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The Accountability Gap: How Autonomous Weapons Reconfigure Human Judgement in U.S. And Israeli Land Warfare

Verónica Barco Cifuentes

Law School, IE University, Madrid, Spain.
Bachelor in Philosophy, Politics, Law, and Economics.

E-mail: vbarco.ieu2024@student.ie.edu

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Abstract

Autonomous lethal weapons are rapidly reshaping land warfare by transferring the evaluative functions of selecting and engaging targets to algorithms instead of human operators. Whilst states start increasing the rate through which they explore the military advantages of autonomy, the dissemination of the decision-making roles through programmers, engineers, commanders, and machine-learning systems, is now creating an accountability gap that already established legal systems and ethical frameworks are having trouble addressing. This article will examine this problem through a comparative analysis of the United States and Israel, two states whose autonomous weapons programs have now developed into a central reference point in global debates regarding the future of regulating warfare. Their respective approaches, marked by their prompt technological integration, active development in land operation and influential defense industries, are able to offer contrasting yet complementary insights concerning the way in which autonomy shapes the relationship between human judgement, legal responsibility, and battlefield outcomes. Drawing on these case studies, the following article will examine the way in which autonomous weapons are challenging the foundational principles of international humanitarian law, including proportionality, distinction, and precautionary measures of attack, especially when deployed in high complexity, civilian-dense environments, archetypal of land warfare. It will argue how even though this type of systems complies with the required legal standards, they are still at risk of eroding human moral agency, by altering lethal decisions into automated outputs. Subsequently, after conducting an analysis of the legal, operational, and ethical implications of autonomy, this article will also evaluate the ongoing debates regarding regulations, as well as identifying their implications. Thereafter, it will conclude by proposing measures that are primarily centred on the importance of human control, transparent and tested weapon reviews, as well as clarified chains of state and command responsibility in order to ensure that the integration of autonomy into land warfare will prevail ethically defensible and legally accountable.

Keywords: Autonomous Weapon Systems (AWS), Meaningful Human Control, Accountability Gap, Land Warfare, Algorithmic Targeting, Ethical Responsibility.

1. Introduction

The rapid advance of artificial intelligence is one of the main changing agents of contemporary warfare conduct. As armed forces are increasingly integrating AI-enabled systems into their operations, the existing boundaries of human control over lethal force are progressively shifting. One of the most notable developments of the rise of autonomous weapons are the systems that are now capable of selecting and engaging targets without the need of human intervention at the moment of conducting attacks. As defined by the International Committee of the Red Cross (ICRC), as weapons that autonomously perform the critical functions of "select and attack", these systems are marking a decisive turn from previous ways of automation that merely assisted human decision makers.[1] Their emergence is currently forcing a fundamental reconsideration regarding the way in which judgement, responsibility and legality operate in battle.

This issue is particularly profound in the domain of land security, where combat unfolds in dense, unpredictable, civilian-populated environments marked by irregular fighters and ambiguous visual cues; conditions that already challenge human operators. Consequently, delegating life and death assessments to algorithms introduces new forms of uncertainty within the decision-making process. By the time autonomous systems act on their own sensory inputs, internal logic and classification models, errors can now have irreversible humanitarian consequences.

In order to move beyond theoretical anxieties, this article grounds its analysis in the two most consequential developers of autonomous land warfare systems, the United States and Israel. Their doctrines and investments, provide a unique lens into how autonomy reshapes legal responsibility and human judgment. For the case of both states, they have pioneered the integration of AI-enabled capabilities into land operations, by embedding varying degrees of autonomy into the process of targeting, surveilling, and decision-making support processes. Nevertheless, their respective approaches diverge in ways influenced by their distinct strategic pressures, civil-military structures, and operational histories. Examining these differences provides a critical insight into the way autonomy is able to interact with accountability mechanisms, ethical responsibility, as well as the decision-making made on the battlefield. By situating broader normative questions within these specific influential state practices, this article seeks to highlight how these emerging technologies are not merely technological innovations but are also catalysts for reconfiguring the human role in the use of force.

