Rights Quarterly* 38, no. 2 (2016): 350–78, p.352 <https://doi.org/10.1353/hrq.2016.0034>.

¹¹ Ingvild Bode and Hendrik Huelss, "Autonomous Weapons Systems and Changing Norms in International Relations," *Review of International Studies* 44, no. 3 (July 2018): 393–413, <https://doi.org/10.1017/s0260210517000614>.

¹² Alberto Rinaldi and Sue Anne Teo, "The Use of Artificial Intelligence Technologies in Border and Migration Control and the Subtle Erosion of Human Rights," *International & Comparative Law Quarterly* 74, no. 1 (January 2025): 61–89, p. 67 <https://doi.org/10.1017/S0020589325000090>.

¹³ Mirko Forti, "Addressing Algorithmic Errors in Data-Driven Border Control Procedures," *German Law Journal* 25, no. 4 (June 2024): 635–45, <https://doi.org/10.1017/glj.2023.102>.

¹⁴ Heyns, "Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement."

¹⁵ Elizabeth E. Joh, "Policing Police Robots," *UCLA Law Review* 64 (November 2016), <https://www.uclalawreview.org/policing-police-robots/>.

¹⁶ Thomas Wanebo, "Remote Killing and the Fourth Amendment: Updating Constitutional Law to Address Expanded Police Lethality in the Robotic Age," *UCLA Law Review* 65, no. 4 (2018): 976–1034. p.992

person who is outside the framework of the law and deprived of legal protection.¹⁷ This act is considered the height of dehumanization because Johnson's life was considered so worthless that a machine killed him. The use of a machine in this case raises serious legal and ethical questions about entrusting life and death decisions to a machine. This directly challenges the fundamental right to life and the principle of accountability, necessity, and proportionality under IHRL.¹⁸

For the time being, countries that use highly automated weapon systems such as Iron Dome by Israel,¹⁹ and utilizing semi-autonomous robots by the United States for security purposes in places like shopping malls, universities, and workplaces.²⁰ These robots have an extraordinary ability to detect abnormal and potentially dangerous behavior.²¹ Another example of the uses of LAWS in non-combat situations is South Korea's use of the SGR-A1 robot made by Samsung, on the border (DMZ) with North Korea. This robot is equipped with a system that can recognize people showing the signs of surrender, and the robot will shoot at intruders who do not surrender, using a light machine gun. Several people believe that this robot decides to shoot at intruders on its own, which means a human is on the loop.²² This trend reflects the increasing role of automation in domestic policing, surveillance, suspect identification, and public order maintenance.²³

These two case studies (SGR-A1 and Dallas) clearly demonstrate that the use of armed robots in domestic policing can have significant implications for human rights, particularly the right to life, human responsibility, and legal transparency. Making life and death decisions from the perspective of human dignity requires features such as compassion, empathy, altruism, and emotion, while LAWS lack these features. To make a conscious decision to take the life of a living being, human

¹⁷ Constantine Gidaris, "The Rise of the Robots: Technocapitalism and the Policing of Race," *Fast Capitalism* 18, no. 1 (December 2021), <https://doi.org/10.32855/fcapital.202101.004>.

¹⁸ Gidaris.

¹⁹ Gunasekara–Rockwell Center/AUP, Ernest A., Civ., USAF AETC, LeMay, "Laws on LAWS: Regulating the Lethal Autonomous Weapon Systems," Air University (AU), September 21, 2023, <https://www.airuniversity.af.edu/JIPA/Display/Article/3533453/laws-on-laws-regulating-the-lethal-autonomous-weapon-systems/>.

²⁰ Wanebo, "Remote Killing and the Fourth Amendment: Updating Constitutional Law to Address Expanded Police Lethality in the Robotic Age." p.995

²¹ Wanebo. p.995

²² Andrea Spagnolo, "Human Rights Implications of Autonomous Weapon Systems in Domestic Law Enforcement: Sci-Fi Reflections on a Lo-Fi Reality," *QIL, Zoom-In* 43 (2017): 33–58, <https://www.qil-qdi.org/human-rights-implications-autonomous-weapon-systems-domestic-law-enforcement-sci-fi-reflections-lo-fi-reality/>.

²³ Spagnolo.

presence is necessary.²⁴ The deployment of LAWS in the context of non-combat can lead to arbitrary deprivation of life, a lack of accountability, and the erosion of human dignity.²⁵ Weapons cannot be punished because machines cannot suffer, nor can they understand deterrence, due to a lack of mental state and intent, which creates a vacuum in accountability and the exercise of legal responsibility.²⁶

One of the main concerns raised about the military use of LAWS is the ambiguity in attributing potential harm that these systems may cause in violation of the Laws of Armed Conflict (LOAC), international humanitarian law (IHL), international human rights law (IHRL), or the law of the use of force (jus ad bellum).²⁷ IHRL applies during peacetime and in law enforcement, which is stricter in the use of force than IHL. Many scholars say that the right to life is the starting point of IHRL, while IHL starts with the right to kill. It seems simple, but it absolutely indicates the restrictive role of IHRL in the use of force, particularly lethal force.²⁸ The right to life is a cornerstone of IHRL, and the UDHR and ICCPR introduced this concept and considered it a prerequisite for the enjoyment of other rights. Therefore, any killing that is considered unlawful under IHRL is arbitrary and violates the right to life, whether by humans or by LAWS.²⁹ Mechanized killing is one of the human rights concerns that machines make life and death decisions without human intervention by LAWS.³⁰

²⁴ Mary Ellen O’Connell, “Banning Autonomous Weapons: A Legal and Ethical Mandate,” *Ethics & International Affairs* 37, no. 3 (2023): 287–98, P. 294 <https://doi.org/10.1017/S0892679423000357>.

²⁵ Bonnie Docherty, *The Need for and Elements of a New Treaty on Fully Autonomous Weapons*, Policy Report (Human Rights Watch and Harvard Law School International Human Rights Clinic (IHRC), 2020), 1–12, p.3- 4 [s://www.hrw.org/news/2020/06/01/need-and-elements-new-treaty-fully-autonomous-weapons](https://www.hrw.org/news/2020/06/01/need-and-elements-new-treaty-fully-autonomous-weapons).

²⁶ Human Rights Watch and Harvard Law School International Human Rights Clinic, *Killer Robots and the Concept of Meaningful Human Control*, Memorandum (New York: Human Rights Watch and Harvard Law School IHRC, 2016), <https://www.hrw.org/node/288610/printable/print>.

²⁷ Robin Geiß, “Lethal Autonomous Weapons Systems,” Technology, Definition, Ethics, Law & Security (Berlin: Federal Foreign Office, April 2016), 109–120. accessed May 24, 2025.

²⁸ Ondrej Bajgar and Jan Horenovsky, “Negative Human Rights as a Basis for Long-Term AI Safety and Regulation,” *Journal of Artificial Intelligence Research* 76 (April 2023): 1043–75, <https://doi.org/10.1613/jair.1.14020>.

²⁹ Human Rights Watch and Harvard Law School International Human Rights Clinic, “SHAKING THE FOUNDATIONS The Human Rights Implications of Killer Robots.”(New York: Human Rights Watch, May 2014). accessed May 24, 2025.

³⁰ Mary Ellen O’Connell, “Banning Autonomous Weapons: A Legal and Ethical Mandate,” *Ethics & International Affairs* 37, no. 3 (2023): 287–98, P. 294 <https://doi.org/10.1017/S0892679423000357>.

Despite the increasing importance of the subject emergence of LAWS, there is no specific customary or treaty-based international law on LAWS.³¹ Establishing regulations on the development and use of LAWS is itself a major challenge. In September 2009, the International Committee for Robot Arms Control (ICRAC) was established by Jürgen Altmann, Noel Sharkey, Rob Sparrow, and Peter Asaro, who issued a statement calling for an international ban on AWS.³² Therefore, there is no specific legal instrument that explicitly regulates LAWS, and this legal vacuum necessitates the development of regulations that define the status of LAWS in peacetime.³³ This is a serious warning to the legal community because existing laws still cannot regulate the use of LAWS outside of armed conflict, and current standards are unable to respond to new developments that are expanding day by day.³⁴

Based on the fact that there are no specific and explicit regulations on LAWS in contemporary international law, examining international human rights law, emphasizing the right to life, implications for the behavior of states, and the use of force in peace situations under IHRL is essential for legal analysis and policymaking. Therefore, the lack of legal norms to regulate LAWS in non-combat situations not only revealed the serious challenges to the protection of the right to life but also the need for urgent rules to regulate the use of lethal force by LAWS under the IHRL framework, particularly in law enforcement, counterterrorism, and border control. The existing literature mainly focuses on the use of LAWS in armed conflict under IHL. This study shifts its focus from armed conflict to non-armed conflict under IHRL, particularly in situations such as law enforcement, counterterrorism, and border control. This study aims to address the legal challenges posed by the use of LAWS, particularly regarding the protection of the right to life under IHRL. Moreover, the research aims to analyze whether existing international legal standards are sufficient to regulate this technology or whether it requires additional international norms and regulations.

³¹ Elliot Winter, “The Compatibility of Autonomous Weapons with the Principles of International Humanitarian Law,” *Journal of Conflict and Security Law* 27, no. 1 (2022): 1–20, <https://doi.org/10.1093/jcsl/krac001>. p. 2. accessed May 26, 2025

³² Peter Asaro, “On Banning Autonomous Weapon Systems: Human Rights, Automation, and the Dehumanization of Lethal Decision-Making,” *International Review of the Red Cross* 94, no. 886 (June 2013): 687–709, <https://doi.org/10.1017/S1816383112000768>. accessed May 26, 2025. p.688-689

³³ Wilia and Wulan Christianti, “The Use of Autonomous Weapon Systems in Armed Conflict: Legality and Challenges for Future Weapon Regulation.” p.287. accessed May 26, 2025

³⁴ Wanebo, “Remote Killing and the Fourth Amendment: Updating Constitutional Law to Address Expanded Police Lethality in the Robotic Age.” p. 995

1.2. Problem Formulation

1.2.1. How does international human rights law, particularly the right to life, regulate the use of lethal force outside armed conflict situations?

1.2.2 . What legal challenges does the use of LAWS in law enforcement, counterterrorism, and border control pose to the protection of the right to life under international human rights law?

1.3. Research Objectives

1.3.1. To examine how international human rights law, particularly the right to life, regulates the use of lethal force outside armed conflict situations.

1.3.2. To identify and analyze the legal challenges arising from the use of lethal autonomous weapons systems (LAWS) in non-combat contexts such as law enforcement, counterterrorism, and border control under IHRL.

1.4. Benefits of the Research

This research is expected to yield both theoretical and practical benefits, particularly regarding the protection of the right to life under international human rights law in the era of emerging security and military technology.

1.4.1. Theoretical Benefits

- a) Addressing a legal research gap: This research examines the regulation of LAWS outside armed conflict under IHRL, particularly regarding the right to life, to fill the existing research gap, because most of study focus on the use of LAWS on the battlefield within the framework of IHL.
- b) Clarifying the scope of the right to life in relation to autonomous technologies: this research will provide a clear understanding of the application of the right to life in the use of autonomous weapons outside armed conflict by analyzing IHRL principles such as necessity, proportionality, and accountability.
- c) Developing a human rights-based analytical framework: this research provides a human rights-based legal framework that can be used in future research to legally examine emerging autonomous technologies, particularly in the use of lethal force outside of war.

1.4.2. Practical Benefits

- a) Assisting in legislation and policy making: this research will be a valuable resource to formulate new regulations or amendments of the current law and policy at the international and national levels to support the protection of the right to life in the use of LAWS.
- b) Proposing legal and practical solutions: this research will provide suggestions and solutions to ensure compliance of LAWS with principles of IHRL.
- c) Accountability promotion and prevention of human rights violations: this research analyzes the responsibility for the use of LAWS, which will be beneficial to promote accountability and prevent arbitrary killing and violation of human rights.

1.5. Originality of Research

The purpose of this review is to identify existing studies on Lethal Autonomous Weapons Systems focusing on IHRL that form the foundation of the current research, utilizing the results of previous research, attempt to prevent the redundancy or overlap with similar issues, and the occurrence of plagiarism. A variety of perspectives are included in this selected literature from those who rely on the IHL, while others emphasize ethical and human rights concerns under the principles of IHRL. By comparing the conceptual frameworks and legal approaches used in these studies, this research seeks to identify specific gaps in the literature and provide a more coherent analysis of the legal challenges posed by LAWS.

Dr. Gargi Bhatt (2025), in *“Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics,”* examines the human rights and ethical challenges of AI in military integration. The research found that the main risks posed by the deployment of LAWS include an accountability gap, algorithmic bias, violation of privacy rights, and loss of meaningful human control, which require transparent and human rights-based regulations under international law.

Christof Heyns (2016), in his research entitled *“Human Rights and the use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement”*, identified that AWS must not be used in law enforcement, and they should be banned even in armed conflict, because delegating life and death decision-making to machines is not acceptable. He emphasizes human meaningful control, necessity, and proportionality principles in terms of AWS use. In his opinion, the principle of accountability, human dignity, and the right to life would be destroyed if machines were to

become completely autonomous, making them incompatible with the concept of a dignified human life.

Christopher J. Coyne and Yahya Alshamy (2021), in their research article entitled “*Perverse Consequences of Lethal Autonomous Weapons Systems*,” argue that the use of LAWS in both armed conflict and peacetime is a serious risk and negative effect on peace and security of the globe. They concluded six major challenges of LAWS, such as increasing the willingness to use force, harming civilians due to algorithmic errors, creating social fear, expanding militarism, intensifying the arms race, and strengthening government control over citizens. Finally, researchers called for the preservation of the precautionary principle while using and developing LAWS due to a lack of accountability, and the rapid advancement of this technology has exceeded international legal frameworks.

Christof Heyns in his research entitled (2017), “*Autonomous weapons in armed conflict and the right to a dignified life: an African perspective*,” analyzed the role of LAWS on the right to life and human dignity from the perspective of African countries. He warns that the nature of war decision-making has changed, and the risk of moral and legal accountability being lost, as well as battles becoming dehumanized by the full autonomy of machines, has increased. He believes that, due to the lack of human judgment, entrusting life and death decisions to algorithms diminishes inherent values and human dignity, and that LAWS are unable to respect fundamental principles such as distinction, proportionality, and military necessity.

Bobi Ardiansyah (2025) in his research entitled “*Legality of the Use of Autonomous Weapons Systems in International Humanitarian Law*” has examined the compatibility of the use of autonomous weapons only in accordance with the fundamental principles of international humanitarian law (IHL), and its main focus is on the analysis of four key principles of IHL, which include principle of distinction, proportionality, military necessity and precaution. The findings of this research show that the uncertainty about the ability of autonomous weapons to strictly comply with the principles of IHL, especially the principle of distinction, may question the legitimacy of their use. Accordingly, Article 36 of Additional Protocol I to the Geneva Conventions emphasizes that states must conduct a legal review before using emerging weapons. The article's conclusion shows that a lack of human control on AWS raises major challenges for the compatibility of AWS weapons with IHL principles.

Robert Sparrow (2016) has carried out research entitled *“Robots and Respect: Assessing the Case Against Autonomous Weapon Systems.”* The ethical issue of lethal autonomous weapon systems has been examined by Robert Sparrow. He argues that while it is true that Autonomous Weapon Systems will be able to distinguish military targets from civilians in a certain limited context, crucial ethical and technical issues will always persist, making their ethical use problematic. Specifically, the author emphasizes the concept of respect for the humanity of the enemy and the principle of distinction. He claims that the lack of interpersonal relationships between humans and targets renders the use of AWS morally questionable.

Neil Davison (2018) carried out research under the name of *“A Legal Perspective: Autonomous Weapon Systems under International Humanitarian Law,”* which this research can be summarized as a legal review of AWS that has been conducted within the Framework of international humanitarian law. Initially, the author defines AWS as a weapon that identifies and attacks a target without human intervention, with a focus on the key principles of international humanitarian law, such as distinction, proportionality, and precaution, and the need to preserve meaningful human control. Legal accountability and possible accountability gaps are reviewed in this research, and he also emphasizes predictability and reliability during the AWS’s law assessment.

Yordan Gunawan, Muhamad Haris Aulawi, Rizaldy Anggriawan & Tri Anggoro Putro (2022) carried out research study entitled *“Command responsibility of autonomous weapons under international humanitarian law,”* with the main focus of this research is the legal challenges and legal requirements related to the research concludes that the current framework of commander responsibility in international humanitarian law faces fundamental challenges in identifying and attributing commander responsibility for war crimes resulting from the use of these weapons due to the autonomous nature of AWS. The authors argue that the reduction of human control in AWS undermines effective commander oversight and obscures commander accountability. The paper suggests that to fill these gaps, new rules and guidelines on meaningful human control and commander oversight should be developed.

Amanda Sharkey (2018), in his article under the name of *“Autonomous weapons systems, killer robots and human dignity critically examine the relationship between human dignity and lethal autonomous weapons.”* Three arguments against lethal autonomous weapons are examined by the author: First, technological arguments that AWS cannot respect fundamental principles of

international humanitarian law. Second, Duty-based arguments insist that life-and-death decisions should be made by human judgment. Third, Consequentialist arguments that focus on the potential impacts of AWS on global stability. It is not enough to base an argument against AWS on human dignity, and it is better to present these arguments alongside other legal and ethical issues

Jackson Marwa Oringa (2024) in his research entitled “*Ensuring Compliance of Autonomous Weapons Systems (AWS) with IHL: Navigating Legal Constraints and Optimization Challenges*,” has discussed the legal and ethical challenges of AWS within the international humanitarian law framework. By using a library method and qualitative analysis, the author examines core IHL principles such as the principles of distinction, proportionality, military necessity, and the technical and ethical challenges of complying with them in autonomous weapons systems, concluding that meaningful human control and a transparent legal framework are essential for IHL compliance in AWS.

Table 1 Research Originality- A Comparative Analysis of this Thesis and Other Scholarly Theses and Articles

No.	Sources	Problem Formulation	Similarities	Differences
1.	Dr. Gargi Bhatt (2025). <i>Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics</i>	How can we balance the military effectiveness of artificial intelligence with the protection of human rights and international ethical principles?	Both research, Dr. Gargi Bhatt's research and current research, have similarities that emphasize the protection of the right to life, human dignity, and human accountability when machines make the decisions, and argue that current international law cannot adequately regulate this emerging technology.	Although both studies have some similarities, current research shifts the focus from the use of AI in military under IHL to non-combat contexts such as law enforcement, counterterrorism, and border control under IHRL. Bhatt has examined the ethical aspects of technology in relation to the need for human control, while the current research examines the challenges to the right to life under IHRL and analyzes the legal and accountability challenges arising from the use of LAWS in peacetime.

2.	Christopher J. Coyne and Yahya Alshamy (2021). <i>Perverse Consequences of Lethal Autonomous Weapons Systems</i>	What unintended and adverse consequences might arise from the development and use of lethal autonomous weapons for peace, security, and human well-being?	There is one similar point between both Christopher J. Coyne's and Yahya Alshamy's research and current thesis, which stresses the dangers of technological autonomy, lack of accountability, and threatens human dignity under international law.	Despite some overlap that both studies showed, Christopher J. Coyne and Yahya Alshamy's article, with a focus on economic, political, and ethical consequences of the deployment of LAWS in war and policing, bears a difference with ongoing research that analyzes the protection of the right to life outside the armed conflict under the IHRL during the use of LAWS.
3.	Christof Heyns (2016). <i>Human Rights and the use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement</i>	Is the use of automatic lethal weapons (AWS) in law enforcement compatible with states' obligations under international human rights, particularly the right to life?	There are some similarities between both research, right to life, and human meaningful control under the IHRL are the main focus of the current study, and Christof Heyns' research. Arbitrary deprivation of life and	Although two studies have some similarities, a fundamental difference exists in the scope and approach of these two studies. Therefore, Heyns' research focused only on the deployment of LAWS

			violation of human dignity can be the result of a lack of accountability and Full autonomy of machines. Therefore, the use of LAWS in peace situations and law enforcement is incompatible with state human rights commitments, which require regulation. Even the prohibition of these technologies in non-combat fields is emphasized.	in law enforcement based on an ethical and normative viewpoint and called for a ban on this technology. In contrast, the current uses an analytical and legal approaches aims to address challenges and gaps in the protection of right to life in a wider scope, such as Law enforcement, counterterrorism, and border control against the use of LAWS.
4.	Christof Heyns (2017). Autonomous weapons in armed conflict and the right to a dignified life: an African perspective	Is the use of lethal automatic weapons in armed conflicts compatible with the right to life and the principle of life with human dignity?	Both studies focus on the right to life and human dignity as fundamental human principles in the use of LAWS. In addition, both studies emphasize a specific legal framework and warn that the lack of meaningful human accountability and	The main difference between Heyns' research and the current study is that Heyns' study analyzed LAWS in armed conflict under the IHL. This thesis shifts its focus to the use of LAWS from IHL to IHRL in peacetime, such as law

			control over the use of LAWS poses a serious threat to human dignity and the right to life.	enforcement, counterterrorism, and border control. Haynes calls for a blanket ban on LAWS, but this research examines, legally and analytically, the gaps and inefficiencies of the IHRL framework in protecting the right to life in peacetime.
5.	Bobi Ardiansyah (2025). <i>Legality of the Use of Autonomous Weapons Systems in International Humanitarian Law</i> .	Is the use of lethal autonomous weapon systems compatible and legitimate with the fundamental principles of international humanitarian law (including the principles of proportionality, distinction, necessity, and precaution)?	Both Ardiansyah's research and my current research have some similarities in terms of examining lethal autonomous weapons systems regarding the lack of human meaningful control and legal challenges under international law.	Despite some overlap between my current research and Ardiansyah's article, there is a huge difference between the two studies, which this research examines the right to life in the context of international human rights law in terms of using LAWS in peacetime. Moreover, Ardiansyah's article only discussed the legitimacy of AWS

				under IHL in a general way.
6.	Robert Sparrow (2016). <i>Robots and Respect: Assessing the Case Against Autonomous Weapon Systems</i> .	Is the use of lethal autonomous weapons morally justified, and do the ethical principles of jus in bello, especially respect for the humanity of the enemy, constitute an obstacle to the moral legitimacy of using these weapons?	Vital Concerns about using AWS and their impact on civilians are addressed in Robert Sparrow's articles and current research. Both studies emphasize legal challenges of AWS, especially its capability to comply with the principle of international law, such as the distinction principle. The role of accountability and possible difficulties in ensuring adherence to human rights, such as the right to life standards, have been highlighted in both studies.	Although Sparrow, in his article, has focused on the ethical implications of AWS and the concept of respecting the humanity of the enemy in armed conflict, the current research shifts its focus to the use of LAWS in peacetime under the IHRL. In Sparrow's article, moral philosophy has been emphasized, but the focus of the present study is on legal challenges and the efficiency existing legal framework regarding the protection of the right to life in IHRL.
7.	Neil Davison (2018). <i>A Legal Perspective: Autonomous</i>	How can the use of lethal autonomous weapons be considered legitimate within	Neil Davison's research and present research have similarities, like analyzing the	Despite the similarities of these two studies, some aspects of LAWS will be examined in the

