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LETHAL AUTONOMOUS WEAPONS SYSTEMS:
THE OVERLOOKED IMPORTANCE OF ADMINISTRATIVE ACCOUNTABILITY

Laura A. Dickinson¹

The development of weapons systems with autonomous capabilities is reshaping modern warfare. From the longstanding Phalanx system, deployed by the U.S. Navy to automatically detect and neutralize missiles that breach a warship's protective envelope; to the Counter Rocket, Artillery, and Mortar (C-RAM) System, the U.S. Army's comparable land-based defense; to the X-47B drone that can fly by itself during takeoff and landing, the U.S. military has developed multiple weapons systems with at least some autonomous capability. Other countries have produced and deployed such systems as well, from Israel's Harpies, which autonomously ferret out enemy radar and then dive-bomb to destroy them, to South Korea's robotic sentries that protect the border.²

The use of such systems, and in particular the potential use of fully autonomous systems that can select targets among multiple options, has generated significant controversy among policymakers, activists, and legal scholars. And autonomous weapons that are lethal (LAWS) ignite the most dispute. While the creation of fully autonomous systems may be years, if not

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² For a discussion of these systems, see text and notes below.

decades away, the prospect of full autonomy and the risks of semi-autonomy have raised concerns on multiple fronts. Human Rights Watch, with their provocatively titled campaign *Stop Killer Robots!*, has advocated for a complete ban on autonomous systems.³ The U.S. Department of Defense has adopted a more moderate approach, instituting a temporary ban on lethal, fully autonomous systems, while at the same time providing policies to ensure meaningful human control over semi-autonomous systems.⁴ Multiple governments and non-governmental experts have engaged in ongoing discussions about whether existing legal frameworks for approval of such systems and for targeting are sufficient to regulate them, or whether new rules are necessary.

Critics worry that such systems could never operate in compliance with the fundamental principles of the law of armed conflict (LOAC) (also known as international humanitarian law (IHL)), including the principles of distinction, proportionality, and feasible precautions.⁵ On the other hand, proponents argue that these weapons have the capacity not only to reduce military casualties, but also conduct more precise targeting that could reduce civilian casualties as well,

³ See B. Docherty, *Losing Humanity: The Case Against Killer Robots*, HUMAN RIGHTS WATCH 2 (Nov. 19, 2012), <https://perma.cc/N77J-EASX>. For an argument for a more limited moratorium on only those Laws that are used to target human personnel, see Chris Jenks, *False Rubicons, Moral Panic, & Conceptual Cul-de-Sacs: Critiquing & Reframing the Call to Ban Lethal Autonomous Weapons*, 44 PEPPERDINE L. REV. 1 (2016).

⁴ Department of Defense, *Autonomy in Weapon Systems*, DOD Directive 3000.09, Washington, DC: U.S. Department of Defense (2012), <https://perma.cc/NLG5-ETGS>.

⁵ *Id.*

because they would rely less on human judgment and might therefore provide an opportunity for more humane warfare, stripped of the irrationality, hot-blooded decision-making, and emotional toll of the battlefield.⁶ Such weapons, according to these arguments, might paradoxically lead to better implementations of the core LOAC/IHL principles of distinction and proportionality.⁷ Still others point to the ease with which these systems can proliferate among states and non-state actors, creating new threats even as they provide increased military capabilities. For example, some have argued that the asymmetric harm such weapons can inflict flouts core principles of humanity that undergird LOAC/IHL, or that the promise of precision that such weapons offer may be overstated.⁸

⁶ See, e.g., U.N. Report of the Special Rapporteur, Heyns; M. Waxman and K. Anderson, *Law and Ethics for Autonomous Weapon Systems: Why a Ban Won't Work and How the Laws of War Can*, THE HOOVER INSTITUTION, (April 13, 2013), <https://perma.cc/C4UA-7DJN>; R. Arkin, *The Case for Ethical Autonomy in Unmanned Systems*, 9 J. MIL. ETHICS 332-41 (2010), <https://perma.cc/6K99-248D>; see also D. Cohen, *Drones off the Leash*, U.S. NEWS (July 25, 2013), <https://perma.cc/XT35-LB2H>.

⁷ For an excellent overview of the debate about autonomous weapons and a moderate approach to the issue, see J. Vilmer, *Terminator Ethics: Should We Ban 'Killer Robots'?*, ETHICS & INT'L AFFAIRS (Mar. 23, 2015), <https://perma.cc/U6QD-TMDE>.

⁸ See, e.g., M. Wagner, *The Dehumanization of International Humanitarian Law: Legal, Political, and Ethical Implications of Autonomous Weapons Systems*, 47 VAND. J. TRANSNAT'L L. 1371-1424 (2014); Docherty, "Losing Humanity."

Regardless of whether unmanned and autonomous weapons might better implement substantive LOAC/IHL principles, autonomy poses serious accountability challenges.⁹ In particular, these systems threaten the framework of individual criminal responsibility that many would argue undergirds all LOAC/IHL. From the Nuremberg trials of Nazi war criminals, to proceedings before more recently established international courts and tribunals, to domestic civilian and military prosecutions, a fundamental principle of LOAC/IHL is that human beings will be held individually responsible for egregious violations of the law of war that constitute war crimes. While such prosecutions are rare, they constitute one of the core sanctions that seek to ensure compliance with this body of law. Yet autonomous weapons pose problems for this framework. As a number of scholars have pointed out, in the case of truly autonomous systems, who will be responsible for the decision to strike?¹⁰ In many instances there may be no human being with the requisite level of intent to trigger individual responsibility under existing doctrine.

⁹ See Wagner, *supra* note 8.

¹⁰ *Id.*; J. Thurnher, *Examining Autonomous Weapon Systems from a Law of Armed Conflict Perspective*, in *NEW TECHNOLOGIES AND THE LAW OF ARMED CONFLICT* 225 (H. Nasu & R. McLaughlin eds., The Netherlands: T.M.C. Asser Press, 2014); M. Sassòli, *Autonomous Weapons and International Humanitarian Law: Advantages, Open Technical Questions and Legal Issues to be Clarified*, 90 *U.S. NAVAL WAR C., INT'L L. STUD.* 308 (2014); see also B. Keller, *Smart Drones*, *THE N.Y. TIMES* (March 16, 2013), <http://www.nytimes.com/2013/03/17/opinion/sunday/keller-smart-drones.html>.

Perhaps international criminal law could be reformed to account for such issues. Or, in the alternative, greater emphasis on other forms of accountability, such as tort liability and state responsibility might be useful supplements. But largely absent from this debate is discussion of an alternative form of accountability that often gets overlooked or dismissed as inconsequential, one that we might term “administrative accountability.” Such accountability includes multiple administrative procedures, inquiries, sanctions, and reforms that can be deployed within the military or the administrative state more broadly to respond to an incident in which a violation of IHL/LOAC may have occurred. This form of accountability may be particularly useful in the case of LAWS, because the restrictions of criminal law, such as the intent requirement for most crimes, may not apply in many circumstances. Administrative accountability is flexible both in the process by which it unfolds and in the remedies available, offering the prospect of both individual sanctions as well as broader organizational reforms.

Obviously, such accountability depends on the willingness of actors within the administrative bureaucracy to pursue such accountability mechanisms. And at times, criminal accountability or tort liability may be more appropriate. But at the very least the potential for such administrative accountability should be part of any discussion about accountability for uses of autonomous and semi-autonomous weaponry. Moreover, because administrative bureaucracies are not monolithic, simply the creation of administrative procedures to investigate and impose non-criminal discipline for violations of international norms can create a cadre of experts within the government who internalize these values and foster a culture of broader compliance.

This paper explores the idea of administrative accountability and its potential applicability to LAWS. The discussion proceeds in four parts. Part I summarizes the existing landscape of semi-autonomous weapons systems and discusses some of the types of risks that these systems pose. In this section, I also map out some potential accountability problems related to the future use of fully autonomous systems. Part II surveys multiple options for accountability in the event that semi-autonomous or fully autonomous systems are deployed in a manner that violates LOAC/IHL. In particular, I examine criminal accountability and identify the challenges of imposing this form of accountability, especially in the event that fully autonomous weapons systems are developed and used. I will also survey alternative forms of accountability that have been advocated in the literature on autonomous weapons, including tort liability and state responsibility. Part III describes some existing mechanisms of administrative accountability for incidents involving suspected LOAC/IHL violations, focusing on the United States, but including discussion of such mechanisms in Canada, Australia, and Great Britain. A brief conclusion acknowledges the limitations of administrative accountability but argues that it at least should be one of the forms of accountability that is considered when evaluating how to respond to alleged LOAC/IHL violations, especially in the context of autonomous and semi-autonomous weaponry, when other forms of accountability may fall short. Indeed, in some circumstances such administrative accountability may be all that is available as a practical matter, and we would do well to take steps to make such administrative accountability mechanisms as robust as possible rather than ignoring them altogether.

