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Autonomous Weapons: A Future Consideration for the International Court of Justice

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Abstract: The jurisprudence of the International Court of Justice is instrumental to one's understanding of the body of International Humanitarian Law in the contemporary context. This holds true despite the Court's relative silence on recognised principles of International Humanitarian Law and other pertinent matters until its landmark case in 1996 which is the advisory opinion given on the Legality of the Threat or Use of Nuclear Weapons. The Court's significant finding—that the principles of International Humanitarian Law are applicable to the use of nuclear weapons—resonates with the intention of this work, which will explore the impact of autonomous weapons on these very principles and argue that, in the future, the Court's attention and efforts will be needed to rule on the legality of the use of such weapons.

The rise in the use of autonomous weapons in international and non-international armed conflicts is thoroughly evidenced by records of the use of force over the last decade. These weapons have become an integral part of the military-industrial complex of the states employing them, and international efforts to reach a consensus on their regulation have already begun. The very nature of autonomous weapons, which confer the capacity for autonomous decision-making on weapon systems by removing the need for human intervention and/or supervision, has given rise to the much-debated 'responsibility gap.' The increasing frequency of the use of these weapons, strengthened by software capable of data collection and orientation, and feeding such data to features like automated target recognition, raises legitimate concerns about the ability of autonomous weapons to comply with the aforementioned principles of International

Humanitarian Law. This concern is further compounded by the lack of international regulation of these weapons and the challenges in establishing individual criminal responsibility due to their autonomy in the use of force. The ability of these weapons to adhere to the conditions laid down in Additional Protocol I has not yet been conclusively established.

In this context, it is proposed that the International Court of Justice must look to the future by addressing this emerging technology as a tool of warfare. The Court could exercise its jurisdiction either through contentious cases or by rendering an advisory opinion to provide its views on the place of autonomous weapons in the framework of International Humanitarian Law and whether their prohibition should be contemplated, particularly in view of the very nature of such weapons that will exclude human decision making from their operation. It is an opportunity for the Court to act pre-emptively as these weapons are yet to become an absolute and total replacement for human combatants and such an anticipatory action is necessary before those goals are achieved.

Keywords: Autonomous Weapons, International Humanitarian Law, International Court of Justice

1 Introduction

When the Israel Aerospace Industries (IAI) launched its IAI Harpy, the world saw a weapon that could trace, select, and engage targets on its own, removing the human element from lethal engagement, and thus giving primacy to a machine to decide on the life and death of humans in a conflict zone ('Israel Aerospace Systems HARPY loitering munition', n.d.). Designed to be airborne over extended periods of time and surpassing the capabilities of human pilots, the Harpy would continue to exercise autonomy over its critical functions, such as target selection and engagement, without the need for human intervention. This ability presents its users with an autonomous weapon that would distort the conventional form of armed conflict. The definition of autonomous weapons and the concept of autonomy in weapon systems will be discussed in the course of this paper. At the outset it can be stated that autonomous weapons are rapidly becoming an essential tool of modern warfare and their very nature calls into question their compatibility with the conventional laws of armed conflict or *jus in bello* (Crootof, 2015, p. 1840). The etymology of the term "autonomous" lies in the two Greek words, 'autos (αυτός)' meaning 'self', and 'nomos (νόμος)' meaning 'law', evokes the very notion of self-governance, and confers upon these weapons a sense of ontological behaviour that would invariably question the role of the human operator and the extent of human control in their use (Krishnan, 2009, 43).

Given that autonomous weapons would allow machine autonomy to dictate compliance with rules of engagement that could result in critical and intimate decisions, such as kill strikes in a battlefield, the very nature of these weapons poses a serious challenge to the contemporary application of the rules of war *(jus in bello*) to armed conflict. The relationship between the normative rules of war and the autonomy of autonomous weapons forms the bedrock of this paper. It attempts to present its findings from a doctrinal and an interdisciplinary research standpoint. The purpose of this paper is to contemplate this requirement in the context of International Humanitarian Law (IHL) by invoking the advisory jurisdiction of the International Court of Justice (ICJ) as to whether the present body of the principles of IHL can co-exist with the nature of autonomous weapons. As the ICJ is the apex international court of law, its ruling on the legality of the use of autonomous weapons within the framework of IHL would carry

substantial persuasive value. This work attempts to address three consequential questions: How does the use of autonomous weapons impact the normative framework of IHL? Should the ICJ approach this specific class of weaponry, in light of the absence of a ban against it? Would the ICJ adopt an approach similar to the one found in the *Nuclear Weapons Opinion?* What would be the consequences of such an interpretation?