At the very centre of this debate lies a structural problem: operative legal and ethical frameworks presuppose that a human moral agent is responsible for every lethal decision. International Humanitarian Law (IHL) is built on the idea that human judgement is necessary in order to guide compliance with the principles of proportionality, distinction, and precautions at the time of attack.[2] Likewise, ethical theories also assume that the decisions that revolve in taking a life, carry intrinsic moral weight. Autonomous lethal weapons destabilize these assumptions by disseminating agency across multiple actors, such as the programmers who train datasets, engineers that design the algorithms, commanders who are in charge of deploying systems and machine-learning processes that advance in ways that not even their creators may fully predict. This results in an "accountability gap",

[1] ICRC 2014, 7–9.

[2] ICRC 2025.

where no single actor can be clearly held responsible for unlawful harm.[3]

After recognizing these accountability gaps, the necessity for a broader examination is now raised, as for the way in which existing legal and ethical doctrines respond to such disruptions. A crucial question follows: *To what extent do autonomous lethal weapons challenge human accountability and ethical responsibility in land warfare, and what regulatory approaches could reduce these risks while reserving meaningful human control over the use of force?* In the attempt to answer this question, this article will proceed in four parts. Section 2 will provide the background by tracing the evolution of autonomy in land warfare, as well as outlining the ethical and legal standards that govern the use of force. Section 3 will analyze the way in which autonomous systems are increasingly disrupting these standards, drawing on developments in the United States and Israel in order to illustrate their respective operational realities. Section 4 evaluates the current regulatory approaches enabled and proposes policy recommendations aimed at preserving meaningful human judgment and responsibility. Finally, section 5 will conclude.

2. Background

The emergence of autonomous lethal weapons is only the latest development in a trajectory that still has a long way to go regarding automating military decision making. Throughout the twentieth century, automation remained limited to guidance and targeting assistance, always under human supervision, who in the end always made the final evaluative choice. However, since the early 2000s, advances in machine learning, sensor fusion and computer vision, have given way for systems to take a larger responsibility in more complex tasks, without direct human supervision. As the International Committee of the Red Cross (ICRC) observed in its 2014 expert meeting, the defining characteristic of autonomous weapon systems is that they can independently perform the "critical function" of selecting and attacking targets, a development that fundamentally distinguishes them from earlier generations of automated technologies.[4] Consequently, this shift represents more than just a technological transformation, but also a conceptual one, as it alters the very understanding of who, or what, exercises judgment and agency in the use of force.

Considering this, the United States and Israel have been central to this trajectory. Both states started developing unnamed systems decades ago, which were initially only for surveillance, reconnaissance, and precision strikes, yet each has progressively integrated higher degrees of autonomy into land-warfare systems. In the case of the United States, the Department of Defense and certain research entities such as DARPA, have focused on autonomy as part of a larger strategy to accelerate decision cycles and maintain technological superiority.[5] Loitering munitions, developed by companies like AeroVironment, particularly the Switchblade series, demonstrate this trend: while still maintaining to some extent human involvement, they incorporate autonomous navigation, algorithmic guidance, and target acquisition assistance, in order to push the boundary that already exists between automation and autonomous action.[6] On the other hand, Israel's trajectory has developed under different strategic pressure. The recurring engagement in urban dense environments and asymmetric conflicts has steered its defense industry towards the pioneering of systems that are designed to operate rapidly and with less

[3] Human Rights Watch 2012.

[4] ICRC 2014.

[5] Clark, Patt, and Schramm 2020, 5–7.

[6] AeroVironment 2025.

exposure of personnel. One of Israel's aerospace industries Harpy and Harop loitering munitions, acknowledges that certain categories of targets autonomously strike, exemplifying the movement towards independent operational capabilities.[7] Together, the United States and Israel, can now shape the global understanding of what autonomy, in land warfare can, and concerningly might also become.[8]

These developments have continued to progress against a backdrop of ethical and legal doctrines that have struggled to keep up the pace. Considering that International Humanitarian Law (IHL), is grounded on the principles of proportionality, distinction, and precautions in attack, assumes that human beings have the ability of possessing contextual awareness as well as the moral reasoning required to evaluate the legitimate use of force.[9] The ICRC´s Customary IHL Database codifies these expectations: "The parties of the conflict must at all times distinguish between civilians and combatants." (Rule 1), "Launching an attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated, is prohibited." (Rule 14), and "All feasible precautions must be taken to avoid, and in any event to minimize, incidental loss of civilian life, injury to civilians and damage to civilian objects." (Rule 15). Yet, scholars like Noel Sharkey have repeatedly shown how current algorithmic systems continue to lack the capacity to interpret highly contextual and ambiguous cues, particularly, in civilian-dense settings of land warfare.[10] For this reason, this technological implication convolutes the compliance with the IHL, not in theory, but in practice.