I. THE CURRENT LANDSCAPE OF AUTONOMOUS AND SEMI-AUTONOMOUS
WEAPONS SYSTEMS

What is an autonomous or semi-autonomous weapon? The debate over such weapons begins with the definition. The U.S. Department of Defense (DOD) draws a clear distinction between the two categories, defining a fully autonomous weapons system as one that, “once activated, can select and engage targets without further intervention by a human operator.”¹¹ DOD further defines a semi-autonomous weapons system as one that “once activated, is intended only to engage individual targets or specific target groups that have been selected by a human operator.”¹² By contrast, the International Committee for the Red Cross (ICRC) does not clearly distinguish among multiple categories of autonomy, instead describing an autonomous weapon as one “that is able to function in a self-contained and independent manner although its employment may initially be deployed or directed by a human operator” and that can “independently verify or detect a particular type of target object and then fire or detonate.”¹³ Similarly, the United Nations has categorized autonomous weapons as those which, “once

¹¹ Department of Defense, *Autonomy in Weapon Systems*, Directive Number 3000.09 (2012) [hereinafter DOD Directive].

¹² *Id.*

¹³ “International Humanitarian Law and the Challenges of Contemporary Armed Conflicts,” *Report of the 31st International Conference of the Red Cross and Red Crescent* (Geneva: International Committee of the Red Cross, 2011), p. 39, <https://perma.cc/ML3F-RUZB>.

activated, can select and engage targets without further intervention by a human operator.”¹⁴ Human Rights Watch focuses specifically on human involvement, classifying autonomous weapons as either “Human-in-the-Loop Weapons,” “Human-on-the-Loop Weapons,” or “Human-out-of-the-Loop Weapons.”¹⁵ Human-in-the-Loop Weapons are those “robots that can select targets and deliver force only with a human command,” while Human-on-the-Loop Weapons are “robots that can select targets and deliver force under the oversight of a human operator who can override the robots’ actions.”¹⁶ Finally, human-out-of-the-loop weapons are those “capable of selecting targets and delivering force without any human input or interaction.”¹⁷

Commentators Kenneth Anderson and Matthew Waxman have observed that, despite significant differences, these definitions “share a common view of what makes a weapon system ‘autonomous’: it is a matter of whether a human operator realistically is able to override an activated machine in the core function of target selection and engagement.”¹⁸ They maintain that an essential aspect of autonomy is the ability of weapons systems to engage in “selection among” targets. Thus, even though any weapon that does not require a human operator could be regarded

¹⁴ *Id.*

¹⁵ B. Docherty, *Losing Humanity: The Case Against Killer Robots*, HUMAN RIGHTS WATCH, 2 (Nov. 19, 2012), <https://perma.cc/N77J-EASX.u>.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ K. Anderson & M. Waxman, *Debating Autonomous Weapon Systems, Their Ethics, and Their Regulation under International Law*.

as autonomous – such as antipersonnel landmines – Anderson and Waxman would not treat them as truly autonomous because they cannot be aimed:

“Selection among” emphasizes that there is a machine-generated targeting decision made; some form of computational cognition, meaning some form of AI or logical reasoning....in today’s debates [autonomous weapons] refer to technologically sophisticated systems in which capabilities for ‘selection among’ is a design aim for the weapon, and which the machine possesses some decisional capability to ‘select and engage.’¹⁹

Anderson and Waxman further point out that while the definitions of autonomous weapons systems are typically categorical, in practice autonomy is more of a continuum. It concerns both “machine capabilities” and “limitations of both machines and human operators, interacting together.” Gradations of autonomy include different aspects of human control:

For example, intermediate automation of weapon systems might pre-program the machine to look for certain enemy weapon signatures and to alert a human operator of the threat, who then decides whether or not to pull the trigger. At a further level of automation, the system might be set so that a human operator does not have to give an affirmative command, but instead merely decides whether to override and veto a machine-initiated attack. Perhaps next in the gradation of autonomy, the

¹⁹ *Id.*

system would be designed with the capability to select a target and engage autonomously – but also programmed to wait and call for human authorization or alternatively, more sophisticated yet (perhaps into the level of science fiction perhaps not) programmed to assess possible collateral damage and not engage if it is estimated to be above a certain level.²⁰

Moreover, the degree of human control may differ depending on the scope of the system or platform, such as the number of sensor and weapon units and the degree to which those units communicate with each other and inter-connect. Anderson and Waxman concede that even without full autonomy in weapons systems, functionally those systems can become autonomous when “the human role is vanishingly small.”²¹

In the current landscape, many weapons systems, including a few types of unmanned aerial vehicles, can now function autonomously to some degree, at least under some definitions of “autonomous.” While fully autonomous weapons may still be decades away (or further, depending on how autonomy is defined), current systems deployed on land, at sea, and in the air can now operate with some degree of independence from individualized human decision-making.

In practice, militaries have deployed these systems primarily for defensive purposes, and they have retained a degree of human involvement even with regard to systems could operate

²⁰ *Id.*

²¹ *Id.*

without human participation. Recent studies indicate that more than 30 countries are using such systems to defend military vehicles and bases.²² These systems typically protect predetermined areas by detecting incoming munitions, such as mortars, rockets, or other projectiles, and then automatically responding by neutralizing the target. Governments tend to deploy them in fixed, rather than mobile, positions in unpopulated and relatively simple and predictable environments, such as at sea or in remote areas, and they typically target weapons and objects rather than persons. In most cases, the reaction time required for engagement is so short that human interaction with the machines is minimal. Often, the human being is only given a brief opportunity to accept or reject the system's choice of action before it deploys, or to override a course of action that the machine will otherwise take automatically.²³

Semi-autonomous offensive systems, which mostly consist of projectiles, tend to require a human operator to launch,²⁴ but then autonomously guide the weapon to a pre-selected target, either by relying on passive sensors that respond to signals from the environment, or by using

²² P. Scharre & M. Horwoit, *An Introduction to Autonomy in Weapon Systems*, CTR. NEW AM. SEC. (Feb. 13, 2015), <https://perma.cc/3BDX-SGW6>.

²³ These countries include: Australia, Bahrain, Belgium, Canada, Chile, China, Egypt, France, Germany, Greece, India, Israel, Japan, Kuwait, the Netherlands, New Zealand, Norway, Pakistan, Poland, Portugal, Qatar, Russia, Saudi Arabia, South Africa, South Korea, Spain, Taiwan, the United Arab Emirates, the United Kingdom, and the United States. *Id.*

²⁴ Scharre & Horwoit, *supra* note 22, at 8–10.

active sensors that send out signals and look for a signal in return.²⁵ Known as guided munitions, these projectiles can be divided into two categories: “go-onto-target” projectiles designed to hit a particular target; and “go-onto-location” projectiles designed to hit a particular geographic location.²⁶ In some cases, humans can “control, abort, or retarget” such weapons in flight, but other times the projectiles cannot be adjusted once launched.²⁷

What is the risk of harm posed by such weapons systems? The scenario of the villain who designs and deploys autonomous weapons to wreak havoc on the world may be largely the stuff of James Bond-style films and other science fiction. Yet the intentional design of such weapons systems to target civilians or inflict other harm is not the primary concern of most critics of such systems. Rather, as such systems move towards autonomy, some policymakers and scholars question whether, even if they were designed with the intent to distinguish between military and civilian targets, such systems could ever actually do so in practice. Markus Wagner, for example, has expressed skepticism that even highly sophisticated weapons systems could distinguish between an armed terrorist and a child playing with a toy gun. Applying the principle of distinction requires the kind of judgment that, he maintains, could never be programmed. Others fear that even if such judgments could be either programmed into machines or learned by them through a process of artificial intelligence (AI) and machine learning, the inherent asymmetry between

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

humans and machines, engendered by the use of such weapons systems, itself is a harm that fundamentally undermines the core principle of humanity at the center of LOAC/IHL.