The limitation or removal of human judgement from a process that culminates in the use of lethal force against other humans would pose a serious challenge to the present understanding and applicability of the principles of IHL to situations of armed conflict. The ICJ has once before delivered a ruling on the legality of a specific class of weaponry in its advisory opinion on the legality of the threat or use of nuclear weapons (*Legality of the Threat or Use of Nuclear Weapons*, 996). When one looks at the nature of autonomy in autonomous weapons and their relationship with the principles of IHL, one is left with the question as to whether these weapons are capable of complying with IHL, a question that would be efitted by an advisory ruling by the ICJ. Such an endeavour proposes several pertinent questions. Does the use of autonomous weapons pose a positive or negative effect on the preservation of IHL? One may be confronted with a dilemma when confronting the advantages of autonomous decision making in a weapon system such as speed and accuracy against reduced or elimination of human judgement and control from target engagement in a battlefield, leaving them with a valid question of whether *jus in bello* have been altered for the better or worse (Güneysu, 2024; Schmitt, 2005). Can the operational complexity of autonomous weapons replace human perception and judgment in the face of the realities of battle? The ICJ ought to approach autonomous weapons precisely for this reason, as they give rise to a question of legality of their use in terms of *jus in bello* and question the ability to comply with these rules. In order to effectively understand the relationship between IHL and autonomous weapons, one must comprehend what an autonomous weapon is and what the concept of autonomy in a weapon system means before considering how rules of war may be affected by these weapons. The work then considers how the ICJ might approach the question of autonomous weapons in the face of the need to comply with IHL.

2 Autonomous Weapons

In light of the question of compatibility of autonomous weapons with the rules that govern the conduct of hostilities between belligerents, it becomes imperative to understand the nature of autonomous weapons and to identify their attributes that are the determinant factors. An instructive starting point can be found in the interpretation by the US Department of Defense (DOD). They lay out the key constituents of a weapon system that could be considered autonomous and define autonomous weapon systems as:

> A weapon system that, once activated, can select and engage targets without further intervention by a human operator. This includes human-supervised autonomous weapon systems that are designed to allow human operators to override operation of the weapon system, but can select and engage targets without further human input after activation (DOD, 2012, pp 13-14).

This description has been of persuasive value for the task of defining these weapons, which has seen a plethora of attempts by both the scholarly and international communities. The offensive capability is a standard identifying characteristic of a weapon system (McClelland, 2003). Such offensive capability is a secondary consideration when the weapon possesses autonomy over its core functions such as target selection and engagement without the need for human involvement. Therefore, autonomous weapons could be identified through their autonomous capabilities rather than their lethality. A more relevant characterisation is the ability of a weapon system for "...self-direction, some form of machine learning and adaptability or emergent behaviour" (Vries, 2023, p 45), which would therefore be evidence of autonomy. This sentiment is echoed by the DOD and has shaped the debate around a commonly acceptable definition of autonomous weapons.

States such as Israel, the UK, China, and the USA are significant stakeholders in the debate surrounding the need to formulate a regulatory instrument pertaining to the use of autonomous weapons due to their comprehensive military industrial complexes and their extensive investments in autonomous weapons (Scharre, 2018, 184; Taddeo & Blanchard, 2021, pp 7-10). Israel has placed much emphasis on the presence of human

control in the operation of any weapon system, which would consequently negate the existence of true autonomy in weapons, while the AI in Weapon Systems Committee for the House of Lords adopted an approach similar to the DOD where autonomous weapons were described as, “Systems that, once activated, can identify, select, and engage targets with lethal force without further intervention by an operator” (Taddeo & Blanchard, 2021, pp 7-10). China has proposed that an autonomous weapon system could possess advanced autonomy in its operational mechanisms as long as such autonomy is subject to human control with procedures in place for overriding functions in cases of non-compliance with IHL (Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, 2023).

