RISKING A NEW BLITZKRIEG: BANNING ARTIFICIAL INTELLIGENCE IN NATIONAL SECURITY

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INTRODUCTION

Hans listened intently as the dull thud of the motorized artillery hit the enemy lines ahead of him. Hans was a tank commander in the German army. Suddenly, he heard the scratchy whine of the radio pipe in: the dive bombers were going to be arriving shortly, and that meant it was time for his tanks to rumble in right behind. Hans began shouting commands, feeling the rising excitement of an almost certain victory in battle. Just thirty minutes later, the Germans broke through the Allied's trenches. This was Blitzkrieg in action. In World War I, these same trenches had withstood years of combat; now, at the start of World War II, they were overwhelmed in a matter of weeks.¹

The technology that Germany had relied on in World War I—the tanks, the motorized artillery, the air force, et cetera—were all part of disarmament treaties, which supposedly banned Germany from using

¹ See Blitzkrieg, HISTORY, https://www.history.com/topics/world-war-ii/blitzkrieg (Dec. 12, 2022) (discussing the history and use of Blitzkrieg and noting how "the Germans blazed through northern France and toward the English Channel"); *Trench Warfare*, ENCYC. BRITANNICA, https://www.britannica.com/topic/trench-warfare (Oct. 4, 2022) (explaining the extensive use of trench warfare in World War I).

them in a future war.² Why had these disarmament provisions failed so miserably? They were negotiated with the highest ideals and the best intentions: ending future wars and violence.³

Technology, including tanks, radar, radios, airplanes, and motorized artillery, rapidly advanced between World War I and World War II.⁴ Many countries were unsure of how these technologies would change warfare.⁵ During its now infamous Blitzkrieg race through Poland, Germany demonstrated the impact of these technologies in warfare.⁶

Warring nations applying new technology to conventional or altogether new strategies is not a historical anomaly. For thousands of years, countries have used technology to change the tide of war, from the longbow in medieval times to nuclear warheads in the Cold War.⁷

Imagine a new "Blitzkrieg" scenario in the modern era, one involving artificial intelligence. Imagine being a soldier in Afghanistan. On the horizon, you see a couple of enemy jets fly over, and after they pass, you think all is safe. However, a few minutes later, you are surrounded, indeed swarmed, by a hundred drones armed with lethal munitions. What you

² Treaty of Peace Between the Allied and Associated Powers and Germany arts. 159– 60, 165, 171, 198, 201, June 28, 1919, S. TREATY DOC. NO. 348 (1923) [hereinafter Treaty of Versailles]; Armistice Convention with Germany art. IV, Nov. 11, 1918, S. TREATY DOC. NO. 348 (1923); PHILIP TOWLE, ENFORCED DISARMAMENT 66 (1997); Andrew Webster, *Piecing Together the Interwar Disarmament Puzzle*, 59 INT'L J. 187, 189–90 (2004); see JAMES S. CORUM, U.S.A.F. ACAD., A CLASH OF MILITARY CULTURES: GERMAN & FRENCH APPROACHES TO TECHNOLOGY BETWEEN THE WORLD WARS 1, 3, 6, 19 (1994) (discussing Germany's reliance on different technology in World War II).

³ In the Treaty of Versailles, Part I included the Covenant of the League of Nations. Treaty of Versailles, *supra* note 2, pt. I. Article VIII thereof states, "The Members of the League recognize that the maintenance of peace requires the reduction of national armaments to the lowest point consistent with national safety and the enforcement of common action of international obligations." Treaty of Versailles, *supra* note 2, art. 8; *see also* Webster, *supra* note 2, at 189, 195 (observing that disarmament was believed to be vital to preserving peace). In order to accomplish their goals, the Treaty's victorious signatories required Germany to disarm itself, stating, "In order to render possible the initiation of a general limitation on the armaments of all nations, Germany undertakes strictly to observe the military, naval, and air clauses which follow." Treaty of Versailles, *supra* note 2, pt. V. The Treaty proceeded to disarm Germany. *See supra* note 2 and accompanying text.

⁴ CORUM, supra note 2, at 1; cf. Chris Meserole, Artificial Intelligence and the Security Dilemma, BROOKINGS: ORDER FROM CHAOS (Nov. 6, 2018), https://www.brookings.edu/blog/order-from-chaos/2018/11/06/artificial-intelligence-and-thesecurity-dilemma/ (identifying radar, mechanized artillery, and aircraft as technologies existing in the 1930s).

⁵ Meserole, *supra* note 4.

 $^{^{6}}$ Id.

⁷ See Martin Van Creveld, War and Technology, FOREIGN POL'Y RSCH. INST. (Oct. 24, 2007), https://www.fpri.org/article/2007/10/war-technology-2/ (explaining how technology shapes war and emphasizing the revolutionary effect of nuclear weapons); How the Longbow Revolutionised Warfare in the Middle Ages, HIST. HIT (Nov. 1, 2018), https://www. historyhit.com/how-the-longbow-revolutionised-warfare-in-the-middle-ages/ ("The English Longbow was one of the defining weapons of the [M]iddle [A]ges. It helped England challenge the might of the French and enabled ordinary peasants to defeat wealthy knights.").

missed was that the jets launched the drones, and after being launched, the swarm of drones went on to methodically surround and destroy their targets while working in perfect unison as a team.⁸

While we have all heard of various drone attacks, the above example is different because the drone swarm is not remote-controlled by a human; it is "self-directed."⁹ This type of technology could make past technology such as aircraft carriers and tanks—potentially obsolete.

This is not a science-fiction film series; it is reality. Thirteen drones recently attacked a Russian military base.¹⁰ Although Russia claimed that its military destroyed, jammed, or neutralized the drones without any harm, a terrorist group contradicted its claim while taking responsibility.¹¹ Swarming drone technology has been called the most significant military technology since the nuclear bomb, but the application of drone swarms is just one lethal, weaponized application of artificial intelligence ("AI").¹² The U.S. and China have demonstrated swarming drone technology as well.¹³ In 2021, new drone swarm projects included "the French Icarus project, the Russian Lightning, the Spanish RAPAZ, the U.K.'s Blue Bear swarm[,] and the UAE/South African N-Raven."¹⁴

These "Drone Swarms" are one of the applications of AI in the category now labeled "lethal autonomous weapon systems" ("LAWS"), which encompass a much larger and quickly-developing area of AI application in warfare.¹⁵ Internationally, there is already a push to

¹⁵ See Thomas B. Payne, Cong. Rsch. Serv., R44466, Lethal Autonomous Weapon Systems: Issues for Congress, at Summary, 1, 7, 10, 17 (4th version 2016)

⁸ See generally Press Release, U.S. Dep't of Def., Department of Defense Announces Successful Micro-Drone Demonstration (Jan. 9, 2017), https://www.defense.gov/News/ Releases/Release/Article/1044811/department-of-defense-announces-successful-micro-drone -demonstration/ (demonstrating that drones with swarming capabilities currently exist).

⁹ Id. (noting how Perdix micro-drones are "autonomous systems"); see Capturing the Swarm, CBS NEWS (Aug. 20, 2017, 2:30 PM), https://www.cbsnews.com/news/60-minutes-capturing-the-perdix-drone-swarm/ (stating the Perdix drone is self-directed).

¹⁰ Syria: Drone Swarm Attacks Russian Military Bases, TRIPWIRE (Jan. 12, 2018, 8:00 AM), https://tripwire.dhs.gov/news/209478.

 $^{^{11}}$ Id.

¹² David Martin, New Generation of Drones Set to Revolutionize Warfare, CBS NEWS (Jan. 8, 2017, 2:34 PM), https://www.cbsnews.com/news/60-minutes-autonomous-drones-set-to-revolutionize-military-technology/; Branka Marijan, AI-Influenced Weapons Need Better Regulation, SCI. AM. (Mar. 30, 2022), https://www.scientificamerican.com/article/ai-influenced-weapons-need-better-regulation/ (enumerating several weaponized uses of AI, including cyberwarfare (such as supercharge malware attacks) and autonomous tanks).