Still others put aside such issues and assume that autonomous weapons systems could be capable of implementing LOAC/IHL principles such as proportionality, distinction, and feasible precautions; they observe that, even still, the use of such systems nonetheless poses multiple risks of harm. That is, even if human beings *intend* the systems to operate in a way that is compliant with LOAC/IHL, and even if the systems *are capable* of operating in such a manner, in practice the systems could still malfunction in ways that cause grievous and catastrophic harm. Probably the most comprehensive recent analysis of such potential harms appears in the report, *Autonomous Weapons and Operational Risk*, authored by Paul Scharre at the Center for a New American Security.²⁸ Scharre lays out the risks of autonomous systems, “assum[ing] that lawful employment of autonomous weapons is feasible, at least for isolated situations.” For Scharre, the central risk in employing such systems “is that the system might not perform the tasks in a manner that the human operator intended.” In particular, he notes that the deployment of systems could result in large numbers of civilian casualties, friendly fire incidents, or unintended escalation in a crisis.

Scharre’s report breaks down and analyzes the elements of operation risk in these unintended scenarios. In particular, he notes that such systems could fail and slip out of effective human control. Factors relevant to this risk include the inherent hazard of a system (such as the task being performed and the operational environment), the time between failure and corrective

²⁸ P. Scharre, *Autonomous Weapons and Operational Risk*, CTR. NEW AM. SEC. (Feb. 2016).

human action, and the complexity of the system. Scharre also discusses the risks posed by adversaries, such as hacking. Lethal systems obviously pose more risks than non-lethal systems. And the operational context is important: undersea usage or deployment in some other domain without civilians is less risky than densely populated urban areas. The time between failure and corrective action by humans would likely be affected by the degree of autonomy, with fully autonomous systems presenting the most risks because the human operator “lacks the ability to observe the autonomous system’s behavior and undertake corrective action in sufficient time if the system fails to perform appropriately.” The complexity both of the system and its environment can also increase the risk. Simpler systems will be easier to predict, while more complex systems are less transparent. Complex rule-based systems can pose significant problems due to malfunctions and bugs, system failures, lack of transparency to human operators, and unanticipated interactions with the environment (which increase based on complexity). Systems that are not rule-based but rather engage in so-called “machine learning” by evaluating and adapting to information from large datasets may pose the greatest challenge. Because such a machine’s “internal cognitive processes are vastly different from a human’s,” this “significantly complicates a human’s ability to predict how [the entity] might classify objects.”

As examples of situations in which these kinds risks can lead to concrete harm, Scharre highlights the two U.S. Patriot air defense system friendly fire or “fratricide” incidents during the 2003 invasion of Iraq. In the first instance a U.S. Patriot battery shot down a British aircraft, killing the crew when the Patriot’s automation misidentified the aircraft as an anti-radiation missile. In addition, a separate system allowing friendly military aircraft to identify themselves also failed. Yet these two factors alone were not enough to cause the fratricide. The Patriot was operating in

semi-autonomous mode and required human approval. But the human operator also made a mistake by accepting the Patriot's incorrect identification. In the second incident, the Patriot identified an incoming track from a ballistic missile later determined to be false (likely due to electromagnetic interference). Unaware the track was false, the human operators set the missile in a "ready status," to prepare for engagement, but in auto-fire, rather than semi-autonomous, mode, thereby removing the need for human engagement. Once the system was ready, the Patriot battery fired and shot down an F-18. In these cases, no one intended for the harms to occur; rather, as Scharre points out "the complexity of the system contributed to human operators' misperceiving or misunderstanding the system's behavior, in some cases taking inappropriate actions." Moreover, Scharre points out that choosing to operate complex systems in high-risk environments means that failures, even if very low-probability events, are "effectively inevitable."

II. ACCOUNTABILITY OPTIONS

The ways in which autonomous and semi-autonomous systems can fail poses challenges for dominant approaches to accountability. To begin with, not all failures result in harms that even implicate LOAC/IHL. And many incidents that could potentially implicate LOAC/IHL would not fit neatly into a paradigm of criminal accountability, especially because in many cases human beings interacting with the weapons systems would not satisfy the requisite intent requirement. For example, in the Patriot missile fratricides and the other types of complex system failures discussed above, no one intended to carry out actions in violation of LOAC/IHL, even as humans interacting with machines made mistakes that caused significant harm. For this reason, some scholars have advocated for more robust forms of tort liability in some cases. They point out that

the lower intent threshold to establish tort liability is a better fit for the kinds of harms that are likely to occur, and that tort law serves as a better mode both for providing redress and regulating the future operation of such weapons systems. Still others emphasize that the law of state responsibility is the most appropriate form of accountability in such instances. Yet these additional forms of accountability are also problematic in many instances. Here I briefly discuss the concept of accountability in general, and then assess the limitations of each form of accountability typically highlighted in the literature, before turning to what I term administrative accountability in Part III.

A. Accountability

Accountability is a term that is often used loosely without clearly specifying what it means. When incidents occur that cause harm, commentators often clamor for “accountability,” but they do not always explain precisely what form or type of accountability they are seeking. Elsewhere, I have argued that debates over the meaning of accountability can impede policy solutions to specific problems, as scholars and policymakers talk past each other.²⁹ For example, in the debate about the privatization of government functions, calls for “accountability” can range from advocacy for market-based consequences, to managerial oversight and reform, to post hoc adjudications of individual responsibility.³⁰

²⁹ L. Dickinson, *Privatization and Accountability*, 7 ANN. REV. L. SOC. SCI. 101–120 (2011).

³⁰ *Id.*

The U.S. administrative law scholar Jerry Mashaw has offered a useful taxonomy of accountability regimes.³¹ He emphasizes that the concept of accountability implies a relationship (a person or entity being held accountable to another person or entity.) And he argues that any discussion of accountability ought to include an analysis of at least six important things

[1] who is liable or accountable [2] to whom; [3] what they are liable to be called to account for; [4] through what processes accountability is to be assured; [5] by what standards the putative accountability is to be judged; and [6] what the potential effects are of finding that such standards have been breached.³²

Mashaw further draws a distinction between accountability in the domains of public governance, markets, and social relationships. With respect to public governance, in particular, he notes that accountability could take multiple forms, from political accountability through electoral processes to bureaucratic mechanisms of hierarchical control to legal regimes that “operate through the authoritative application of law to facts.”³³

³¹ JERRY L. MASHAW, *Accountability and Institutional Design, Some Thoughts on the Grammar of Governance*, PUBLIC ACCOUNTABILITY: DESIGNS, DILEMMAS AND EXPERIENCES 115–156 (M. Dowdle ed., Cambridge Univ. Press 2006).

³² *Id.* at 118.

³³ *Id.* at 119.

Mashaw's taxonomy is helpful because it brings precision to the concept of accountability, in general, and also to the specific idea of accountability within the domain of public governance, when public officials are implicated. Moreover, the taxonomy allows us to go beyond merely differentiating between forms of accountability such as criminal and tort. Criminal liability, for example, usually entails individual criminal responsibility (the "who" is usually an individual) held accountable to the people/state (the "to whom") according to rigorous procedures ("what processes") and high standards such as proof of intent ("what standards), with incarceration, a severe restriction on personal liberty, a potential result (the effects). Yet, within the arena of criminal liability, the elements of Mashaw's taxonomy could vary, as entities (rather than individuals) can in some cases be held criminally responsible, standards can fluctuate (for example, sometimes "intent" is not required to establish responsibility), and fines are a potential punishment in some contexts. Mashaw's discussion of domains of accountability is also useful because he suggests that the goals and forms of accountability may vary across these domains.

Mashaw's taxonomy enriches the debate about accountability for problems caused by the use of autonomous or semi-autonomous weapons systems, because it offers a more nuanced starting point for discussion of these issues. Mashaw's rubric helps us to see that that the use of autonomous weapons systems poses a fundamental challenge to the entire conception of accountability, because the autonomous weapons systems themselves can be causal agents that inflict harm, yet they do not fit neatly within the first box in the framework: they do not clearly qualify as a "who." The "who" could of course be the various human beings involved in the operation of these systems, but because of the autonomy of the weapons it is not clear that those human beings qualify as an

appropriate “who” either. In addition, this framework helps illumine debates about appropriate standards and effects for holding these actors to account.