	<i>Weapon Systems under International Humanitarian Law.</i>	the framework of IHL principles and rules, particularly the principles of distinction, proportionality, and precaution, and can meaningful human control be maintained in the design and use of these weapons in a way that ensures compliance with IHL requirements?	challenges of using LAWS within international law. Both studies emphasize on need for human meaningful control and surveillance on LAWS and the importance of accountability for possible violations of international law, particularly regarding the protection of the right to life.	current research from the perspective of the right to life under the IHRL, while the research conducted by Davison focuses on IHR issues and does not directly address IHRL. In addition, in Davison's research, he focuses specifically on the role of states and military commanders in ensuring compliance with IHL, but the present study focuses on the relationship between the right to life and accountability for its violation.
8.	Yordan Gunawan, Muhamad Haris Aulawi, Rizaldy Anggriawan & Tri Anggoro Putro (2022). <i>Command responsibility of</i>	How can the commander's responsibility be defined and applied to the use of AWS within the International Humanitarian Law framework?	The similarities of these two studies include: They address the issue of LAWS and the legal challenges arising from their use. Both address key principles such as the principles	Their main focus of this article is on the concept of the commander's responsibility and how it applies in the context of the use of AWS, but the present research focuses on

	<i>autonomous weapons under international humanitarian law.</i>		of distinction, proportionality, and meaningful human control, and address concerns about accountability and legal responsibility.	broader and more complex issues, such as the principle of distinction, proportionality and the right to life in the context of IHRL in non-combat situation.
9.	Amanda Sharkey (2018). <i>Autonomous weapons systems, killer robots and human dignity.</i>	Do lethal autonomous weapons threaten human dignity and can human dignity be used as a compelling argument for banning AWS?	Both Amanda Sharkey's research and current research have focused on the legal and ethical challenges arising from the use of LAWS. The importance of human judgment, human meaningful control, the concerns about the consequences of lack of accountability, and the diminishment of human dignity resulting from the use of LAWS are all emphasized.	The research conducted by Amanda Sharkey emphasizes critical analysis of arguments based on the concept of human dignity and examines its limitations. However, the present study, in examination, specifically emphasizes the right to life, within the framework of IHRL, and seeks to present legal challenges and the efficiency of the current legal system regarding the right to life.
10.	Jackson Marwa Oringa (2024).	What legal and optimization	The research conducted by Jackson	Oringa's research focuses on IHL and

	<i>Ensuring Compliance of Autonomous Weapons System (AWS) with IHL: Navigating Legal Constraints and Optimization Challenges.</i>	challenges exist in the use of lethal autonomous weapons within the framework of international humanitarian law, and how can they be managed?	Marwa Oringa and the present study emphasize the legal challenges arising from the use of LAWS, the need for meaningful human control and a legal framework that respects international law and protection of the right to life.	optimization challenges of using AWS. While the present research will focus on the IHRL with emphasis right to life.
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After reviewing the conducted research on LAWS, it can be concluded that previous studies mainly focus on the ethical implications of these weapons, addressing international humanitarian law (IHL). Despite some research focused on the human rights consequences of LAWS, particularly the right to life, no comprehensive legal analysis has been done on the deployment of LAWS in non-combat situations such as law enforcement, counterterrorism, and border control. Therefore, there is a yawning research gap in understanding how to regulate the use of force by autonomous machines within the framework of IHRL. This study aims to address the legal challenges posed by the use of LAWS, particularly regarding the protection of the right to life under IHRL. Moreover, the research aims to analyze whether existing international legal standards are sufficient to regulate this technology or whether it requires additional international norms and regulations. Ultimately, this research, based on the normative legal research and human rights-based approaches, provides room for further discussion about the role of AI in the modern security context, particularly the use of LAWS in peacetime.

1.6. Theoretical Framework

A. Human rights and technology theory

This research uses human rights and technology theory to address the challenges that LAWS pose towards the protection of the right to life. Feenberg states that technology is not a neutral

tool but rather³⁵ a political, hierarchical, and laden tool for a specific group that uses it for its own power and interests. Technology has two dimensions; when both the operator and objectives are human, technology has transformed into a tool for power. He argues that power imbalances are an essential part of today's modern world, but among them, technological power is the most important and influential form of power in today's society.³⁶ Therefore, humans lose their agency and responsibility when decisions are made by autonomous and technical systems. According to Feenberg, a technological system is the combination of social hierarchy and political structures, and a small number of actors designed these to rule the fate of the majority based on the decisions of algorithmic logic.³⁷ Based on his claim, bureaucratize, deskill, and routinize human labor to minimize the voluntary and moral role of human actors, taking the place of humans and understating human intentional role, moral, and replacing human judgement by standards principles.³⁸ Designers are increasingly trying to mechanize humans, that is, to turn humans into part of a machine process by routinizing work, reducing agency, and transferring judgment to automated systems.³⁹

In terms of LAWS, this logic also applies when life and death decisions are delegated to a machine, and removing human agency creates legal and ethical challenges, increases the risk of illegitimate use of force, and weakens the accountability mechanism regarding LAWS.⁴⁰ He warns that “Yet rational though it may be, technology engulfs its creators, threatening both spiritual and material survival.”⁴¹ “Essentialism holds that technology reduces everything to functions and raw materials, which is in contradiction with inherent human dignity”.⁴² Feenberg

³⁵ Andrew Feenberg, “Critical Theory of Technology,” Northeast China University, Shenyang, 2004, p.6 https://www.sfu.ca/~andrewf/books/Critical_Theory_Technology.pdf.

³⁶ Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited*, 2nd edition (New York, NY: Oxford Univ. Press, 2002).

³⁷ Andrew Feenberg, “Critical Theory of Technology,” Northeast China University, Shenyang, 2004, p.6 https://www.sfu.ca/~andrewf/books/Critical_Theory_Technology.pdf.

³⁸ Thomas P. Hughes, “The Evolution of Large Technological Systems,” in *The Social Construction of Technological Systems* (Cambridge, Massachusetts: MIT Press, 1987). p.5

³⁹ Hughes. p.6

⁴⁰ Carlos Alberto Aponte García et al., “Governance and Regulation of Autonomous Weapons and Cybersecurity (2016–2024): The Influence of States, International Organizations, and Civil Society on International Humanitarian Law,” *Contemporary Readings in Law and Social Justice* 17, no. 1 (February 2025): 550–62 555, <https://crlsj.com/index.php/journal/article/view/537>.

⁴¹ Andrew Feenberg, “Questioning Technology,” *Routledge*, 1999, 1–9 P. 3, https://www.researchgate.net/publication/296706069_Questioning_Technology#fullTextFileContent.

⁴² Feenberg. p.3

and Winner also indicate that large technological systems are increasingly equipped with internal power and independent direction, which gradually escapes human control. Weiner explains that as these systems become more advanced, they acquire their own momentum and style, imposing soft coercion on individuals, institutions, and society, and this soft coercion limits the range of human choices by shaping their behavior.⁴³ Control crises, especially when the complexity of these systems exceeds human ability to monitor them, increases with their expansion. This issue is particularly important in the use of LAWS, because these weapons operate unpredictably due to technology beyond their original purposes and outside of human control.⁴⁴

Winner also rejects the neutrality of technology and argues that technology is never a neutral tool, but rather shapes social values, decision-making methods, and guides human actions in certain directions. Technological systems often take on an autonomous life and produce outcomes that do not necessarily reflect human intent. In the military, LAWS impose machine speed, algorithmic logic, and impersonal targeting. These elements can lead to the elimination of moral judgment and the unlawful use of lethal force. LAWS are therefore inherently dangerous because the risk is not only a result of misuse, but also because of their design, speed, opaque complexity, and high levels of autonomy.⁴⁵ Moreover, non-comprehensibility represents another dimension of this technology. This system, as Wiener states, is so complex that a single human being is not able to understand all the steps of its operation, but rather each section has a person, such as operators, designers, programmers, and mine commanders, limited to that section. The people who use this system only see the outputs, not the full chain of algorithmic reasoning that leads to those outputs.⁴⁶

Winner states that “a crucial function of people in technological systems is to complete the feedback loop and correct errors,”⁴⁷ But this important human role is eliminated by LAWS. Without human feedback and the possibility of correction and error, in addition to increasing the risk of unpredictability, accountability is also eliminated. Especially when the system makes a mistake or unlawfully causes human death.⁴⁸ There is a gap between military technological

⁴³ Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*, 9. printing (Cambridge, Mass.: MIT Pr, 1978). p.28

⁴⁴ Hughes, “The Evolution of Large Technological Systems.”

⁴⁵ Winner, *Autonomous Technology*. p.30

⁴⁶ Winner. p.31

⁴⁷ Hughes, “The Evolution of Large Technological Systems.” p.6

⁴⁸ Hughes. p.6

progress, such as algorithmic autonomy, and the ability of international law to regulate the consequences of this technology. To address this gap based on an engineering, socio-technical, and governance perspective on control, Verdiesen et al suggest a comprehensive human oversight that helps to have more control over LAWS. This led to a more comprehensive approach, which ensures more effective control and accountability of LAWS.⁴⁹

Santoni de Sio and Van den Hoven said that for the fulfillment of the human meaningful control concept for the deployment of autonomous systems (LAWS), two conditions are necessary, which include the tracking and tracing condition.⁵⁰ the Tracing condition, meaning that humans must be responsible for the use of the LAWS, and the design can be properly verified. The second condition is a tracking condition that weapons must be responsible for both a humane and an environmental perspective. A framework for Comprehensive Human Oversight is among the proposals that examine technocratic and algorithmic systems from a socio-technical perspective.⁵¹ This theory states that weapons must be technically and morally monitored to protect the right to life and human dignity. As a result, this monitoring framework shows that LAWS endanger the right to life. If there is no human judgment and monitoring, a gap in moral and legal responsibility will arise. Therefore, this technology must always be under human supervision and control to be consistent with human rights values.⁵²

B. The right to life as a non-derogable right theory

In addition to the human rights and technology theory, this research utilizes the theory of the right to life as a non-derogable right to assess the challenges of the deployment of LAWS in the protection of the right to life. In international law, the right to life is recognized as a fundamental and non-derogable right and protected by the UDHR and the ICCPR. The right to life is considered a prerequisite for exercising other rights such as human safety, human dignity, and human immunity.⁵³ It is a universal right that applies to all individuals without discrimination, and cannot

⁴⁹ Ilse Verdiesen, Filippo Santoni De Sio, and Virginia Dignum, "Accountability and Control Over Autonomous Weapon Systems: A Framework for Comprehensive Human Oversight," *Minds and Machines* 31, no. 1 (March 2021): 137–63 138, <https://doi.org/10.1007/s11023-020-09532-9>. p.137

⁵⁰ Verdiesen, Santoni De Sio, and Dignum. p.148-149

⁵¹ Verdiesen, Santoni De Sio, and Dignum. p.148-149

⁵² Verdiesen, Santoni De Sio, and Dignum.

⁵³ Anastasiia Mernyk, Oleh Hyliaka, and Viktoriia Sheverdina, "The Right to Life," *Wiadomości Lekarskie*, no. 1 (January 2025): 197–209 p. 200, <https://doi.org/10.36740/WLek/197134>.

be derogated even in emergencies. Although the right to life is recognized as a non-derogable right, its non-derogability does not mean that every deprivation of life is prohibited under all circumstances.⁵⁴ The European Convention on Human Rights is the only instrument that determines a limit for the suspension of the right to life and states that: “Everyone’s right to life shall be protected by law. No one shall be deprived of his life. Deprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is no more than absolutely necessary: (a) in defense of any person from unlawful violence; (b) in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; (c) in action lawfully taken for the purpose of quelling a riot or insurrection.”⁵⁵ Therefore, based on African Commission on Human and Peoples’ Rights, the prohibition of unlawful killing is a *jus cogens* that is applicable at all times, is a precise definition in international law.⁵⁶

The state has two kinds of responsibility, consisting of the protection of the right to life and refraining from arbitrary deprivation of life, which require regulating norms and mechanisms.⁵⁷ Moreover, the inalienability of the right to life is closely linked to human dignity, which prohibits any cruel behavior and ensures that human beings always remain at the center of moral and legal considerations.⁵⁸ According to this theoretical framework, delegating the life and death decision to machines such as LAWS poses serious challenges to the inherent inalienability of the right to life. The use of LAWS in a non-combat context, such as law enforcement, counterterrorism, and

⁵⁴ Lene Guercke, “State Responsibility for a Failure to Prevent Violations of the Right to Life by Organised Criminal Groups: Disappearances in Mexico,” *Human Rights Law Review* 21, no. 2 (March 2021): 329–57 p. 332, <https://doi.org/10.1093/hrlr/ngaa061>.

⁵⁵ European Convention on Human Rights, 213 U.N.T.S. 221 (1950), https://www.echr.coe.int/documents/d/echr/convention_ENG.

⁵⁶ Stuart Casey-Maslen and Christof Heyns, *The Right to Life Under International Law: An Interpretative Manual* (Cambridge: Cambridge University Press, 2021), https://books.google.co.id/books?hl=en&lr=&id=f_w7EAAAQBAJ&oi=fnd&pg=PR9&dq=The+Right+to+Life+under+International+Law+An+Interpretative+Manual&ots=CuobwWKb9u&sig=4oHEl8tTVcPJufEAbXdzsf2BCM&redir_esc=y#v=onepage&q&f=false. p.21

⁵⁷ Lene Guercke, “State Responsibility for a Failure to Prevent Violations of the Right to Life by Organised Criminal Groups: Disappearances in Mexico,” *Human Rights Law Review* 21, no. 2 (March 2021): 329–57 p. 332, <https://doi.org/10.1093/hrlr/ngaa061>.

⁵⁸ Douwe Korff, *The Right to Life: A Guide to the Implementation of Article 2 of the European Convention on Human Rights* (Strasbourg, France: Council of Europe, 2006), p.25, https://www.researchgate.net/publication/228149775_The_Right_to_Life_A_Guide_to_the_Implementation_of_Article_2_of_the_European_Convention_on_Human_Rights.

border control, undermines the international human rights law principle, which protects the right to life, due to a lack of human judgment, altruism, accountability, and compassion.⁵⁹

The UN Special Rapporteur on extrajudicial, summary or arbitrary executions has emphasized that fully autonomous robots create a physical, moral, and psychological distance between humans and the use of lethal force, which weakens the legal and ethical frameworks for and protection of the right to life. In the use of LAWS, humans are removed from both the scene of the lethal act and the decision-making process. This situation leads to increased moral indifference, a lack of accountability, and the normalization of algorithmic violence.⁶⁰ When an unpredictable autonomous machine is tasked with the use of lethal force, there is no longer any human judgment in the life-or-death decision, which significantly increases the risk of arbitrary deprivation of life.⁶¹ International human rights law not only prohibits states from using force, but also requires broad positive obligations from states to protect the right to life against state and non-state actors. According to the settled case-law of the European Court of Human Rights, states are obliged to adopt legal and administrative frameworks to prevent any threats to the right to life. Depending on the level of autonomy of the LAWS, these obligations must be implemented.⁶²

In systems where humans remain “in the loop” or “on the loop,” if the state knows or should have known that there is a real and immediate threat to the right to life, then it is held responsible. Accordingly, states are required to use the least amount of force in their operations, whether through planning or by providing adequate supervision and training for their agents.⁶³ When autonomous systems are out of the loop, the state is required to fulfill its positive obligations by preventing violations and conducting ongoing due diligence. Otherwise, the state can escape responsibility under the pretext of a technical error. Since LAWS lacks moral agency and the lack of transparency in algorithmic decision-making weakens the state’s obligation to conduct prompt,

⁵⁹ Mary Ellen O’Connell, “Banning Autonomous Weapons: A Legal and Ethical Mandate,” *Ethics & International Affairs* 37, no. 3 (2023): 287–98, P. 294 <https://doi.org/10.1017/S0892679423000357>.

⁶⁰ Christof Heyns, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*, A/HRC/23/47, Human Rights Council, Twenty-Third Session, Agenda Item 3 (Geneva: United Nations Human Rights Council, 2013), 7, <https://digitallibrary.un.org/record/755741?ln=en&v=pdf>.

⁶¹ Rebecca Crotoft, “The Killer Robots Are Here: Legal and Policy Implications,” *University of Richmond – School of Law UR Scholarship Repository* 36:1837 (2015), p.1851 <https://scholarship.richmond.edu/law-faculty-publications>.

⁶² Andrea Spagnolo, “Human Rights Implications of Autonomous Weapon Systems in Domestic Law Enforcement: Sci-Fi Reflections on a Lo-Fi Reality,” *QIL, Zoom-In* 45, no. 1 (2017), p. 49 <https://www.qil-qdi.org/human-rights-implications-autonomous-weapon-systems-domestic-law-enforcement-sci-fi-reflections-lo-fi-reality/>.

⁶³ Spagnolo.p.49

independent, comprehensive, and impartial investigations into fatal incidents, which leads to the state's weakness in fulfilling its positive obligations to protect the right to life.⁶⁴

1.7. Definition of Terms

The aim is to clarify some specific terms that will be used in this research to prevent misunderstandings and discrepancies in line with the research title, Lethal Autonomous Weapons Systems outside the armed conflict: Legal Challenges to the Right to Life.

1.7.1. Autonomous Weapon System

An autonomous weapon system is any type of system that can perform tasks autonomously in its key parts, meaning a system that can identify, track, select, and ultimately attack, disable, or destroy targets using military power without the need for human intervention.⁶⁵

1.7.2. Right to Life

The right to life is the inherent right of every individual that must be protected by law, and no one should be arbitrarily deprived of this right.⁶⁶ Right to life has been ensured in Article 6 of ICCPR, which is one of the fundamental human rights. The Human Rights Committee has referred to this as a fundamental human right. The negative aspect of this is that governments should not arbitrarily or unlawfully threaten or end the lives of individuals. On the other hand, the positive aspect is that to protect this right, states are obliged to take measures to protect the lives of their citizens.⁶⁷

1.7.3. International Human Rights Law

International Human Rights Law is one of the branches of international law, and its aim is to promote, extend, and protect human rights at international, regional, and national levels.⁶⁸

⁶⁴ Spagnolo. p.50

⁶⁵ Neil Davison, "A Legal Perspective: Autonomous Weapon Systems under International Humanitarian Law," in Views of the ICRC on Autonomous Weapon Systems, paper submitted to the Convention on Certain Conventional Weapons Meeting of Experts on Lethal Autonomous Weapons Systems (LAWS), 11 April 2016, UNODA Occasional Papers, No. 30, <https://www.icrc.org/en/document/>.

⁶⁶ "International Covenant on Civil and Political Rights | OHCHR," accessed June 3, 2025, <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>.

⁶⁷ Sarah Joseph and Melissa Castan, "THE INTERNATIONAL COVENANT ON CIVIL AND POLITICAL RIGHTS," Cases, Materials, and Commentary, 3rd ed. (Oxford: Oxford University Press, 2013). p. 167 accessed June 4, 2025

⁶⁸ Daniel Moeckli, Sangeeta Shah, and Sandesh Sivakumaran, eds., "International Human Rights Law 3rd, (Oxford: Oxford University Press, 2018). accessed June 4, 2025

1.8. Literature Review

This research aims to analyze compliance of LAWS with the right to life under IHRL, which focuses on international legal standards governing the use of lethal force in non-combat situations such as law enforcement, border control, and counterterrorism. Therefore, this thesis analyzes the implementation of international documents, such as the UN Basic Principles on the Use of Force and Firearms (BPUFF) and the UN Code of Conduct for Law Enforcement Officials (CCLEO UDHR and ICCPR, General Comment No. 36).

The previous research focused mostly on the use of LAWS in armed conflict, but very few studies addressed the consequences of this technology in non-combat situations during peacetime, particularly domestic law enforcement under international law. Through the interpretation of key documents such as the UN Human Rights Committee (General Comment No. 36), this research aims to reveal existing research legal gaps about the inadequacy of the IHRL framework in the protection of the right to life and legal challenges of the use of LAWS in non-combat situations beyond the traditional battlefield. While the deployment of LAWS was intensively discussed in armed conflict under the IHL in many studies, this research with shifting its focus to the IHRL examines the state's obligations to protect the right to life, accountability, and proportionality in the use of LAWS and shows how the lack of meaningful human control, algorithmic decision-making, and weaknesses in accountability mechanisms challenge the right to life. Finally, it assesses the adequacy of existing human rights frameworks and identifies existing legal gaps.

1.8.1. Concept and definition of lethal autonomous weapons systems

A lethal autonomous weapons system can be defined within a working definition as a machine, “once activated, can identify, select, and apply force (lethal or non-lethal) to targets without human intervention.”⁶⁹ Despite the existence of different types of AWS, all of them share similar sociotechnical characteristics: First, AWS functions rely on a predefined target profile, as indicated by technical indicators such as sensors and software detectors. Second, AWS not only responds to humans but also to the environment, making the decision-making process for the use of force faster than with traditional weapons. Third, the AWS may be designed to operate under the supervision of humans and stop it if necessary. However, the system is designed to operate in a way that does

⁶⁹ Laura Bruun, Marta Bo, and Netta Goussac, “Compliance with International Humanitarian Law in the Development and Use of Autonomous Weapon Systems What Does IHL Permit, Prohibit and Require? (Stockholm: Stockholm International Peace Research Institute, March 2023), 1. accessed June 4, 2025

not require a human presence for identification, targeting, and attack. This feature makes its designer unaware of the exact location, targeting, conditions, and time of AWS.⁷⁰

There is a common consensus that autonomy should not be considered as an absolute characteristic of a machine or technology. Rather, it should be seen as a type of relationship between a system and its operator, which can vary across a range of degrees of autonomy.⁷¹ to put it differently:

- a. "Semi-autonomous: completely controlled operation (Human in loop),
- b. Human-supervised: Supervised operations (human on the loop)
- c. Fully Autonomous: Fully autonomous operation (human out of the loop)".⁷²

Nathan Wood (2021), in *The Problem with Killer Robots*, considers autonomous weapons in three types: semi-autonomous, supervised, and fully autonomous. He emphasized that when weapons reach to level of full autonomy, human control over decision-making and choosing the targets will decline. Despite his research focus on ethical and technical issues arising from the use of the LAWS, the effect of legal rules on the right to life in IHRL has not been discussed clearly in his research. Therefore, this research fills the existing gap by focusing on legal implications of LAWS beyond the battlefield in peacetime situations such as law enforcement, counterterrorism, and border control and protection of the right to life under IHRL.⁷³

1.8.2. Legal Framework of International Human Rights Law

Right to life is the cornerstone of human rights, and the Universal Declaration of Human Rights (1948) and the International Covenant on Civil and Political Rights (ICCPR) (1966), as fundamental documents, give prominence to this right. Article 6 of the ICCPR states that the right to life is an inherent right for every human being. This right has been recognized by the Human Rights Committee as a superior right that cannot be suspended even in times of war and crisis.