¹³ Michael Peck, *China's Autonomous Attack Drones Are Ready to Take Off*, NAT'L INT.: THE REBOOT (Sept. 21, 2021), https://nationalinterest.org/blog/reboot/chinas-autonomous-attack-drones-are-ready-take-192831.

¹⁴ David Hambling, What Are Drone Swarms and Why Does Every Military Suddenly Want One?, FORBES (Mar. 1, 2021, 8:26 AM), https://www.forbes.com/sites/davidhambling/2021/03/01/what-are-drone-swarms-and-whydoes-everyone-suddenly-want-one/?sh=6a9a3182f5c6.

regulate LAWS. Over 160 different non-governmental organizations (NGOs) started a "Campaign to Stop Killer Robots," which seeks to preemptively ban LAWS, or what they call "killer robots."¹⁶ Already, thirty nations have called to ban LAWS internationally.¹⁷ Other countries, including Germany and the United States, oppose a treaty banning LAWS.¹⁸ Bans like these are not new to the world's diplomatic stage.¹⁹

The Allied nations created a legally binding treaty to preemptively disarm Germany of its submarines, air force, and tanks to prevent a World War II.²⁰ This diplomatic regulation of key technology ultimately did not work.²¹ The thesis of this Note is that the current international law sufficiently protects humanity and that attempts to ban LAWS preemptively would fail in safeguarding humankind, likely leading to more significant human rights abuses.

In Part I, this Note will (1) define artificial intelligence and lethal autonomous weapon systems, (2) discuss the current controlling laws, and (3) discuss various countries' positions on regulating LAWS. In Part II, this Note will (1) discuss a historical analogue of Nazi Germany, disarmament, and Blitzkrieg; (2) explain how that compares with LAWS and disarmament; and (3) analyze the problem of enforcement. Lastly, in Part III, this Note will argue that the international community should not preemptively ban LAWS and that doing so would likely be destructive of human rights.

⁽discussing the swift development of LAWS and highlighting how the use of AI in LAWS leads to swarming behavior); see also Ted Piccone, How Can International Law Regulate Autonomous Weapons?, BROOKINGS: ORDER FROM CHAOS (Apr. 10, 2018), https://www.brookings.edu/blog/order-from-chaos/2018/04/10/how-can-international-law-regulate-autonomous-weapons/ (likening the rapid development of autonomous weapons to the next global arms race); CBS NEWS, supra note 9 (observing the first test of an autonomous drone swarm).

¹⁶ MARY WAREHAM, HUM. RTS. WATCH, STOPPING KILLER ROBOTS: COUNTRY POSITIONS ON BANNING FULLY AUTONOMOUS WEAPONS AND RETAINING HUMAN CONTROL 1 & n.1 (Steve Goose & Bonnie Docherty eds., 2020).

¹⁷ *Id.* at 4.

¹⁸ Id. at 23, 53.

¹⁹ Sean Watts, *Regulation-Tolerant Weapons, Regulation-Resistant Weapons and the* Law of War, 91 INT'L L. STUD. 540, 561–607 (2015) (enumerating different attempts throughout history to ban and/or regulate certain types of weapons); Sean Watts, Autonomous Weapons: Regulation Tolerant or Regulation Resistant?, 30 TEMP. INT'L & COMPAR. L.J. 177, 178–79, 184 (2016) (similar).

²⁰ See supra note 3 and accompanying text; see also TOWLE, supra note 2 (recounting that Germany was forced to disarm herself of her air force, tanks, and submarines in the wake of World War I).

²¹ Id. at 86–87 ("In terms of reassurance, enforced disarmament and intrusive verification had been a failure. Soon after Hitler's accession to power in 1933 it became clear that [the Treaty of Versailles] had done nothing to reduce Germany's military potential.").

I. DEFINING ARTIFICIAL INTELLIGENCE

What is artificial intelligence? At first, this may seem to be a simple question, but it is much more elusive and contested than first thought. There is no settled definition for an autonomous weapon when it comes to international law.²² Much of the international debate revolves around defining artificial intelligence.²³ Some authors have posited that this is one of the fundamental problems with having any widespread international support for a global, legislative solution.²⁴

Consider a landmine, for example. After initial setup, a landmine is completely "automated."²⁵ A landmine needs an external stimulus of some kind to trigger the mine, and then it explodes.²⁶ Once a landmine is set, no further human input is required.²⁷ However, while a landmine is automated, it is not *really* automated, or at least not "fully autonomous."²⁸

In contrast, consider something more "autonomous" like Google Maps, Alexa, or the fictional Terminator.²⁹ How does one determine where the "autonomy" line is? There is much ambiguity in determining if autonomy means full automation or if it simply means byproducts of a chain reaction set off by a trigger pull.³⁰ For this reason, some have suggested that, at least for now, we cannot build any weapon that is "fully

²⁴ See *id.* at 72–73, 78 (emphasizing how the lack of an accepted definition means "any international regulation would be vulnerable from its inception").

²⁵ See Rebecca Crootof, Autonomous Weapon Systems and the Limits of Analogy, 9 HARV. NAT'L SEC. J. 51, 59 (2018) (identifying a landmine as a type of automated weapon); cf. RAE MCGRATH, LANDMINES AND UNEXPLODED ORDNANCE 16 (2000) (observing landmines are "victim-triggered" and "persistent in that their effects continue indefinitely after a war ends").

²⁶ What Is a Landmine?, INT'L CAMPAIGN TO BAN LANDMINES, http://www.icbl.org/engb/problem/what-is-a-landmine.aspx (last visited Mar. 14, 2023) ("[Landmines] can be activated by direct pressure from above, by pressure put on a wire or filament attached to a pull switch, or even simply by the proximity of a person within a predetermined distance.").

 27 $\,$ See McGRATH, supra note 25, at 18 (listing methods of landmine activation that do not require further action by the combatants who placed the mine).

²⁸ Crootof, *supra* note 25 (noting that although "an autonomous weapon system is capable of independently selecting and engaging targets," a landmine "does not 'select' a target; rather, it responds predictably to a preset trigger").

²⁹ Sumbo Bello, 8 Examples of Artificial Intelligence in Our Everyday Lives, EDGY (May 3, 2021, 7:05 AM), https://edgy.app/examples-of-artificial-intelligence.

³⁰ See Wyatt, supra note 23, at 69, 74–77 (discussing multiple factors to consider when defining autonomy and observing that "autonomy is not a binary characteristic that can be easily identified, separated and measured").

²² Paul Scharre & Michael C. Horowitz, *An Introduction to Autonomy in Weapon Systems* 3 (Ctr. for a New Am. Sec., Working Paper No. 021015, 2015).

²³ Austin Wyatt, So Just What Is a Killer Robot? Detailing the Ongoing Debate Around Defining Lethal Autonomous Weapon Systems, WILD BLUE YONDER 68, 72–73, 78 (June 8, 2020), https://www.airuniversity.af.edu/Portals/10/Wild-Blue-Yonder/Site-Assets/PDFs/WBY%208%20June%2020.pdf ("Developing a definition for a complete lethal autonomous weapon system (LAWS) is arguably one of the major stumbling blocks to developing an effective international response to the emergence of increasingly autonomous military technology....").

autonomous."³¹ There is always a certain amount of pre-programming present in every technology.

The main problem revolves around how much choice, discretion, or lack of pre-programming makes something "autonomous."³² Attempts to define AI can quickly devolve into something resembling a "free will" debate, rooted in ancient times, with ideas from the minds of "Plato, Aristotle, Augustine, Aquinas, Descartes, and Kant."³³ But while it is a murky philosophical subject, most see that there should be a line somewhere, even if they disagree as to where, and that there is still an enormous distinction between a landmine and the Terminator.³⁴ For simplicity's sake, we will call this the "robot-human discretion problem." The robot-human discretion problem has resulted in various typologies or schemes for defining LAWS.