B. Criminal responsibility

A large portion of the scholarship on accountability for problems caused by autonomous weapons systems focuses on criminal responsibility and its limitations. In particular, a growing body of work highlights the difficulties in holding individuals criminally responsible for uses of unmanned and autonomous weapons that lead to significant violations of IHL. For example, Markus Wagner has observed that, if these weapons can effectively make decisions such as engaging in target selection, it will be very difficult to determine which individuals to hold responsible for those decisions, let alone fit the humans’ decisions into existing doctrinal frameworks.³⁴ If a soldier is monitoring the operation of a weapon that goes on a rampage and the soldier fails to stop it, should he or she be held responsible? Or does responsibility lie with the programmer who made it possible for the weapon to act in this way? Or the manufacturer? Or possibly even the military commander who approved the use of the weapon in the first place?

In a seminal article, Rebecca Crootof explained that a significant aspect of the problem flows from the doctrine of international criminal law itself, in particular the intent requirement for

³⁴ See Wagner, *supra* note 8.

most war crimes.³⁵ War crimes usually must be committed “willfully,” which means that the accused must either act with the intent to commit a violation or act recklessly. Thus, if autonomous weapons were used to commit war crimes, a prosecutor might demonstrate the requisite intent by proving that a software engineer had deliberately programmed the weapon to target civilians, or a commander had ordered them to be used in such a manner. But Crootof emphasizes that these are the “easy cases” and instead focuses on the hard case of “whether anyone might be accountable in the more complicated situation where no individual acts intentionally or recklessly, but an autonomous weapon system nonetheless takes action that constitutes a serious violation of international law.”³⁶ Assuming “no one intended the violation or acted recklessly, no one can be held directly liable.”³⁷ Crootof does not support criminalizing negligence, however, and instead argues that civil responsibility in tort is a more appropriate mechanism of accountability in such cases than criminal responsibility.

To be sure, international criminal law does contain multiple doctrines that provide criminal accountability for participants in war crimes who do not actually pull the trigger. For example, the doctrine of command responsibility permits the imposition of liability on persons with authority over the acts of subordinates in some circumstances. In addition, the doctrine of aiding and abetting reaches those who may assist in the commission of a war crime. And the doctrines of complicity

³⁵ See R. Crootof, *War Torts: Accountability for Autonomous Weapons* 164(6) UNIV. PENN. L. REV. 1347–402 (2016).

³⁶ *Id.* at 1377.

³⁷ *Id.*

or joint criminal enterprise sweep broadly to cover all of those who may be implicated in a plan to commit war crimes. None of these doctrines necessarily requires that all participants intend to commit the war crime.

Yet as Heather Roff points out, these doctrines are premised on the notion that there is at least one individual who *does* possess the requisite intent, an observation that Crootof makes as well.³⁸ For example, under the doctrine of command responsibility, a superior can be punished for the war crime of a subordinate if that superior has actual or constructive knowledge of the crime and effectively controls the subordinate. In other words, he or she need not intend for the crime to be committed, but at least the *subordinate* must possess the requisite intent. In the case of a superior in charge of an autonomous weapon, it cannot be fairly said that the autonomous weapon possesses the requisite intent. Thus, negligent supervision of a weapon could not justify criminal punishment, at least under the standard theory of command responsibility. While some commentators have advocated for imposing criminal punishment based on mere negligence, or even strict liability, others suggest that lowering the intent requirement would be contrary to fundamental tenets of individual criminal responsibility.

Jehns Ohlin has argued that international criminal law can nonetheless provide a framework for accountability with respect to the use of semi-autonomous and autonomous

³⁸ H. ROFF, *Killing in War: Responsibility, Liability and Lethal Autonomous Robots*, in

ROUTLEDGE HANDBOOK OF ETHICS AND WAR: JUST WAR THEORY IN THE 21ST CENTURY (A.

Henschke et al. eds., Routledge Press, 2013); *see also* Crootof, *supra* note 35.

weapons. He observes that the origins of the command responsibility and other doctrines emerging out of the Nuremberg trials are premised on the notion of actions in a bureaucratic context, in which the bureaucracy itself is the instrument of harm. He suggests that the critical element of criminal responsibility of the commander in this context is control, not whether the subordinate possesses the requisite intent. If the commander has effective control over the bureaucracy, and actors within the bureaucracy commit the harm, the commander can be held responsible (assuming he or she had constructive knowledge). Moreover, he argues that autonomous systems can be analogized to bureaucracy, equivalent in this sense to the “bureaucratic machine.” Thus, commanders could be held responsible for the actions of autonomous systems. The fact that fully autonomous systems might exercise independent decision-making is not necessarily a problem; rather, in his view it is similar to the concept of bureaucratic discretion, which the doctrine anticipates.

The challenge for Ohlin’s view is that the concept of effective control in the context of ordinary bureaucracy is not easily applied to the context of those operating autonomous weapons. Even in the case of semi-autonomous weapons, as Scharre’s case studies illustrate, meaningful human control will not always be possible, particularly when systems are complex and involve multiple components. Moreover, Ohlin acknowledges that while the doctrine of command responsibility does not necessarily require commanders to intend harm, at a minimum a showing of recklessness is required. He points out that the concept of recklessness is underdeveloped and unclear in current doctrine, and it may be problematic to apply a concept of recklessness to an autonomous or even-semi-autonomous weapon.

International criminal law thus remains an imperfect framework to provide accountability arising from incidents involving autonomous weapons systems. Part of the problem turns on how one defines “autonomous,” which as discussed above, is a source of significant debate among scholars and policymakers. The limitations in applying criminal law frameworks will be greatest when fully autonomous weapons engage in independent decision-making. No such fully autonomous weapons are in operation, and the technology to implement this kind of autonomy in weapons systems may still be many years away. Nonetheless, as Crootof points out, and Scharre’s case studies reveal, the problem still arises for semi-autonomous systems, where human decision-makers who are “in the loop” make mistakes that are lethal but do not satisfy the requisite intent for criminal responsibility.

C. Tort liability and state responsibility

Tort liability could potentially fill the void left by the failure of criminal doctrines to address many of the harms that could potentially result from the use of autonomous and semi-autonomous weapons. Tort doctrine typically permits liability not only for intentional wrongs but also for acts of negligence, and in some cases even allows for strict liability. Accordingly, the doctrine would seem to encompass the kinds of situations that could arise due to the use of autonomous or semi-autonomous weapons, providing at least a potential mechanism for effective accountability. Moreover, tort liability could encompass not only individual liability, but organizational or state responsibility as well. Indeed, in international law, there is a long-standing legal framework of state responsibility that can incorporate tort liability for international humanitarian law violations and that provides specific international venues for holding states responsible under international

law. Yet, tort liability too entails numerous limitations that often make it a relatively poor vehicle for imposing accountability for harms resulting from the use of autonomous and semi-autonomous weapons.

Crootof has been a prolific advocate of this form of liability. As compared to criminal accountability, she notes that while criminal law and tort law serve some of the same purposes, such as “detering undesirable actions through sanctions, holding those responsible for harm accountable, ingraining norms of conduct,” the two bodies of law are quite different: “criminal law generally is concerned with moral wrongs, guilt, and prohibiting certain actions; tort law focuses on injurious wrongs, fault, and regulation of valuable but sometimes dangerous activities.” In particular, tort law aims to regulate “unintended but injurious harms,” precisely the kind of harms that fall outside the core domain of criminal law. For this reason, she advocates the development of a “war torts” regime focused on ensuring accountability for autonomous weapons systems, so that serious violations of international humanitarian law can implicate state responsibility.

In domestic law, of course, tort law can give rise to liability for individuals or entities, such as corporations. Thus, international law could in theory permit such individual liability for torts, but most of the existing substantive international law norms and international judicial or quasi-judicial venues provide for state responsibility. It is therefore not surprising that Crootof focuses on state responsibility. She also argues that it is more normatively desirable to hold states responsible in cases involving autonomous weapons because they are in a better position to take corrective action and provide compensation. She acknowledges that the existing legal doctrine of state responsibility

in international law does not focus on torts per se but rather on internationally wrongful acts. Yet, she notes that states are already responsible for all serious violations of IHL/LOAC attributable to the state. Holding states responsible for the actions of their autonomous weapons under a tort theory would therefore require only “clarifying existing law” rather than “creating a new liability regime out of whole cloth.”