Ethical considerations exacerbate these concerns. Scholars like Peter Asaro and the Human Rights Watch have stressed that delegating lethal decision making to machines risks eroding human moral agency, as well as the undermining of the dignity of those targeted.[11] Furthermore, the Royal Society's 2017 report on machine learning also adds a layer regarding arising structural worries: modern algorithms often behave unpredictably in novel environments.[12] In the case of autonomous systems deployed by the United States or Israel, this indicates that even rigorous testing could not guarantee reliable or expected behavior in the conditions of a battlefield. Therefore, when applied to land warfare, which is primarily characterized by its rapid shifting dynamics, irregular fighters and civilian proximity, these kinds of uncertainties carry complex humanitarian implications.

Regardless of their distinct technological dealership, both the United States and Israel face similar regulatory tensions. On one hand, their investments allow the reflection of their operational incentives, which are, reducing the burden placed on soldiers, accelerating targeting cycles and increasing accuracy under pressure. On the other hand, these types of innovations have heated the international debate. The UN Report of the Panel of Experts on Libya, responsible for the discussion of a possible autonomous engagement involving a Kargu-2 loitering munition, was able to prove how close already the world is regarding the stance of a more practical use of autonomous force.[13] While, at the same time, discussions continue to take place within the UN Convention on

[7] Israel Aerospace Industries 2025.
[8] UN Security Council 2021, 17–18.
[9] ICRC 2025.
[10] Sharkey 2012, 787–799.
[11] Asaro 2012, 687–709.
[12] Royal Society 2017.
[13] UN Security Council 2021, 17–18.

Certain Conventional Weapons (CCW), that reveal deep divisions over regulation despite ICRC calls for limits ensuring meaningful human control.[14]

Altogether the evolution of autonomous weapons, the technologically filled pathways that are being pursued by both the United States and Israel, as well as the tension between autonomy and already established ethical and legal frameworks, demonstrate why this issue continues to stay at the frontlines of the ongoing global security debates. The prompt advancement of these types of systems is changing the way states think about risk, force, and responsibility on the battlefield. The autonomy in land warfare is now not only an abstract concept or future scenario; it is an active, contested dynamic driven by states that are at the technological frontier. Which is why, understanding the way in which these developments challenge existing norms is therefore a crucial aspect in order to determine whether the integration of autonomy into warfare can remain both ethically defensible and legally accountable.

3. The Erosion of Accountability in Autonomous Land Warfare

3.1 The Accountability Gap in U.S. and Israeli Autonomous Weapons Programmes

The autonomous weapons programmes of the United States and Israel continue to provide a critical comparative lens that allows for the examination of how increasing degrees of machine independence are now challenging human accountability and ethical responsibility in land warfare. With both states, it can be observed the high investment in AI-enabled systems that can filter, assist, and even independently conduct the evaluative steps needed to select and engage with targets. However, neither state has yet to develop a coherent answer to the normative central dilemma: if an autonomous or AI-assisted system contributes to an unlawful killing, who can be held responsible, and on what grounds? The following analysis will show how autonomy does not eliminate accountability in a legal manner, but it does indeed erode the current mechanisms that make responsibility enforceable. The extent of this erosion is now especially evident when both the U.S and Israeli programmes are evaluated against operational, legal, and ethical standards that govern land warfare.

3.2 United States: Institutional Recognition and the Limits of DoD Directive 3000.09

In the United States, apprehensions about accountability are codified in the Department of Défense's Directive 3000.09, first issued in 2012 and revised in 2023.[15] The directive defines an autonomous weapon as one that "once activated, can select and engage targets without further intervention by a human operator", and highlights that all systems of this type should be designed to allow "appropriate levels of human judgement" in the use of force.[16] The existence of directives like such indicates that there is an institutional recognition that autonomy introduces risks that surpass traditional weapon systems. Because it acknowledges that once the function of evaluating, distinguishing, and selecting a target are passed on to algorithms, the causal chain between human will and battlefield outcomes becomes increasingly opaque and more fragmented. And, if the behaviour of the systems is regulated through machine learning processes, data annotators, engineers, commanders, and sensors, then a single, undeniable identifiable agent will cease to exist,

[14] ICRC 2022, 521–552.