The most popular and long-standing definition consists of three categories of human involvement in the decision-making process.³⁵ The first category is "human-*in*-the-loop," where lethal force only occurs under human direction.³⁶ The second category is "human-*on*-the-loop," and in this category, humans can override a robot, but robots both target and attack.³⁷ The third category is "human-*out-of*-the-loop," which gives robots the ability to target and attack without human input or interaction.³⁸

The United States Department of Defense ("DoD") has an equally popular definition for a fully autonomous weapon system:

³⁸ Id.

 $^{^{31}~}$ See id. at 69 (suggesting that a fully autonomous weapon cannot exist until autonomy is defined).

³² See id. at 69–70, 74–76 (discussing how the role of human decision-making impacts the definition of LAWS); cf. Karni Chagal-Feferkorn, *The Reasonable Algorithm*, 2018 U. ILL. J.L., TECH., & POL'Y 111, 133–35 (discussing the interplay between choice, discretion, and programming in relation to autonomous algorithms).

³³ Timothy O'Connor & Christopher Evan Franklin, *Free Will*, STAN. ENCYC. PHIL., https://plato.stanford.edu/entries/freewill/ (Nov. 3, 2022).

³⁴ See FRANK SLIJPER, PAX, WHERE TO DRAW THE LINE: INCREASING AUTONOMY IN WEAPON SYSTEMS – TECHNOLOGY AND TRENDS 7 (2d prtg. 2018) (advocating that a clear line must be drawn concerning the human role in autonomous weapons systems and noting how LAWS exist on "a continuum[] with levels of technology varying from simple automation towards full autonomy").

³⁵ BONNIE DOCHERTY, HUM. RTS. WATCH, LOSING HUMANITY: THE CASE AGAINST KILLER ROBOTS 2 (2012); Nicholas W. Mull, *The Roboticization of Warfare with Lethal Autonomous Weapon Systems (LAWS): Mandate of Humanity or Threat to It?*, 40 HOUS. J. INT'L L. 461, 479–80 (2018).

³⁶ DOCHERTY, *supra* note 35.

³⁷ Id.

A weapon system that, once activated, can select and engage targets without further intervention by a human operator. This includes human-supervised autonomous weapon systems that are designed to allow human operators to override operation of the weapon system, but can select and engage targets without further human input after activation.³⁹

This DoD definition corresponds with the "human-*on*-the-loop" category.⁴⁰ Unsurprisingly, the DoD has an additional definition that fits the "human-*in*-the-loop" category, such as "semi-autonomous" weapon systems.⁴¹ In other words, the DoD definition does not add or change anything substantively to the "human in, on, or out of the loop" categories.⁴²

Many NGOs in the Campaign to Stop Killer Robots suggest a different definition: "fully autonomous weapon systems which lack meaningful human control over the critical functions of targeting and engagement in every attack."⁴³ A prominent area of disagreement is what "meaningful human control" means.⁴⁴ Essentially, however, this definition fails to solve the robot-human discretion problem.

All these definitions have a fatal flaw in that they are "plotting autonomy as a linear and single axis progressively and discretely demarcated by whether humans are in, on, or out of a functional loop."⁴⁵ As others have pointed out, a machine's sheer complexity is different from the human-machine connection, which is also different from the type of

³⁹ U.S. DEP'T OF DEF., DIRECTIVE NO. 3000.09, at 13–14 (2012); see also Wyatt, supra note 23, at 69 ("The most common definition of LAWSs originated in a 2012 US Department of Defense (DOD) directive on autonomous weapon systems.").

⁴⁰ Compare U.S. DEP'T OF DEF., *supra* note 39 (indicating that "autonomous weapons systems" are those that do not require further human intervention to engage targets but can be overridden by human operators), *with* DOCHERTY, *supra* note 35 (defining human-on-the-loop weapon as "[r]obots that can select targets and deliver force under the oversight of a human operator who can override the robots' actions").

⁴¹ Compare U.S. DEP'T OF DEF., supra note 39 (defining a semi-autonomous weapon system as "[a] weapon system that, once activated, is intended only to engage individual targets or specific target groups that have been selected by a human operator"), with DOCHERTY, supra note 35 (defining a human-in-the-loop weapons as "[r]obots that can select targets and deliver force only with a human command").

⁴² See Mull, *supra* note 35 (observing how the DoD's and Human Right Watch's definitions "[b]oth break down levels of autonomy into three levels that correlate" to one another).

⁴³ Daan Kayser, *How to Do a Scientist Letter*, *in* CAMPAIGN TO STOP KILLER ROBOTS: CAMPAIGNER'S KIT 42, 43, 45 (Erin Hunt ed., 2d prtg. 2020), https://www.stopkillerrobots. org/wp-content/uploads/2020/02/2020_Campaigners-Kit_FINAL.pdf.

⁴⁴ Filippo Santoni de Sio & Jeroen van den Hoven, *Meaningful Human Control over Autonomous Systems: A Philosophical Account*, FRONTIERS ROBOTICS & AI, Feb. 28, 2018, at 1–3, 8, https://doi.org/10.3389/frobt.2018.00015 ("[P]olicy-makers and technical designers lack a detailed theory of what 'meaningful human control' exactly means.").

⁴⁵ Chris Jenks, False Rubicons, Moral Panic, & Conceptual Cul-De-Sacs: Critiquing & Reframing the Call to Ban Lethal Autonomous Weapons, 44 PEPP. L. REV. 1, 16 (2016).

decision made.⁴⁶ Autonomy embodies all of these concepts, and although they are interrelated, they are not the same. This explains some of the philosophical debate that is present in defining AI. In essence, defining AI is more philosophical than a practical legislative effort to determine, for example, what the maximum speed limit should be. This Note does not seek to solve the robot-human discretion problem; rather, it seeks to solve the real-world implication of an international treaty banning LAWS.

While identifying these intricacies and real-world issues, for the purpose of this Note, the term LAWS means that it must have "autonomy" in that the AI must be able to select and engage without human interaction. This demarcates between a landmine (not LAWS) or a drone swarm and the Terminator (LAWS). For this Note, when referring to LAWS, it is not necessary to delineate the exact amount of human oversight or control. This Note will demonstrate that this ongoing debate over definitions helps prove why preemptively banning LAWS is bad, leading to more significant human-rights abuses.

A. Current Controlling Law

Two principal types of international law are international humanitarian law and human rights law.⁴⁷ Human rights law governs in times of peace and conflict, whereas international humanitarian law only governs during an emergency or periods of armed conflict.⁴⁸ International humanitarian law looks at the legality of a war's justifications, the conduct of war, and specific tactics and weapons regulation.⁴⁹ International humanitarian law is rooted in customs, traditions, and history from ancient civilizations; these customs have, over time, been codified in contemporary international humanitarian law through multi-

⁴⁶ See Paul Scharre, Between a Roomba and a Terminator: What Is Autonomy?, WAR ON THE ROCKS (Feb. 18, 2015), https://warontherocks.com/2015/02/between-a-roomba-and-aterminator-what-is-autonomy/ (explaining how different types of decisions have varying degrees of complexity and how these degrees of complexity must be considered in order to describe autonomy more accurately); Wyatt, *supra* note 23, at 69 ("[I]t is important to note at the outset that it is not realistic to consider autonomy in the robotics field in binary terms; instead, it is much more analytically effective to consider autonomy as a function-based spectrum where human interaction remains present at some point, even if it is limited to the production or strategic deployment stages.").

⁴⁷ See INT'L COMM. OF THE RED CROSS, WHAT IS INTERNATIONAL HUMANITARIAN LAW? 7 (2022), https://www.icrc.org/en/document/what-international-humanitarian-law; Gabriele Porretto & Sylvain Vité, *The Application of International Humanitarian Law and Human Rights Law to International Organisations* 6 (Univ. Ctr. for Int'l Humanitarian L., Rsch. Paper Ser. No. 1, 2006), https://iihl.org/wp-content/uploads/2018/03/Application_of_IHLand-H-rights-law.pdf.