While important, Crootof’s “war torts” framework suffers from some limitations. To begin with, it is a bit unclear precisely what the “war torts” idea adds to existing law. After all, under LOAC/IHL itself, states are already responsible for respecting LOAC/IHL, even when the violations in question would not amount to crimes. Moreover, the substantive law of state responsibility provides a doctrinal framework for assessing the conditions under which states can be held responsible, in general, for violations of international law. Crootof seems to be arguing that, within those substantive legal doctrines, it is important to frame certain violations as “war torts,” but it is unclear whether she is suggesting that concepts from domestic tort law should be imported into the existing analytical framework, and if so, how exactly these concepts would apply to situations involving autonomous weapons or how they would improve upon existing doctrine.

In addition, other obstacles exist. There are actually relatively few international venues that exist to adjudicate these types of “war torts,” even if incidents were framed as such. The leading available international tribunal, the International Court of Justice, is a court of quite limited jurisdiction. Moreover, only states may initiate cases, and they are often reluctant to do so for a variety of reasons. With only a small number of entities empowered to initiate cases, few incentives for these entities to do so, and limited available venues, any “war torts” would likely be

significantly under-enforced in international courts and tribunals. Meanwhile, initiating proceedings for “war torts” in domestic courts poses any number of challenges, including limits on the enforceability of international law within domestic judicial systems and possible contractor and governmental immunity doctrines that might be asserted.

In sum, while a tort framework holds some promise, and there is an existing framework of state responsibility for violations of international humanitarian law that do not involve criminal acts, tort liability for the use of autonomous weapons entails significant challenges and cannot be a full response to concerns about accountability.

III. ADMINISTRATIVE ACCOUNTABILITY

Despite all of the debate over the appropriate form of accountability for potentially problematic uses of autonomous or semi-autonomous weapons, few commentators focus on what might be termed administrative accountability, procedures and mechanisms for investigating and remedying harms within the administrative state itself. Using Mashaw’s framework, administrative accountability would generally fall within the domain of public governance, because the accountability would be sought against individuals and entities operating within and in relation to the government. Administrative accountability differs from criminal and tort liability both because it focuses primarily on this public governance domain (while these other forms of accountability sweep across domains), and because of its purposes and goals, as reflected in the six elements of the Mashaw taxonomy. The “who” could be individual but it could also encompass

organizations or entities within or operating in relationship with the government. The “to whom” would often be the public but could also encompass individual victims of incidents or problems. The “procedures” could include procedures within the Executive Branch ranging from judicialized processes to investigations to committee reports. The standards could also be more flexible and broad-ranging than the narrow doctrines of criminal and tort law, and the effects or consequences could vary from penalties imposed on individuals to bureaucratic reforms.

In practice, governments invoke a variety of administrative procedures and mechanisms in situations in which there is a suspected violation of IHL/LOAC. In some circumstances, this administrative accountability can involve effects such as individual corrective measures or non-criminal sanctions such as demotion, firing, reassignment, or financial penalties. Alternatively, broader organizational reforms of practices and procedures can be imposed, in order to prevent future harms. Indeed, this sort of administrative accountability can be particularly important to address harms caused by the use of autonomous or semi-autonomous weapons where no crime has been committed. Yet in the debate about accountability mechanisms regarding autonomous or semi-autonomous weaponry, administrative accountability tends to be neglected as a potential response. This Part attempts to fill that gap by first providing a brief overview of the administrative accountability framework for alleged violations of IHL/LOAC, focusing on the practices of the United States. Then I will turn to assess the advantages and disadvantages of using this form of accountability to address harms caused by the use of autonomous or semi-autonomous weapons systems that implicate IHL/LOAC.

A. The administrative accountability framework for alleged IHL/LOAC violations

The U.S. airstrike on an Afghanistan hospital operated by the humanitarian organization Medecins Sans Frontieres (MSF) on Oct. 3, 2015, offers a prominent recent example of a situation in which U.S. authorities turned to a form of administrative accountability. The attack destroyed the hospital's main building, including an emergency room, and resulted in the deaths of 24 patients, 14 staff members, and 4 caretakers. During the strike, MSF personnel contacted U.S. military authorities to alert them, but the attack did not get called off immediately. If deliberate, the attack likely would have constituted a violation of the principle of distinction and therefore would have constituted a war crime under IHL/LOAC. Following the incident, in the midst of wide public criticism, the U.S. military conducted an investigation pursuant to Army Regulation 15-6, which establishes procedures for investigations and the creation of boards of officers to conduct fact-finding inquiries in a variety of circumstances. In this case, General John Campbell, then the commander of U.S. forces in Afghanistan, appointed General William Hickman to serve as the investigating officer, along with several assistant investigating officers and a staff. This group conducted numerous interviews and gathered information over many months to produce a report

evaluating the facts surrounding the incident and the cause of the strike.³⁹ After a legal review, General Campbell largely approved the report.⁴⁰

The report concluded that a cascade of errors led the service members in the AC-130 gunship that conducted the strike to misidentify the hospital. The intended target was an insurgent-controlled site nearby, and the hospital was actually on the U.S. military's no strike list. But the report identified errors, both human and technological. The AC-130 deployed ahead of schedule and therefore before receiving the no-strike list. The video-feed failed, depriving senior commanders of their ability to receive images in real time. Insurgents fired on the AC-130 during the flight, disrupting the targeting system's alignment. Ground forces who could not actually see the target nevertheless confirmed the target. Senior officials who had the no-strike list and received the coordinates of the hospital nevertheless erroneously approved the target because they did not

³⁹ Gen. W. Hickman, *Investigation Report of the Airstrike on the Medecins Sans Frontieres/Doctors Without Borders Trauma Center in Kunduz, Afghanistan on October 3, 2015* (Nov. 11, 2015), http://fpp.cc/wp-content/uploads/01.-AR-15-6-Inv-Rpt-Doctors-Without-Borders-3-Oct-15_CLEAR.pdf.

⁴⁰ Gen. J. Campbell, *Memorandum for the Record, Action by the Appointing Authority, Army Regulation 15-6 Report of Investigation (ROI) into the Airstrike on the Medecins Sans Frontieres/Doctors Without Borders Trauma Center in Kunduz, Afghanistan on October 3, 2015* (Nov. 21, 2015), http://fpp.cc/wp-content/uploads/01.-AR-15-6-Inv-Rpt-Doctors-Without-Borders-3-Oct-15_CLEAR.pdf.

realize the coordinates matched those of the facility on the list. Finally, according to the report, there was general confusion about the rules of engagement.

In the end, the investigation concluded that certain personnel violated the law of war but that the violations did not rise to the level of war crimes, which meant that the matter was not turned over to the military justice system. This move was controversial because some human rights organizations argued that war crimes had been committed and criminal prosecution was appropriate. Nevertheless, the lack of criminal proceedings did not mean that the individuals escaped consequences altogether. Sixteen service members, including a general officer, received administrative penalties or other disciplinary action, ranging from suspension and removal from command, to letters of reprimand, to formal counseling and extensive retraining.⁴¹ In addition, following the investigation, Secretary of Defense Ashton Carter issued a memorandum calling for specific reforms and comprehensive reviews of Rules of Engagement (ROE) and other policies and directives to clarify any confusing directives, all pre-deployment training requirements, and all mission command systems, including those of partners, to “identify effective methods to maintain unified understanding of the battlespace and enhance interoperability.”⁴²

⁴¹ Jim Garamone, *Centcom Commander: Communications Errors, Human Error Led to Attack on Afghan Hospital*, DEP’T OF DEFENSE (April 29, 2016), <https://www.defense.gov/News/Article/Article/746393/centcom-commander-communications-breakdowns-human-errors-led-to-attack-on-afgha/>.

⁴² A. Carter, Sec’y of Defense, Memorandum for Secretaries of the Military Departments, Commanders of the Combatant Commands (April 28, 2016).