[15] U.S. Department of Defense 2023.

[16] U.S. Department of Defense 2023, 2–3.

giving place to the situation that scholars define as the "accountability gap".[17]

3.3 Israel: High-Tempo Operations and the Compression of Human Judgment

As for Israel, it also faces similar, in some ways even more pronounced, challenges of accountability. By operating frequently in urban dense environments, Israeli forces have now adopted AI-assisted targeting tools that are designed to hasten the identification of potential targets. Through investigative reports, they were described as systems capable of generating vast volumes of recommended targets based on patterns in intelligence data, with human analysts formally approving strikes at the very end of the chain.[18] However, this is not "full autonomy" under definitions employed by the ICRC and the U.S. Department of Defence, both of which reserve the term for systems capable of selecting and engaging with targets without human intervention. Yet, the speed and volume of algorithmic output, can noticeably compress the cognitive space in which human judgement is exercised. In this type of contexts, the role of humans is at risk of becoming merely supervisory rather than decisional, even more so when the machine´s recommendation comes across as authoritative. Because, even if a human is the one who signs off on the final strike, the practical responsibility for the evaluation that took place in the process may have been carried out by the system itself, which raises questions as to whether accountability is preserved in substance or merely in form.

3.4 Challenges to International Humanitarian Law: Distinction, Proportionality, and Precautions

These problems become even more clear when put into context within the established principles of international humanitarian law, which supposes that human judgement is necessary to carry out lawful targeting. The principle of distinction requires that combatants are able to differentiate civilians from legitimate military objectives.[19] But computer vision systems and target recognition algorithms continue to have a hard time with ambiguous, complex, or adversarial environments, as noted by Sharkey, and depicted in technical assessments of AI´s limitations regarding object classification.[20] Autonomy has the ability to magnify the risk of misidentifying a target, especially in environments where the U.S and Israeli forces continue to operate, which are often crowded, fast moving and civilian-dense terrain in which objects can be obstructed, fighters blend in, and conventional signatures become unreliable. In the case that an autonomous subsystem misclassifies a civilian as a combatant, and the designated commander signs off on the strike based on confidence and trust in the performance of the machine, determining responsibility after the fact becomes very difficult.

Under the IHL, the principle of proportionality, codified in Article 51(5)(b) of Additional Protocol I, prohibits attacks in which the expected incidental civilian harm would be excessive in regard to the anticipated concrete and direct military advantage.[21] Proportionality presents another structural challenge. This principle demands assessing whether the expected civilian harm would be excessive relative to anticipated military

[17] Human Rights Watch 2012.
[18] McKernan and Davies 2024.
[19] ICRC, Customary IHL Database, Rule 1.
[20] Sharkey 2012, 787–799.
[21] Additional Protocol I (1977), art. 51(5)(b).

advantage.[22] These assessments depend on moral reasoning, which autonomy disrupts in two ways. First, they can be optimised in order to be able to maximise target throughput, potentially lodging a bias towards efficiency that sits uneasily with proportionality. Second, they increase the speed of the decision cycles by generating target lists faster than humans can, independently of the review conducted. In Israel, the speed in which AI-assisted targeting has been reported to generate pressure for the rapid approval in the cases of intense conflict.[23] As for the U.S, while the directive 3000.09 demands for human judgement, it lacks the definition of the depth or independence for such judgement, nor does it detail what amount of time or information is needed to conduct what is considered a lawful proportionality assessment.[24] In the case a human commander approves a machine-proposed target list, it may still be technically considered to fulfil the requirement, even if their review is effectively symbolic. Here, however, autonomy weakens proportionality without formally violating it.

The duty to take precautions at the time of attack, requiring all feasible measures to be taken to verify targets and minimize harm, is also facing similar pressures. Modern autonomous and semi-autonomous systems derive from machine-learning models, whose internal decision-making processes are often opaque, even to those who designed them. The Royal Society's report regarding machine learning describes this as the "black box" challenge: systems may perform adequately through training but may also behave unpredictably when faced with novel battlefield conditions.[25] For both the U.S and the Israeli contexts, the classification models or decision supported tools assisting in target verification, opacity makes room for genuine epistemic barriers to accountability. In the case that the internal logic of the system cannot be fully explained, it gets increasingly more difficult for investigators or courts to be able to establish whether the commanders took "all feasible precautions", primarily when certain aspects of the model's training data or assembly are classified. With the failure to appear of clear, attributable human decision making, responsibility risks dissolving into the system´s technological complexity.