The reference to a higher level of autonomy is crucial to understanding the complexity that surrounds the nature of autonomous weapons as it dictates much of their legality. Wagner (2013) has stated that the absence of the need to depend on human judgement and/or authorisation to proceed with target selection and engagement and its ability to adapt to a dynamic situation in an armed conflict, demonstrating an independence from its base programming resulting in machine-learning and situational cognisance are strong evidence of a weapon system possessing such an advanced degree of autonomy. Crootof and Seixas-Nunes (2022) both alluded to operational complexity in these systems that allow target selection and engagement without the need for human intervention, while NATO referenced “situational awareness” as an indicator of a weapon system being autonomous Taddeo & Blanchard, 2021). The commonality of the reference to anthropomorphic behaviours through the exercise of autonomy embedded in these weapons highlights the interdisciplinary tensions between technological elements and the normative framework of *jus in bello*. If one is to understand the results of this engagement, it is critical to question the concept of autonomy in the context of autonomous weapons and how it determines their nature.

3 Autonomy

A roboticist's view on autonomy is essential to understanding the extent of autonomy present in a weapon system and the capacity allowed for human control. A variety of determinant factors, such as how the machine responds to evolving situations that require it to adapt and execute functions unperceived by its base algorithmic command structures, and the extent of its dependence for human authorisation to carry out these tasks, all point to the fluid and dynamic nature of its autonomy. The relevant literature approaches the concept of autonomy through the use of diverse terminology. The DOD has identified autonomy in the form of levels. Scharre (2018) stated that dimensions of autonomy are present in systems that may be independent of one another (Crootof, 2015; Unmanned Systems Integrated Roadmap, 2014). A common operational structure that may be found in autonomous weapons is the existence of the OODA loop (Observe, Orient, Decide and Act) and the OOSA loop (Observe, Orient, Select and Act). These decision-making processes are an instructive insight into the complexity of autonomy that may be present. OODA and OOSA command loops represent autonomous decision-making processes where the weapon uses the human operator's instructions only as a guidance for its actions and where the weapon presents the human operator with optimal courses of actions for selection (McFarland, 2015; Seixas-Nunes, 2022). The OODA loop allows the weapon to observe a battlefield, gather intelligence, orient and analyse such data, and autonomously decide on an appropriate course of action based on the received data, and execute such action without the human operator being involved. OODA loops present a higher level of autonomy than OOSA loops which allow the weapon to present an array of choices of action to the human operator and then for them to decide on the appropriate lethal response (McFarland, 2015; Seixas-Nunes, 2022).

These loops employ an operational structure that effectively anthropomorphises a non-human combatant in the field where, akin to its human counterpart, the autonomous weapon would observe the surrounding battle terrain, orient or analyse the data, apply an array of applicable courses of action, either pre-programmed or machine-learned to the available data, and then finally decide on a course of action (Marra & McNeil, 2012; McIntosh, 2011). Emulating human decision-making processes warrants

a higher level of autonomy. These levels could vary between each stage of loops which could allow weapon systems to render the 'Act' component fully autonomous, thereby removing human judgment from a potential act of lethal engagement on the battlefield (Crootof, 2015). Even if human judgement may not be removed *in toto* from the execution of the decision cycle of the weapon, one may still see that the weapon identifies and selects targets for human authorisation. It could even make such authorisation easier by assigning priority levels for such targets, demonstrating again non-human yet autonomous elements in critical combat decisions (DOD 3000.09. *Autonomy in Weapon Systems*, 2012).