Although the MSF incident did not concern autonomous or semi-autonomous weapons systems, it provides an illustrative example of the kind of non-criminal administrative mechanisms that can be invoked in the case of suspected violations of IHL/LOAC and the kind of administrative corrective actions and non-judicial punishment that can be imposed even if it is determined that no one has committed a crime. Administrative accountability has also been relevant in incidents specifically involving semi-autonomous weapons systems. For example, in the wake of the Patriot missile system friendly fire incidents in Iraq, discussed above, multiple administrative inquiries were also conducted. U.S. Central Command (USCENTCOM) conducted an investigation to determine the facts and circumstances surrounding the incident. The principal investigator, Brig. Gen. David M. Edgington of the Air Force, concluded that the fighter pilot operating some aspects of the system had rushed his decision to bomb. But General Edgington also concluded that no one had acted criminally, negligently, or recklessly, and therefore recommended that no one be disciplined. USCENTCOM accepted his recommendations.⁴³ Meanwhile, in 2005, the Defense Science Board, a standing advisory committee established pursuant to the Federal Advisory Committee Act (FACA), created a separate Task Force to study the incidents. The Task Force consisted of a group of experts, primarily non-military, who produced a report assessing the Patriot system failures and making recommendations to reduce risks in the future.⁴⁴

⁴³ James Dao, *A Trail of Pain from a Botched Attack in Iraq in 2003*, N.Y. TIMES (April 15, 2005).

⁴⁴ Defense Science Board Task Force, *Report on Patriot System Performance* (Jan. 2005), <https://www.hsdl.org/?view&did=454598>.

There has been little scholarship on the interaction of these sorts of administrative investigations and accountability measures and the formal commands of international law. It is well-established that IHL/LOAC obligates states to punish those who commit war crimes. The precise scope of the obligation to *investigate* such incidents, in the event of *suspected* war crimes, is subject to more debate.⁴⁵ Certainly IHL/LOAC imposes an obligation to investigate as a correlate to the obligation to prosecute,⁴⁶ but it is less evident precisely what IHL/LOAC requires

⁴⁵ The most comprehensive article on the obligation to investigate is probably M. Schmitt, *Investigating Violations of International Law in Armed Conflict*, 2 HARVARD J. NAT'L SEC. 31 (2011). Dick Jackson has also provided a careful overview of this subject. Dick Jackson, *Reporting and Investigation of Possible, Suspected, or Alleged Violations of the Law of War*, ARMY LAWYER (June 2010).

⁴⁶ Schmitt argues that the obligation lies in the Geneva Conventions' obligation to "search for" war crimes suspects:

With regard to investigations, the relevant text lies in the second paragraph's complementary requirements to "search for" persons alleged to have committed grave breaches and to try them domestically or turn them over to other Parties, an obligation which can be met by transfer to a competent international tribunal. The International Committee of the Red Cross' official *Commentary* on the articles confirms that the obligation extends to nationals of the State and members of the enemy forces, and that the Parties must actively search for, arrest and prosecute those responsible for violations as quickly as possible.

as to how that investigation must be conducted. Some argue that discretionary authority lodged within the military command structure is entirely appropriate,⁴⁷ while others contend that the obligation to conduct an independent and impartial investigation may demand that investigations be conducted outside that command structure in some contexts.⁴⁸

Separate from criminal investigations, the contours of an international obligation to provide administrative accountability for non-criminal violations of LOAC/IHL is even less clear. Nevertheless, some requirement to take administrative action can be gleaned from existing treaty obligations. The Geneva Conventions make clear that not every violation of LOAC/IHL war is a war crime. War crimes are only those acts in violation of the law of war that may give rise to penal responsibility for individuals. Yet states are obligated to respect all aspects of LOAC/IHL. For example, parties to the Geneva Conventions must “undertake to respect and to ensure respect” for

Id. (citing Geneva Convention Relative to the Protection of Civilian Persons in Time of War, art. 146, Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287 [hereinafter GC IV]).

⁴⁷ *Id.* (noting that while investigations must be independent and impartial, “safeguard for independence and impartiality lies primarily in prohibiting wrongful interference, not in mandating, for instance, a particular command or organizational relationship”).

⁴⁸ *See, e.g.*, Report of the Committee of Independent Experts in International Humanitarian and Human Rights Laws to Monitor and Assess Any Domestic, Legal or Other Proceedings Undertaken by both the Government of Israel and the Palestinian Side, U.N. Doc. A/HRC/15/50 (Sept. 21, 2010) (Advanced Edited Version) [hereinafter Investigations Report].

the Conventions.⁴⁹ More specifically, the Conventions impose a duty on states parties to “take measures necessary for the suppression of all acts contrary to the provisions of the present Convention other than ... grave breaches.”⁵⁰ The commentaries on the Conventions make clear that this obligation extends to all violations of the Conventions that do not amount to war crimes: “all breaches of the Convention should be repressed.”⁵¹ The commentaries also explicitly contemplate that measures used to comply with this provision could encompass “administrative” measures, including non-judicial “disciplinary” measures.⁵² Thus, the obligation to respect and ensure respect, read alongside the duty to suppress non-criminal violations, could be read to impose some form of administrative accountability in the event of non-criminal breaches.

While an obligation to provide a minimum of administrative accountability in the event of non-criminal breaches of LOAC/IHL can fairly be derived from the Geneva Conventions, Additional Protocol I (AP I) provides further support for such an obligation in international armed conflicts. It is true that the United States and numerous other states are not parties to AP I, but many provisions have arguably attained the status of customary international law. Article 87 of AP I provides even greater specificity than the Geneva Conventions regarding the duty to

⁴⁹ GC IV, art. 1.

⁵⁰ GC IV, art. 146.

⁵¹ *See, e.g.*, Int’l Comm. of the Red Cross, *Commentary: IV Geneva Convention Relative to the Protection of Civilian Persons in Time of War* 594 (Jean Pictet ed. 1958) [hereinafter GC IV Commentary].

⁵² *Id.*

investigate and remediate violations of LOAC/IHL that do not rise to the level of war crimes. In particular, this provision provides that commanders must be required “to prevent and, where necessary, to suppress and to report to competent authorities breaches of the Conventions and of this Protocol.”⁵³ Significantly, this language does not distinguish between war crimes and other potential violations. Moreover, states must obligate commanders who are “aware that subordinates or other persons under [their] control are going to commit or have committed a breach of the Conventions or of this Protocol, to initiate such steps as are necessary to prevent such violations of the Conventions or this Protocol, and, where appropriate, to initiate disciplinary or penal action against violators thereof.”⁵⁴ Notably, the language again does not draw a distinction between war crimes or other violations, and further contemplates “disciplinary,” as opposed to purely penal action in some cases.⁵⁵

Separate from possible obligations under international law, it is worth noting that as a practical matter multiple states in fact regularly use administrative mechanisms and procedures to investigate violations of LOAC/IHL that are either suspected war crimes or other violations. These mechanisms and procedures exist both within the military and within civilian defense agencies. Michael Schmitt has provided an overview of state practice regarding investigative procedures in

⁵³ Protocol Additional to the Geneva Conventions of 12 Aug. 1949, and Relating to the Protection of Victims of International Armed Conflict, art. 87, June 8, 1977, 1125 U.N.T.S. 3 [hereinafter AP I].

⁵⁴ *Id.*

⁵⁵ Schmitt, *supra* note 45.

Canada, the U.K., Australia and the United States. Although his focus is primarily on criminal investigations, his account also lays out the general framework for non-criminal investigative procedures in these countries. The key distinction between an administrative inquiry and a criminal investigation, according to Schmitt, is the focus on fact-finding rather than on potential criminal prosecution.