⁷⁰ Laura Bruun, Marta Bo, and Netta Goussac, "Compliance with International Humanitarian Law in the Development and Use of Autonomous Weapon Systems What Does IHL Permit, Prohibit and Require?"(Stockholm: Stockholm International Peace Research Institute, March 2023), Report. accessed June 4, 2025.

⁷¹ Jeffrey L. Caton, *Autonomous Weapon Systems: A Brief Survey of Developmental, Operational, Legal, and Ethical Issues* (Carlisle, PA: U.S. Army War College Press, 2015), 3. p. 1. accessed June 4, 2025

⁷² Jeffrey L. Caton, *Autonomous Weapon Systems: A Brief Survey of Developmental, Operational, Legal, and Ethical Issues* (Carlisle, PA: U.S. Army War College Press, 2015), 3. P.2- 3. accessed June 4, 2025

⁷³ Nathan G Wood, "The Problem with Killer Robots," (M. A. thesis, Georgetown University, 2021) , accessed June 19, 2025.

Arbitrary killing has been prohibited by the right to life, and the ICCPR states that no one shall be arbitrarily deprived of the right to life. The legal and ethical meaning of arbitrarily committing unlawful and unjust action must be assessed with the key elements like proportionality, necessity, and reasonableness.⁷⁴

The Human Rights Committee, in a general interpretation No. 39, addressed the challenges of autonomous weapons systems development, which lack human judgment and compassion, raising ethical and legal concerns. The committee recommended that this kind of technology must be prohibited from development and use, unless in compliance with the right to life. According to international human rights law, the right to life even in armed conflict and law enforcement, is not suspendable. During the armed conflict, a particular rule of international humanitarian law entitled *lex specialis* will be applicable, and extra killing is considered unlawful killing. The International Committee of the Red Cross (ICRC) states that the prohibition of arbitrary deprivation of life also includes unlawful killings in war, which include not only war crimes but also indiscriminate or inappropriate attacks that harm civilians, and the protection is based on principles of distinction and proportionality within the framework of international humanitarian law.⁷⁵

LAWS have some limitations, such as a lack of human emotions and emotional intelligence, and difficulty understanding human context and behavior, raising concerns in law enforcement that they could also interfere with compliance with international humanitarian law during conflicts. There is a new doubt that autonomous systems can distinguish between legitimate and illegitimate individuals, because today most wars are accompanied by concealment of external signs of military status, such as uniforms, which makes it difficult to identify the enemy. LAWS cannot understand subtle signs of human behavior because they lack the necessary emotions, cultural information, and context. It seems impossible that these systems can perform the tasks necessary to implement the right to life in times of peace and war, which also threatens human dignity; although these systems will improve in processing complex information in the future.⁷⁶

Christof Heyns (2013), in his report to the Human Rights Council (*A/HRC/23/47*), believes that lethal autonomous robotics systems (LARS) will be a significant threat to the right to life under

⁷⁴ Bonnie. Docherty, *A Hazard to Human Rights : Autonomous Weapons Systems and Digital Decision-Making* (Human Rights Watch, 2025). p.17 accessed Jun 4, 2025.

⁷⁵ Docherty. p.18

⁷⁶ Docherty. p.18

international human rights law. He warns that delegating the decision-making about human life and death and removing human judgment could lead to arbitrary deprivation of life, which is non-derogable in both peacetime and armed conflict. Haynes calls for a temporary settlement and legal reflection on LAWS, but this research critically analyzes the ineffectiveness of existing legal frameworks to protect the right to life and account for the proliferation of these weapons.⁷⁷ Based on Heyn's research the use of LAWS in non-combat situations poses a major legal challenge to the protection of the right to life.

While International Humanitarian Law (IHL) provides key principles such as distinction and proportionality applicable in warfare, this research focuses instead on how International Human Rights Law governs the protection of life in non-combat contexts where these principles still serve as interpretative guidance.⁷⁸ Michael N. Schmitt (2013), in his article *Autonomous Weapon Systems and International Humanitarian Law: A Reply to the Critics*, is optimistic that autonomous weapons inherently do not violate the IHL and, with emphasis on the principle of distinction, said that if autonomous weapons are properly designed, they will perform better than humans in identifying lawful targets. He believes that before the total ban of each system, it must be carefully evaluated. However, his view ignores broader concerns, particularly the loss of human judgment and accountability when decision-making is delegated to algorithms. This research builds on Schmitt's legal analysis, but goes further to examine the impact of such weapons on the right to life within the framework of international human rights law, an issue that Schmitt did not address.⁷⁹

1.8.3. Interplay between IHL and IHRL

In addition to IHL, there are other branches of international law, like IHRL, ICL, and international migration law, that can be applied in the event of humanitarian problems arising in war situations.⁸⁰ The principle *lex specialis*: the *lex specialis* principle is the intersection point of

⁷⁷ Christof Heyns, "Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions", UN Doc. A/HRC/23/47 (2013), paras. 75–91. www.ohchr.org/en/NewsEvents/Pages/NewsSearch.aspx?MID=SR_Summ_Executions. accessed Jun 19, 2025.

⁷⁸ Laura Bruun, Marta Bo, and Netta Goussac, "COMPLIANCE WITH INTERNATIONAL HUMANITARIAN LAW IN THE DEVELOPMENT AND USE OF AUTONOMOUS WEAPON SYSTEMS What Does IHL Permit, Prohibit and Require? Laura Bruun, Marta Bo and Netta Goussac," (Stockholm: Stockholm International Peace Research Institute, March 2023), 1, accessed June 2, 2025. p.2

⁷⁹ Michael N Schmitt, "FEATURES Autonomous Weapon Systems and International Humanitarian Law: A Reply to the Critics," *Harvard National Security Journal* 4 (2013), 3 http://www.hrw.org/sites/default/files/reports/arms1112ForUpload_0_0.pdf. accessed Jun 4, 2025.

⁸⁰ Marco Sassòli, *International Humanitarian Law*, (Cheltenham, UK: Edward Elgar Publishing, 2019), <https://doi.org/10.4337/9781786438553>. p 422, accessed Jun 4, 2025.

IHL and IHRL. This is one of the controversial principles among researchers, some of whom do not consider it a definitive solution.⁸¹ The International Court of Justice states that the rights provided in the International Covenant on Civil and Political Rights must not be violated in any way during wartime. Still, the right to life is an exception to these provisions that cannot be suspended. The *lex specialis* applicable in armed conflict is the main criterion for determining whether the taking of life is arbitrary. However, in non-combat situations, the legality of using lethal force—including the use of autonomous weapons—is governed by international human rights law (IHRL), which is based on the principles of necessity, proportionality, and accountability.⁸²

1.8.4. Meaningful Human Control (MHC)

The term human control was used to define semi-autonomous weapons systems by the US Department of Defense Directive 3000.09 on Autonomy in Weapon Systems in 2012. Moreover, the International Committee of the Red Cross emphasized that human control over the function of autonomous weapons systems is vital. International Committee for Robot Arms Control (ICRAC) and Berlin spoke and warned about the important role of human meaningful control on security, using lethal forces, and war management. However, within Article 36, the term human meaningful control was initiated by a UK NGO for the first time,⁸³ and Article 36 suggested the phrase Human Meaningful Control (HMC) for the discussion on legal and ethical challenges of autonomy in weapons technologies, and this proposal was appreciated by the civil society of countries, organizations like ICRAC, and Stop Killer Robots campaign. Although there is no clear definition of HMC, its inclusion as a basis for international discussions will lead to the establishment of a clear international rule in the future, and highlight the importance of this concept for accountability and the rule of law.⁸⁴ Human meaningful Control is used as an approach to examine parameters such as predictability, spatial constraints, time constraints, distinction between civilian and military targets, stability versus mobility, compliance standards, verification, and weapon performance, as

⁸¹ Sassòli. p. 423

⁸² International Court of Justice, *Legality of the Threat or Use of Nuclear Weapons* Advisory Opinion, I.C.J. Reports 1996, accessed Jun 4, 2025. p. 226.

⁸³ United Nations Institute for Disarmament Research, “The Weaponization of Increasingly Autonomous Technologies: Considering How Meaningful Human Control Might Move the Discussion Forward,” UNIDIR Resources No. 2 (Geneva: UNIDIR, 2014). www.unidir.org/programmes/security-and-society/the-accessed Jun 4, 2025. p. 1-2

⁸⁴ “The Weaponization of Increasingly Autonomous Technologies: Considering How Meaningful Human Control Might Move the Discussion Forward.” accessed Jun 2, 2025 p.2

the increase in the use of LAWS raises particular concerns. Human Meaningful Control is an approach that considers both human meaningful control and the concerns raised by the use of LAWS.⁸⁵

Merel Ekelhof (2019), in her article “Moving Beyond Semantics on Autonomous Weapons: Meaningful Human Control in Operation,” defines this concept. She explained her idea by giving the example that human has control over different steps, like during the programming, deployment, or use of the weapon, not just at the moment the weapon attacks. Because of that, distinguishing between who is morally and legally responsible will be difficult. Her idea for expanding this research is crucial because it shows that when human control is weak or denied, complying with international law will have implications. As a result, the use of LAWS in peacetime will be a significant threat to the protection of the right to life in the absence of meaningful human control.⁸⁶

1.8.5. Principles Governing the Use of LAWS under IHRL

Since the use of lethal force in peacetime is regulated by international human rights law, it must comply with human rights principles, including the need for necessity, proportionality, precaution, legality, and accountability. These principles are binding as general legal principles for all states in the use of force. Failure to observe these principles leads to human rights violations by states.⁸⁷

a) Necessity

Within the framework of international human rights law, the use of force is permissible only when necessary, and any use of force should be a last resort and an exceptional measure. Law enforcement officers may use force if nonviolent means such as arbitration, negotiation, and mediation are not effective.⁸⁸ Furthermore, force should only be used for the legitimate purpose of law enforcement and only to the extent necessary to carry out the task. Even when dealing with

⁸⁵ “The Weaponization of Increasingly Autonomous Technologies: Considering How Meaningful Human Control Might Move the Discussion Forward.”

⁸⁶ Merel Ekelhof, “Moving Beyond Semantics on Autonomous Weapons: Meaningful Human Control in Operation,” *Global Policy* 10, no. 3 (September 1, 2019): 343–48, <https://doi.org/10.1111/1758-5899.12665>. accessed Jun 19, 2025.

⁸⁷ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life: The Role of the Human Rights Council*, Academy In-Brief No. 6 (Geneva: Geneva Academy of International Humanitarian Law and Human Rights, 2016), 1–43 6.

⁸⁸ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations* (Geneva: International Committee of the Red Cross, 2022), 1–7 3, https://www.icrc.org/sites/default/files/document/file_list/the_use_of_force_in_law_enforcement_operations.pdf.

potentially dangerous individuals, the principle is that they should be apprehended as far as possible and not killed.⁸⁹ This principle is supported by international practice, including the Human Rights Committee in the Suarez de Guerrero case, which stated that killing suspects, if it is possible to detain them, constitutes an arbitrary deprivation of the right to life.⁹⁰ In addition, the European Court of Human Rights has declared that any physical force that is not necessary violates human dignity and human rights.⁹¹ Therefore, LAWS without meaningful human control cannot respect the principle of necessity and be able to properly assess the necessity of the use of force. As a result, the use of force cannot be truly and legally guaranteed by LAWS, and this is in direct conflict with the fundamental requirements of human rights.⁹²

b) Proportionality

Based on proportionality, in the use of force, there must be a proportion between the severity of the crime and the officer's legitimate purpose and the amount of force used. Proportionality determines the maximum amount of force that can be lawfully used. According to the 1979 Code of Conduct for Law Enforcement Officials, the use of force must never exceed what is necessary for a legitimate purpose. Therefore, if force is used in excess of what is necessary, even if it is necessary, it is unlawful. According to Principle 5 of the 1990 UN Basic Principles on the Use of Force and Firearms (BPUFF), when the use of force or firearms is unavoidable, officers should use force proportionate to the crime and their purpose, but no more. The principle of proportionality prohibits attacks that cause a lot of damage to civilians,⁹³ unless the purpose and military advantage of that attack is greater than the damage to civilians.⁹⁴ Therefore, the main challenge in the use of LAWS is this type of weapon's ability to determine whether the expected

⁸⁹ International Committee of the Red Cross (ICRC).

⁹⁰ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life*. p.8

⁹¹ Stuart Casey-Maslen. p.9

⁹² Amnesty International, *Autonomous Weapons Systems: Five Key Human Rights Issues for Consideration*, ACT 30/1401/2015 (London: Amnesty International Publications, 2015), p.28, <https://www.amnesty.org/en/wp-content/uploads/2023/05/ACT3014012015ENGLISH.pdf>.

⁹³ Dr. Gargi Bhatt, "Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics," *JSS Journal for Legal Studies and Research* Special Issue (2025): 20–39 22, https://jsslawcollege.in/wp-content/uploads/2025/02/02.-Recognising-Human-Rights-Concerns-in-Military-AI-Stabilizing-the-Authority-and-Legal-Ethics-1_compressed.pdf. p.23

⁹⁴ Anzhelika Solovyeva and Nik Hynek, "Going Beyond the 'Killer Robots' Debate: Six Dilemmas Autonomous Weapon Systems Raise," *Central European Journal of International and Security Studies* 12, no. 3 (2018): 166–208, <https://cejiss.org/going-beyond-the-killer-robots-debate-six-dilemmas-autonomous-weapon-systems-raise-0>. p.193 <https://cejiss.org/going-beyond-the-killer-robots-debate-six-dilemmas-autonomous-weapon-systems-raise-0>

military benefits are worth the potential harm to civilians and civilian property or not. Therefore, the principles of proportionality may be violated.⁹⁵

c) Precaution

The precautionary principle states that in making decisions and policies that cause great and irreparable harm, and there is still no complete and conclusive evidence, one should refrain from doing it or act very cautiously and carefully.⁹⁶ It is advisable to exercise caution in the use of LAWS due to technical issues, the lack of recognition of their unexpected and potentially hazardous effects, and their potential consequences. Especially when there is a possibility of widespread use of force and abuse by governments to consolidate power, the principle of precaution finds a special place to avoid possible harm.⁹⁷

d) Legality

Under international human rights law, the principle of legality means that the use of force, especially lethal force, is only permissible based on a clear, modern, and binding law, which is already in place and accessible to both the public and law enforcement officials, and is transparent and predictable. The use of force and all types of weapons must be within the framework of the law to prevent arbitrary acts. In addition, continuous review of the provisions on the use of force is necessary to ensure that they are consistent with human rights requirements, in particular the protection of the right to life.⁹⁸

e) Responsibility and Accountability

In international law, states are always responsible for their actions. The International Law Commission (ILC), stated that states are internationally responsible for any wrongful actions against international law by their institutions, such as the military.⁹⁹ Therefore, if LAWS violate

⁹⁵ Bhatt, "Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics."

⁹⁶ Christopher J. Coyne and Yahya Alshamy, "Perverse Consequences of Lethal Autonomous Weapons Systems," *SSRN Electronic Journal*, March 10, 2021, 14 11, <https://doi.org/10.2139/ssrn.3767512>. p.12

⁹⁷ Coyne and Alshamy. p.12

⁹⁸ OHCHR, "Basic Principles on the Use of Force and Firearms by Law Enforcement Officials," OHCHR, 1190, <https://www.ohchr.org/en/instruments-mechanisms/instruments/basic-principles-use-force-and-firearms-law-enforcement>.

⁹⁹ International Law Commission (ILC), *Responsibility of States for Internationally Wrongful Acts (2001)* (New York and Geneva: United Nations, 2005).

the IHRL or IHL, it is attributed to the government. As the government has the authority to decide the deployment of LAWS is morally the most culpable actor.¹⁰⁰ While LAWS is making progress, experts have reached a collective consensus that LAWS cannot be held accountable because LAWS will never be held responsible as a moral agent. The Group of Governmental Experts (GGE) expert group, although they often disagree with each other, all agreed that the machine cannot be held accountable. Some believe that attributing responsibility to humans will become more difficult as weapons become more autonomous. Therefore, experts are divided into two groups based on their views: those who call for a ban on LAWS, and those who emphasize the need for human meaningful control.¹⁰¹ Therefore, the use of LAWS does not prevent a state from being held responsible for the use of its forces, because under IHRL, intent is not required to be proven for an act to constitute a violation.¹⁰²

Reviewing previous studies, I found that all research conducted focused on the legal and ethical challenges of using LAWS, which mainly examined international humanitarian law during the armed conflict. Therefore, no comprehensive research has been done about the use of LAWS outside armed conflict, such as law enforcement, counterterrorism, and border control. Moreover, very few studies focused on the impact of the use of LAWS on the right to life within the IHRL, particularly regarding the principle of necessity, proportionality, and accountability outside the armed conflict. This research, with shifting its focus to the IHRL, examines the state's obligations to protect the right to life, accountability, and proportionality in the use of LAWS, and shows how the lack of meaningful human control, algorithmic decision-making, and weaknesses in accountability mechanisms challenge the right to life. Ultimately, the lack of mechanisms for clear accountability and oversight on the deployment of LAWS under the IHRL framework requires the formulation of a new legal framework or the amendment of the existing legal framework to protect the non-derogable right to life.

¹⁰⁰ Bhatt, "Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics."

¹⁰¹ Carrie McDougall, "AUTONOMOUS WEAPON SYSTEMS AND ACCOUNTABILITY: PUTTING THE CART BEFORE THE HORSE Autonomous Weapon Systems and Accountability," *Melbourne Journal of International Law* 20 (2019): <https://perma.cc/2ZPF-TWFQ>. accessed 2, 2025. p. 4.

¹⁰² McDougall. p.7

1.9. Research Method

1.9.1 Type of Research

In exploring the legal challenges of Lethal Autonomous Weapons Systems outside armed conflict, this research uses a normative and doctrinal legal research method.¹⁰³ The primary resources include international legal instruments and treaties, particularly the protection of the right to life such as the Universal Declaration of Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), the European Convention on Human Rights (ECHR), the American Convention on Human Rights (ACHR), the African Charter on Human and Peoples' Rights (ACHPR), and relevant United Nations soft-law instruments, including the Code of Conduct for Law Enforcement Officials (1979) and the Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (1990). Moreover, this research analyzes relevant jurisprudence of international and regional human rights bodies, including the Human Rights Committee, the European Court of Human Rights, the Inter-American Court of Human Rights, and the International Court of Justice. Through this method, this thesis will provide the answer to specific legal questions regarding the compliance of LAWS in a non-combat context with the IHRL principles, such as necessity, proportionality, precautionary measures, accountability, and human monitoring.

1.9.2 Method of Approach

To comprehensively examine the legal challenges of using LAWS in a non-combat context, the author applies several normative legal research approaches.

1.9.2.1. Statutory Approach

This approach allows researchers to conduct a thorough analysis of the LAWS, focusing on the legal provisions related to the protection of the right to life. Based on the relevant international treaties, conventions, and protocols governing outside armed conflict and human rights, including the International Covenant on Civil and Political Rights (ICCPR), Customary International Law, the UDHR, and General Comment No. 36 of the Human Rights Committee.

¹⁰³ I Gusti Ayu Ketut Rachmi Handayani, Siti Sundari Rachma, and Budi Santoso, "The Normative Legal Research Method in International Law Study," in "Proceedings of the International Conference on Environmental and Social Science (ICESS 2018)", *Advances in Social Science, Education and Humanities Research*, vol. 239 (Paris: Atlantis Press, 2018), 83.

1.9.2. 2. Conceptual Approach

The conceptual approach combines the analysis of statutes or regulations with their practical application as well as theoretical concepts relevant to accountability and meaningful human control in the use and improvement of LAWS.

1.9.2.3. Case Approach

Using a case approach, which includes an analysis of past cases, government procedures, and legal precedents that have shaped the current legal framework, will help to examine the current legal challenges related to the use of LAWS within the IHRL.¹⁰⁴

1.9.3. Sources of Research Data

This research relies on secondary data collection based on library studies and authoritative legal resources.

1.9.3.1. Primary Legal Material

This category of sources includes international treaties, such as the ICCPR, Regional Human Rights Treaties, the European Convention on Human Rights (ECHR), the American Convention on Human Rights (ACHR), and the African Charter on Human and Peoples' Rights (ACHPR), and Customary International Law.

1.9.3.2. Secondary Legal Materials

Soft law, such as the UDHR, UN the Code of Conduct for Law Enforcement Officials (1979), the Basic Principles on the Use of Force and Firearms by Law Enforcement Officials (1990), Principles on the Effective Prevention and Investigation of Extra-legal, Arbitrary and Summary Executions, judicial court decision, including judgments of the European Court of Human Rights, the Inter-American Court of Human Rights, the International Court of Justice, and General Comment No. 36 of the Human Rights Committee, legal textbooks, academic Journal articles, reports by international organizations (e.g., ICRC, UN), expert commentaries on IHRL related to LAWS can be included in this category.

¹⁰⁴ S.I. Strong, "Research Methods in Law: A Handbook" (Cheltenham, UK: Edward Elgar, 2017), 75-79. accessed Jun 20, 2025.

1.9.3.3. Tertiary Legal Materials

This thesis provides more guidance and clarification for the primary and secondary resources through the use of the tertiary legal materials. These resources include legal dictionaries, encyclopedias, and other reference materials that help to clarify and interpret related legal principles and materials.¹⁰⁵

1.9. 4. Method of Data Collection

A literature study approach, as its primary data collection method, is used in this thesis. This approach calls for collecting data from library-based sources, which include books, academic articles, reports from international organizations, legal documents such as treaties, conventions, court decisions, and expert commentaries. By employing this method current thesis aims to provide a comprehensive understanding of the legal challenges caused by using LAWS with a focus on the protection of the right to life under IHRL through systematically reading, reviewing, and analyzing the materials.

¹⁰⁵ *ibid*

CHAPTER II

Theoretical Framework: The Right to Life under International Human Rights Law and Human Rights–Technology Theory

2.1 The right to life under IHRL

This chapter provides the necessary legal framework to examine the legal challenges of the use of LAWS to the right to life outside of armed conflict. This analysis is based on two complementary approaches: First, the theory of the right to life as a non-derogable right within the framework of international human rights, within which the legitimacy of the use of lethal force by state forces is examined. IHRL sets strict standards for the use of lethal force in peacetime to protect the right to life. Second, human rights and technology theory examines how technology is not a neutral tool but a structure that influences decision-making practices, the distribution of power, and patterns of responsibility. According to this theory, this technology cannot be examined from a legal perspective without considering its structural and operational characteristics. As a result, these two approaches provide the basis for analyzing the legal challenges of autonomous weapons to the right to life outside of armed conflicts.