3.5 Erosion of Moral Agency. Ethical Implications of Algorithmic Lethality

Beyond the IHL, practices of both the U.S and Israeli forces raise deeper ethical questions regarding moral agency. Peter Asaro, known for his work on the ethics of autonomous weapons, argues that when lethal decisions are transformed into algorithmic outputs, the moral relationship between the attacker and the attacked is eroded: humans are becoming overseers of the harm inflicted rather than the authors of it.[26] Human Rights Watch, similarly, warns that autonomous weapons could potentially reach the point of degrading the moral weight of decisions to kill by creating a larger gap between the human and the lethal outcome.[27] In Israel, critics of AI-assisted targeting argue that human review risks becoming procedural rather than substantive. In the same manner, in the U.S, the operational appeal for a faster and more precise system, is risking the institutionalization for a preference of machine-influenced decision pathway, over a slower, human-centred deliberation. For both cases, autonomy is reshaping not only the way in which decisions

[22] ICRC, Customary IHL Database, Rule 14.
[23] McKernan and Davies 2024.
[24] U.S. Department of Defense 2023, 2–3.
[25] Royal Society 2017.
[26] Asaro 2012, 694–700.
[27] Human Rights Watch and Harvard IHRC 2012, 2–6, 30–34.

are made, but also what it means for humans to be held accountable as moral agents on the battlefield.

3.6 Fragility of Existing Accountability Structures

Yet, the analysis should not overstate the collapse of accountability. Both the United States and Israel maintain formal structures of responsibility. International law keeps holding states accountable for the choice and use of weapons. Additionally, domestic military law, in both of the respective contexts, issues the responsibility to commanders and operators. As for the United States, it conducts the legal review of weapons under Article 36 of Additional Protocol I (even though the U.S is not an established party, it treats this as customary), and as for Israel, it asserts that human officers are still who remain responsible for approving every strike.[28] Nevertheless, what ensues from the comparative analysis is that autonomy stretches these frameworks to their very breaking point. They suppose a level of human understanding, foresight, and control that in some cases, may no longer exist in practice when algorithms filter information, generate target lists, and especially when they select targets. As autonomy increasingly reshapes the structure and sequencing of lethal decisions, the more fragile the human link progressively becomes.

3.7 Comparative Findings: How Autonomy Reconfigures Responsibility

Taken together, both the U.S and Israeli experiences are able to demonstrate that autonomous lethal weapons are now challenging accountability and ethical responsibility, not by getting rid of them, but by hollowing out the substantive mechanisms through which they operate. They debilitate the ability to trace casualty, dilute the moral agency of human operators, and complicate the application of core IHL principles. As much as internal policies like the U.S Directive 3000.09 or the Israeli guarantees of an extent of human oversight are important steps that are trying to maintain meaningful human control, they continue to stay fractured, bound by territory, and insufficiently resilient to close the accountability gap. As such, autonomy challenges human accountability to a significant degree: it does not remove humans from the loop in its entirety, but it does make their role less considerable, more constrained, and at times more symbolic rather than substantive.

Altogether, these findings make clear that relying on the already established internal guidelines, even though well-intended, is not enough to attempt to close the accountability gap. Instead, what is needed is a framework of internationally recognized constraints that govern the way in which autonomous systems are designed and deployed, in order to ensure that human responsibility remains the core of every decision regarding the use of lethal force. Without such externally validated limits, accountability is still at risk of becoming increasingly procedural rather than substantive. Which is why it is imperative that the subsequent policy discussion builds.

4. Closing the Accountability Gap: Policy Failures and Paths Forward

4.1 Structural Weaknesses in U.S. and Israeli Approaches to Autonomy

By assessing critically, the approaches of the U.S and Israel towards autonomous weapons, it is evidenced that the regulatory landscape shows partial advances but persistent structural gaps. For both countries, they have the ability to recognize that autonomy reinforces the existence of distinct legal and moral risks, yet their policies persist being constrained by domestic priorities and

[28] Lawand 2006.

technological optimism. As autonomy outpaces governance, internal guidelines fail to ensure meaningful accountability. Thus, understanding why existing approaches keep falling short, is crucial at the moment of identifying more robust and forward-looking solutions.