In Canada, for example, military authorities can conduct investigations not only through law enforcement but also through administrative channels. When the actions in question do not clearly involve crimes, they may be investigated through the mechanism of a Summary Investigation, which a commander may order with respect to any matter related to his or her command.⁵⁶ More formal administrative investigations, Boards of Inquiry, may be convened by

⁵⁶ Canadian Forces, Queen's Regulations and Orders for the Canadian Forces, art. 21.01. This provision specifies that:

An officer commanding a command or formation or a commanding officer may order that a summary investigation be conducted where:

- a. he requires to be informed on any matter connected with his command, formation, base, unit or element or affecting any officer or non-commissioned member under his command;
- b. a board of inquiry is not required by the regulations; and
- c. a board of inquiry or summary investigation has not been convened or ordered by a superior authority.

the Minister of National Defence and commanders for serious issues.⁵⁷ These Boards must consist of at least two officers and “may call witnesses, receive evidence, and examine records.”⁵⁸ The primary purpose of these inquiries is fact-finding, and if evidence of criminal behavior is uncovered, the matter must be concluded in the administrative venue and transferred to criminal investigative authorities. Boards of Inquiry are called for not only in cases of LOAC/IHL violations but also accidents such as aircraft accidents that could entail LOAC/IHL violations or not, if they result in death or serious injury.⁵⁹

In Australia, as in the Canadian System, military regulations provide for both administrative proceedings and the military prosecutorial system to address possible violations of IHL/LOAC. In most cases, when a significant incident comes to the attention of a commander/supervisor, that person will initiate an administrative proceeding entitled the Quick Assessment (QA).⁶⁰ Schmitt notes that “the primary purpose of the QA is to determine whether further action is required.”⁶¹ Following a QA, military authorities can convene a more formal administrative inquiry, or transfer the matter to the military or civilian prosecutorial system. More formal administrative inquiries include:

⁵⁷ *Id.*, arts. 21.08, 21.10.

⁵⁸ Schmitt, *supra* note 45, at 59.

⁵⁹ Queen’s Regulations, *supra* note 56, art. 21.56.

⁶⁰ Dep’t of Defence, *Defence Instructions (General), Admin. 67-2*, ¶ 8 (Aug. 7, 2007) (Australia).

⁶¹ Schmitt, *supra* note 45, at 63

- 1) Routine Inquiry, an informal administrative inquiry into relatively simple matters;
- 2) Investigating Officer Inquiry, a formal administrative inquiry involving matters that are more serious, and which attach certain privileges, immunities, rights, and responsibilities in accordance with the Defence (Inquiry) Regulations;
- 3) Board of Inquiry or a Commission of Inquiry, a quasi-judicial administrative inquiry during which, for example, civilian witnesses subject to its jurisdiction can be compelled to testify, witnesses can have legal representation, and proceedings are generally made public; and
- 4) Combined Board of Inquiry, an administrative Board of Inquiry involving the participation of the forces of other countries.⁶²

In each case, the goal of the administrative proceedings is primarily to gather facts, although the individuals involved may be subject to administrative sanctions.⁶³ If evidence of criminal wrongdoing is uncovered, then the matter must be transferred to appropriate criminal prosecutorial authorities.⁶⁴

⁶² Schmitt, *supra* note 45, at 64; *see also* Australian Defence Force, *Australian Defence Force Publication 6.1.4: Administrative Inquiries Manual* (2006).

⁶³ *Id.*

⁶⁴ *Id.*

In the United Kingdom, administrative inquiries known as “Service Inquiries” within the military system are also authorized in the case of LOAC/IHL violations that do not rise to the level of war crimes, as well as incidents that are not war crimes or for which more information is needed to determine whether they may be war crimes. Commanders and other officers may conduct these inquiries, which, like the Canadian and Australian administrative inquiries are primarily designed for fact-finding.⁶⁵ Administrative mechanisms convened outside the military system are also available to address such incidents. For example, Cabinet members may direct commissions to be formed on issues of public concern, and the Minister of Defence can also convene similar commissions.⁶⁶

In the United States, administrative mechanisms and procedures that can address IHL/LOAC provisions include both military and non-military mechanisms and range from informal investigations under the purview of the commanding officer to more formal inquiries and

⁶⁵ Armed Forces Act, 2006, c. 52, § 343 (Eng.) (“The Secretary of State may make regulations for causing inquiries, to be known as service inquiries, to be held (whether or not in the United Kingdom) in prescribed circumstances in relation to matters connected with any of Her Majesty’s forces.”); Armed Forces (Service Inquiries) Regulations, 2008, S.I. 2008, No. 1651, reg. 7 (“The functions of a service inquiry panel shall be to investigate and report on the facts relating to the matters specified in its terms of reference... and otherwise to comply with those terms of reference”); *see also* Schmitt, *supra* note 45, at 67.

⁶⁶ Schmitt, *supra* note 45, at 68.

investigations, as well as non-military commissions, inquiries, and proceedings within the Department of Defense and other governmental entities. Many of these inquiries and investigations are aimed at fact-finding, as well as recommendations for future actions that will prevent the harm in question. Yet, some procedures provide for the imposition of non-criminal sanctions on individuals involved in the incident under investigation.

The U.S. Department of Defense policy mandates prompt reporting, thorough investigation, and appropriate corrective action in all cases of LOAC/IHL violations: “all reportable incidents committed by or against U.S. personnel, enemy persons, or any other individual are reported promptly, investigated thoroughly, and, where appropriate, remedied by corrective action.”⁶⁷ Reportable incidents, in turn, are those in which there is a “possible, suspected, or alleged violation of the law of war, for which there is credible information, or conduct during military operations other than war that would constitute a violation of the law of war if it occurred during an armed conflict.”⁶⁸ Thus, reporting, investigation, and appropriate corrective action are required not merely for suspected war crimes but any violation of LOAC/IHL violations—although the pathway for action may differ depending on the type of violation. These requirements are “intended to reflect several concepts embodied in the treaties and case law,” including not only “the need to investigate, prosecute, or extradite individuals who have committed grave breaches,” but also “the need to take corrective action, or whatever measures are necessary

⁶⁷ Dep’t of Defense Directive (DoDD) 2311.01E, DoD Law of War Program, May 9, 2006, ¶ 4.4 (*Incorporating Change 1, November 15, 2010 Certified Current as of February 22, 2011*).

⁶⁸ *Id.*, ¶ 3.2.

to prevent other violations of the law of war; and the requirement for higher level commanders to know what is occurring in their area of operations so they can intervene to prevent further violations.”⁶⁹ To be sure, not all aspects of the DOD policy may reflect purely legal requirements, but rather may implement policy and practice beyond what the law strictly demands.

While DOD sets the overarching policy, each of the five U.S. military services sets its own rules and regulations for implementing that policy. Most incidents begin with an inquiry by the commander in whose jurisdiction the incident has occurred. Often referred to as a “commander’s inquiry,”⁷⁰ such inquiries are undertaken in order to conduct a “credibility review” of all “reasonably available evidence.”⁷¹ Another option is an administrative investigation, which for the Army is laid out in regulation 15-6.⁷² Such an investigation has slightly more defined procedures, but is still somewhat informal. As described by Dick Jackson,

the regulation allows for informal procedures to be used to gather additional information about an alleged incident. The appointing authority, usually a battalion commander or above, will appoint an uninvolved officer to conduct the inquiry and sort out the facts, making recommendations to the commander as to corrective

⁶⁹ Jackson, *supra* note 45, at 96.

⁷⁰ *Id.*

⁷¹ Rule for Court Martial (R.C.M.) 303.

⁷² Army Regulation (AR) 15-6, Procedures for Administrative Investigations and Boards of Officers (2016).

action (in the case of lesser violations of the law of war), no further action, or further criminal investigation. The informal procedures allow for expedited evidence gathering and consideration of sworn statements and routine reports, rather than taking direct evidence.⁷³

The procedure has often been used in Iraq and Afghanistan to conduct fact-finding into incidents with significant civilian casualties, such as the MSF strike discussed above. If at any point there are credible allegations of actions amounting to war crimes, matters are to be turned over to military prosecutorial or civilian prosecutorial authorities.

Short of criminal punishment, the commander could take no action, take administrative “corrective measures, or impose non-judicial punishment under the Uniform Code of Military Justice.⁷⁴ Administrative corrective measures include counseling, admonition, letters of reprimand, exhortation, disapproval, criticism, censure, reproach, rebuke, extra military instruction, or the administrative withholding of privileges, or any combination of the above.⁷⁵ Other administrative measures, which are subject to regulations of the relevant Service Secretary, include:

⁷³ D. Jackson, *Reporting and Investigation of Possible, Suspected, or Alleged Violations of the Law of War*, ARMY LAWYER 95, 99 (June, 2010).

⁷⁴ R.C.M. 306–07, *Manual for Courts Martial, United States*.