This process can be contrasted to human-on-the-loop decision cycles where the human operator has oversight and overriding ability over the critical functions of the semi-autonomous weapons, such as target selection, the level of lethality, and lethal engagement (Seixas-Nunes, 2022). It has been observed that the human operator who is supervising the decision cycles may not fully comprehend the real-time processes due to their complexity ('Joint Doctrine Publication 0-30.2 Unmanned Aircraft Systems', 2017). This drawback may not necessarily reduce the remoteness of the human element from battlefield decisions, thereby risking the compliance of the use of the weapon with *jus in bello*. There exist decision cycles that completely remove all their stages from human input or oversight, save for safety mechanisms such as kill switches (Seixas-Nunes, 2022). These human-out-of-the-loop cycles:

> Prosecute an attack based on a code that enables an independent (i.e. not pre-determined) decision-making process without direct human input. This includes the detection and targeting as well as the firing decision, wholly independent from immediate human intervention (Wagner, 2011, p 159).

These systems that may be taken as evidence of the highest level of autonomy in the present context could be equipped with machine-learning algorithms, giving them adaptive capabilities to environmental uncertainties and changes that go beyond their base programming (Boulanin, 2016; Hua, 2019).

The impact on the normative framework of IHL and the legality of autonomous weapons in such context has a correlational nexus with the extent of autonomy and the allowance given for human control. An increase in remoteness of the human operator to

the critical functions places the requirement of compliance with *jus in bello* directly on the weapon's autonomous capacity to execute an anthropomorphic role in an armed conflict. The much debated responsibility gap adds an additional layer obscurity to the overarching question of whether autonomous weapons have an adverse impact on IHL. The constitution of a criminal offence in most cases needs the physical element (*actus reus*) and the mental element (*mens rea*) on the part of the perpetrator (Bo, 2021; Matthias, 2004). The question of accountability or the responsibility gap comes to the fore when machine autonomy dictates the physical manifestation of the conduct, rather than the mind of the human operator. One would have to ascertain the extent of meaningful control on the part of the operator over the lethal output of the weapon in order to establish their criminal responsibility for any crimes committed through the autonomous weapon (Bo, 2021; Matthias, 2004; Roff & Moyes, 2016). The co-existence of IHL with autonomous weapons being deployed in armed conflict is essential to determining whether the ICJ is required to rule on this instrument of modern warfare.

4 The Relationship Between Autonomous Weapons and IHL

The lethality of the offensive output of an autonomous weapon is a secondary consideration in light of the principal concern, which is the lack of or reduced capacity of human involvement and the tethered issues of accountability that arise due to that very nature. The question of the legality of the use of these weapons rests more on the nature of their execution rather than their firepower, as the latter is a consequence of the former. It is therefore, prudent to identify the aspects of the normative framework of IHL that may be affected by the use of autonomous weapons. Customary international law of IHL provides for the general principles that should guide the use of weapons in the conduct of hostilities, wherein those weapons should not, by their nature, cause superfluous injury or unnecessary suffering and should not be indiscriminate. These norms are expressed in the Additional Protocol I to the Geneva Conventions under Articles 48, 51(5), 57(2)(b) and 35(2) and provide the normative framework in which the weapons ought to be used in armed conflict.

Autonomous weapons present strides in technology employed in remote warfare, which has been of great appeal to military commanders throughout history (Fleck & Bothe, 2010; Greenwood, 2010; Seixas-Nunes, 2022). Concerns rise over the reduced capacity for human control in the animus of such weapons that can determine a lethal strike in the battlefield and are fast constituting a shift away from conventional military arsenals (Alston, 2010). *Jus in bello* are greatly determined by the tense relationship between the requirement of military necessity and the conducting hostilities in a humane manner (Schmitt, 2011). There have been examples of the use of autonomous weapons in recent and ongoing conflicts. A Russian general was geolocated and killed on 01 May 2022 with the suspect weapon being a US HIMARS, an autonomous weapon (King, 2024, pp 3-4). Israel has deployed weapons powered by application programme interfaces such as Lavender and Gospel to geolocate Hamas personnel and to execute attacks on their homes (‘“Lavender”: The AI machine directing Israel’s bombing spree in Gaza’, n.d.; ‘“The Gospel”: how Israel uses AI to select bombing targets in Gaza’, 2023; ‘“The machine did it coldly”: Israel used AI to identify 37,000 Hamas targets’, n.d.). These advances in technology have to be measured in the context of this relationship. In the absence of a regulatory framework (‘Report of the 2018 session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems’, 2018), the parties that are obligated by API to investigate and prosecute the commission of war crimes potentially face a dilemma in relation to the use of autonomous weapons (Schmitt, 2012). This lacuna is a significant concern to any hypothesis that would advocate for the legality of autonomy in the present regime of IHL. However, the Group of Governmental Experts (GGE) created by the contracting parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons does meet annually in order to form a consensus on the regulation of lethal autonomous weapons. How do autonomous weapons, notwithstanding the above, fare against the application of the aforementioned principles of IHL?