A. Concept and Legal Status of the Right to Life

Human rights are a set of rights that humans are entitled to because they have reason and conscience, and these rights are recognized as inalienable and non-transferable. The right to life is considered the most important characteristic and fundamental human right, which is protected all over the world.¹⁰⁶ The Human Rights Committee in General Comment No. 36 emphasizes that “The right to life is the supreme right from which no derogation is permitted.”¹⁰⁷ Even in the situation of armed conflict and other emergency which threat the life of the general populace. This is a crucial right for both individuals and society.¹⁰⁸ The right to life is a cornerstone of human rights and is a prerequisite for the fulfillment and support of other human rights. This right is an inherent human right that does not require recognition by the legislator; it is possessed from

¹⁰⁶ Dumitru Popa and Georgiana Alina Ristea, “THE RIGHT TO LIFE IN THE INTERNATIONAL HUMAN RIGHTS LAW,” *International Journal of Communication Research* 11, no. 1 (March 2021): 12–19 p. 18, https://www.ijcr.eu/articole/531_002%20Dumitru%20Popa.pdf.

¹⁰⁷ Human Rights Committee, *General Comment No. 36, Article 6 (Right to Life)*, CCPR/C/GC/36, General Comment 36 (Geneva: United Nations, 2019), <https://www.refworld.org/legal/general/hrc/2019/en/123145>.

¹⁰⁸ Human Rights Committee, *General Comment No. 36, Article 6 (Right to Life)*, CCPR/C/GC/36, General Comment 36 (Geneva: United Nations, 2019), <https://www.refworld.org/legal/general/hrc/2019/en/123145>.

birth.¹⁰⁹ The Committee stated in 1985 in the case of *Baboe Ram Adhin v. Suriname* that the right to life is the most fundamental human right and that if this right is denied by public authorities, it is a matter of the utmost importance and seriousness. The Committee found that the victims in this case were arbitrarily deprived of their lives and therefore did not examine allegations of violations of other provisions of the covenant.¹¹⁰

The importance and primacy of the right to life are recognized not only in human rights treaties but also in the decisions of other regional courts. As the European Court of Human Rights emphasized in its 2001 ruling in the *Streletz* case, the right to life is the primary right in all international instruments related to the protection of human rights, demonstrating the inalienable specialness of human life and its status as the highest among human rights.¹¹¹ Three years later, the same Supreme Court, in its ruling in the *Makartzis* case, emphasized that no suspension of the right to life is permissible. The Inter-American Court of Human Rights, within the framework of the American Convention on Human Rights of 1969 (known as the San José Treaty), has adopted a similar approach to the status of the right to life. In the 1999 *Villagrán-Morales* case, the court stated that the right to life is a fundamental human right and a prerequisite for the realization of other human rights, and that if this right is not respected, other rights will be meaningless.¹¹²

Article 4 of the African Charter on Human and Peoples' Rights (Banjul Charter) states that: "Human beings are inviolable. Every human being shall be entitled to respect for his life and the integrity of his person."¹¹³ African Commission on Human and Peoples' Rights interpreted this Article to consider the right to life as meaning of fundamental human rights which is universally recognized and the realization of the right to life is essential for living a life with dignity and

¹⁰⁹ Hafsa Ghafoor, Manahil, and Kashif Mahmood Saqib, "The Right to Life under Siege: Arbitrary Deprivation of Life and Liberty in Pakistan and the UK," *Al-Hayat Research Journal* 3, no. 1 (2025): p.126, <https://doi.org/https://doi.org/10.5281/>.

¹¹⁰ Stuart Casey-Maslen and Christof Heyns, *The Right to Life Under International Law: An Interpretative Manual* (Cambridge: Cambridge University Press, 2021), p.13 https://books.google.co.id/books?hl=en&lr=&id=f_w7EAAQBAJ&oi=fnd&pg=PR9&dq=The+Right+to+Life+under+International+Law+An+Interpretative+Manual&ots=CuobwWKb9u&sig=4oHEl8tTVcPJufEAbXdzsf2BCM&redir_esc=y#v=onepage&q&f=false.

¹¹¹ Casey-Maslen and Heyns. p. 14

¹¹² Casey-Maslen and Heyns. p. 14

¹¹³ African Charter on Human and Peoples' Rights (Banjul Charter), 21 I.L.M. 58 (1981), <https://doi.org/10.1163/9789004520646>.

realizing other rights, including civil, political, economic, social, and cultural rights, as well as the rights of nations, especially the right to peace.¹¹⁴

International human rights instruments such as the UDHR, in Article 3, state that: “Everyone has the right to life.”¹¹⁵ Article 6 ICCPR, “Every human being has the inherent right to life.”¹¹⁶ Article 2 of the ECHR states that: “everyone’s right to life shall be protected by law. No one shall be deprived of his life intentionally.”¹¹⁷ Therefore, the right to life is a fundamental human right, and any kind of arbitrary deprivation of life and freedom is considered a violation of this right.¹¹⁸ According to General Comment No. 36 of the Human Rights Committee, the right to life is not merely a biological existence, but it includes the right to life along with human dignity. Therefore, it should not be interpreted narrowly to be protected, but it should be supported against refraining and decisions that lead to certain unnatural and immature death.¹¹⁹

The right to life is a universal concept which growth simultaneously with the formation of modern governments and constitutions, then integrated into international human rights instruments. It is not only recognized by domestic courts, but also at the international levels, human rights courts, the International Criminal Court, and the UN human rights committee is interpreted and applied.¹²⁰ Hence, the state's obligations are not limited to the prohibition of arbitrary deprivation of life, but the state is obliged to instigate measures to protect individuals’ lives under its authority. These commitments consist of preventing foreseeable threats, regulating the use of force, and ensuring effective investigations in cases of arbitrary deprivation of life.¹²¹

¹¹⁴ African Commission on Human and Peoples’ Rights, *General Comment No. 3 on the African Charter on Human and Peoples’ Rights: The Right to Life (Article 4)* (Pretoria: Pretoria University Law Press (PULP), 2016), <https://achpr.au.int/sites/default/files/files/2021-09/generalcommentno3english.pdf>.

¹¹⁵ United Nations, “Universal Declaration of Human Rights,” United Nations, United Nations, 1948, <https://www.un.org/en/about-us/universal-declaration-of-human-rights>.

¹¹⁶ “International Covenant on Civil and Political Rights,” OHCHR, accessed February 18, 2026, <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights>.

¹¹⁷ European Convention on Human Rights.

¹¹⁸ Ghafoor and Saqib, “The Right to Life under Siege: Arbitrary Deprivation of Life and Liberty in Pakistan and the UK.”

¹¹⁹ Mona Rishmawi, “Protecting the Right to Life in Protracted Conflicts: The Existence and Dignity Dimensions of General Comment 36,” *International Review of the Red Cross* 101, no. 912 (December 2019): 1149–69 p.1156, <https://doi.org/10.1017/S1816383120000272>.

¹²⁰ Tijana Šurlan, “The Duty to Protect the Right to Life,” *Nauka Bezbednost Policija* 26, no. 2 (2021): 19–30 p. 20, <https://doi.org/10.5937/nabepo26-34101>.

¹²¹ Ghafoor and Saqib, “The Right to Life under Siege: Arbitrary Deprivation of Life and Liberty in Pakistan and the UK.”

B. Non-Derogable Character of the Right to Life

The right to life is a non-derogable right under international law. In contrast to other human rights, the right to life is a supreme right that cannot be subjected to suspension even in an emergency that poses a threat to public life.¹²² The right to life has two dimensions, substantive and procedural dimensions.¹²³ The UDHR was the first international instrument that called this right a non-derogable right, so it can be applied at all times.¹²⁴ It is a soft law and does not specify the limits and framework of the right to life.¹²⁵ The International Covenant on Civil and Political Rights was the first treaty that specified precise limits and a framework for the right to life. Article 6 of ICCPR states that: “Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life.”¹²⁶

Other international instruments, such as Article 11 of ASEAN 2012, which is not binding, state that everyone has an inherent right to life, which is protected by the law, and no one shall be arbitrarily deprived of life except based on the law. Moreover, the Law of Foreign Relations of the United States said that the prohibition of murder is a customary human right norm and is described as *Jus cogens*. Similarly, Article 5 of the Arab Charter on Human Rights 2004 expresses the same concept that every human has an inherent right to life, and it should be protected by law; no one shall be unlawfully killed.¹²⁷ However, it is not an absolute right and can be limited under strict standards in exceptional circumstances.¹²⁸ The right to life with non-derogable characteristics obliged states to use lethal force under extreme limitations and protect the individual's right in any circumstances.¹²⁹

The European Convention on Human Rights is the only instrument that determines a limit for the suspension of the right to life and states that: “Everyone’s right to life shall be protected by

¹²² Šurlan, “The Duty to Protect the Right to Life.” p.19

¹²³ Casey-Maslen and Heyns, *The Right to Life Under International Law*. p.17

¹²⁴ Hanna Bourgeois and Patryk I. Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians? Reconciling Threats to Civilians, Imminence, and the Right to Life,” *Journal of Conflict and Security Law* 28, no. 1 (April 2023): 1–65 33, <https://doi.org/10.1093/jcsl/krac027>.

¹²⁵ Casey-Maslen and Heyns, *The Right to Life Under International Law*. p.9

¹²⁶ OHCHR, “International Covenant on Civil and Political Rights.”

¹²⁷ Casey-Maslen and Heyns, *The Right to Life Under International Law*. p.15

¹²⁸ Šurlan, “The Duty to Protect the Right to Life.” p.19

¹²⁹ Sarah Joseph, “Extending the Right to Life Under the International Covenant on Civil and Political Rights: General Comment 36,” *Human Rights Law Review* 19, no. 2 (August 2019): 347–68, <https://doi.org/10.1093/hrlr/ngz003>.

law. No one shall be deprived of his life. Deprivation of life shall not be regarded as inflicted in contravention of this Article when it results from the use of force which is no more than absolutely necessary: (a) in defense of any person from unlawful violence; (b) in order to effect a lawful arrest or to prevent the escape of a person lawfully detained; (c) in action lawfully taken for the purpose of quelling a riot or insurrection.”¹³⁰ Therefore, based on African Commission on Human and Peoples’ Rights, the prohibition of unlawful killing is a *jus cogens* that is applicable at all times, is a precise definition in international law.¹³¹

C. The Concept of Arbitrary Deprivation of Life

The prohibition of arbitrary deprivation of the right to life constitutes the fundamental axis of the substantive protections of customary international law for the right to life. Deprivation of life is considered arbitrary when it is carried out in violation of international law or violates domestic laws that protect the right to life.¹³² Includes situations where a person is killed as a result of a fundamental violation of human rights by the state. In the same vein, the African Commission on Human and Peoples’ Rights states that in cases where the violation of procedural or substantive guarantees, especially if based on discriminatory grounds and practices, results in killing, the deprivation of life is arbitrary and unlawful.¹³³

In IHRL, when the taking of life by state authorities is considered arbitrary or non-arbitrary is assessed by the principles which govern the use of force: necessity, proportionality, legality, precaution, and accountability.¹³⁴ This means that there must be a precise proportion between the legitimate target and the use of force, and that the least risk to the right to life is among the priorities of the operation, and that precise control and planning must be carried out in accordance with it.¹³⁵ Therefore, the use of lethal force must strictly meet both principles of proportionality and necessity. If the use of force exceeds the absolute necessity, even if the purpose is legitimate, it is considered an arbitrary deprivation of life.¹³⁶ According to the necessity and reasonableness test, lethal force

¹³⁰ European Convention on Human Rights.

¹³¹ Casey-Maslen and Heyns, *The Right to Life Under International Law*. p.21

¹³² Casey-Maslen and Heyns. p.34

¹³³ Casey-Maslen and Heyns. p.28

¹³⁴ Bourgeois and Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians?” P.33

¹³⁵ Aurelija Pūraitė, “Use of the Lethal Force by Police: Lithuanian Cases in ECtHR,” *Public Security and Public Order (Visuomenės Saugumas Ir Viešoji Tvarka)*, no. 17 (2016): 242–43, <https://cris.mruni.eu/server/api/core/bitstreams/1d885014-d3f3-43a6-986f-218ac97898e3/content>. p.245

¹³⁶ Pūraitė. p.251

should not be used automatically or hastily. If the authorities automatically use lethal force without adequate assessment of the risks or margin for error, an attack on life cannot be considered lawful. Also, based on the objective standard of reasonableness in judicial practice, the criterion for assessing the knowledge of the authorities is whether they reasonably anticipated that risk or not.¹³⁷

D. Positive and Negative Obligations of States

Under the international human rights law, a state has two obligations: positive and negative obligations regarding the protection of the right to life. The state's obligation to protect the right to life is negative when it and its agents have to refrain from taking life unlawfully, and make sure that the use of force is a last resort and strictly regulated by law.¹³⁸ However, the state has a positive obligation, which means a sense of responsibility to take all necessary measures, such as to protect the right to life of people within its territory, not only regarding acts of its officials, but also acts of any private individual.¹³⁹ Furthermore, it includes commitments to investigate effectively and impartially when a death occurs. This state's obligation includes the procedural dimension of protecting the right to life. All of these indicate that the right to life does not only mean refraining from unlawful killing, but also its preventive and supportive nature make governments control and manage potential risks to human life.¹⁴⁰

Therefore, the right to life in IHRL includes a three-pronged model: respect, protection, and fulfillment, which requires the state to respect, protect, and provide the conditions for the effective realization and enjoyment of this right.¹⁴¹ The Human Rights Committee, in General Comment No. 36, emphasizes that the right to life and human dignity are closely connected. Therefore, it means not only to refrain from deprivation, but also that states have the responsibility to take every measure to protect this right. This right should be interpreted broadly, particularly in regard to the use of LAWS, because both human dignity and human life are influenced by algorithmic decision-making while using lethal force. Moreover, the possible systemic errors, lack of human judgment, and identifying accountability in an automatic process, raise the question of whether LAWS can

¹³⁷ Pūraitė. p. 251

¹³⁸ Zoran Pavlović and Ivana Stevanović, eds., *The Right to Life and Body Integrity* (Belgrade / Novi Sad, Serbia: Institute of Criminological and Sociological Research, 2024), p.81 https://www.iksi.ac.rs/izdanja/life_and_body_integrity_2024/life_and_body_integrity_2024.pdf#page=222.

¹³⁹ Pavlović and Stevanović. p. 81

¹⁴⁰ Šurlan, "The Duty to Protect the Right to Life." P. 19

¹⁴¹ Casey-Maslen and Heyns, *The Right to Life Under International Law*. p.23

comply with the right to life standards, especially to prevent foreseeable deaths and ensure life with dignity or not.¹⁴²

2.2. Human Rights and Technology Theory

Within the framework of instrumentalist theory, technology is understood as a tool that users use only to achieve their goals.¹⁴³ Technology is neutral and has no intrinsic value. That is, technology is a neutral expression that acts indifferently to achieve different goals.¹⁴⁴ "A hammer is a hammer,"¹⁴⁵ regardless of the social, political, or moral goals for which it is used.¹⁴⁶ Thus, technology is evaluated based on its efficiency and effectiveness in achieving a goal, rather than its human values and social consequences.¹⁴⁷

Critical theory rejects the claim of technological neutrality and argues that technological rationality is the same as political rationality, which has various political aspects.¹⁴⁸ Technology cannot be defined simply as a means to achieve goals, but rather as a reflection of various forms of power and authority.¹⁴⁹ When designing this technology, all the values of a particular social system and the interests of the dominant groups are taken into account and institutionalized.¹⁵⁰ Therefore, the technical order cannot be considered simply a set of technical tools to achieve a goal, but rather shapes the social structure regardless of the users' intentions. Therefore, the technical order cannot be considered simply a set of technical tools to achieve a goal, but rather shapes the social structure regardless of the users' intentions.¹⁵¹

Technical code reflects human interest and motivation, which is designed to find a logical and practical solution.¹⁵² Critical theory shows the intangible values that are present in these codes. We cannot limit morality only to the words and actions of humans, but morality is also realized in

¹⁴² Rishmawi, "Protecting the Right to Life in Protracted Conflicts." P.1150

¹⁴³ Feenberg, *Transforming Technology*. p.5

¹⁴⁴ Feenberg. p.5

¹⁴⁵ Feenberg. p.6

¹⁴⁶ Feenberg. p.6

¹⁴⁷ Feenberg. p.6

¹⁴⁸ Feenberg. p. 14- 15

¹⁴⁹ Langdon Winner, *Technologies as Forms of Life*, ed. Robert S. Cohen and Marx W. Wartofsky (Dordrecht: Springer Netherlands, 1983), 249–63, https://doi.org/10.1007/978-94-017-1458-7_10.

¹⁵⁰ Feenberg, *Transforming Technology*.p.12

¹⁵¹ Feenberg. p. 14

¹⁵² Feenberg. p. 20

artifacts. If this claim can be successfully realized, it can be transformed into a technical code.¹⁵³ The relationship among systems is hierarchical, like Russian Easter Eggs, which demonstrates how each level builds on the other. The hierarchical systems are preferred by inventors, organizers, and managers because this system is considered more efficient and can be controlled.¹⁵⁴ Therefore, among different systems, such as large and widespread technological or organizational systems tendency to continue the previous path increased, and it became difficult to change, which is called high momentum. This leads to the exertion of soft determinism, which means it does not need to use explicit coercion to limit and guide the actions and choices.¹⁵⁵ Within this context, operational freedom reflects the freedom of the owner or those who control the system in technical and operational decision-making. It does not include users or public freedom, and decision-makers will not take responsibility.¹⁵⁶ Moreover, technocracy empowers its manager with control and authority weapons, and this ideology aims to put distance between technical decisions and public debate and discussion. As if these decisions were purely technical and non-political matters.¹⁵⁷

A. Automation, Agency, and Accountability

Technology is not a neutral phenomenon, and the meaning and impact of technology are not inherent in the technology itself; rather, its meaning and impact depend on the social and economic environment in which the technology is used.¹⁵⁸ Technology is, in fact, one of the ways of creating and organizing order in the world. Thus, technology is not only a means to achieve goals, but it also organizes human relationships, regulates the framework of actions, and defines limitations and opportunities. At the same time as a technological system is designed and established, a specific type of social order is also established.¹⁵⁹ “Technical artifacts have politics,”¹⁶⁰ meaning that authority, hierarchy, and participation are part of technology. Politics is not just about laws and formal institutions, but sometimes technology is designed to reinforce power, and sometimes this technology provides the basis for the distribution of power and participation on a large

¹⁵³ Feenberg. p.15

¹⁵⁴ Hughes, “The Evolution of Large Technological Systems.” p. 5-6

¹⁵⁵ Hughes. p.6

¹⁵⁶ Feenberg, “Critical Theory of Technology.” p. 5.6

¹⁵⁷ Winner, *Technologies as Forms of Life*.

¹⁵⁸ Langdon Winner, *The Whale and the Reactor: A Search for Limits in an Age of High Technology*, First edition (1986) (Chicago: University of Chicago Press, 1986). p. 40

¹⁵⁹ Winner. p. 18

¹⁶⁰ Winner. p.18

scale.¹⁶¹ "Technologies are forms of life"¹⁶² means that technology not only affects human life but is part of human life. Technology creates frameworks that shape human habits, roles, and ways of interacting, and affects the way society behaves, communicates, and organizes.¹⁶³

In today's world, the main issue is not the machine itself, but the technique.¹⁶⁴ That is, autonomous technique no longer adheres to previous traditions, but follows its own inherent laws.¹⁶⁵ Humans in today's world are not bound by machines, but by techniques, which carry logic that considers the ultimate measure of efficiency and optimization for all things.¹⁶⁶ Technology is independent of man, with its own economy and politics.¹⁶⁷ Political will and human values are no longer the deciding factors, but the path of development is determined by technical logic.¹⁶⁸ The spontaneous advancement of technology is not the problem, but rather the core issue of rational governance that sets aside morality, tradition, and choice, prioritizes efficiency over everything else, and creates limitations on the realm of human agency and responsibility.¹⁶⁹

Another challenge with autonomous and learning technology is the creation of an accountability gap. Sometimes, no one can be clearly held accountable for the actions of learning systems.¹⁷⁰ The behavior of autonomous systems is unpredictable even for their designers.¹⁷¹ It will be difficult to attribute responsibility to the intentions and decisions of a person if the machine makes a mistake.¹⁷² This is where the issue of agency becomes complicated: does the responsibility lie with the programmer? With the user? With the manufacturer? Or with the system itself?¹⁷³ As a result, the core of the accountability gap is the ambiguity of attribution. As the degree of machine autonomy increases, attribution becomes more difficult, which undermines traditional

¹⁶¹ Winner. p.18

¹⁶² Winner. p.18

¹⁶³ Winner. p.18

¹⁶⁴ Jacques Ellul, *The Technological Society*, trans. John Wilkinson (New York: Vintage Books, 1964). p.142

¹⁶⁵ Ellul. p.14

¹⁶⁶ Ellul. p.31

¹⁶⁷ Ellul. p.135

¹⁶⁸ Ellul. p.133

¹⁶⁹ Ellul. p.31

¹⁷⁰ Andreas Matthias, "The Responsibility Gap: Ascribing Responsibility for the Actions of Learning Automata," *Ethics and Information Technology* (Netherlands.) 6, no. 3 (2004): 175–83, p. 181 <https://doi.org/10.1007/s10676-004-3422-1>.

¹⁷¹ Matthias. p. 175- 176

¹⁷² Matthias. p.176

¹⁷³ Matthias. p.182

accountability frameworks, as there is no longer a direct and transparent relationship between action and actor.¹⁷⁴ As a result, technology is an autonomous and accelerating force. Its development is not simply the result of individual human decisions, but rather the logic embedded within it shapes its direction. Technology has ‘run amok’, meaning that technology is not controlled and has overtaken humans.¹⁷⁵ The power of technology has gone beyond the individual and collective will of humans, and traditional and moral frameworks are no longer sufficient to regulate it; it itself determines the course of history.¹⁷⁶

B. Relevance of Technology Theory to Lethal Autonomous Weapons Systems

The emergence of autonomous weapons systems is not only a technological innovation but also a massive shift in how lethal force is used and organized. Large technological systems, when incorporated into formal institutions and organizations and become part of their decision-making rules, enjoy high inertia and exert a kind of soft coercion that, by limiting alternative paths, normalizes the continued use of this technology.¹⁷⁷ Once the process of automated target and engagement identification is institutionalized in the military command structure, it becomes difficult to change or revert. Furthermore, if decisions are delegated to algorithmic systems, the completion of the feedback loop, which is one of the traditional core human functions that requires contextual judgment, moral skepticism, and critical thinking, is challenged or weakened.¹⁷⁸

Consequently, structural risk is realized when meaningful human assessment is abandoned amid fatal decision-making, and it is not limited to technical violations or programming errors. Since ethics is embodied in technology itself, it carries within the structure of that technology the values and moral decisions of its creators about efficiency, threat assessment, and risk level.¹⁷⁹ Therefore, legal control and liability are affected by the consequences of the moral values inherent in technology. When multiple actors, such as designers, programmers, commanders, and governments, are involved in a complex technical structure, it becomes difficult to assign liability in the event of unlawful harm due to fragmentation.¹⁸⁰ As systems become increasingly

¹⁷⁴ Winner, *Autonomous Technology*. p. 14-15

¹⁷⁵ Winner. p.13

¹⁷⁶ Winner.