⁴⁸ INT'L COMM. OF THE RED CROSS, *supra* note 47, at 1, 7 ("[H]uman rights law – unlike [international humanitarian law] – applies during both armed conflict and peacetime, although some of its provisions can be derogated from during an armed conflict.").

⁴⁹ *Id.* at 1, 3, 5; INT'L COMM. OF THE RED CROSS, INTERNATIONAL HUMANITARIAN LAW: ANSWERS TO YOUR QUESTIONS 4 (2023).

national treaties.⁵⁰ These treaties address LAWS, even if they only do so implicitly,⁵¹ so it is important to know how and to what extent they potentially control LAWS.

While the Hague Conventions came first, the most famous treaties are the four Geneva Conventions of 1949.⁵² The four Geneva Conventions of 1949 have a near-universal ratification, including the United States.⁵³The additional protocols of the Geneva Convention are not as widely adopted.⁵⁴ Still, the Additional Protocols I and II of the Geneva Conventions have been ratified by over 160 countries, though the U.S. is not among them, and are some of the most widely recognized and adopted treaties in the world.⁵⁵ The older Hague Conventions of 1899 and 1907⁵⁶

⁵³ INT'L COMM. OF THE RED CROSS, *supra* note 49, at 31; Thomas J. Murphy, Sanctions and Enforcement of the Humanitarian Law of the Four Geneva Conventions of 1949 and Geneva Protocol I of 1977, 103 MIL. L. REV. 3, 4–5 (1984); INT'L COMM. OF THE RED CROSS, STATES PARTY TO THE FOLLOWING INTERNATIONAL HUMANITARIAN LAW AND OTHER RELATED TREATIES AS OF 01-MARCH-2023, at 1, 6 (2023), https://ihldatabases.icrc.org/public/refdocs/IHL_and_other_related_Treaties.pdf.

⁵⁴ INT'L COMM. OF THE RED CROSS, *supra* note 49, at 31 (stating that fewer parties have ratified the Additional Protocols than the original Geneva Conventions); INT'L COMM. OF THE RED CROSS, *supra* note 53 (indicating that 196 countries have ratified the original Geneva Conventions, 174 countries have ratified Geneva Protocol I, 169 countries have ratified Geneva Protocol II, and 79 countries have ratified Geneva Protocol III).

⁵⁵ INT'L COMM. OF THE RED CROSS, *supra* note 49, at 31; INT'L COMM. OF THE RED CROSS, *supra* note 53; *cf.* ZHANG Weihua, *Modernization of International Humanitarian Law—The Origins and Evolution of the 1977 Additional Protocols to the 1949 Geneva Conventions*, 17 J. HUM. RTS. 650, 653–54 (2018) (noting that the additional protocols played a major part in developing international humanitarian law); JUDITH GARDAM, U.N. AUDIOVISUAL LIBR. OF INT'L L., PROTOCOL ADDITIONAL TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, AND RELATING TO THE PROTECTION OF VICTIMS OF INTERNATIONAL ARMED CONFLICTS (PROTOCOL I) PROTOCOL ADDITIONAL TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, AND RELATING TO THE PROTECTION OF VICTIMS OF INTERNATIONAL ARMED CONFLICTS (PROTOCOL II) PROTOCOL ADDITIONAL TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, AND RELATING TO THE PROTECTION OF VICTIMS OF INTERNATIONAL ARMED CONFLICTS (PROTOCOL II) PROTOCOL ADDITIONAL TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, AND RELATING TO THE PROTECTION OF VICTIMS OF INTERNATIONAL ARMED CONFLICTS (PROTOCOL II) PROTOCOL ADDITIONAL TO THE GENEVA CONVENTIONAL ARMED CONFLICTS (PROTOCOL III), at 1 (2021), https://legal.un.org/avl/pdf/ha/pagc/pagc_e.pdf (stating that the four 1949 Geneva Conventions and the 1977 Protocols "are the best known of the treaty documents and are major components of what is today referred to as International Humanitarian Law").

⁵⁶ Full versions of the conventions can be found, for example, in THE HAGUE CONVENTIONS AND DECLARATIONS OF 1899 AND 1907 (James Brown Scott ed., 2d ed. 1915), which also includes information about the signing, ratification, and adhesion to the conventions.

 $^{^{50}}$ INT'L COMM. OF THE RED CROSS, supra note 47, at 2; INT'L COMM. OF THE RED CROSS, supra note 49, at 14–15.

⁵¹ See Erica H. Ma, Autonomous Weapons Systems Under International Law, 95 N.Y.U. L. REV. 1435, 1448–49 (2020) (indicating that international humanitarian law principles apply to autonomous weapons systems if they are deployed during an armed conflict).

 $^{^{52}~}Id.$ at 1447–48 (noting that the Hague Conventions of 1899 and 1907 preceded the Geneva Conventions); *cf.* BOYD VAN DIJK, PREPARING FOR WAR: THE MAKING OF THE GENEVA CONVENTIONS 2 (2022) (describing the Geneva Conventions as "the most important rules for armed conflict ever formulated").

(hereinafter Hague Conventions), on the other hand, have significantly fewer signatories and are less comprehensive, and the United States is one of the signatories.⁵⁷ Since the United States is a signatory of the Hague Conventions and not the additional protocols of the Geneva Conventions, this Note will first briefly look at the Hague Conventions.

1. Hague Conventions

The Hague Conventions primarily dealt with methods of warfare, occupation, and conduct in combat, unlike the Geneva Conventions, which mainly dealt with protecting victims of war.⁵⁸ The Hague Conventions prohibit killing or wounding enemy combatants who have laid down their weapons and refusing quarter.⁵⁹ The Hague Conventions also prohibit "employ[ing] arms, projectiles, or material of a nature to cause superfluous injury," and they prohibit destroying the enemy's property unless "imperatively demanded by the necessities of war."⁶⁰ To comply with the Hague Conventions, LAWS must not cause "superfluous injury" and must have the ability to discriminate when the destruction of property is necessary for the war.⁶¹

 61 See id.

E.g., Convention Between the United States of America and Certain Powers, with 57Respect to the Laws and Customs of War on Land art. V, July 29, 1899, 32 Stat. 1803 [hereinafter Hague II] (showing that the 1899 Hague Convention has twenty-six signatories, of which the United States is one); Convention Between the United States and Other Powers Respecting the Laws and Customs of War on Land art. 9, Oct. 18, 1907, 36 Stat. 2277 [hereinafter Hague IV] (showing that the 1907 Hague Convention has forty-two signatories, of which the United States is one); Convention (II) with Respect to the Laws and Customs of War on Land and Its Annex: Regulations Concerning the Laws and Customs of War on Land. The Hague, 29 July 1899. INT'L COMM. RED CROSS, https://ihl-databases.icrc.org/en/ihltreaties/hague-conv-ii-1899/state-parties?activeTab=undefined (last visited Apr. 5, 2023); Convention (IV) Respecting the Laws and Customs of War on Land and Its Annex: Regulations Concerning the Laws and Customs of War on Land. The Hague, 18 October 1907, INT'L COMM. OF THE RED CROSS, https://ihl-databases.icrc.org/en/ihl-treaties/hague-conv-iv-1907/state-parties?activeTab=default#footnote-2 (last visited Apr. 5, 2023); see also Sources of International Humanitarian Law, DIAKONIA INT'L HUMANITARIAN L. CTR., https://www. diakonia.se/ihl/resources/international-humanitarian-law/sources-international-

humanitarian-law/ (last visited Apr. 5, 2023) (observing that while the Hague Conventions principally dealt with "the conduct of armies during hostilities," the Geneva Conventions and Additional Protocols not only "extend[ed] the protection provided to civilians," but they "also set out rules on the conduct of hostilities . . . which define[d] the lawful means and methods of warfare"—areas of "traditional Hague Law").