4.2 The United States: Between Ambition and Ambiguity in DoD Directive 3000.09

For the United States, its principal regulatory instrument, the Department of Defence Directive 3000.09, is demonstrating a genuine attempt to try to manage the risks that autonomy entails.[29] Its emphasis on predictability, rigorous testing, and "appropriate levels of human judgement" points out to the current institutional awareness that exists towards how algorithmic systems cannot replace human responsibility when considering the use of force.[30] Therefore, these strengths coexist with two main weaknesses. The first being that the directive´s language remains deliberately open-ended. By staying away from precise and clear definition of what adequate human judgment actually accounts for, it effectively delegates interpretative authority to commanders and individual programmes, a type of approach that is ill-suited for technologies that diffuse decision making. And the second being that the directive is essentially inward-looking. It does not provide either transparency or normative guidance for the larger international community. As for the ICRC, it has warned that by themselves, national policies cannot provide satisfactory levels of humanitarian protection at the time autonomy in target selection and engagement has global implications.[31]

4.3 Israel: The Illusion of Control in High-Tempo Algorithmic Targeting

Similarly, Israeli officials regularly maintain their position that human operators are the ones that approve every strike, even in the cases where AI systems generate extensive target recommendations.[32] This commitment represents a clear intention to try to anchor responsibility to human judgement. Yet, investigative reporting also suggests that in high-tempo urban conflicts, in which AI systems are producing target suggestions at a scale, the practical space that remains for human evaluation significantly shrinks.[33] In this context, the human reviewer may be presented with algorithmically filtered outputs whose internal logic is very challenging, if not impossible, to be able to interrogate. Additionally, the ethical concerns highlighted by Asaro concerning the displacement of moral agency becomes crucial here: although the human operator might have been the one to formally authorize the strike, the evaluative steps that underpin the decisions, have been already shaped by an opaque machine learning system.[34] As such, the Israeli model alleges for accountability without necessarily ensuring it.

4.4 The Limits of International Governance Under the CCW

At the international level, governance mechanisms continue to be even more limited. Negotiations held within the UN Convention on Certain Conventional Weapons (CCW) are stalled by disagreements raised over definitions and the degree of acceptability of autonomous weapons. Some states argue in favour of a ban, while others favour regulation; nevertheless, the more technologically advanced states seem to prefer

[29] U.S. Department of Defense 2023.
[30] U.S. Department of Defense 2023, 2–3.
[31] ICRC 2014, 10–11.
[32] McKernan and Davies 2024.
[33] McKernan and Davies 2024.
[34] Asaro 2012, 694–700.

non-binding guidelines.[35] This impasse perpetuates the ambiguity surrounding what are the forms of autonomy that should be permissible. Moreover, the ICRC´s call for there to be limits on autonomy when regarding "critical functions", which is the independent selection and engagement of targets, continues to remain as one of the few widely endorsed proposals, yet without there being a formal adoption, it works more as moral guidance rather than as enforceable constraint.[36]

4.5 Why Current Policies Fail: Opacity, Tempo, and Diffusion of Responsibility

Taking this into consideration, both the U.S and Israel cases make clear that the currently enforced policies are inadequate, not because of the lack of good intentions, but because autonomy is being able to reshape the preconditions of accountability by itself. Machine-learning systems introduce epistemic opacity: their outputs might be accurate, but the reasoning of their internal systems remains difficult to reconstruct, making it more complex for investigations and legal review to take place.[37] Also, it's important to consider that autonomy also alters the tempo of decisions. Systems that accelerate the generation of targets can compress human deliberation as well, resulting in the inhibition of the independence required for assessments regarding proportionality and precaution. Furthermore, the technological complexity of autonomous systems diffuses responsibility across multiple actors, such as designers, testers, commanders, and operators, none of whom meet the existing legal criteria for there to be an individual fault. These challenges continue to expose the limits that policies that rely solely on internal oversight have.