¹⁷⁷ Hughes, “The Evolution of Large Technological Systems.” p.6

¹⁷⁸ Hughes. p.6

¹⁷⁹ Feenberg, *Transforming Technology*. p.21

¹⁸⁰ Feenberg. p.20

autonomous, human rights frameworks, particularly those protecting the right to life, are challenged because they are built on human agency and accountability. Therefore, the legal use of lethal force requires a legal and political framework that maintains meaningful human control.¹⁸¹

¹⁸¹ Feenberg. p.15

CHAPTER III

Regulating Lethal Force Outside Armed Conflict Under International Human Rights Law: Challenges of Lethal Autonomous Weapons Systems

3.1 Regulation of Lethal Force under International Human Rights Law

A. The Right to Life as the Legal Standard for Lethal Use of Force

Use of lethal force outside an armed conflict is governed by IHRL. The right to life and the arbitrary deprivation are used as a standard to evaluate the legitimate use of lethal force.¹⁸² The UDHR was the first international instrument to state that everyone has the right to life. Later, ICCPR defined this right more precisely and said everyone has the right to life and no one shall be arbitrarily deprived of their life. This covenant creates an obligation for the states to ensure the protection of the right to life through introducing laws and regulations, and any kind of use of force that results in fatalities must be strictly regulated.¹⁸³

At the regional levels, Article 2 of the European Convention of Human Rights emphasizes that the right to life must be ensured and determines some limited situations in which the right to life can be suspended. This Article establishes an obligation for states that, if there is a serious and foreseeable threat against individuals' lives, practical measures must be taken to protect the people's lives.¹⁸⁴ Although this Article bears some exceptions regarding the right to life, such as the use of force for self-defense, or, legally, the use of lethal force in peacetime, law enforcement is only allowed when it is necessary and as a last resort to achieve a legitimate purpose. Therefore, the use of any weapons that lead to intentional killing must be strictly limited and controlled.¹⁸⁵

Hence, the IHRL is much stricter regarding the use of lethal force by authorities. International human rights institutions strengthen these commitments in practice. The United Nations Human Rights Council emphasizes that domestic law and procedure must comply with international standards, particularly with the principle of necessity and proportionality, when using lethal force

¹⁸² Christof Heyns, "Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement," *Human Rights Quarterly* 38, no. 2 (2016): 350–78 p. 353, <https://doi.org/10.1353/hrq.2016.0034>.

¹⁸³ Šurlan, "The Duty to Protect the Right to Life." p. 21

¹⁸⁴ Scottish Human Rights Commission, *Human Rights and New Technologies in Policing: Issues Paper for the Independent Advisory Group on Emerging Technologies in Policing* (Edinburgh: Scottish Human Rights Commission, 2021), p. 19, www.scottishhumanrights.com.

¹⁸⁵ Pūraitė, "Use of the Lethal Force by Police: Lithuanian Cases in ECtHR." p. 245

by law enforcement officers.¹⁸⁶ Distinguishing between the scope of IHL and IHRL depends on how we can define whether the situation is a legally armed conflict or not. Armed conflict must be defined based on the facts and object, and it is beyond a superficial understanding of those who are involved.¹⁸⁷ An armed conflict is said to be a prolonged conflict between government forces and organized armed groups or groups within a state. For armed conflict to occur, two criteria must be met: the intensity of the conflict and the organization of the other parties. If these criteria are not met, the situation falls within the framework of international human rights.¹⁸⁸

Since armed conflicts are regulated by international humanitarian law, only the manner in which force is used is determined by this system, while the criterion for the legitimacy of resorting to force is the *jus ad bellum*.¹⁸⁹ As stated in Article 2(4) of the Charter of the United Nations, states may not use force against one another. Article 51 emphasizes that the use of force must be subject to the principles of necessity and proportionality, and that the use of force must not be for retaliation.¹⁹⁰ Therefore, any action to use force must be consistent with all applicable laws, including IHL, IHRL, and *jus ad bellum*. Even self-defense cannot be used as a justification for non-compliance with non-derogable human rights obligations.¹⁹¹ Therefore, in situations where violence falls outside the scope of armed conflict, the use of force is regulated by IHRL and must be based on principles such as necessity, proportionality, and non-arbitrariness. Taking of life by government officials is the most extreme form of taking of life, the circumstances of which must be strictly controlled and limited. The main source of conflict between the right to life and the public interest becomes apparent when law enforcement officers use lethal force.¹⁹²

¹⁸⁶ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life: The Role of the Human Rights Council*, Academy In-Brief No. 6 (Geneva: Geneva Academy of International Humanitarian Law and Human Rights, 2016), 1–43 p. 22.

¹⁸⁷ Christof Heyns et al., “The International Law Framework Regulating the Use of Armed Drones,” *The International and Comparative Law Quarterly* 65, no. 4 (2016): 791–827 p. 826, <https://www.jstor.org/stable/26348270>.

¹⁸⁸ Heyns et al. p. 806

¹⁸⁹ Heyns et al. p. 802

¹⁹⁰ Heyns et al. p. 801

¹⁹¹ Tubagus Ami Prindani et al., “HUMAN RIGHTS AND LAW ENFORCEMENT: THE USE OF FORCE IN COUNTER TERRORISM,” *Diponegoro Law Review* 5, no. 1 (April 2020): 124–39 p.127- 130, <https://doi.org/10.14710/dilrev.5.1.2020.124-139>.

¹⁹² Pūraitė, “Use of the Lethal Force by Police: Lithuanian Cases in ECtHR.” p.245

B. The Prohibition of Arbitrary Deprivation of Life

For having a more flexible and broader concept for the arbitrary deprivation of life, those who drafted the ICCPR, American Convention on Human Rights, and African Charter on Human and Peoples' Rights, did not draw a list of actions; instead, they used the phrase "Arbitrarily Deprivation of Life," which has ambiguous results in broad interpretation.¹⁹³ In broad terms, deprivation of life can be considered arbitrary when it is incompatible with international and domestic law. However, the Human Rights Committee said that in some cases, even if the national law allows the deprivation of life, it can be arbitrary.¹⁹⁴ Furthermore, the concept of arbitrariness encompasses a wide range of elements, such as inappropriateness, injustice, lack of predictability, due process of law, reasonableness, necessity, and proportionality. Therefore, arbitrariness cannot be limited only to the concept of unlawful killing.¹⁹⁵ The verdict of the International Court of Justice in the case of *Elettronica Sicola* said that the word arbitrariness can be interpreted as the opposite of the rule of law.

Therefore, principles such as proportionality and necessity play a crucial role in determining the arbitrariness of taking life. Moreover, in the *Camargo v Colombia* case, the Human Rights Committee announced that killing by the Colombian police violated Article 6 of ICCPR because it was unnecessary and disproportionate.¹⁹⁶ In reviewing the Israeli report, the Human Rights Committee stated that if a person suspected of terrorism is killed on purpose, this killing is considered arbitrary because the suspect could have been arrested in other ways but was not. In the case of *Nadege Dorzema v. Dominican Republic*, the Inter-American Court of Human Rights also declared that force should be used in proportion to the targeted person's level of resistance.¹⁹⁷ The state has a responsibility to prevent arbitrary deprivation of life, which, according to the Human Rights Committee, requires the state to take measures not only to prevent and punish killings resulting from these criminal acts of individuals but also to prevent arbitrary killings by

¹⁹³ Petersen Niels, "Life, Right to, International Protection," in *Max Planck Encyclopedia of Public International Law*, with Petersen Niels (Oxford University Press, June 2019), <https://doi.org/10.1093/law:epil/9780199231690/e841>.

¹⁹⁴ International Centre on Human Rights and Drug Policy, *Obligations Arising from Human Rights Standards – Right to Life* (Geneva: International Centre on Human Rights and Drug Policy; United Nations Development Programme; Joint United Nations Programme on HIV/AIDS, 2019), <https://www.humanrights-drugpolicy.org/guidelines/obligations-arising-from-human-rights-standards/right-to-life/>

¹⁹⁵ International Centre on Human Rights and Drug Policy.

¹⁹⁶ Niels, "Life, Right to, International Protection."

¹⁹⁷ Niels.

the police. A serious form of deprivation of life is the deprivation of life by security forces, which must be controlled by law and limited to the circumstances in which they can deprive a person of life.¹⁹⁸

C. International Standards on Law Enforcement Use of Force

The use of force outside armed conflict, particularly law enforcement, is regulated by IHRL, which applies both in peacetime and during armed conflict. The right to life is one of the rights that is non-derogable. Deprivation of life is considered arbitrary when it is inconsistent with international human rights standards. The right to life is used as a legal standard for the use of force.¹⁹⁹ Article 6 of the ICCPR regulates the use of force by law enforcement officials outside situations of armed conflict in relation to the right to life as an inherent right and the prohibition of arbitrary deprivation thereof. According to this convention, arbitrary deprivation is not limited to unlawful killings, but also occurs when the use of force fails to comply with principles such as necessity, proportionality, reasonableness, and due process of law.²⁰⁰ The European Convention on Human Rights sets out the circumstances in which force may be used without violating the right to life. It stated that the right to life can be deprived if the use of force is strictly necessary.²⁰¹ According to the ECHR, there are three situations which allow the use of force without violation of the right to life: “(a) in defense of any person from unlawful violence; (b) to effect a lawful arrest or to prevent the escape of a person lawfully detained; (c) in action lawfully taken for the purpose of quelling a riot or insurrection depending on the circumstances,”²⁰²

Use of force in law enforcement is governed by two UN instruments: the Code of Conduct for Law Enforcement Officials (1979) and the Basic Principles on the Use of Force and Firearms by Law Enforcement officials (1990). Although the 1990 Basic Principles are not a binding treaty, the European Court of Human Rights and the Inter-American Court of Human Rights have cited them

¹⁹⁸ Office of the United Nations High Commissioner for Human Rights, “Overview of International Human Rights and Humanitarian Law Standards,” in *Training Manual on Human Rights Monitoring* (Geneva: United Nations, 2001), <https://hrlibrary.umn.edu/monitoring/chapter4.html?>

¹⁹⁹ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations* (Geneva: International Committee of the Red Cross, 2022), 1–7 p. 2, https://www.icrc.org/sites/default/files/document/file_list/the_use_of_force_in_law_enforcement_operations.pdf.

²⁰⁰ Sarah Joseph, “Introductory Note to General Comment No. 36 (2018) on Article 6 of the International Covenant on Civil and Political Rights, on the Right to Life (h.r. Comm.),” *International Legal Materials* 58, no. 4 (2019): 849-852 P.849, <https://www.jstor.org/stable/26786834>.

²⁰¹ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p.3

²⁰² International Committee of the Red Cross (ICRC). p.2

as valid international rules governing the use of force in law enforcement and have recognized them as authoritative statements that have a special place in IHRL.²⁰³ According to BPUFF, “exceptional circumstances such as internal political instability or any other public emergency may not be invoked to justify any departure from these basic principles.”²⁰⁴ Moreover, the norms regarding the use of force set out in Article 3 of the 1979 Code of Conduct were further developed by the 1990 BPUFF, according to Article 3 of this Code of Conduct for Law Enforcement Officials: “Law enforcement officers may use force only when strictly necessary and to the extent required for the performance of their duty.”²⁰⁵

As a result, both documents regulate the actions of state officials in relation to the use of force in law enforcement, including not only actions taken by the police but also by other institutions, such as state security forces, gendarmerie, and forces operating within the framework of domestic law enforcement. Other institutions, including public and private institutions that have police powers, are also included in these standards.²⁰⁶

D. Core Principles Governing the Use of Lethal Force under IHRL

According to international standards, force must be used under specific circumstances, such as in self-defense or in defense of others against an imminent threat to life, and is regulated by fundamental principles such as necessity, proportionality, precaution, and legality.²⁰⁷

1. Necessity

The principle of necessity in the use of force requires that, in law enforcement, force should be used to the extent necessary as a last resort, and in accordance with the circumstances.²⁰⁸ “This principle has three interrelated elements: the duty to use non-violent means wherever possible; the

²⁰³ Ezequiel David Strajman, *The Inter-American System on Human Rights Should Apply the UN Guidance on Less Lethal Weapons in Law Enforcement*, n.d., 173–89, <https://www.swlaw.edu/sites/default/files/2024-06/8%20-%20Strajman.pdf>.

²⁰⁴ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*.

²⁰⁵ Code of Conduct for Law Enforcement Officials (1979), https://www.unodc.org/pdf/criminal_justice/Code_of_Conduct_for_Law_Enforcement_Officials_GA_43_169.pdf.

²⁰⁶ United Nations Office on Drugs and Crime (UNODC), “Topic Three – The General Principles of Use of Force in Law Enforcement,” E4J University Module Series: Crime Prevention and Criminal Justice, United Nations Office on Drugs and Crime, 2019, [//www.unodc.org](http://www.unodc.org).

²⁰⁷ Christof Heyns et al., “THE INTERNATIONAL LAW FRAMEWORK REGULATING THE USE OF ARMED DRONES,” *International and Comparative Law Quarterly* 65, no. 4 (October 2016): 791–827 p. 800, <https://doi.org/10.1017/S0020589316000385>.

²⁰⁸ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p.3

duty to use force only for a legitimate law enforcement purpose; and the duty to use only the minimum necessary force that is reasonable in the prevailing circumstances.”²⁰⁹ Therefore, if other tools such as persuasion, negotiation, and mediation fail, force can be used exceptionally to achieve a legitimate goal, and in many cases, it will not even be permitted.²¹⁰ Force must be used in the performance of official duties, such as the prevention of crime or the lawful apprehension of suspects, and must be reasonable in the circumstances, but not more.²¹¹ As Article 3 of the 1979 code of conduct provides, law enforcement officials may use force only "to the extent required for the performance of their duty". The use of force must not be vindictive, such as extrajudicial punishment, or in a discriminatory manner, or against individuals who resist.²¹² Unlawful arrest or detention is not a legitimate purpose for the use of force.²¹³

Another essential element of the principle of necessity requires that even when necessity is established, there must be a proportion between force and the level of resistance, and that force be limited to the extent possible.²¹⁴ For example, if a potentially violent suspect is apprehended, he should not be killed, and the use of lethal force when there is imminent danger to the person can be very limited and exceptionally permitted. Moreover, when the necessity has ceased, the use of force must cease.²¹⁵ International jurisprudence emphasizes that suspects should not be killed if they can be detained, as it constitutes an arbitrary deprivation of life. If the use of force is not necessary, it violates human dignity, inhuman and degrading treatment.²¹⁶

In terms of the use of lethal force, it can be justified when it is strictly necessary to achieve a legitimate purpose, as a last resort. It means that the use of lethal force is allowed when a less risky

²⁰⁹ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

²¹⁰ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*.

²¹¹ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement* (New York Geneva: United Nations, 2020), p. 6, https://www.ohchr.org/sites/default/files/Documents/HRBodies/CCPR/LLW_Guidance.pdf.

²¹² Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life: The Role of the Human Rights Council*, Academy In-Brief No. 6 (Geneva: Geneva Academy of International Humanitarian Law and Human Rights, 2016), 1–43 p.7.

²¹³ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

²¹⁴ United Nations Office on Drugs and Crime (UNODC).

²¹⁵ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life*. p.7

²¹⁶ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

means is unavailable or manifestly unreasonable.²¹⁷ As the use of force is unavoidable, it must not exceed the limit that is necessary against the potential threat. Therefore, while using lethal force, the principle of graduated force must be considered, and the least risky measure must be taken first.²¹⁸ Generally, the need for the use of lethal force is rooted in an imminent and grave threat. According to the Basic Principle on the Use of Force and Firearms by Law Enforcement Officials, law enforcement officers are permitted to use firearms in defense of themselves or others against an imminent threat or massive injuries.²¹⁹ The relationship between the target and the attacker must be close and logical in terms of location, indicating an imminent threat, but the existence of a serious threat to life does not allow any preventive lethal action against any possible future threat. If there is an imminent and real danger, deadly force can be used.²²⁰

2. Proportionality

Another limitation on the use of force in law enforcement is adherence to the principle of proportionality, which requires law enforcement officers to ensure that the type and amount of force used and its potential harm are proportionate to the threat posed. Under no circumstances should excessive and extreme force be used to achieve a legitimate goal.²²¹ The principle of proportionality means that the end never justifies the means. This principle is of particular importance in relation to the right to life.²²² In many cases, the proportional use of force is not interpreted correctly, which proportionality does not mean at what level the officer can start using and gradually increase it, but rather determines the maximum amount of force that can be used in response to a threat, and how much force is legitimate.²²³ Therefore, the amount of force that is used to achieve a legitimate goal is equal and proportionate to the threat. Even if the use of force is unavoidable, there must be a balance between the legitimate goal and the severity of the

²¹⁷ Bourgeois and Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians?” p. 42

²¹⁸ Bourgeois and Labuda. p. 42

²¹⁹ Bourgeois and Labuda. p. 43

²²⁰ Bourgeois and Labuda. p. 43

²²¹ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p. 4

²²² Bourgeois and Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians?” p. 47

²²³ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

crime.²²⁴ For this reason, if a suspect is fleeing and poses no potential threat to life, he should not be shot; even if deadly force is not used, it may be impossible to apprehend the suspect.²²⁵

Accordingly, the nature and extent of the force used must be proportionate to the severity of the threat and the legitimate aim sought. This principle requires that a distinction be made between the use of potentially deadly force and the intentional use of deadly force, because potentially lethal force maximizes the risk of death. In both cases, the primary purpose of the use of potentially deadly force and the intentional use of deadly force is to stop a threat, not to kill someone.²²⁶ A risk assessment is essential to assess the appropriateness of a risk assessment, which depends on the professional judgment of the officers and the information available. Officers must be aware of their legal authority, necessary authorization, and the legitimacy of their actions.²²⁷ This recognition is not limited to officers, but rather to the fact that after the use of force, officers' actions should be monitored and reviewed by superiors.²²⁸ In addition, law enforcement officers should minimize collateral damage from the use of force to the extent possible, such as to bystanders, medical personnel, and journalists. The principle of proportionality severely limits the use of firearms and other forms of lethal force so that any use of force is used in the most rigorous manner and in a manner that is proportionate to the threat.²²⁹

According to the commentary on Article 3 of the 1979 Code of Conduct, "National law ordinarily restricts the use of force by law enforcement officials in accordance with a principle of proportionality. It is to be understood that such national principles of proportionality are to be respected in the interpretation of this provision. In no case should this provision be interpreted to authorize the use of force which is disproportionate to the legitimate objective to be achieved."²³⁰

²²⁴ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement*. p.7

²²⁵ United Nations Office on Drugs and Crime (UNODC), "Crime Prevention & Criminal Justice Module 4 Key Issues."

²²⁶ Bourgeois and Labuda, "When May UN Peacekeepers Use Lethal Force to Protect Civilians?" p.46-48

²²⁷ African Commission on Human and Peoples' Rights, *Study on the Use of Force by Law Enforcement Officials in Africa* (Banjul, The Gambia: African Commission on Human and Peoples' Rights, 2023), P. 12-13, <https://achpr.au.int/en/soft-law/study-use-force-law-enforcement-officials-africa>.

²²⁸ Tubagus Ami Prindani et al., "HUMAN RIGHTS AND LAW ENFORCEMENT: THE USE OF FORCE IN COUNTER TERRORISM," *Diponegoro Law Review* 5, no. 1 (April 2020): 124-39, P.135 <https://doi.org/10.14710/dilrev.5.1.2020.124-139>.

²²⁹ African Commission on Human and Peoples' Rights, *Study on the Use of Force by Law Enforcement Officials in Africa*. p. 12

²³⁰ Code of Conduct for Law Enforcement Officials.

Similarly, according to Principle 5 of the 1990 Basic Principles, “Whenever the lawful use of force and firearms is unavoidable, law enforcement officers shall ... act in proportion to the seriousness of the offence and legitimate objective to be achieved.”²³¹ To comply with the principle of proportionality, the principle of necessity must be observed. This means that the use of force must be necessary in view of the circumstances and at the same time proportionate to the legitimate aim to be achieved.²³²

3. Precautionary

To uphold the principles of necessity and proportionality, the precautionary principle provides the theoretical basis for the use of force in law enforcement. This principle requires officers and members of the public to take all necessary precautions during law enforcement operations and measures to prevent or at least reduce the risk of the use of force.²³³ This principle encompasses all stages, including the planning, organization, and control of operations. It is not limited to the use of force itself, aiming to minimize the risk of death and injury to both officers and civilians.²³⁴ According to Article 5 Basic Principle, “Whenever the lawful use of force and firearms is unavoidable, law enforcement officials shall: Minimize damage and injury, and respect and preserve human life.”²³⁵ When there is a possibility of reducing the likelihood of the use of force or violent outcomes, the law enforcement officers should delay the direct use of force or confronting the public.²³⁶ The European Court of Human Rights, in its 1995 judgment in the *McCann* case, announced that it would examine not only the proportionality of the use of force, but also whether the authorities had minimized the need for the use of lethal force in the operation through careful planning and control.²³⁷

²³¹ OHCHR, “Basic Principles on the Use of Force and Firearms by Law Enforcement Officials,” 1190.

²³² United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

²³³ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life*. p. 9-10

²³⁴ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

²³⁵ “Basic Principles on the Use of Force and Firearms by Law Enforcement Officials,” OHCHR, accessed August 5, 2025, <https://www.ohchr.org/en/instruments-mechanisms/instruments/basic-principles-use-force-and-firearms-law-enforcement>.

²³⁶ Darina Aytmatova, *Use of Police Force: A Framework to Ensure Good Governance Over the Use of Force* (Kingdom of the Netherlands, 2021), p.16, <https://policehumanrightsresources.org/use-of-police-force-a-framework-to-ensure-good-governance-over-the-use-of-force>.