⁵⁸ Hague Conventions, INT'L COMM. RED CROSS, https://casebook.icrc.org/glossary/ hague-conventions (last visited Feb. 5, 2023); Brian D. Tittemore, *Belligerents in Blue Helmets: Applying International Humanitarian Law to United Nations Peace Operations*, 33 STAN. J. INT'L L. 61, 64–65 (1997).

⁵⁹ Hague II, *supra* note 57, art. XXIII(c)–(d); Hague IV, *supra* note 57, art. 23(c)–(d).

⁶⁰ Hague II, *supra* note 57, art. XXIII(e), (g).

2. Geneva Conventions

In Geneva Convention Additional Protocol I, the treaty declares: "methods or means of warfare [are] not unlimited."⁶² "It is prohibited to employ weapons, projectiles and material and methods . . . of a nature to cause superfluous injury or unnecessary suffering."⁶³ In other words, it is already illegal under Protocol I to use automated or autonomous weapons if they would cause "superfluous injury" or "unnecessary suffering."⁶⁴

Furthermore, Article 36 of Protocol I says that a party to this convention is "under an obligation to determine whether its employment [of new weapons] would, in some or all circumstances, be prohibited by this Protocol or by any other [applicable] rule of international law."⁶⁵

Article 48 of Protocol I states that to "ensure respect for and protection of the civilian population . . . the Parties to the conflict shall at all times distinguish . . . between civilian objects and military objectives and accordingly shall direct their operations only against military objectives."⁶⁶ This is particularly applicable to LAWS as it requires artificial intelligence to be advanced enough to distinguish between civilian and military objectives. In addition, the Geneva Conventions state in Article 51 of Protocol I that, concerning civilians, "[i]ndiscriminate attacks are prohibited."⁶⁷ It then defines what an indiscriminate attack is, including if it is "expected to cause incidental loss of civilian life . . . which would be excessive in relation to the . . . military advantage anticipated."⁶⁸ Article 12 of Protocol I similarly protects medical units, requiring that medical units "be respected and protected at all times and . . . not be the object of attack."⁶⁹

The Martens Clause is another part of the Geneva Convention Additional Protocols that comes up frequently when talking about LAWS.⁷⁰ The Martens Clause states, "In cases not covered by this Protocol or by other international agreements, civilians and combatants remain under the protection and authority of the principles of international law

⁶² Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I), art. 35(1), *adopted* June 8, 1977, 1125 U.N.T.S. 3 [hereinafter Geneva Protocol I].

⁶³ Id. art. 35(2).

 $^{^{64}}$ See id.

⁶⁵ Id. art. 36.

⁶⁶ *Id.* art. 48.

⁶⁷ Id. art. 51(4).

⁶⁸ Id. art. 51(5).

⁶⁹ *Id.* art. 12(1).

⁷⁰ See, e.g., Bonnie Docherty, *REMARKS: Banning 'Killer Robots': The Legal Obligations of the Martens Clause*, ARMS CONTROL ASS'N (Oct. 2018), https://www.armscontrol.org/act/2018-10/features/remarks-banning-'killer-robots'-legal-obligations-martens-clause; Michael W. Meier, *Lethal Autonomous Weapons Systems (LAWS): Conducting a Comprehensive Weapons Review*, 30 TEMP. INT'L & COMPAR. L.J. 119, 120–21 (2016).

derived from established custom, from the *principles of humanity* and from the dictates of public conscience."⁷¹ Many who would like to preemptively ban LAWS interpret the Martens Clause to mean that it precludes LAWS because it requires human interaction, such as human emotion.⁷² However, the text's plain meaning and the signatories' intent contradict this interpretation of "principles of humanity."⁷³ Even their actions for further legislation seem to refute that it is a binding interpretation.⁷⁴ But, in another sense, those who argue that the Martens Clause precludes LAWS are saying that customary law recognizes a preemptive ban of LAWS, and they are creating a treaty to effectuate the "customary" established law that already exists.⁷⁵

Although the United States has not ratified Protocol I, because it is a party to the first four Geneva Conventions, it must treat persons humanely and may not kill the sick, wounded, or surrendered combatants.⁷⁶ Therefore, even if the level of discrimination is not as

⁷¹ Geneva Protocol I, *supra* note 62, art. 1(2) (emphasis added). See generally Patrick Leisure, *The Martens Clause, Global Pandemics, and the Law of Armed Conflict*, 62 HARV. INT'L L.J. 469, 476–77 (2021) (explaining that the clause derives its name from Fyodor F. Martens, who proposed it, and that it appears "in numerous other international conventions").

⁷² See infra Section I.B.2; Bonnie Docherty & Matthew Griechen, Legal Arguments, in CAMPAIGN TO STOP KILLER ROBOTS: CAMPAIGNER'S KIT, supra note 43, at 6, 7.

⁷³ See Geneva Protocol I, supra note 62, art. 1(2); Vaios Koutroulis, Martens Clause, OXFORD BIBLIOGRAPHIES, https://www.oxfordbibliographies.com/display/document/obo-9780199796953/obo-9780199796953-0101.xml (July 24, 2013). Admittedly, attempting to definitively interpret the signatories' intent could open a can of worms that is outside the scope of this Note. Looking at the legislative intent, the original purpose of the Martens Clause was to protect the rights of occupied states and customary law. See Koutroulis, supra ("To appease the fears expressed [by small states] and avoid the possibility of a deadlock in the negotiations, Martens came up with the idea of inserting in the preamble of the convention the clause that has rightfully borne his name ever since."). Arguably, changing the meaning of "principles of humanity" to simply fit an agenda not only changes the plain meaning of the text but also deviates from the original purpose of the clause.

⁷⁴ Those who argue for preemptively banning LAWS say that additional multinational treaties to effectuate a preemptive ban are necessary while simultaneously saying that the Martens Clause already bans them. *Compare* Mary Wareham, *Let's Stop Killer Robots, in* CAMPAIGN TO STOP KILLER ROBOTS: CAMPAIGNER'S KIT, *supra* note 43, at 2, 3–4 (calling for a treaty to ban LAWS in order "to retain meaningful human control over weapons systems and the use of force"), *with* Docherty & Griechen, *supra* note 72 (arguing that LAWS violate "principles of humanity" and thereby violate the Martens Clause).

⁷⁵ An argument from customary law, however, begs the question as to why opposition exists to the preemptive ban of LAWS. If the treaty was *already* presupposed by customary law, then there would be close to a consensus among countries. *See What is International Humanitarian Law?*, INT'L COMM. RED CROSS (July 31, 2004), https://www.icrc.org/en/doc/assets/files/other/what_is_ihl.pdf (defining customary law as "general rules by which all States are bound"); *see also supra* notes 69–70 and accompanying text.

⁷⁶ IN'L COMM. OF THE RED CROSS, *supra* note 53; Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, arts.

explicit as in Protocol I, any LAWS need to discriminate between surrendered combatants and actual combatants. So, they must be "discriminating" in this regard.

3. Convention on the Use of Certain Conventional Weapons

The Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons (CCW) is "a multilateral arms control agreement to which the United States became a party in 1982."⁷⁷ Since the CCW directly applies to weapon disarmament, it is the most significant currently binding law.⁷⁸ The full title of the treaty calls for prohibiting "weapons which may be deemed to be excessively injurious or to have indiscriminate effects."⁷⁹ In a later adoption, the CCW prohibits "[t]he indiscriminate use of weapons" such as mines, booby-traps, and other devices.⁸⁰ "[O]ther devices" are defined as "manually-emplaced munitions and devices . . . designed to kill, injure or damage and which are actuated . . . by remote control or automatically after a lapse of time."⁸¹

In 2018, the parties to the CCW agreed that LAWS are regulated by the CCW by agreeing to eleven guiding principles concerning LAWS.⁸² The first guiding principle states, "International humanitarian law continues to apply fully to all weapons systems, including the potential development and use of lethal autonomous weapons systems."⁸³ The eleven guiding principles include other aspects such as stipulating human responsibility for the use of force and that LAWS must account for potential uses by terrorists.⁸⁴

^{3, 12, 50,} Aug. 12, 1949, 6 U.S.T. 3114, 75 U.N.T.S. 31. The United States originally signed the additional Protocol I and II, but they were never ratified by the Senate, and later presidents refuted the additional Protocols. George H. Aldrich, *Prospects for United States Ratification of Additional Protocol I to the 1949 Geneva Conventions*, 85 AM. J. INT'L L. 1, 1–4 (1991).