In respect of the principle of proportionality, which requires military strikes to be conducted in a manner that would not cause excessive harm to civilian life or infrastructure has no universally applicable mathematical formula to that could be used to guide such attacks, it introduces an element of subjectivity to individual operations based on intended military objective and intelligence gathered from the battlefield

(Holland, 2004; Noll, 2013). The question remains whether such intimate and dynamic information can be configured into the operational algorithms and command cycles that drive autonomous weapons with varying degrees of human control. The qualitative assessment whether or not an autonomous weapon would be required to compute and reconcile with its commanding operational structure in the face of civilians participating in hostilities and civilian infrastructure used as military outposts is difficult to predict at the stage of design. It is completely at the mercy of the autonomy in the case of machine-learning algorithms which all lead to a serious question as to whether these weapons can legally handle such situations (Van Den Boogaard, 2015). Even if strategies such as Circular Error Probability (CEP) or the Collateral Damage Estimation Methodology (CDEM) which can be defined as a "a body of joint standards, methods, techniques and processes to conduct collateral damage analysis and produce collateral damage estimates," where it assists military strikes by aiding assessment of resulting in collateral damage, are coded into the mission-specific or general operational algorithms of the software that guides the autonomous weapon, the execution of those tests would be dependent on the interpretation of the target and environment data on the part of the weapon (Nelson, 1988; 'No-Strike and the Collateral Damage Estimation Methodology', Chairman of the Joint Chiefs of Staff Instruction, 2012; Seixas-Nunes, 2022; Wagner, 2014). If the command loop excludes humans or places humans on an oversight capacity, one is looking at a complete or partial robotisation of military strikes that have to balance between achieving military objectives and conforming with the principle of proportionality.

The principle of distinction, another branch of the parental norm against indiscriminate attacks, would require the use of an autonomous weapon to achieve mission objectives only against military targets by sparing civilian targets (Schmitt, 1999). AP I defines military objectives as being limited to:

> those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage (Article 52(2), Protocol Additional to the Geneva

> Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977).

Thus, the deterministic algorithms that already have predetermined operational parameters and identified responses or the machine learning algorithms that have real-time impact on the operational state of the autonomous weapon should, in theory, be able to comply with the aforementioned distinction. In the face of the potential violation of this obligation and causing harm to civilians, the weapon's autonomy would be required to determine the validity of the object that is to be engaged lethally in the context of the military objective. Such calculations and interpretations may be done without human judgement, depending on the pertinent command loop. The complexity increases in the context of machine-learning algorithms rewriting the preset mission parameters in the face of dynamic changes in the battlefield and still ensuring the weapon's lethal output conform with IHL.

The lack of accessibility to the black box shielding given to the algorithmic command structures of these weapons which prevent post-strike investigations to assess the legality of a particular strike, presents another concern in the use of autonomous weapons (Pasquale, 2016; Seixas-Nunes, 2022). Inability to access or comprehend the exact nature of the operational structure involved in a military strike could pave way for the more troubling questions of accountability (Boulanin, 2016).