²³⁷ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life*. P. 10

The UN Special Rapporteur emphasizes that: “Once a situation arises where the use of force is considered, it is often too late to rescue the situation. Instead, in order to save lives, all possible measures should be taken “upstream” to avoid situations where the decision on whether to pull the trigger arises, or to ensure that all the possible steps have been taken to ensure that if that happens, the damage is contained as much as is possible.”²³⁸ That preventive measures should be taken at the planning stage before a conflict occurs, as this will prevent a situation that could lead to the use of weapons, or at least mitigate its effects²³⁹. To implement the precautionary principle, measures such as delaying direct engagement when it reduces risk, providing specialized training for officers, equipping them with appropriate defensive equipment, prohibiting the use of fully lethal and less-lethal weapons, and providing care to injured persons can be implemented. Failure to take these measures will result in the use of excessive force and violate the state's obligation to exercise caution.²⁴⁰ Finally, if law enforcement officers are not properly equipped with the necessary protective equipment and tools, it represents a failure of the state to fulfill its precautionary obligations, especially in cases where excessive use of force is a foreseeable result of this deficiency.²⁴¹

4. Principle of legality

The principle of legality requires that all human rights, which are protected and supported by law, must be respected, supported, and fulfilled. The human rights-based approach requires that these rights be recognized as legally enforceable entitlements, and this approach has a direct connection with international and national human rights.²⁴² The principle of legality states that there must be approved, clear, and accessible laws based on which the use of force or any type of restriction on fundamental rights and freedoms is considered legitimate.²⁴³

²³⁸ Stuart Casey-Maslen. p. 10

²³⁹ United Nations Office on Drugs and Crime (UNODC), “Crime Prevention & Criminal Justice Module 4 Key Issues.”

²⁴⁰ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p.6

²⁴¹ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p.6

²⁴² Scottish Human Rights Commission, *Human Rights and New Technologies in Policing: Issues Paper for the Independent Advisory Group on Emerging Technologies in Policing*. p.30

²⁴³ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement*. p.4-5

Therefore, this principle requires the state to develop legal and administrative frameworks that precisely limit the use and conditions of force by authorities, as well as which authorities, in what circumstances, and in what manner, can use force or interfere with the fundamental rights of individuals.²⁴⁴ People must be able to foresee the legal consequences of their conduct within the framework of this law and be able to enjoy effective protection against arbitrary conduct by authorities. All these conditions constitute the creation of a clear and precise law.²⁴⁵ As the case law of the European Court of Human Rights emphasizes the concept of the quality of law and states that, in addition to having a formal basis, it must have a degree of precision, predictability, and protective guarantees that can prevent any arbitrary and excessive exercise of power by the state.²⁴⁶ In law enforcement, force should never be used as a punishment tool. Moreover, the law enforcement officers are only permitted to use the equipment that is officially authorized by the competent government authorities. Furthermore, domestic law should determine the situation in which less-lethal weapons and other relevant equipment can be deployed and limit their use to minimize their foreseeable risks.²⁴⁷

The right to life must be protected by law, and any use of lethal force must have an adequate legal basis. Article 2, paragraph 1, of the European Convention on Human Rights, Article 6, paragraph 1, of the International Covenant on Civil and Political Rights, and Article 4, paragraph 1, of the American Convention on Human Rights state that the right to life “shall be protected by law.”²⁴⁸ The African Charter on Human and Peoples' Rights does not refer to the principle of legality, but the African Commission on Human and Peoples' Rights, in its General Comment No. 3, obliges states to develop and implement appropriate domestic legal frameworks to respect, protect, promote, and fulfill the right to life.²⁴⁹

²⁴⁴ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations*. p.3

²⁴⁵ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement*. p.6

²⁴⁶ Andrea Spagnolo, “Human Rights Implications of Autonomous Weapon Systems in Domestic Law Enforcement: Sci-Fi Reflections on a Lo-Fi Reality,” *QIL, Zoom-In* 43 (2017): p.52-53, <https://www.qil-qdi.org/human-rights-implications-autonomous-weapon-systems-domestic-law-enforcement-sci-fi-reflections-lo-fi-reality/>.

²⁴⁷ Darina Aytmatova, *Use of Police Force: A Framework to Ensure Good Governance Over the Use of Force* (Kingdom of the Netherlands, 2021), p. 16, <https://policehumanrightsresources.org/use-of-police-force-a-framework-to-ensure-good-governance-over-the-use-of-force>.

²⁴⁸ Bourgeois and Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians?” p.41

²⁴⁹ Bourgeois and Labuda. p.42

Case law also emphasizes that there must be precise legal frameworks to regulate and limit the use of lethal force in accordance with international standards. For example, in domestic law enforcement operations, the legal basis for the use of lethal force can be a combination of police regulations and criminal law.²⁵⁰ In peacekeeping operations, the use of force is based first on UN Security Council resolutions and secondly on the rules of engagement (ROE) specific to each mission.²⁵¹ However, even if peacekeepers are authorized to use all necessary means to protect civilians, the legality of any use of lethal force is subject to compliance with the applicable legal frameworks, including the principles of necessity and proportionality, as well as the stricter rules contained in the domestic law of the host state and the countries contributing to the force.²⁵²

5. Accountability and State Responsibility

Within the framework of a Human Rights-based approach, the state has a commitment as a duty-bearer and is responsible for guaranteeing the rights of the right holder. The state responsibility can be defined as a state's commitment in three categories: to respect, to protect, and to fulfil.²⁵³ In general, accountability is the obligation of an individual, organization, or political entity to record, disclose, explain, and justify its activities to individuals or entities with a legitimate interest in knowing about them.²⁵⁴ Accountability requires the participation of other actors to record and evaluate activities, which attracts public attention, raises awareness, and provides a forum for discussion and debate. In other words, if an individual, organization, or institution fails to be accountable, other actors can hold them accountable for their actions.²⁵⁵

Accountability has three dimensions: the relational dimension, the substantive dimension, the normative dimension, and the process dimension, which can be considered a fourth dimension.²⁵⁶ Monitoring deaths related to police and law enforcement activities primarily helps ensure the accountability of the institutions involved in these activities and the public officials responsible

²⁵⁰ Bourgeois and Labuda. p.21

²⁵¹ Bourgeois and Labuda. p.17

²⁵² Bourgeois and Labuda.

²⁵³ Prindani et al., "Human Rights and Law Enforcement: The Use of Force in Counter Terrorism," p. 131

²⁵⁴ Stephen Skinner, "Enhancing Accountability for Police Use of Lethal Force: Global Monitoring and Comparative Benchmarking," *Policing: A Journal of Policy and Practice* 18 (January 2024): p. 3 <https://doi.org/10.1093/police/paad100>.

²⁵⁵ Skinner. p.3

²⁵⁶ Skinner. p.4

for them.²⁵⁷ At the international level, civil society members conduct monitoring to raise awareness of these deaths and promote solutions to reduce them. In addition, other dimensions of the use of lethal force can be addressed through international monitoring.²⁵⁸ This can include producing and disseminating data on fatal incidents, conducting research, and establishing mechanisms for institutional reflection and learning from experience.²⁵⁹

Accountability is not limited to the role of the police as law enforcers, but includes any type of service that broadly creates responsibility and obligation, such as the use of force against citizens. The police and their actions are subject to domestic and international law, in addition to their jurisdiction, which citizens are able to use against the relevant institutions, the relevant government, and the responsible person.²⁶⁰ In some cases, enforcing the law and preventing unnecessary harm requires the use of force and coercion, which violates the rights and freedoms of citizens. However, police accountability prevents unnecessary or unacceptable harm.²⁶¹ “There are two broad senses of policing accountability: The “subordinate or obedient” sense – incorporating the applicability of the law and the jurisdiction of higher authorities. The “explanatory and cooperative” sense – being answerable for what they do/fail to do and cooperating with the processes of inquiry.”²⁶² When law enforcement officers use force, it must be understood as a reflection of state authority, because they are representatives of states. This action is not based on a personal decision, but a state attribution.²⁶³

Under the principle of accountability and responsibility, states are not only responsible for the actions of their officials but also responsible for the legal and institutional frameworks regulating the use of force. International human rights law requires states to hold law enforcement officials accountable for the use of force, whether in the form of acts or omissions.²⁶⁴ The Basic Principles

²⁵⁷ Skinner. p.5

²⁵⁸ Skinner. p.5

²⁵⁹ Skinner. p. 6

²⁶⁰ Genevieve Lennon et al., *Principles for Accountable Policing* (London: The Police Foundation, 2023), p. 15–16, https://www.police-foundation.org.uk/wp-content/uploads/2010/10/accountable_policing_FINAL.pdf.

²⁶¹ Lennon et al. p. 15

²⁶² Lennon et al. p. 16

²⁶³ Prindani et al., “Human Rights and Law Enforcement: The Use of Force in Counter Terrorism,” p. 132

²⁶⁴ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement*. p.41

on the Use of Force and Firearms by Law Enforcement Officials obliged the state to establish rules and regulations to regulate the use of force.²⁶⁵

In order to guarantee this principle, independent and effective domestic mechanisms must be in place and impartially monitored by external bodies, such as national human rights institutions or ombudsmen. An accountability system has essential elements such as recording, prompt reporting, transparency, and independent investigation of deaths and injuries, which are mandatory.²⁶⁶ The State is responsible in all circumstances, such as when the security function is part of the duties of a private company or in areas such as the use of autonomous weapons that create a gap in accountability at the individual level.²⁶⁷ The state is obliged under international law to ensure that any actions or mechanisms used under its jurisdiction are in accordance with the rules of international law and to provide effective investigation, redress, and appropriate accountability in the event of any violations.²⁶⁸ It is a state's responsibility to protect its citizens' lives, and situations in which the state fails to fulfil its commitments, or itself violates human rights, particularly the right to life, responsibility rests fairly and squarely on the state.²⁶⁹ If education, training, and supervision are not integrated as a coherent and integrated part of the functioning of law enforcement agencies, the standards that exist at the international level will lack practical value.²⁷⁰

3.2. Legal Challenges of Lethal Autonomous Weapons Systems

A. Delegation of Lethal Decision-Making to Algorithms

Nowadays, AI represents a technological evolution for which there is neither a definition nor corresponding concepts in international law.²⁷¹ There are serious concerns regarding the compliance of AI-based weapons with IHRL and IHL principles. The main concern is the legal

²⁶⁵ Prindani et al., “Human Rights and Law Enforcement: The Use of Force in Counter Terrorism,” April 2020. p.130

²⁶⁶ Office of the United Nations High Commissioner for Human Rights (OHCHR), *Guidance on Less-Lethal Weapons in Law Enforcement*. p. 9

²⁶⁷ Badreldin Abdalla Hassan Hamad, “The Impact of Digital Technology on International Humanitarian Law: Ethical and Legal Implications of Autonomous Weapons Systems,” *European Journal of Law and Political Science* 4, no. 4 (September 2026): 1–14 p. 6-7, <https://doi.org/10.24018/ejpolitics.2025.4.4.182>.

²⁶⁸ Hamad. p.6-7

²⁶⁹ Prindani et al., “Human Rights and Law Enforcement: The Use of Force in Counter Terrorism,” April 2020. p.131

²⁷⁰ Prindani et al.

²⁷¹ Hamad, “The Impact of Digital Technology on International Humanitarian Law.” P. 3

and ethical consequences of automated decisions regarding targeting and the use of force.²⁷² Therefore, LAWS can be defined as a system that can identify, select, make lethal decisions, and target without human supervision and intervention.²⁷³ The use of LAWS flatly contradicts the right to life under IHRL. As stated by the Human Rights Committee in General Comment No. 36 which right to life is a supreme right that does not allow any derogation even in armed conflict.²⁷⁴ Since life and death decisions require human judgment and moral reasoning, LAWS, by removing human intervention and judgment from decision-making and selecting the target, dehumanizes war and the use of force outside the armed conflict.²⁷⁵ The technological progress lacks ethical norms such as empathy, sympathy, a sense of responsibility, and compassion. Moreover, the use of force requires human judgment, which is based on special values and conditions.²⁷⁶

Many states emphasize that in life and death decisions, human control is essential. They stress that accountability and responsibility for deployment and the use of the lethal autonomous weapons system should be with humans and cannot be transferred to machines. Accountability relies on predictability and explainability when humans use force.²⁷⁷ Moreover, delegating life and death decisions to a machine is morally unacceptable because human dignity is the core element of human rights, and the use of this machine weakens human dignity, dehumanization, and escalation of violence and civilian casualties.²⁷⁸ Therefore, the authorities' use of force should not be given to a machine without direct human supervision; rather, the taking of life must be the result of a conscious and deliberate human decision.²⁷⁹ Therefore, it calls for a ban on LAWS at

²⁷² Peter Asaro, "On Banning Autonomous Weapon Systems: Human Rights, Automation, and the Dehumanization of Lethal Decision-Making," *International Review of the Red Cross* 94, no. 886 (June 2012): 687–709 p. 689, <https://doi.org/10.1017/S1816383112000768>.

²⁷³ Amanda Sharkey, "Autonomous Weapons Systems, Killer Robots and Human Dignity," *Ethics and Information Technology* 21, no. 2 (June 2019): 75–87 p. 77, <https://doi.org/10.1007/s10676-018-9494-0>.

²⁷⁴ Australian Human Rights Commission, *Human Rights and Lethal Autonomous Weapons Systems: Submission to the Human Rights Council Advisory Committee* (Sydney, Australia: Australian Human Rights Commission, 2023), 1–13 P. 5, https://humanrights.gov.au/sites/default/files/human_rights_and_lethal_autonomous_weapons_0.pdf.

²⁷⁵ Carlos Alberto Aponte García et al., "Governance and Regulation of Autonomous Weapons and Cybersecurity (2016–2024): The Influence of States, International Organizations, and Civil Society on International Humanitarian Law," *Contemporary Readings in Law and Social Justice* 17, no. 1 (February 2025): 550–62 p. 555, <https://crlsj.com/index.php/journal/article/view/537>.

²⁷⁶ United Nations, *Lethal Autonomous Weapons Systems: Report of the Secretary-General*, A/79/88 (New York: United Nations General Assembly, 2024), p. 85/179, <https://docs.un.org/en/A/79/88>.

²⁷⁷ United Nations. p. 10/179

²⁷⁸ United Nations. p. 10/179

²⁷⁹ Amanda Sharkey, "Autonomous Weapons Systems, Killer Robots and Human Dignity," *Ethics and Information Technology* 21, no. 2 (June 2019): 75–87 p. 77, <https://doi.org/10.1007/s10676-018-9494-0>.

the global level under IHRL and IHL.²⁸⁰ LAWS sparked intense debate among domestic and international organizations regarding the use of force and the principles governing its use to protect the right to life outside armed conflict.

B. Challenges to the principle of necessity

The principle of necessity outside the armed conflict is governed by IHRL, especially in law enforcement.²⁸¹ This principle requires that the use of force, particularly lethal force, be used only when strictly necessary to protect life or to prevent an imminent threat.²⁸² The use of force by law enforcement officers is permissible only when it is necessary to achieve a legitimate goal and no peaceful options, such as persuasion, negotiation, or mediation, are effective, and when they must assess the necessity of their action in the moment.²⁸³ For instance, in the case *McCann and Others v. United Kingdom*, the European Court of Human Rights said that in the use of force, not only proportionality must be considered, but also the necessity of resorting to lethal force in planning and control must be examined. The Court found a violation of Article 2 of the European Convention of Human Rights to be the result of deficiencies in the planning and control of the operation, which led to the excessive use of deadly force. As a result, the principle of necessity is not limited to the moment of use of force, but also includes the stages of planning and organizing the overall operation.²⁸⁴

This principle is established in IHRL documents and procedures, which are more restrictive than in armed conflict under IHL.²⁸⁵ It states that the use of force must be the last resort. The 1979 Code of Conduct states that the law enforcement official can only use force when it is necessary and exceptional. In the use of firearms, it is more restrictive, and in situations where human life is at risk, the use of force is allowed. Moreover, based on the 1979 Code of Conduct and officer can

²⁸⁰ Asaro, “On Banning Autonomous Weapon Systems.” p. 693

²⁸¹ Dr. Gargi Bhatt, “Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics,” *JSS Journal for Legal Studies and Research* Special Issue (2025): 20–39 p. 30, https://jsslawcollege.in/wp-content/uploads/2025/02/02.-Recognising-Human-Rights-Concerns-in-Military-AI-Stabilizing-the-Authority-and-Legal-Ethics-1_compressed.pdf.

²⁸² Bhatt.

²⁸³ Stuart Casey-Maslen, *Use of Force in Law Enforcement and the Right to Life*. p.7

²⁸⁴ *McCann and Others v. the United Kingdom*, No. 18984/91 (ECtHR [GC] September 27, 1995), <https://hudoc.echr.coe.int/eng?i=001-57943>.

²⁸⁵ Nathan G. Wood, “The Problem with Killer Robots,” *Journal of Military Ethics* 19, no. 3 (2020): 220–40 p. 15, <https://doi.org/10.1080/15027570.2020.1849966>.

use firearms when there is an imminent threat, and it is necessary for self-defense or others. To prevent serious crime that creates a serious threat to human life, arrest the criminal or resist.²⁸⁶

Within this framework, the use of LAWS poses serious legal challenges to the principle of necessity because this machine lacks the necessary human characteristic to assess the necessity of its decision accurately. Although a system may understand the clear signs of the existence of weapons, other signs, such as sound, facial expressions, and body language, are complex and require contextual understanding.²⁸⁷ These systems may not be able to assess them because these features rely on human judgment and human understanding. These assessments are essential on decision whether the force, particularly lethal force, can be used or not.²⁸⁸

Moreover, in law enforcement situations, interaction between humans and machines may lead to genuine misunderstandings and misinterpretations due to failure in recognizing correct behaviors. It leads to the arbitrary use of force by LAWS because of the inability to interpret the correct situation.²⁸⁹ From a legal perspective, this situation results in violations of the right to life. This right is enshrined in Article 6 of ICCPR, which says any kind of deprivation must be necessary, proportionate, and non-arbitrary. Therefore, in the absence of human supervision and intervention, LAWS may fail to accurately assess this necessity and result in the unlawful killing of people, which is absolutely prohibited.²⁹⁰ Hence, the use of LAWS outside the armed conflict to respect the principle of necessity requires meaningful human control over the decision about the use of force. It is impossible to comply with the strict necessity obligations under the IHRL framework in the absence of this meaningful human control. The use and deployment of LAWS create the risk of grave violations of states' international commitments.²⁹¹

²⁸⁶ Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making* (New York, United States: Human Rights Watch, 2025), 1–63 p. 12–13, <https://www.hrw.org/report/2025/04/28/hazard-human-rights/autonomous-weapons-systems-and-digital-decision-making>.

²⁸⁷ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations: The Human Rights Implications of Killer Robots* (Washington, DC: Human Rights Watch, 2014), p. 10, <https://www.hrw.org/report/2014/05/12/shaking-foundations/human-rights-implications-killer-robots>.

²⁸⁸ Human Rights Watch and International Human Rights Clinic, Harvard Law School. p. 10

²⁸⁹ Human Rights Watch and International Human Rights Clinic, Harvard Law School. p. 11

²⁹⁰ Bhatt, “Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics.” P. 30-31

²⁹¹ Bhatt.

C. Challenges to the principle of proportionality

The proportionality principle is a fundamental principle in international law regarding the use of force. International standards of law enforcement emphasize that any kind of use of force must be proportionate to the threat. The 1990 Basic Principles state that law enforcement officers' actions must be proportionate to the severity of the crime and achieve a legitimate goal. Moreover, emphasis that law enforcement officers have to exercise restraint and reduce injuries to a minimum level.²⁹² Furthermore, the 1979 Code of Conduct also said that: "to the extent required for the performance of their duty."²⁹³ However, it is difficult for LAWS to determine the proportionality of its decision on how much force should be used. The assessment of proportionality is not merely a qualitative calculation; this principle requires a balance between civilian injuries and military objectives.²⁹⁴

Proportionality assessment can be done only when the commander creates this balance based on human judgment, ethical norms, ethical considerations, and their practical experience. This judgment relies on the ability to interpret data, understand context, and make reasonable decisions in an uncertain situation.²⁹⁵ As a result, it sparked a profound question: whether this type of complex judgment can be reproduced in a machine system. There is a fundamental limitation for LAWS to practice this judgment.²⁹⁶ This system is a pre-programmed machine that works based on AI and machine learning; as a result, it is unable to fully adapt to the infinite number of unforeseen situations that may occur on the battlefield. Therefore, based on the special and varied characteristics of proportionality assessment, it is impossible to design an algorithm to provide an accurate and proper response in all situations.²⁹⁷ According to Christof Heyns, "While robots are especially effective at dealing with quantitative issues, they have limited abilities to make the

²⁹² Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making*. P. 14

²⁹³ Code of Conduct for Law Enforcement Officials.

²⁹⁴ Docherty, *The Need for and Elements of a New Treaty on Fully Autonomous Weapons*. P. 2

²⁹⁵ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations*. P.12

²⁹⁶ Federal Foreign Office, *Lethal Autonomous Weapons Systems: Technology, Definition, Ethics, Law & Security* (Berlin: Federal Foreign Office, 2014), <https://www.auswaertiges-amt.de/resource/blob/204830/5f26c2e0826db0d000072441fdeaa8ba/abruestung-laws-data.pdf>.

²⁹⁷ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations*. P.13

qualitative assessments that are often called for when dealing with human life.” Hence, human judgment remained an irreplaceable element.²⁹⁸

Autonomous systems are unable to observe the self-restraint required by the 1990 Principles because they lack emotions such as the sense of compassion that humans have for their fellow human beings. In the field of law enforcement, human agents consider factors such as an individual's background, mental state, and behavior when deciding whether to use force.²⁹⁹ On the contrary, autonomous systems are not capable of reproducing such considerations and cannot be designed for all possible situations in advance, because even humans cannot predict the possibilities.³⁰⁰ Finally, the principle of proportionality is weakened if human judgment is removed or reduced from the decision-making process.³⁰¹

The inability of LAWS to make complex, context-based assessments of the proportionality principle leads to excessive use of force, especially lethal force. For example, the 2021 Report of the United Nations Panel of Experts on Libya documented the alleged deployment of the STM Kargu-2 loitering munition in March 2020. The system could attack targets without human intervention, raising concerns about its judgments in specific situations and contexts regarding the use of lethal force.³⁰² This situation has resulted in unacceptable civilian casualties and, as a result, raises serious legal and ethical challenges regarding the legitimacy of the use of these weapons.³⁰³ Consequently, if LAWS are used outside armed conflicts in peacetime for the arbitrary and

²⁹⁸ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations*. P. 13

²⁹⁹ Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making*. P. 16

³⁰⁰ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations*. P. 13

³⁰¹ Federal Foreign Office, *Lethal Autonomous Weapons Systems: Technology, Definition, Ethics, Law & Security*.