⁷⁷ Kelley M. Sayler, Cong. Rsch. Serv., IF11294, International Discussions Concerning Lethal Autonomous Weapon Systems (2021).

⁷⁸ See id.

⁷⁹ Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (with Protocols), *opened for signature* Apr. 10, 1981, 1342 U.N.T.S. 137 [hereinafter CCW].

⁸⁰ Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as Amended on 3 May 1996 (Protocol II) art. 3(1), (8) *adopted* May 3, 1996, S. TREATY DOC. NO. 105–1 (1997), 2048 U.N.T.S. 93.

⁸¹ Id. art. 2(5).

⁸² Rep. of the 2019 Session of the Group of Governmental Experts on Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, ¶¶ 16, 26(a), U.N. Doc. CCW/GGE.1/2019/3 (Sept. 25, 2019) [hereinafter Group of Governmental Experts LAWS Report]; *id.* annex IV, cls. (c)–(e), (g)–(k).

⁸³ *Id.* annex IV, cl. (a).

⁸⁴ Id. annex IV, cls. (b), (f).

For any person desiring a preemptive ban of LAWS, there is no need to stretch the CCW's interpretation to say that LAWS are controlled by international humanitarian law. This should be a huge relief to LAWS ban seekers as any new "adoption" by the CCW requires consensus, meaning that only a single state needs to vote against a measure for it to be blocked.⁸⁵

Critics (namely, the Stop Killer Robots Campaigners) have said that these principles do not go far enough and are not legally binding because they were adopted with the intent of guiding deliberation at the convention.⁸⁶ With this brief survey of the current controlling law, this Note will look next at the different country positions and recommendations.

B. Country Positions

Countries' positions fall into three categories: (1) those who perceive current controlling law as adequate and oppose additional laws; (2) those who believe explicit regulation of LAWS is needed; and (3) those who seek to sidestep the issue (this position is held by China alone).⁸⁷ Each position will be discussed, and arguments outlined, starting with those who oppose additional laws.

1. Position in Opposition to Additional Laws

Countries that have adopted this position include the United States, the United Kingdom, South Korea, Australia, France, Germany, Israel, and Russia.⁸⁸ The United States believes the emerging AI technologies can uphold international humanitarian law and save lives in armed conflict.⁸⁹ The United States gives five reasons why LAWS would reduce civilian casualties: (1) incorporation of auto self-destruct function, (2) "increase[ed] awareness of civilians ... on the battlefield," (3) better

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⁵ WAREHAM, *supra* note 16, at 5.

⁸⁶ Id. at 5–6; Aiden Warren & Alek Hillas, Decreasing Unintentional War: Governance Considerations for Regulating Lethal Autonomous Weapons Systems, 9 PENN STATE J.L. & INT'L AFFS. 68, 81 (2021).

⁸⁷ See SAYLER, supra note 77. For clarity's sake, China's position is called a "third" position. However, it is not actually a third position because although China "supports a ban on the use—but not development—of LAWS," it defines LAWS so differently that a weapon falling under its definition "would be unable to comply with [international humanitarian law] and therefore would inherently be illegal." *Id.* (stating that China defines LAWS as "indiscriminate lethal systems that do not have any human oversight and cannot be terminated").

⁸⁸ Id.

⁸⁹ Charles Trumbull, U.S. Mission to Int'l Orgs. in Geneva, Potential Military Applications of Advanced Technology (Mar. 25, 2019), https://geneva.usmission.gov/ 2019/03/26/u-s-statement-on-laws-potential-military-applications-of-advanced-technology/.

outcome assessments of military operations, (4) increased accuracy, and (5) decreased necessity for "immediate fires in self-defense."⁹⁰

Russia has said it opposes a preemptive ban of LAWS because there is no precedent for banning an entire class of weapons.⁹¹ According to Russia, the use of LAWS "ensure[s] the increased accuracy of weapon guidance on military targets[] while contributing to a lower rate of unintentional strikes against civilians and civilian targets."⁹² In short, the argument for not banning LAWS is that the benefits are too great and will help to further protect human rights, even if there are risks.

2. Positions in Support of Regulation

Another position adopted by countries supports a preemptive ban of LAWS.⁹³ This position is taken by thirty countries and has a large following and media attention.⁹⁴ Notably, the International Committee of the Red Cross has joined this movement, recommending regulation of design and prohibition of autonomous weapon systems that (1) are designed so that their outcomes are not "sufficiently understood, predicted and explained," and (2) target humans.⁹⁵

As mentioned before, this group includes many different NGOs, all under the umbrella organization of the "Campaign to Stop Killer Robots."⁹⁶ Although the many organizations in this group may have slightly differing definitions, some similarities are prevalent in them all chiefly, their focus on "meaningful human control."⁹⁷ Another common feature is their aligned argument behind the Geneva Convention Martens Clause. These NGOs argue that the Martens Clause precludes the use of

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⁹⁰ Group of Governmental Experts of the High Contracting Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects, Humanitarian Benefits of Emerging Technologies in the Area of Lethal Autonomous Weapon Systems, at ¶ 7, U.N. Doc. CCW/GGE.1/2018/WP.4 (2018).

⁹¹ SAYLER, *supra* note 77.

 $^{^{92}}$ Id.

⁹³ *Id.*; WAREHAM, *supra* note 16, at 4 (discussing support for banning "weapons systems that lack meaningful human control").

⁹⁴ Id.; see, e.g., Frank Pasquale, 'Machines Set Loose to Slaughter': The Dangerous Rise of Military AI, GUARDIAN (Oct. 15, 2020, 1:00 PM), https://www.theguardian.com/news/2020/oct/15/dangerous-rise-of-military-ai-drone-swarm-autonomous-weapons?ref= hyper.com.

⁹⁵ Autonomous Weapons: The ICRC Recommends Adopting New Rules, INT'L COMM. RED CROSS (Aug. 3, 2021), https://www.icrc.org/en/document/autonomous-weapons-icrc-recommends-new-rules.

⁹⁶ WAREHAM, *supra* note 16, at 1 n.1.

⁹⁷ WILLIAM BUNN, OLD DOMINION UNIV. MODEL U.N., THE CHALLENGE OF LETHAL AUTONOMOUS WEAPONS SYSTEMS (LAWS) 4 (2021), https://ww1.odu.edu/content/dam/odu/ offices/mun/docs/1st-lethal-autonomous-4.pdf; *see*, *e.g.*, SLIJPER, *supra* note 34 (noting that the Dutch peace organization PAX advocates for a definition "guaranteeing meaningful human control" in LAWS).