Balancing the aforementioned concerns against the advantages of technologically advanced weapons such as reaction speeds and precision of strikes (Schmitt, 2005), unhindered by manual control of slower humans, is key to any regulatory framework that may govern these weapons. A compelling argument could be made to justify using these weapons in an armed conflict based solely on the military advantages they bring to the equation such as speed and protection for the human operator (Seixas-Nunes, 2022). It is pertinent to bear in mind that the conformity with IHL should be one of the primary considerations of the use of these weapons. It may be illustrative to highlight the attitude of the ICJ in this regard prior to considering its role in this context. ICJ stated in its *Nuclear Weapons Opinion*:

> The cardinal principles contained in the texts constituting the fabric of humanitarian law are the following. The first is aimed at the protection of the

civilian population and civilian objects and establishes the distinction between combatants and non-combatants; States must never make civilians the object of attack and must consequently never use weapons that are incapable of distinguishing between civilian and military targets (*Legality of the Threat or Use of Nuclear Weapons,* 1996, para. 78).

5 A Future Consideration for the ICJ

The dictates of the ICJ, particularly in its *Nuclear Weapons Opinion*, showed the Court's first foray into questions of legality surrounding the use of a specific class of weapons in the context of their compatibility with the normative framework of IHL. This judicial venture was after a period of relative silence on matters generally related to IHL, in which the jurisprudence emanating from regional tribunals such ICTR and ICTY (International Criminal Tribunal for Rwanda and International Criminal Tribunal for the Former Yugoslavia) dominated (Greenwood, 2022). A compelling argument can be made to propose an exercise of its contentious or advisory jurisdiction in the case of autonomous weapons, as the *Nuclear Weapons Opinion* amply demonstrates the Court's analysis of the nature of the weapon in question and its ability to co-exist with *jus in bello*. Unlike the case of nuclear weapons, where their lethality impacts compliance with IHL, the absence or limitation of human control in the use of autonomous weapons risks distorting the rules that govern the hostilities between belligerent humans, where autonomous decisions can decide on taking lives in armed conflict. Given the ICJ's views on nuclear weapons, could one expect anything different or substantial in respect of autonomous weapons?

In its relatively short advisory opinion, the International Court of Justice has made express reference to the nature of the nuclear explosion, with emphasis on the constructs of such a weapon and their impact on the armed hostilities to conclude that *inter alia*, customary or conventional international law does not expressly prohibit the threat or use of nuclear weapons. The Court stated that the threat or use of nuclear weapons should be compatible with IHL, that the use of these weapons would generally be contrary to such norms, and finally that it cannot rule on its legality in exceptional cases such as extreme cases of self-defence, where the survival of the victim state is at

stake. Another criticism lies in the Court exposing a lacuna in the law due to the nature of nuclear weapons, their incompatibility with IHL, and not adequately addressing the gap in the legal norms in question (Aznar-Gomez, 1999). An exceptional case of that nature is resonant with an act of aggression using weapons of mass destruction. The normative framework of IHL would have benefited immensely with a definite ruling on the use of these weapons. The conclusion that these weapons would not conform to the rules governing warfare should have been sufficient reason to add an express prohibition to their use, especially in light of the absence of such a prohibition. This was reflected critically in the dissenting opinion of Justice Weeramantry, where he questioned the court's inclination to consider a *lex ferenda* (law that ought to be but yet not enacted) and not *lex lata* (law as it exists) (08 July 1996). However, it is perplexing that the dissenting judge had opined in the principal advisory opinion that the threat or use of nuclear force should conform with IHL, when the very nature of those weapons precludes such a possibility. The only recorded event of the use of nuclear weapons is cogent evidence of their inability to conform to *jus in bello*, which should have acted as serious propellant for the ICJ to produce a definite ruling on the pertinent question (Wellerstein, 2020).

The ICJ ought to take into account the asymmetrical shift in the balance of military power that the introduction of autonomous weapons brings into the equation, which as seen earlier, envisages decisions made on life and death by non-human entities (Geiß, 2006). The The International Court of Justice further needs to be cognisant of the fact that the very nature of its operational complexity would make the task of investigating and adjudicating an impugned military strike impossible or simply subject to various extralegal limitations that stem from the military industrial complex (Kovach, 2014; Pelopidas & Renic, 2024; UNIDIR, 2017). The appreciation of characteristics unique to the animus of autonomous weapons is no guarantee of a definite ruling on the part of the ICJ on their compatibility with IHL. This was the case in *Nuclear Weapons Opinion* where the Court observed that those weapons are "scarcely reconcilable" with such requirements but still went on to determine that it "does not have sufficient elements to enable it to conclude with certainty that the use of nuclear weapons would necessarily be at variance with the principles and rules of law applicable in armed conflict in any circumstance" (*Legality of the Threat or Use of Nuclear Weapons*, 1996, para. 95).