³⁰² Joe Hernandez, “A Military Drone With A Mind Of Its Own Was Used In Combat, U.N. Says,” World, *NPR*, June 1, 2021, <https://www.npr.org/2021/06/01/1002196245/a-u-n-report-suggests-libya-saw-the-first-battlefield-killing-by-an-autonomous-d>.

³⁰³ Goddy Uwa Osimen et al., *Autonomous Warfare: Exploring the Consequences of AI- Powered Weapons System on Global Peace and Security*, 49, no. 2 (2025): 1461, https://www.researchgate.net/publication/392171898_Autonomous_Warfare_Exploring_the_Consequences_of_AI-Powered_Weapons_System_on_Global_Peace_and_Security.

unlawful use of force, they violate the right to life, a right that has a fundamental and non-derogable status in IHRL.³⁰⁴

D. The Accountability Gap

The use of LAWS poses a fundamental challenge called the accountability gap in contemporary international law, especially IHRL.³⁰⁵ Accountability is the obligation of individuals to explain and justify their actions to an authority. That is, individuals and agents must explain to others for the action or omission they were obligated to take.³⁰⁶ Among the agent's accountability is that a human agent, within the framework of a governance system, reports and explains their actions.³⁰⁷ The right to life and the right to be free from arbitrary deprivation of life are recognized as fundamental rights in IHRL, such as Article 3 of the Universal Declaration of Human Rights and Article 6 of ICCPR.³⁰⁸ The emergence of LAWS has seriously undermined this principle regarding the use of force and the protection of the right to life. The existence of an accountability gap undermines the legal standards for supportive and protective aims.³⁰⁹ Accountability has two aspects: one is deterrence from future violations of the law, and the second is compensation and punishment of the perpetrator to assure victims that justice is guaranteed.³¹⁰

One of the important tools for protecting the right to life is accountability, which use of LAWS creates a serious accountability gap because this machine lacks legal personality and the ability to be punished.³¹¹ From a legal and equitable perspective, it is not possible to attribute responsibility

³⁰⁴ Goddy Uwa Osimen et al., *Autonomous Warfare: Exploring the Consequences of AI- Powered Weapons System on Global Peace and Security*, 49, no. 2 (2025): p.1461, https://www.researchgate.net/publication/392171898_Autonomous_Warfare_Exploring_the_Consequences_of_AI-Powered_Weapons_System_on_Global_Peace_and_Security.

³⁰⁵ Bonnie Docherty, *The Need for and Elements of a New Treaty on Fully Autonomous Weapons*, Policy Report (Human Rights Watch and Harvard Law School International Human Rights Clinic (IHRC), 2020), 1–12 p. 2, <https://www.hrw.org/news/2020/06/01/need-and-elements-new-treaty-fully-autonomous-weapons>.

³⁰⁶ Esther D. Reed, “Accountability for the Taking of Human Life with LAWS in War,” *Ethics & International Affairs* (England) 37, no. 3 (2023): 299–308 p. 300, <https://doi.org/10.1017/S0892679423000308>.

³⁰⁷ Reed. p. 300

³⁰⁸ Reed.

³⁰⁹ Ahmad Khalil and Anandha Krishna Raj S, “Beyond the Loop: Accountability and the Legal Abyss of Autonomous Weapon Systems,” *Indonesian Journal of International Law* 23, no. 1 (March 2026), <https://doi.org/10.17304/ijil.vol23.1.1723>.

³¹⁰ Aponte García et al., “Governance and Regulation of Autonomous Weapons and Cybersecurity (2016–2024).” p.555

³¹¹ Aponte García et al.

to the operator for the unpredictable actions of an autonomous system.³¹² Likewise, the programmer and manufacturer cannot be held responsible, because the machine acts unpredictably, it is difficult to predict all possible function and behaviors of the system, and the moral element of mens rea cannot be proven.³¹³ Normally, as well as accordance to traditional international law, responsibility falls on human commanders, governments, or legal entities, but responsibility in the case of using an LAWS raises the question of who should be held accountable.³¹⁴

In addition, another challenge in assigning responsibility is the fragmentation of decision-making throughout the life cycle of this technology, because from the time a project is designed until its deployment, responsibility is distributed among multiple actors and cannot be concentrated on a specific factor. As a result, effective accountability and responsiveness face serious challenges at the international level, weakening the normative force of international law and paving the way for the illegitimate use of force.³¹⁵ To address this challenge, maintaining human oversight and judgment in decisions regarding the use of force—the concept of meaningful control—can serve as a minimal principle.³¹⁶

However, the concept of meaningful human control cannot alone address the challenge of the responsibility vacuum, because traditional doctrines such as commander responsibility are limited to human agency and hierarchy and are not sufficient when faced with systems that operate outside of these classical hierarchies. Some propose alternative approaches such as electronic accountability to address this challenge and adapt to new technological realities, although the proposal faces serious theoretical and practical questions.³¹⁷

E. Responsibility

LAWS, either lethal or less lethal, weaken the principles of human rights-based law enforcement which are based on positive and close human relationships between officers and the

³¹² Docherty, *The Need for and Elements of a New Treaty on Fully Autonomous Weapons*. p.6

³¹³ Berkant Akkuş, “Autonomous Weapon Systems Under International Law,” *Güvenlik Bilimleri Dergisi* 11, no. 2 (November 2022): 333–66 p 352, <https://doi.org/10.28956/gbd.1078155>.

³¹⁴ R. Shashank Reddy, *India and the Challenge of Autonomous Weapons* (Washington, DC: Carnegie Endowment for International Peace, 2016), p.8, <https://carnegieendowment.org/research/2016/06/india-and-the-challenge-of-autonomous-weapons>.

³¹⁵ Aponte García et al., “Governance and Regulation of Autonomous Weapons and Cybersecurity (2016–2024).” p. 554- 555

³¹⁶ Aponte García et al. p.555

³¹⁷ Aponte García et al. p. 555

community.³¹⁸ This is essential, especially regarding the right to life, that use of force can be the only open option to save the life of a human, although LAWS face serious technological and decision-making limitations in meeting these criteria. Despite theoretical and practical efforts, a responsibility gap still exists, and it is difficult to determine the responsibility for the actions of LAWS. This indicates that there is no binding and efficient framework at the international level to limit and regulate the use of LAWS.³¹⁹ To address this gap based on an engineering, socio-technical, and governance perspective on control, Verdiesen et al suggest a comprehensive human oversight that helps to have more control over LAWS. This led to a more comprehensive approach, which ensures more effective control and accountability of LAWS.³²⁰

In international law, accountability plays a crucial role in fulfilling the right to a legal remedy for victims.³²¹ There are often responsibilities vacated regarding the use of LAWS in armed conflict or non-armed conflict in peacetime.³²² In this context, no one can be held responsible, although a machine commits an immoral action. Ultimately, responsibility will be shifted away from LAWS, while it is not really clear whether anyone is truly responsible for the breach.³²³ Many researchers emphasize that there is a gap in existing accountability structures and relationships when LAWS are deployed.³²⁴ In the international legal system, responsibility has traditionally been based on human agency, where the wrongful conduct is attributable to actors who are clearly under the direction and control of the state.³²⁵ It emphasizes assumptions such as the existence of identifiable actors, the possibility of effective control, and the existence of a causal relationship between the conduct and the outcome.³²⁶

³¹⁸ Amnesty International, *AUTONOMOUS WEAPONS SYSTEMS IN LAW ENFORCEMENT* (Amnesty International, 2024), p.2, <https://www.amnesty.org/en/documents/ior40/7981/2024/en/>. p.3

³¹⁹ Aponte García et al., “Governance and Regulation of Autonomous Weapons and Cybersecurity (2016–2024).” p.554

³²⁰ Verdiesen, Santoni De Sio, and Dignum, “Accountability and Control Over Autonomous Weapon Systems.” p.137

³²¹ Thompson Chengea, “Accountability Gap, Autonomous Weapon Systems and Modes of Responsibility in International Law,” *SSRN Electronic Journal* 45, no. 1 (Fall) (2016): 1–51 P. 2, <https://doi.org/10.2139/ssrn.2755211>.

³²² Daniel N. Hammond, “Autonomous Weapons and the Problem of State Accountability,” *Chicago Journal of International Law* 15, no. 2 (2015): 652–91 664, <https://chicagounbound.uchicago.edu/cjil/vol15/iss2/8/>.

³²³ Patrick Taylor Smith, “Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems,” *Frontiers in Big Data* 5 (December 2022): 1–6 2, <https://doi.org/10.3389/fdata.2022.1038507>.

³²⁴ Verdiesen, Santoni De Sio, and Dignum, “Accountability and Control Over Autonomous Weapon Systems.” p.144

³²⁵ International Law Commission, *Responsibility of States for Internationally Wrongful Acts*, UN Doc A/56/83 (New York: United Nations, 2001), https://legal.un.org/ilc/texts/instruments/english/draft_articles/9_6_2001.pdf.

³²⁶ International Law Commission.

This fragmentation of decision-making complicates the issue of attribution both normatively and conceptually.³²⁷ LAWS's ability to operate without human supervision creates a great responsibility issue. When this system takes people's lives arbitrarily in the absence of human intention or predictive evidence, it leads to a major concern about attribution of responsibility. This gap is the result of the fragmentation between technological progress and the inadequacy of the current legal frameworks.³²⁸

There is often a responsibility vacuum regarding the use of LAWS in armed conflict or non-armed conflict in peacetime.³²⁹ In this context, no one can be held responsible, although a machine commits a wrongful act.³³⁰ This transformation has a significant effect on the right to life. The right to life is not only violated when it is arbitrary, but also when there is a lack of accountability, which also causes the violation of the right to life. Even if these systems are more accurate than humans in targeting, errors are still inevitable, which raises a fundamental question: who is responsible for these errors?³³¹

There is often a responsibility vacuum regarding the use of LAWS in armed conflict or non-armed conflict in peacetime, which weakens fundamental human rights.³³² In the use of LAWS, the traditional framework of responsibility for breach is not applicable. One of these theories is commander liability, which traditionally does not hold commanders or superiors accountable for the autonomous decisions of their subordinates, as the LAWS operates autonomously.³³³ Therefore, in the classical structure, accountability is based on the superior-subordinate relationship, which does not apply to LAWS. Another challenge in attributing responsibility to this technology is its uncontrollable and unpredictable nature.³³⁴ In different situations, the behavior of the system is unpredictable for the operator or commander, and they cannot intervene in time in case of an error, due to the human ability is limited compared to the speed of processing

³²⁷ Hammond, "Autonomous Weapons and the Problem of State Accountability." p. 664

³²⁸ Smith, "Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems." p. 3

³²⁹ Hammond, "Autonomous Weapons and the Problem of State Accountability." p. 664

³³⁰ Smith, "Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems." p.3

³³¹ Federal Foreign Office, *Lethal Autonomous Weapons Systems: Technology, Definition, Ethics, Law & Security*.

³³² Hammond, "Autonomous Weapons and the Problem of State Accountability." p. 664

³³³ Smith, "Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems." p. 4

³³⁴ Smith. p.5

and decision-making of this system. As a result, the removal of humans from the decision-making loop, the traditional basis for assigning responsibility, is severely weakened.³³⁵

On the other hand, the lack of moral agency and lack of punishment elements also pose challenges to direct responsibility, which is a characteristic of LAWS, but still can't hold humans responsible because they don't have sufficient control and foresight over this system. If they were to impose responsibility, it would be unfair.³³⁶ This technology is not only neutral in its use but also affects human agency itself. Over time, the way humans think, understand, and make decisions changes according to this technology, leading to dependency in human decisions.³³⁷ Finally, it is understandable that accountability is not limited to the individual level, but rather, due to the complexity of obligations and the coordination, regulation, distribution, and assignment of responsibility, the role of other institutions becomes increasingly prominent. Due to the multi-layered nature of accountability in autonomous systems, traditional legal frameworks need to be rethought and a new approach introduced.³³⁸ Who is responsible if an autonomous weapon causes unlawful death?

1. Programmer Responsibility

In most cases, it is not reasonable to put the responsibility on the programmer because they do not intend to commit an illegal act or even predicate this kind of action. Namely, about the complex AI system that is beyond the programmer's predictability.³³⁹ However, responsibility due to negligence can be considered as an alternative. It means that the programmer can be held responsible for the lack of fulfilment of their duties to take necessary measures, even unintentionally. It is a great option for civil responsibility to provide compensation for the victims with preventive impacts.³⁴⁰ Therefore, to hold someone responsible, effective control on system is necessary. On the other hand, others suggest that responsibility must be distributed collectively

³³⁵ Khalil and S, "Beyond the Loop: Accountability and the Legal Abyss of Autonomous Weapon Systems." p. 209

³³⁶ Khalil and S. p. 210

³³⁷ Smith, "Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems." p.5

³³⁸ Smith.

³³⁹ Human Rights Watch, *Mind the Gap: The Lack of Accountability for Killer Robots* (United States of America: Human Rights Watch, 2015), P. 3, https://www.hrw.org/sites/default/files/report_pdf/arms0415_summary_mindthegap.pdf.

³⁴⁰ Human Rights Watch. p. 3

among various actors.³⁴¹ Moreover, vicarious liability may be another solution, meaning even in the lack of full control over the system, a contribution to the outcome may lead to responsibility. All in all, a combination of civil responsibility, negligence, and vicarious liability can be a suitable responsibility framework in the case of LAWS and AI systems.³⁴²

2. Command Responsibility

According to the traditional principle of command responsibility, superior military officials are liable for crimes committed by their subordinates if certain conditions are met, such as the existence of a superior-subordinate relationship, actual or presumed knowledge of the crime, and failure to take reasonable steps to prevent or punish it.³⁴³ Enhancing effective oversight and deterring harmful behavior are primary goals of this theory.³⁴⁴ In the use of fully autonomous weapons systems, the commander's responsibility faces serious challenges. The lack of logic for committing crimes in autonomous weapons weakens the basis for criminal responsibility, and commanders are often exempted from responsibility.³⁴⁵

The responsibility of the commander is realized if crimes are committed by human agents, and the commander is responsible for preventing these crimes. Therefore, this type of responsibility cannot be recognized in the use of machines.³⁴⁶ Regardless of the conceptual challenges, this doctrine is also not applicable in a practical context because autonomous weapons systems operate independently and are beyond the commander's technical knowledge and understanding to anticipate unlawful action.³⁴⁷ Even if the commander can anticipate the threat, the commander cannot intervene effectively due to challenges such as effective communication, rapid algorithmic decision-making, or the inability to reprogram the system in real time.³⁴⁸ The commander cannot stay “in the loop.” As a result, maintaining meaningful human control over the system becomes

³⁴¹ Michael Da Silva, “Responsibility Gaps,” *Philosophy Compass* (UK) 19, nos. 9–10 (October 2024): p. 7, <https://doi.org/10.1111/phc3.70002>.

³⁴² Da Silva. p.7

³⁴³ Hammond, “Autonomous Weapons and the Problem of State Accountability.” p.664

³⁴⁴ Hammond. p. 664

³⁴⁵ Human Rights Watch, *Mind the Gap: The Lack of Accountability for Killer Robots*. p.1

³⁴⁶ Human Rights Watch.

³⁴⁷ Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making*. p. 13

³⁴⁸ Smith, “Resolving Responsibility Gaps for Lethal Autonomous Weapon Systems.” p. 3

practically challenging.³⁴⁹ Some legal scholars believe that if the commander was aware or had reasonable knowledge of the possibility of this system violating international law, they could be held liable.³⁵⁰ This is similar to the concept of indirect command responsibility, where the commander is held responsible if they were aware of the dangers or should have been aware of them.³⁵¹

There are several obstacles to fulfilling this responsibility in practice. First, it is difficult to achieve an element of awareness regarding these weapons due to the unpredictability and inexplicability of these systems. The nature of these systems makes it difficult to assess violations of international human rights.³⁵² Second, the fulfillment of the condition of prevention and punishment is difficult to achieve, because if the commander cannot predict the behavior of the system, it is impossible to prevent the crime from occurring, and it is also impossible to punish a machine.³⁵³ As a result, although commander responsibility provides the basis for assigning responsibility to the commander, he is not fully accountable for the use of lethal autonomous systems. This leads to an accountability gap and provides the basis for illegal harm, and the perpetrator remains unpunished.³⁵⁴

3. State Responsibility

In the international legal system, responsibility has traditionally been based on human agency, where the wrongful conduct is attributable to actors who are clearly under the direction and control of the State.³⁵⁵ It emphasizes assumptions such as the existence of identifiable actors, the possibility of effective control, and the existence of a causal relationship between the conduct and the outcome.³⁵⁶ Stated that states are internationally responsible for any wrongful actions against international law by their institutions, such as the military.³⁵⁷ Therefore, if LAWS violate the IHRL

³⁴⁹ Smith. p. 4

³⁵⁰ Human Rights Watch, *Mind the Gap: The Lack of Accountability for Killer Robots*. p. 2

³⁵¹ Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making*. p. 14

³⁵² Human Rights Watch; International Human Rights Clinic, Harvard Law School.

³⁵³ Human Rights Watch; International Human Rights Clinic, Harvard Law School.

³⁵⁴ Human Rights Watch; International Human Rights Clinic, Harvard Law School.

³⁵⁵ International Law Commission, *Responsibility of States for Internationally Wrongful Acts*.

³⁵⁶ Paola Gaeta, “Who Acts When Autonomous Weapons Strike?,” *Journal of International Criminal Justice* 21, no. 5 (March 2024): 1033–55 p. 1046, <https://doi.org/10.1093/jicj/mqae001>.

³⁵⁷ International Law Commission (ILC), *Responsibility of States for Internationally Wrongful Acts (2001)*.

or IHL, it is attributed to the government. As the government has the authority to decide the deployment of LAWS is morally the most culpable actor.³⁵⁸ The management of both phases, such as the buying stage and the use of LAWS, is based on the government's decision, so it must pay all the costs of its decisions and be blamed the most. The best way to address this issue is for the absolute responsibility to belong to the state.³⁵⁹

IHRL is applicable outside armed conflict, in peacetime situations, and within the internal affairs of a state. The fundamental rights, such as the right to life, are protected by ICCPR and emphasize the prevention of arbitrary deprivation of the right to life, and suspects must be put on trial to be held accountable.³⁶⁰ Then, if the government uses the LAWS outside the armed conflict for targeted killing, it could be considered a breach of international law, even if the victim is a terrorist. As a result, ICCPR can ensure the responsibility of the state in the use of force for extraterritorial killing.³⁶¹ Therefore, LAWS must be designed in a way which ensure right to life, and the state or the individual should be held responsible for any arbitrary deprivation of life. It requires an international framework to regulate this kind of weapon.³⁶² Some of the critics emphasize the ethical implications of LAWS and say it is immoral because delegating life and death decisions to an algorithm, which is not ethically accountable, undermines fundamental human values, including human dignity and the right to life.³⁶³

Since IHRL holds states and individuals accountable, not machines, the use of force without meaningful human control under IHRL by LAWS outside the armed conflict may create an accountability gap and make it difficult to attribute responsibility to humans.³⁶⁴ According to Article 24 of BPUFF, states and individuals ensure that superiors can be held accountable when they know or should have known that their subordinates use illegal force or firearms, but did not take preventive measures. As LAWS relies on AI for selecting and targeting, currently, it is not possible to closely examine and document the decision-making process in deep learning-based

³⁵⁸ Bhatt, "Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics." p. 30

³⁵⁹ Bhatt. p. 30

³⁶⁰ Bhatt. p. 31

³⁶¹ Bhatt. p.32

³⁶² Bhatt.

³⁶³ Jürgen Altmann and Frank Sauer, "Autonomous Weapon Systems and Strategic Stability," *Survival* 59, no. 5 (September 2017): 117–42 119, <https://doi.org/10.1080/00396338.2017.1375263>.

³⁶⁴ Amnesty International, *AUTONOMOUS WEAPONS SYSTEMS IN LAW ENFORCEMENT*. p. 2

systems—sometimes referred to as black boxes.³⁶⁵ As a result, operators are unable to fully understand the internal mechanisms of these systems or the data, making it impossible to predict and prevent harmful outcomes.³⁶⁶ Finally, the lack of transparency and explainability in the high-stakes decisions of these systems negatively impacts fundamental rights, especially the right to life, and poses profound challenges to existing legal systems.³⁶⁷

F. Risks in Law Enforcement, Counterterrorism, and Border Control

Use of LAWS outside the armed conflict in peacetime is becoming widespread, especially in fields of policing, counterterrorism, and border control. It assumes that this system works under the ultimate control of a highly educated, ethical, and competent individual or a group. However, its use sparks significant ethical and legal concerns.³⁶⁸

1. Law enforcement challenges

IHL is much stricter than IHL in terms of the use of force, especially lethal force, and is based on the protection of the right to life. Although the use of LAWS is not subject to a comprehensive international prohibition, their use in law enforcement and peacetime is incompatible with human rights considerations and raises serious legal and ethical concerns.³⁶⁹ One of the reasons for the prohibition of these systems, is the issue of the depersonalization process of the use of force, which causes humans to have no role in the decision of life and death. Early systems operated unmanned but under human control, while LAWS could delegate decisions regarding the use of force to a machine, thereby increasing the risk of violating the right to life.³⁷⁰ Due to the rapid introduction of this system into policing, these weapons will pose serious challenges to meeting strict human rights standards in the future.³⁷¹

³⁶⁵ Amnesty International. p. 2

³⁶⁶ Amnesty International. p.3

³⁶⁷ Human Rights Watch; International Human Rights Clinic, Harvard Law School, *A Hazard to Human Rights Autonomous Weapons Systems and Digital Decision-Making*. p. 58

³⁶⁸ “Lethal Autonomous Weapon Systems (LAWS) Enforcement of Human Rights by Algorithms?,” in *Collection Regional Law Review*, by Hektor Ruci (Institute of Comparative Law, 2024), 1–8 p. 5, https://doi.org/10.56461/iup_rlr.2024.5.ch1.

³⁶⁹ Christof Heyns, “Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement,” *Human Rights Quarterly* 38, no. 2 (2016): 350–78 p. 353-354, <https://doi.org/10.1353/hrq.2016.0034>.

³⁷⁰ Christof Heyns, “Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement,” *Human Rights Quarterly* 38, no. 2 (2016): 350–78 p. 354, <https://doi.org/10.1353/hrq.2016.0034>.

³⁷¹ Christof Heyns, “Human Rights and the Use of Autonomous Weapons Systems (AWS) During Domestic Law Enforcement,” *Human Rights Quarterly* 38, no. 2 (2016): 350–78 p.35, <https://doi.org/10.1353/hrq.2016.0034>.