4.6 Toward an Internationally Grounded Framework for Human Responsibility

Addressing these gaps calls for externally validated standards that allow for the preservation of human judgement as the normative core of lawful force. The first step towards this is to establish definitional clarity. States must converge on a shared understanding of autonomous weapons that centres on the degree of independence in target selection and engagement. Without this, regulatory frameworks will persist to operate on assumptions based on divergence, enabling states to be able to characterise systems in a strategic manner, rather than in a substantive one.

4.7 Redefining Meaningful Human Control

On a similar degree of importance is the need for a more precise articulation of meaningful human control. Both U.S and Israeli doctrines make an emphasis on human oversight; however, they rarely specify the timing, depth or independence required for such oversight to be either legally or ethically meaningful. Meaningful control requires more than veto power, it demands time, information, and insight into machine reasoning. This is especially relevant in land warfare environments, where errors in decisions carry immediate humanitarian consequences.[38]

4.8 Transparency and Harmonised Weapons Review Processes

Transparency in the same manner plays a vital role. National weapons review, such as the emulations done in Article 36, can vary widely in both rigour and visibility.[39] While some states do not have the need to disclose classified information, having a harmonised model of

[35] CCW 2019.
[36] ICRC 2022, 521–552.
[37] Royal Society 2017, 62–67.
[38] Sharkey 2012, 792–794.
[39] Lawand 2006, 7–12.

public reporting would significantly strengthen trust and facilitate global alignment. This type of transparency would also help to identify the best practices and generate incentives for states to toughen their internal safeguards.

4.9 Engineering Accountability: Auditability and Traceability in System Design

Finally, accountability shall be engineered into the autonomous systems themselves. Features of auditability that allow for investigators to reconstruct the way in which a system processes data, either to prioritize targets, or execute a sequence of actions, are essential for there to be a meaningful legal review. Without traceable logs, investigators turn speculative, and responsibility dissolves.

4.10 Integrating Legal, Ethical, and Technical Safeguards

Altogether, these considerations focus on the need for there to be regulatory approaches that allow for there to be an integration of the legal doctrine, ethical reasoning, and technical safeguards. And, although the internal guidelines of the U.S and Israel represent meaningful steps, they remain insufficient by themselves. Ensuring that human responsibility remains central to the use of force, will require internationally grounded standards that showcase both the complexity of modern autonomy and the enduring moral imperatives that govern armed conflict.

5. Conclusion

The evolution of autonomous lethal weapons in the United States and Israel comes to show a fundamental transformation in the way that decisions about life and death are made in land warfare. What emerges from the background, analysis and policy sections is a clear realisation that autonomy does not abolish human accountability completely, instead, it alters the processes through which responsibility is exercised, assessed, and ultimately understood. As algorithms continue to develop a growing role in target identification, prioritisation, and engagement, the foundation of international humanitarian law of judgement, foreseeability, and moral agency, become increasingly strained. These pressures turn progressively more acute in the complex land environments, where mistakes in the acceleration or classification of decision cycles have direct humanitarian consequences.

Cases as the ones of the United States and Israel validate that internal safeguards, although necessary, are insufficient. National doctrines are able to articulate commitments to human oversight, but the structural effects of autonomy such as opacity, speed, and the diffusion of agency, can also hollow out these commitments in practice. The gap between intention and implementation highlights the need for policy frameworks that move beyond domestic boundaries. As evidenced in the policy analysis, ensuring meaningful human control demands for there to be internationally agreed definitions of transparent weapon reviews, unacceptable autonomy, and technical design choices that allow for decision-making to be traceable and accountable. These types of measures must not only regulate the already existing systems, but also have the ability to anticipate the trajectory in which increasingly capable and unpredictable technologies are headed.

The stakes stretch well beyond the cases of both the United States and Israel. The military remains to be one of the central pillars of the global order, and the integration of autonomy into warfare will be a factor that shapes the environment of strategies for years to come. Without instituting international standards that are coherent,

divergent national practices risk the acceleration of instability, of eroding humanitarian norms, and undermining the trust that exists between states. Nevertheless, well-informed strategies that are fixed in cooperative regulation, responsible innovation, and legal clarity, suggest a path that has an objective to harness technological change, while still safeguarding restraint and human dignity.

The future of warfare therefore not only lies in the distinct technologies' states develop, but also by the choices they make about how these technologies are governed and regulated. Preserving accountability in this era of autonomy, is not only a legal challenge, but a political and moral imperative; one that demands for coordinated action today in order to prevent irreversible consequences tomorrow.

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