Despite the differences in concerns that surround both these types of weaponry, it is prudent to be mindful of the fact that a nuclear warhead, which is the lethal component of the weapon, could still find itself at the discretion of autonomous decision-making as a component of an autonomous weapon system. The sum of fears that is present in that scenario does not augur well for the preservation of the rules of warfare.

The necessity for human judgment cannot be understated in the context of remote warfare. A hypothesis of a civilian taking part in hostilities and the subtle and precise decision making that a targeting autonomous weapon would be required to perform is illustrative of this point. The intimate distinction of assessing the combatant nature of a civilian would require more critical processing than the accepted advantages of speed and accuracy of lethal strikes without the need for human intervention. How can the targeting software of the autonomous compute the change in the nature of the civilian's conduct? If the civilian had ceased hostilities, can the weapon appreciate the change in status of the civilian? Would it perhaps, continue to target such civilian given that it has allowed its adaptive capabilities and situational awareness to identify the civilian as a target in the first place due to their former behaviour? Can the weapon appreciate the civilian status of a compound used by combatants? Human judgement, perception, and appreciation of the dynamic nature of conflict zones are essential to ensuring legality of methods in warfare. Serious questions have to be put forth at the use of weapons that do not involve or limit such factors. The assurances will have to then lie on the premise that these subjective notions could be programmed into such weapons at the outset or those weapons are capable of using such parameters during live combat situations. (Güneysu, 2024) questions the epistemological notion of such assumptions:

> Not only is it not possible for a weapon system to feel any remorse or anxiety about the human life it ends as a result of the act of killing, but these systems also lack the capacity to reason about the meaning and significance of the human life they end. The killing of humans is therefore reduced to a simple numerical expression in an algorithm that just needs to be run without glitches and with periodical maintenance. It does not seem possible at the moment for a machine to attribute any meaning to actions such as the meaning of life and its ending, nor will it be realistic to expect that machines would be able to grasp

the gravity of the autonomously generated decision to kill and/or wound humans during armed conflicts.

ICJ would have to grapple with the considerations above in order to assess the viability of the use of autonomous weapons within the confines of IHL. If the ICJ does indeed rule in favour of the continued use of autonomous weapons, especially in the light of the expansion of technology, it would constitute a significant shift in the dynamics of conventional warfare in the exercise of decisions that decide on the life or death of the adversaries. If the ICJ rules that weapon autonomy is not reconcilable with the applicable principles of IHL, autonomous weapons would be rendered as a class of weaponry which cannot be legally used in armed conflict. The advisory opinion of the ICJ would be an imperative criterion in the future of these tools of warfare.

6 Conclusion

Technological advancements of weaponry to achieve more sophisticated and complex forms of warfare at the expense of the human element in the battlefield threatens the conventional norms that govern the conduct of hostilities. The difficulty in understanding the nature of the weapon system, removal of human judgment and discretion from vital moments in war, the questions of accountability that arise as a consequence, the absence of a regulatory framework, the political motivations of states toward this new form of weaponry, and the clear incompatibility that could exist between it and legal norms pertinent to armed hostilities are sufficient reasons to invite the ICJ to direct their attention to autonomous weapons. As seen with their attitude toward nuclear weapons, whether any definitive ruling would result from such involvement is another matter and does not bear a positive outlook. Yet, it is imperative to recognize the very nature of autonomous weapons and how the destructive capacity of a weapon is rendered a secondary consideration in light of a system that could govern its functions without the need of a human. As these weapons are being deployed in contemporary conflict situations, it becomes necessary for the judicial guardian of international law, and more specifically, the ICJ, to rule on the legality of their use.

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