One of the greatest issues about the use of LAWS outside armed conflict is its compliance with human rights. Use of LAWS raises a profound question about whether this machine can decide on the use of force while respecting human dignity and the right to life. As there is no evidence about the compliance of AI for such a distinction between legitimate and illegitimate objects, these concerns become more serious.³⁷² However, LAWS are unable to fulfil this principle because of their lack of contextual understanding and human judgment. It results in disproportionate and unnecessary use of force in complex or unpredictable circumstances.³⁷³

Article 6 of ICCPR recognizes the right to life as a fundamental human right and prevents any arbitrary deprivation of life.³⁷⁴ The term arbitrary plays a key role in protecting the right to life from deprivation. According to General Command Number 36, it is a fundamental Article that must not be interpreted broadly.³⁷⁵ In the law enforcement context, there are several factors to understand the meaning of arbitrary, one of which is the principle of necessity.³⁷⁶ This principle requires law enforcement officers to adhere to this principle and other international human rights frameworks to prevent violations of the right to life. Taking human life is arbitrary, even if it is according to law and for self-defense, if it does not comply with the principle of necessity.³⁷⁷ Therefore, to prohibit arbitrary deprivation of life in addition to a legal basis for the use of force, law enforcement officers must have the ability to carefully assess the circumstances and necessity

³⁷² Mattias Leppänen, “Autonomous Weapons Systems in Law Enforcement: Potential Threat Towards the Most Fundamental of Human Rights?” (Malmö University, 2021), <https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1558931&dsid=9712>.

³⁷³ Australian Human Rights Commission, *Human Rights and Lethal Autonomous Weapons Systems: Submission to the Human Rights Council Advisory Committee* (Sydney, Australia: Australian Human Rights Commission, 2023), 1–1 p. 10, https://humanrights.gov.au/sites/default/files/human_rights_and_lethal_autonomous_weapons__0.pdf.

³⁷⁴ Hanna Bourgeois and Patryk I. Labuda, “When May UN Peacekeepers Use Lethal Force to Protect Civilians? Reconciling Threats to Civilians, Imminence, and the Right to Life,” *Journal of Conflict and Security Law* 28, no. 1 (April 2023): 1–65 P. 33, <https://doi.org/10.1093/jcs/krac027>.

³⁷⁵ Ka Lok Yip, “Demystifying the Right to Life during the Conduct of Hostilities: Theories, Methods, Practices,” *European Journal of International Law* 36, no. 1 (May 2025): 77–112 P.93, <https://doi.org/10.1093/ejil/chaf005>.

³⁷⁶ Jürgen Altmann and Frank Sauer, “Autonomous Weapon Systems and Strategic Stability,” *Survival* 59, no. 5 (September 2017): 117–42 p. 119, <https://doi.org/10.1080/00396338.2017.1375263>.

³⁷⁷ Shannon Brandt Ford, “Restraining Police Use of Lethal Force and the Moral Problem of Militarization,” *Criminal Justice Ethics* 41, no. 1 (January 2022): p. 3–17, <https://doi.org/10.1080/0731129X.2022.2060014>.

of their action.³⁷⁸ Moreover, they should be trained to make correct decisions in complex situations, which LAWS cannot fulfil.³⁷⁹

Additionally, Article 3 of the Code of Conduct for Law Enforcement Officers said that the use of force is allowed when it is strictly necessary, which requires human judgment. Besides the existence of these frameworks, unnecessary use can be seen, and some experts emphasize that current laws need to be updated to regulate LAWS.³⁸⁰ LAWS lacks sufficient ability to understand human situations, and the actions of judges based on emotion and context cannot comply with the principle of necessity.³⁸¹ Leaving the decision to use lethal force to a machine without human assessment would violate the right to life. Therefore, to protect the right to life, existing legal frameworks for the use of force by LAWS should be amended, or new laws should be enacted.³⁸² Article 5 of the Code of Conduct for Law Enforcement Officials requires officers to use force as a last resort to protect human life. The word necessity is not explicitly stated in this article, but the understanding of the minimum use of force depends on careful human judgment.³⁸³

In addition, according to Articles 9 and 10 of this law, the use of firearms is permitted if there is an imminent threat. In this context, LAWS is not able to determine the necessity and urgency of the threat, which requires human judgment. Therefore, the nature of these weapons raises the question of whether this machine is a weapon or a carrier of state obligations.³⁸⁴ If LAWS is not recognized as a weapon nor as a state obligation, it will not be included in the legal framework, which will pose a great threat to human rights, especially the right to life. The extent of the advancement of this technology and the extent of effective human control are the definitive

³⁷⁸ Office of the Attorney General, State of New Jersey, *Use of Force Policy* (New Jersey: Office of the Attorney General, 2025), p. 6, <https://www.njoag.gov/wp-content/uploads/2025/09/Use-of-Force-Policy-revised-9-17-25.pdf>.

³⁷⁹ Titus Hattan, “Lethal Autonomous Robots: Are They Legal under International Human Rights and Humanitarian Law?,” *Nebraska Law Review* 93 (2015): p. 1051, <https://digitalcommons.unl.edu/nlr>.

³⁸⁰ International Committee of the Red Cross (ICRC), *The Use of Force in Law Enforcement Operations* (Geneva: International Committee of the Red Cross, 2022), 1–7 p. 3, https://www.icrc.org/sites/default/files/document/file_list/the_use_of_force_in_law_enforcement_operations.pdf.

³⁸¹ Regina Surber, *Artificial Intelligence: Autonomous Technology (AT), Lethal Autonomous Weapons Systems (LAWS) and Peace Time Threats* (Zurich: ICT4Peace Foundation, 2018), 1–40 p. 17, https://ethicsandtechnology.org/wp-content/uploads/2022/06/2018_RSURBER_AI-AT-LAWS-Peace-Time-Threats_final.pdf.

³⁸² Hattan, “Lethal Autonomous Robots: Are They Legal under International Human Rights and Humanitarian Law?”

³⁸³ Amnesty International, *Autonomous Weapons Systems: Five Key Human Rights Issues for Consideration*, ACT 30/1401/2015 (London: Amnesty International Publications, 2015), p. 21, <https://www.amnesty.org/en/wp-content/uploads/2023/05/ACT3014012015ENGLISH.pdf>.

³⁸⁴ Amnesty International.

answers to this question.³⁸⁵ Use of this technology by law enforcement officers leads to new and serious concerns. For example, after the 1033 program, military equipment and robotic technology became cheap for police officers, and there is no legal prohibition on the militarization of robots by police and leads to serious to the protection of the right to life.³⁸⁶ It can be exemplified that Dallas police used a bomb disposal robot to transport and detonate explosives, killing one person.³⁸⁷

Moreover, the expansion of robots in policing can create and perpetuate racial discrimination and inequality. For example, when a robot surrounds a suspect, and when the suspect shoots at the robot, the robot will shoot again without hesitation, and in the field, which is questionable in terms of legality.³⁸⁸ In addition, digitalization, automation, and data-driven policing have entered the realm of policing, which includes predictive policing, where machines predict crime based on past data.³⁸⁹ However, this system has been criticized for producing inaccurate results due to false data, which can lead to a shift from individual bias to widespread bias. Therefore, these models are no more accurate or fair than humans.³⁹⁰ In larger areas, it empowers the state to defend itself more effectively and has contributed to the expansion of state power, which has led to the restriction of individual freedoms and rights.³⁹¹ The issue of liability is complicated by the delegation of the decision to use force to a machine, such as who will be held liable if a robot commits an unlawful killing.³⁹² Other uses for these machines include border control and policing to suppress protests, where seemingly non-lethal force can lead to the death of individuals.³⁹³

³⁸⁵ Angelika Adensamer and Lukas Daniel Klausner, “‘Part Man, Part Machine, All Cop’: Automation in Policing,” *Frontiers in Artificial Intelligence*, 655486, vol. 4 (June 2021): 1-10-P 4, <https://doi.org/10.3389/frai.2021.655486>.

³⁸⁶ Constantine Gidaris, “The Rise of the Robots: Technocapitalism and the Policing of Race,” *Fast Capitalism* 18 (December 2021): 35–48 p. 42, <https://doi.org/10.32855/fcapital.202101.004>.

³⁸⁷ E. Joh, “Policing Police Robots.”

³⁸⁸ E. Joh.

³⁸⁹ Angelika Adensamer and Lukas Daniel Klausner, “‘Part Man, Part Machine, All Cop’: Automation in Policing,” *Frontiers in Artificial Intelligence*, 655486, vol. 4 (June 2021): 1-10-P .4, <https://doi.org/10.3389/frai.2021.655486>.

³⁹⁰ Angelika Adensamer and Lukas Daniel Klausner, “‘Part Man, Part Machine, All Cop’: Automation in Policing,” *Frontiers in Artificial Intelligence*, 655486, vol. 4 (June 2021): 1-10-P .4, <https://doi.org/10.3389/frai.2021.655486>.

³⁹¹ Christopher J. Coyne and Yahya Alshamy, “Perverse Consequences of Lethal Autonomous Weapons Systems,” *SSRN Electronic Journal*, March 10, 2021, 14 p. 11, <https://doi.org/10.2139/ssrn.3767512>.

³⁹² Lewis, “The Case for Regulating Fully Autonomous Weapons.”

³⁹³ Acheson Ray, *A WILPF Guide to Killer Robots: A User Guide to Killer Robots*, with Women’s International League for Peace and Freedom (Geneva: Women’s International League for Peace and Freedom, 2022), p.4, https://www.wilpf.org/wp-content/uploads/2022/05/WILPF_Killer-Robots-Guide_4th-edition_EN-Web.pdf.

2. Counterterrorism Challenges

Governments can use artificial intelligence and machine learning to assess the statistical probability of some preemptive activities turning into an actual attack and gauge the imminence of threats in countering terrorism.³⁹⁴ This system allows governments to assess the extent of damage caused by the lack of preventive action and the extent of damage caused by the unnecessary use of force.³⁹⁵ Therefore, this algorithm can play an important role in decision-making and response to cyberattacks. If both countries use the automated algorithm, both sides can enter into armed conflict without their knowledge. In addition, the use of algorithms can lead to the misuse of machine learning to forge messages, military orders, or political threats to gain power.³⁹⁶

The use of autonomous weapons in counter-terrorism operations is permissible to the extent that it can prevent civilian casualties. Therefore, despite the claim that these weapons are capable of assessing extensive and appropriate information for all, their use should be limited to defensive environments.³⁹⁷ The risk of war at the international level increases as a result of the use of these weapons because their use in war and peacetime is possible without observing human rights requirements. This situation leads to their use illegally and paves the way for machine and targeted killing.³⁹⁸ This system can easily be introduced into the peacekeeping field and used to suppress dissent and control the population, which increases the risk of arbitrary deprivation of life. This technology has the ability to monitor long-term at any time, which the government is very interested in using.³⁹⁹ In this technology, human control is replaced by an algorithm that is unable to properly understand the context and complex situations.⁴⁰⁰

³⁹⁴ Ashley Deeks, Noam Lubell, and Daragh Murray, "Machine Learning, Artificial Intelligence, and the Use of Force by States," *Virginia Public Law & Legal Theory Research* 10, no. 1 (2018): 1–26 p. 5, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3285879.

³⁹⁵ Deeks, Lubell, and Murray.

³⁹⁶ Ashley Deeks, Noam Lubell, and Daragh Murray, "Machine Learning, Artificial Intelligence, and the Use of Force by States," *Virginia Public Law & Legal Theory Research* 10, no. 1 (2018): 1–26 p. 8, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3285879.

³⁹⁷ John Lewis, "The Case for Regulating Fully Autonomous Weapons," *THE YALE LAW JOURNAL* 124, no. 4 (2015): p. 1315, <https://www.jstor.org/stable/43617052?seq=1>.

³⁹⁸ Heyns, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*.

³⁹⁹ Coyne and Alshamy, "Perverse Consequences of Lethal Autonomous Weapons Systems." p. 10

⁴⁰⁰ United Nations, *Lethal Autonomous Weapons Systems: Report of the Secretary-General*.

The use of these systems in counter-terrorism also violates the principles of necessity and proportionality, leading to arbitrary deprivation of the right to life. In addition to the benefits such as data mining, big data analytics, digital surveillance, and threat prediction.⁴⁰¹ The use of these systems in counter-terrorism also raises challenges such as algorithmic errors, data bias, privacy violations, and abuse.⁴⁰² In addition to the risk of violating the right to life, this technology can be used by certain groups for repressive purposes without effective oversight.⁴⁰³ Overall, these challenges suggest that without clear international legal, ethical, and regulatory frameworks, the use of LAWS results in fundamental violations of human rights, especially the right to life. As a result, international frameworks should be developed proactively to ensure human control, accountability, and respect for the principles of international human rights law.

3. Border Control Challenges

In border control, the use of autonomous technology, especially LAWS and drones, includes surveillance, recognition, and managing mobile populations.⁴⁰⁴ This technology is used for different purposes, such as long-term surveillance, continuous monitoring, and even for potential lethal hostilities.⁴⁰⁵ This technology can remain in the sky for long periods of time, which humans cannot do due to fatigue, and monitor all activities in visible areas, which is why it is called a silent observer.⁴⁰⁶ This activity allows for profiling, monitoring, and mapping of mobile populations. This technology has transformed border control from being purely physical to creating virtual borders. Using this technology, it is possible to provide monitoring and control at longer distances through data, algorithms, and integrated information systems.⁴⁰⁷

⁴⁰¹ Deden Rahmad Hidayat, Joko Setiono, and Supardi Hamid, “Transformation of Counter-Terrorism Strategies Based on Artificial Intelligence and Legal Challenges Regarding the Use of Autonomous Weapons,” *Jurnal Greenation Sosial Dan Politik* 3, no. 3 (August 2025): 539–47, <https://doi.org/10.38035/jgsp.v3i3.435>.

⁴⁰² Dr. Gargi Bhatt, “Recognising Human Rights Concerns in Military AI: Stabilizing the Authority and Legal Ethics,” *JSS Journal for Legal Studies and Research* Special Issue (2025): 20–39 p. 22, https://jsslawcollege.in/wp-content/uploads/2025/02/02.-Recognising-Human-Rights-Concerns-in-Military-AI-Stabilizing-the-Authority-and-Legal-Ethics-1_compressed.pdf.

⁴⁰³ Hidayat, Setiono, and Hamid, “Transformation of Counter-Terrorism Strategies Based on Artificial Intelligence and Legal Challenges Regarding the Use of Autonomous Weapons.”

⁴⁰⁴ Rinaldi and Teo, “The Use of Artificial Intelligence Technologies in Border and Migration Control and the Subtle Erosion of Human Rights.”

⁴⁰⁵ JANIE HAR, “San Francisco Will Allow Police to Deploy Robots That Kill,” AP News, November 30, 2022, <https://apnews.com/article/police-san-francisco-government-and-politics-d26121d7f7afb070102932e6a0754aa5>.

⁴⁰⁶ E. Joh, “Policing Police Robots.”

⁴⁰⁷ John Lewis, “The Case for Regulating Fully Autonomous Weapons,” *THE YALE LAW JOURNAL* 124, no. 4 (2015): 1309–25, p. 1315 <https://www.jstor.org/stable/43617052?seq=1>.

In this context, systems such as Eurodac, ETIAS, VIS, EES and ECRIS-TCN, which are used to record and exchange information, jointly provide the basis for analysis, prediction and risk assessment for individuals.⁴⁰⁸ As a result, border control in the future will become largely data-driven, predictable, and automated. These developments are important for strengthening security because today, especially after the September 11 attacks, issues such as immigration, asylum, terrorism, and politics have changed from responding to crime to prevention and timely detection. To achieve these goals, devices such as CCTV, GPS, facial recognition, and pre-screening systems are used to identify dangerous individuals.⁴⁰⁹ This technology uses data and algorithms to assess and classify individuals based on characteristics such as distrust and criminal propensity.⁴¹⁰

However, this system can still lead to serious challenges to human rights. For example, it can lead to widespread and non-transparent surveillance as a result of a lack of compliance with the principles of necessity and proportionality, as this technology combines and uses data from different sources.⁴¹¹ The government can use this technology to exert its power over vulnerable individuals.⁴¹² The data collected can be misused because the technology is covert in nature and the existing legal frameworks for regulating it are inadequate, making public oversight and accountability difficult.⁴¹³ Furthermore, the right to life is at risk if LAWS is used to control borders. This right is a fundamental right, the arbitrary deprivation of which is unlawful in both war and peace, and is the criterion for determining the legitimate use of force.⁴¹⁴ The legitimate use of force requires the observance of three basic conditions: necessity, proportionality, and last

⁴⁰⁸ Alberto Rinaldi and Sue Anne Teo, “The Use of Artificial Intelligence Technologies in Border and Migration Control and the Subtle Erosion of Human Rights,” *International & Comparative Law Quarterly* 74, no. 1 (January 2025): 61–89 p. 68, <https://doi.org/10.1017/S0020589325000090>.

⁴⁰⁹ Rinaldi and Teo.

⁴¹⁰ Constantine Gidaris, “The Rise of the Robots: Techno capitalism and the Policing of Race,” *Fast Capitalism* 18, no. 1 (December 2021), p. 48 <https://doi.org/10.32855/fcapital.202101.004>.

⁴¹¹ Rinaldi and Teo, “The Use of Artificial Intelligence Technologies in Border and Migration Control and the Subtle Erosion of Human Rights.” p.68

⁴¹² Christopher J. Coyne and Yahya Alshamy, “Perverse Consequences of Lethal Autonomous Weapons Systems,” *SSRN Electronic Journal*, March 10, 2021, 14 p. 11, <https://doi.org/10.2139/ssrn.3767512>.

⁴¹³ W. Gregory Voss, “Privacy Law Implications of the Use of Drones for Security and Justice Purposes,” *International Journal of Liability and Scientific Enquiry* 6, no. 4 (2013): p.16, <https://doi.org/10.1504/ijlse.2013.060848>.

⁴¹⁴ Christof Heyns, *Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions*, A/HRC/23/47, Human Rights Council, Twenty-Third Session, Agenda Item 3 (Geneva: United Nations Human Rights Council, 2013), p. 7, <https://digitallibrary.un.org/record/755741?ln=en&v=pdf>.

resort. However, the fulfillment of these conditions requires human judgment, empathy, and an understanding of the context, which LAWS lacks.⁴¹⁵

From a legal perspective, it has been emphasized that LAWS must be within the bounds of existing legal frameworks, such as international humanitarian and human rights law and the Charter of the United Nations.⁴¹⁶ Furthermore, weapons with their uncontrollable and unpredictable nature should not be used against civilians,⁴¹⁷ and meaningful human control over life and death decisions must be maintained because machines cannot be held accountable.⁴¹⁸ Finally, a proactive approach should be taken to regulate LAWS because this technology is characterized by potential risk and uncertainty. Regulations should be developed to regulate it, and the development of these systems should be suspended to prevent their irreversible consequences.⁴¹⁹

⁴¹⁵ Human Rights Watch and International Human Rights Clinic, Harvard Law School, *Shaking the Foundations*.

⁴¹⁶ Nik Hynek and Anzhelika Solovyeva, "Operations of Power in Autonomous Weapon Systems: Ethical Conditions and Socio-Political Prospects," *AI & SOCIETY* 36, no. 1 (March 2021): 79–99 p. 81, <https://doi.org/10.1007/s00146-020-01048-1>.

⁴¹⁷ Hynek and Solovyeva. p. 81

⁴¹⁸ United Nations, *Lethal Autonomous Weapons Systems: Report of the Secretary-General*. p. 7/179

⁴¹⁹ United Nations. p. 8/179

CHAPTER IV

4.1 Conclusion

A. The use of force outside armed conflict is regulated by international human rights law, which the right to life, as a comprehensive legal framework, regulates and limits the use of lethal force outside armed conflict. The use of lethal force by state authorities is assessed by the principle of the prohibition of arbitrary deprivation of life, as a main criterion for assessment. This framework not only prohibits unlawful killing but also, if the deprivation of life is permitted under the law, the principles of necessity, proportionality, legality, and precaution must be strictly observed. This framework states that in the event of an imminent threat to human life, the use of lethal force is permissible as a last resort in response to the threat, and the use of lethal force must be proportionate to the imminent threat. Therefore, IHRL regulates the use of lethal force outside the armed conflict, so that the protection of the right to life is the primary objective, and any use of lethal force must be strictly limited and in accordance with the prohibition of arbitrary deprivation of life standards. Any violations of these standards lead to arbitrary and unlawful use of lethal force, undermining the rule of law and fundamental human dignity.

B. The use of LAWS outside armed conflicts in peacetime, such as in the areas of law enforcement, counterterrorism, and border control, poses serious legal challenges to the protection of the right to life under the IHRL framework. Delegating life and death decisions to a machine that operates based on an algorithm undermines human judgment, which is the primary criterion for assessing the principles of necessity, proportionality, and legality of the use of force. Furthermore, the use of LAWS in the absence of a clear and enforceable legal framework creates a significant accountability gap, as it is impossible to attribute responsibility to a machine without legal personality. Additionally, responsibility is fragmented among actors such as the commander, operator, cooperation, designer, and government, weakening existing frameworks for attributing individual and state responsibility and making it difficult to attribute unlawful killings. Therefore, in the absence of meaningful human control and clear international legal frameworks to regulate LAWS, their use outside of armed conflict is incompatible with the IHRL principles and poses a serious threat to the effective protection of human dignity and the right to life. As a result, leads to arbitrary deprivation of life, because the current IHRL framework is not sufficient to adequately regulate the use of LAWS.

4.2 Recommendations

First, it is suggested that states have an obligation to prevent the complete delegation of life and death decisions to LAWS, and any decision to use lethal force must be under effective and meaningful human control.

Second, all domestic and international laws must be updated, or new laws must be enacted to accurately and clearly define the conditions for the use of lethal force and regulate the use of LAWS in order to prevent arbitrary actions.

Third, states must ensure the attribution of responsibility at all stages (design, development, deployment, and use) and establish effective mechanisms for investigation, monitoring, and accountability to prevent accountability gaps.

Fourth, Since this weapon, due to its lack of human judgment and understanding of the context, is unable to comply with LWAS principles in the use of lethal force, such as necessity, proportionality, precaution, and legality, its use in peacetime, especially in the areas of law enforcement, counterterrorism, and border control, should be severely restricted and prohibited to prevent arbitrary deprivation of life.

Fifth, LAWS operate based on artificial intelligence, so these systems must be auditable and explainable, and their decisions must be traceable and legally assessable to assign responsibility.

Sixth, the prevention of arbitrary deprivation of life and protection of the right to life without any exception should be the primary duty of governments, and any use of new technologies should be in accordance with principles of IHRL, such as necessity, proportionality, precaution, and legality.

All in all, to ensure that the right to life is not arbitrarily denied and human dignity is preserved in the event of the use of LAWS, the role of humans in decision-making must be preserved, legal frameworks must be strengthened or new laws enacted, and accountability must be effectively guaranteed.

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