LAWS because LAWS are incapable of human emotion, have no human conscience, and can feel no compassion or empathy, and are therefore incapable of acting ethically.⁹⁸

3. Other Position: China

The last position, which is adopted solely by China, seeks to "ban" LAWS but not their production or development⁹⁹—a position that some have described as "strategic ambiguity."¹⁰⁰ In 2018, China announced its support of a preemptive ban of LAWS.¹⁰¹ The media enthusiastically applauded China's stance because the media largely backed the preemptive prohibition of LAWS.¹⁰² However, the enthusiasm died down because "it soon became clear that the [People's Republic of China] was seizing on the lack of an internationally agreed upon definition to control the debate in its favor."¹⁰³ China defined LAWS as "indiscriminate, lethal systems that do not have any human oversight and cannot be terminated."¹⁰⁴

As seen from the CCW, indiscriminate lethal systems are already banned by International Human Rights law.¹⁰⁵ Therefore, it is clear that China never intended to build LAWS that fit that description in the first place as it would have been illegal by existing international law.¹⁰⁶

¹⁰² See, e.g., Stop Killer Robots (@BanKillerRobots), TWITTER (Apr. 13, 2018, 4:42 AM), https://twitter.com/BanKillerRobots/status/984713419134853120 ("We will be talking to the delegation of #China, but we welcome the call it just made 'to negotiate and conclude a succinct protocol to ban the use of fully autonomous weapons systems."); UN: Key Action on 'Killer Robots'. HUM. RTS. WATCH (Dec. 16. 2016.12.00AMD. https://www.hrw.org/news/2016/12/16/un-key-action-killer-robots; JHS, Lethal Autonomous Weapon Systems and AI: Developments and Resistance, PLANET DYSTOPIA, https://planetdystopia.net/blog/autonomous-weapons-ai/ (last visited Apr. 11, 2023); cf. BUNN, supra note 97, at 3 (stating China's announcement was "initially greeted with enthusiasm"); Wyatt, supra note 23, at 70 ("On 14 April 2018, China became the first permanent member of the Security Council [of the United Nations] to publicly endorse a ban on the use of LAWSs. This surprise announcement was initially seized on as a victory by the Campaign to Stop Killer Robots and covered extensively in the media" (footnote omitted)).

¹⁰⁶ Elsa Kania, *China's Strategic Ambiguity and Shifting Approach to Lethal Autonomous Weapons Systems*, LAWFARE (Apr. 17, 2018, 3:17 PM), https://www.lawfareblog.com/chinas-strategic-ambiguity-and-shifting-approach-lethalautonomous-weapons-systems ("China might be strategically ambiguous about the international legal considerations to allow itself greater flexibility to develop lethal autonomous weapons capabilities while maintaining rhetorical commitment to the position

⁹⁸ Docherty & Griechen, *supra* note 72.

⁹⁹ SAYLER, *supra* note 77.

 $^{^{100}}$ Id.

¹⁰¹ Wyatt, *supra* note 23, at 70.

 $^{^{103}\;}$ BUNN, supra note 97, at 3.

 $^{^{104}}$ SAYLER, *supra* note 77.

¹⁰⁵ CCW, *supra* note 79, art. 3; *see supra* notes 77–81 and accompanying text.

II. HISTORICAL ANALOGUE & RECOMMENDATION

Part II of this Note will (1) analyze the history before World War II leading up to the military advancement of Nazi Germany with Blitzkrieg, (2) compare World War II lessons to LAWS, (3) compare World War II to China's current use of AI, and (4) analyze the different policy implications, concluding that preemptively banning LAWS is fruitless.

A. Historical Analogue: World War II, the Tank, and Blitzkrieg

Consider the implications of the tank for World War II and Blitzkrieg again. In September 1938, Hitler made clear to the international community that Germany would invade Czechoslovakia with military force.¹⁰⁷ The world was on the brink of war.¹⁰⁸ Neville Chamberlain of Great Britain and two other leaders met with Hitler to discuss a "diplomatic resolution" for the possible hostilities.¹⁰⁹ Meanwhile, in mainland Great Britain, the British were preparing for war by installing sirens, bunkers, and sandbags.¹¹⁰ Neville Chamberlain came back from this meeting waving an agreement that was said to have secured "peace for our time."¹¹¹ Part of the agreement Chamberlain secured was a nonaggression pact between Great Britain and Germany, a promise "never to go to war with one another again"¹¹²—a promise Germany did not keep.¹¹³

In 1918 and 1919, Germany entered two disarmament agreements following World War I: the Armistice of November 1918 and the Treaty of Versailles.¹¹⁴ These binding agreements had the full authority of international law and represented the greatest and most binding type of international law.¹¹⁵ In the agreement, Germany's air force was abolished

¹¹⁰ Id.

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¹⁰⁷ See Daryl G. Press, The Credibility of Power: Assessing Threats During the "Appeasement" Crises of the 1930s, INT'L SEC., Winter 2004/05, at 136, 145, 148, 150–51; Christopher Klein, Chamberlain Declares "Peace for Our Time," HISTORY, https://www.history.com/news/chamberlain-declares-peace-for-our-time-75-years-ago (Jan. 30, 2020) (explaining that, upon meeting with multiple world leaders, the Sudetenland was ceded to Hitler).

¹⁰⁸ Klein, *supra* note 107.

¹⁰⁹ Id.

¹¹¹ Id.; NEVILLE CHAMBERLAIN, IN SEARCH OF PEACE 200 (G.P. Putnam's Sons 1939).

¹¹² Klein, *supra* note 107; CHAMBERLAIN, *supra* note 111, at 210.

¹¹³ See Klein, supra note 107.

¹¹⁴ TOWLE, supra note 2; Armistice Day: World War I Ends, HISTORY, https://www.history.com/this-day-in-history/world-war-i-ends (Nov. 9, 2022); Jun 28, 1919 CE: Treaty of Versailles, NAT'L GEOGRAPHIC, https://education.nationalgeographic.org/ resource/treaty-versailles-ends-wwi/ (May 20, 2022).

¹¹⁵ This is, of course, a generalization. While treaties are the most evident—and possibly the most recognized—formal type of international law, there is much scholarly debate. There are various theories on what is "binding" and, in many ways, enforceable. *See* Hugh Thirlway, *The Sources of International Law, in* INTERNATIONAL LAW 95, 98–101

entirely, and its army was reduced to 100,000 men.¹¹⁶ Furthermore, they banned Germany from specific military factories and certain types of weapons, including submarines, poison gas, and tanks.¹¹⁷ It was a combination of airpower, tanks, and mobile artillery, along with the coordination allowed by radio communications, that resulted in the effective use of Blitzkrieg.¹¹⁸ Some authors contend specifically that the critical element in Blitzkrieg was the effective use of the tank because it gave the army new mobility.¹¹⁹ The bottom line is this: there was a preemptive technological ban on Nazi Germany's use of the tank, air force, and submarine, yet it did not stop Germany's use of the technology in the "Blitzkrieg" offensive.¹²⁰ To some extent, disarmament, whether in World War II or the modern era, has to do with one's perspective on international law.

There are two main schools of thought on international law and disarmament: the realist perspective and the idealist perspective.¹²¹ Under an idealist view, things such as LAWS or nuclear weapons pose an existential threat to humanity, and therefore the only rational response is to disarm and believe that other countries will follow this idealist view and disarm as well.¹²² In contrast, from a realist's perspective, for international law to be binding on countries and effective, it must be enforceable, and realists believe countries "will not willingly forego the capabilities they believe essential to their security on the hope or promise that cooperation will prevail."¹²³

When it comes to international law, "many prescriptions are not enforceable against noncompliant decisionmakers. Even prescriptions

⁽Malcolm D. Evans ed., 3d ed. 2010) ("[A] treaty is one of the most evident ways in which rules binding on two or more States may come into existence, and thus an evident formal source of law. The 1969 Vienna Convention on the Law of Treaties, which is to a very large extent the codification of pre-existing general law on the subject, states the principle in Article 26, under the heading '*Pacta sunt servanda*': 'Every treaty is binding upon the parties to it and must be performed by them in good faith.'.').

¹¹⁶ TOWLE, *supra* note 2.

¹¹⁷ *Id.* at 66–67.

¹¹⁸ See supra notes 1–6 and accompanying text.

¹¹⁹ See, e.g., John Simkin, *Blitzkrieg*, SPARTACUS EDUC., https://spartacus-educational.com/2WWblitzkreig.htm (Jan. 2020).