⁷⁵ *Id.*

matters such as efficiency reports, academic reports, and other ratings; rehabilitation and reassignment; career field reclassification; administrative reduction for inefficiency; bar to reenlistment; personnel reliability program reclassification; security classification changes; pecuniary liability for negligence or misconduct; and administrative separation.⁷⁶

Non-judicial punishment may also be imposed under the Uniform Code of Military Justice following the procedures set forth in the Manual for Courts Martial.⁷⁷ Such non-judicial punishment consists of disciplinary measures that are more serious than the administrative measures described above, but less serious than trial by court martial, such as admonition and reprimand, restrictions on liberty, arrest in quarters, correctional custody, confinement on diminished rations, extra duties, reduction in grade, and forfeiture of pay.⁷⁸

Beyond such proceedings, numerous other entities, such as the Service inspector generals and civilian authorities such as the DoD Inspector General or committees formed under the Federal Advisory Committee Act can also gather information about incidents, report on them, and provide recommendations for future action. For example, the committee report in the wake of the Patriot missile failures prompted significant bureaucratic reforms.

⁷⁶ *Id.*

⁷⁷ *Manual for Courts Martial, United States*, part V.

⁷⁸ *Id.*

Returning to Mashaw’s taxonomy, it might be helpful to draw distinctions among these different types of administrative accountability, which range along a spectrum. For example, sometimes the “who” is an individual, and the “effects” serve as punishment for that individual after a proceeding governed by the Manual for Courts Martial. In such a case, administrative accountability resembles criminal accountability, but with less severe consequences deemed more commensurate with the behavior of the individual in question. At the other end of the spectrum, the “who” is a bureaucratic entity, whose processes leading to the harm in question are assessed not in a judicialized proceeding but rather by a committee, and the effects are recommendations for change to future practices.

Administrative accountability is often disparaged and not well understood. The media often portrays administrative accountability mechanisms in a negative light largely because they appear to result in weaker consequences than criminal punishment. For example, following the Kunduz incident, the *New York Times* reported that although “[s]ixteen American military personnel have been punished for their roles in the attack... none of them will face criminal charges because a military investigation determined the attack to be unintentional.”⁷⁹ The article further noted that the punishments were “unlikely to satisfy” Doctors Without Borders and other human rights groups, observing that “punishments were ‘administrative actions’ that could include suspension or removal from command.”⁸⁰ To be sure, one could legitimately criticize the process undertaken

⁷⁹ G. Aisch, J. Keller & S. Pecanha, *How a Cascade of Errors Led to a U.S. Airstrike on an Afghan Hospital*, N.Y. TIMES (April 29, 2016).

⁸⁰ *Id.*

in that case. However, while it is true that the disciplinary sanctions did not entail criminal punishment, such sanctions do carry significant consequences for the individuals involved. It is also notable that the article did not mention the Secretary of Defense's memorandum, discussed above, calling for bureaucratic review and reforms in the wake of the incident. Such reforms do not punish individuals but can have important forward-looking consequences.

To be sure, one could reasonably criticize the government's response to the Kunduz incident on a number of fronts. It is interesting that one critique by the prominent military justice expert Eugene Fidell focused not only on the outcome of the process but on the process itself. In particular, he questioned the lack of transparency in the investigation, noting that "the process that the Pentagon used to investigate the bombing was closed."⁸¹ He recommended, as an alternative to the routine investigation process, that the more robust and transparent "court of inquiry," as laid out in the Uniform Code of Military Justice, should have been convened in this case.⁸² He argued that such a court "would have been closed to the public when classified evidence was being examined, but much of it could have been open," which would in turn have "fostered greater confidence in the results."⁸³ Fidell also critiqued existing law's placement of the decision whether to initiate a court martial within the discretion of the commander. He suggested that reforms moving the "disposition" decision outside the chain of command could foster independence and

⁸¹ E. Fidell, *The Wrong Way to Handle the Kunduz Tragedy*, N.Y. TIMES (May 1, 2016).

⁸² *Id.*

⁸³ *Id.*

enhance the legitimacy of decision-making.⁸⁴ Fidell's emphasis, therefore, is not to criticize the use of administrative accountability mechanisms, but to find ways to improve those mechanisms. Further research could expand on this sort of critique, with the goal of maximizing the impact of administrative accountability mechanisms.

Administrative accountability is certainly not appropriate in every case. In some cases, other forms of accountability may be more appropriate, either as an alternative to administrative accountability or as a supplement to it. In some contexts, as where an initial investigation does lead to a court-martial, administrative accountability could be the first step toward criminal responsibility. In others, it may encompass lesser sanctions on individuals or provide the impetus for bureaucratic reforms (or both). In addition, reforms to administrative accountability procedures, such as efforts to enhance the independence and transparency of these processes, could improve the framework of administrative accountability.

IV. CONCLUSION

This Chapter has identified elements of what we might call administrative accountability for suspected IHL/LOAC violations, and suggested that administrative accountability is an often-overlooked but important framework for addressing potential harms related to the use of autonomous and semi-autonomous weapons systems. However, I do not mean to suggest that

⁸⁴ *Id.*

administrative accountability is a panacea. Indeed, administrative accountability as currently practiced suffers from significant limitations in addressing IHL/LOAC violations in general, and harms or failures of autonomous weapons systems in particular. While existing international law could fairly be read to require some type of administrative accountability, it leaves open precisely what form it should take. In practice, such as in the United States, administrative accountability may well exceed the requirements of international law. Yet the significant discretion on the part of those charged with initiating administrative accountability mechanisms as well as the vast discretion in determining the gradations of administrative sanctions on individuals and reform programs for organizations, leaves the impact of administrative accountability in many cases up to the judgment of the specific individuals in charge of implementing it. Moreover, the independence of those individuals may sometimes be open to question. And the lack of transparency in some cases, combined with the at times confusing multiplicity of mechanisms and processes, weakens the impact of this form of accountability.

Nonetheless, as this Chapter seeks to show, administrative accountability should not be overlooked as at least one important mechanism for addressing harms caused by autonomous and semi-autonomous weapons systems, where in many cases these harms will not result from actions intended by human operators or indeed even from negligence. In such cases, criminal and tort frameworks may not be available as a matter of substantive doctrine. And procedurally, the tort framework suffers from a lack of venues with jurisdiction to implement the kind of war torts regime that Crotoft and others advocate. Administrative accountability has in its favor the simple fact that it is available and has been used to address these types of issues in the past.

Administrative accountability could also be developed further. At the international level, for example, debates about the regulation of autonomous weapons systems have recently taken place as expert discussions within the aegis of the United Nations Convention on Certain Conventional Weapons.⁸⁵ These discussions have deadlocked to some degree, with those opposed to autonomous weapons seeking a categorical ban butting heads with those arguing in favor of a more modest approach of working within existing legal frameworks. A focus on administrative accountability probably fits more within the latter than the former approach. But perhaps targeted discussions about how to improve administrative accountability could focus on developing frameworks that build on existing practices in order to mitigate certain classes of harms likely to arise from the use of such weapons.

At the domestic level, efforts to strengthen administrative accountability could also be fruitful. For example, in the United States efforts could be made to clarify existing administrative accountability pathways as they might apply to specific categories of harm that could be caused by autonomous and semi-autonomous systems. A focused Department of Defense directive on accountability in such situations might be beneficial. In particular, it would be helpful to clarify which types of incidents involving autonomous weapons would fall within the IHL/LOAC framework, and which types might fall outside that framework altogether. For those in the former category, guidelines could clarify circumstances in which individual sanctions may be warranted, and through which types of proceedings (i.e. non-judicial punishment v. corrective measures). Furthermore, it may be helpful to harmonize the regulations of the Service secretaries on these

⁸⁵ For a brief account of these discussions, see Anderson & Waxman, *supra* note 18, at 1099.

issues. For organizational reforms in the wake of such incidents, it could be useful to clarify when civilian versus military processes would be appropriate to develop lessons learned and institute reforms as well as to clarify how these different processes should interact with one another. In addition, reforms to enhance the transparency and independence of these mechanisms are necessary.

In sum, the purpose of this Chapter is to highlight administrative accountability as one possible framework for addressing potential harms related to the use of autonomous and semi-autonomous weapons system. This form of accountability is under-appreciated and offers significant benefits to address these issues. It is not a magic solution to the accountability problem posed by the use of these weapons, but with improvements in existing systems of administrative accountability, it can be an important tool to fill the accountability gaps that exist.