¹²⁰ Jerry D. Morelock, *No, the 1919 Treaty of Versailles Was Not Responsible for World War II*, HISTORYNET (July 18, 2017), https://www.historynet.com/failed-peace-treaty-versailles-1919/.

¹²¹ Keith B. Payne, *Realism, Idealism, Deterrence, and Disarmament*, STRATEGIC STUD. Q., Fall 2019, at 7, 7–8.

¹²² Id. at 10, 12 ("[Idealism] essentially contends that the prevailing international system of independent and often conflicting states can be transformed via concerted, cooperative international efforts to such a degree that individual states ultimately will no longer feel compelled to, or need to, maintain independent nuclear arsenals.").

¹²³ Id. at 15–16, 18.

that have enforcement mechanisms are only enforceable to a degree."¹²⁴ As Eric Posner and Jack Goldsmith said, "[M]orality or immorality of international law is exhausted by its content; international legality does not impose any moral obligations.... [Countries] cannot bootstrap cooperation by creating rules and calling them 'law."¹²⁵

After World War I, the Allies were not completely under the auspices of an idealist perspective. The Allies, in making disarmament agreements, required Germany to disarm and created an oversight body to monitor the disarmament of Germany, the Inter-Allied Military Commission of Control (IMCC).¹²⁶ The IMCC could inspect, supervise, and verify whether disarmament measures were in place.¹²⁷ As some authors contend, the main reason disarmament failed was lack of enforcement because it was not "backed by the political will of the major powers."¹²⁸ "This [political] will did not exist for the enforcement of German disarmament, or indeed for the Versailles Treaty as a whole."¹²⁹ So, while there was some enforcement of disarmament efforts before World War II, in the long term, it was not effective.

B. Comparison of German Disarmament with a Preemptive Ban of LAWS

How does the German disarmament compare technologically with the proposed bans of LAWS? The parallels between the military application of AI vis-à-vis LAWS and the joint use of tanks, radio, motorized artillery, and air power are striking. As tanks, motorized artillery, and air power were in the past, LAWS are considered a new technology and method of warfare that are untested in combat; resulting in faster, more mobile militaries; and tied to international disarmament agreements.¹³⁰

However, there are some key differences. LAWS potentially have a greater chance of upending traditional combat as "[m]any commentators have argued that the development of lethal autonomous weapon systems for military use would represent a third revolution in warfare, after the invention of gunpowder and nuclear weapons."¹³¹ While tanks and submarines were new technology before World War II and resulted in advancements, they were, in many ways, adaptations of conventional

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¹²⁴ TAI-HENG CHENG, WHEN INTERNATIONAL LAW WORKS: REALISTIC IDEALISM AFTER 9/11 AND THE GLOBAL RECESSION 10 (2012).

 $^{^{125}\,}$ Jack L. Goldsmith & Eric A. Posner, The Limits of International Law 197, 203 (2005).

¹²⁶ Webster, *supra* note 2, at 190.

 $^{^{127}}$ Id.

¹²⁸ E.g., *id.* at 191.

 $^{^{129}}$ Id.

¹³⁰ Meserole, *supra* note 4; *see supra* notes 2, 78–86 and accompanying text.

¹³¹ Emilia Javorsky et al., *Lethal Autonomous Weapons*, THEBMJ (Mar. 25, 2019), https://www.bmj.com/content/bmj/364/bmj.l1171.full.pdf.

warfare—just as the transition from horses to chariots, for example.¹³² Advancement of AI, however, could result in something outside "conventional" warfare.

Additionally, there is a more important distinction between the disarmament of Germany and a preemptive ban of LAWS. While the former bound Germany alone, a preemptive ban of LAWS would bind not only potentially militant nations, such as Nazi Germany, but also countries that tend to uphold human rights, such as the United States.¹³³

This Note argues that LAWS are an inevitable technology in warfare like gunpowder and the tank. By trying to pass legislation that preemptively bans LAWS, we are disarming those most likely to protect human rights. Just like in 1938, we can pass regulations securing "peace in our time," but without enforcement, this amounts to a Neville Chamberlain-like failure of impotent, paper-flapping agreements.¹³⁴ Furthermore, current international humanitarian law may in many ways suffer from the same enforcement dilemma.¹³⁵ So, even though international law arguably already covers LAWS, as noted above,¹³⁶ a treaty explicitly addressing LAWS is unlikely to be effectively enforced. But first, let us consider China's use of AI in comparison to Germany's disregard for disarmament treaties.

C. Comparison of China's Use of AI with Germany's Disregard of Disarmament

Consider China's current use of artificial intelligence. China has been using AI in a manner that has been called a "police state" and an "apartheid with Chinese characteristics."¹³⁷ Some estimate that nearly 800,000 people of an ethnic minority are in gulag-like re-education camps,

¹³² See Richard Marian Ogorkiewicz, *Tank*, ENCYC. BRITANNICA (Sept. 15, 2022), https://www.britannica.com/technology/tank-military-vehicle (linking the usage of tanks to the history of using vehicles in combat, which dates back to ancient times); John Protasio, *Evolution of the Submarine*, WARFARE HIST. NETWORK, https://warfarehistorynetwork. com/article/evolution-of-the-submarine/ (last visited Feb. 20, 2023) (noting the concept of "ship[s] that could submerge beneath the water and then resurface" dates back to the 1400s and the first military submarine was used in the American Revolution).

¹³³ See Treaty of Versailles, *supra* note 2, pt. V ("In order to render possible the initiation of a general limitation of the armaments of all nations, *Germany undertakes strictly to observe the military, naval, and air* [*disarmament*] *clauses which follow.*" (emphasis added)); *supra* notes 52–53 and accompanying text; INT'L COMM. OF THE RED CROSS, *supra* note 49, at 4.

¹³⁴ See supra notes 107–15 and accompanying text.

¹³⁵ See Oona Hathaway & Scott J. Shapiro, *Outcasting: Enforcement in Domestic and International Law*, 121 YALE L.J. 252, 255–56 (2011) (noting a principal objection to international law is that it "lacks mechanisms of physically coercive enforcement," meaning "it cannot affect behavior in the right way and hence cannot be a real legal system").

¹³⁶ See infra pp. 8–13.

¹³⁷ Inside Xinjiang: Apartheid with Chinese Characteristics, ECONOMIST, June 2, 2018, at 21, 21, 24.

labeled dissidents or terrorists.¹³⁸ People must have certain apps installed on their phones with iris scanning and face recognition checkpoints.¹³⁹ In areas of China, there are poles with eight to ten cameras every 100-200 meters that have facial recognition and license plate reading technology, enabling the government to enforce the law permitting only registered owners to drive.¹⁴⁰ These systems oppress Chinese citizens by "us[ing] machine-learning systems, information from cameras, smartphones, financial and family-planning records[,] and even unusual electricity use to generate lists of suspects for detention."¹⁴¹ In other words, while the international world debates LAWS, a version of AI is already being used to oppress China's own people.

Compare this to how Germany was unwilling to comply with the disarmament terms it had agreed to at the end of World War I.¹⁴² In the same way, China is *already* violating human rights laws by discriminating against religious minorities, violating freedom of speech, and oppressing dissidents.¹⁴³ Analogously, Germany violated the disarmament treaties' bans of tanks and would go on to use them in the Blitzkrieg to overwhelm the Allies at the start of World War II.¹⁴⁴ If a country is already violating human rights laws, what will stop it from violating international humanitarian law with LAWS? A preemptive ban of LAWS will not prevent countries *already* violating human rights laws from using them. However, it will halt those law-abiding nations (such as the United States or Great Britain) which actively work to protect human rights.

China's use of AI is not haphazard; it is intentional. According to Zeng Yi, an executive with one of China's most prominent military defense companies, "[i]n future battlegrounds, there will be no people fighting," and the use of AI in the military is "inevitable."¹⁴⁵ China's leaders are not taking a backseat with LAWS but are "aggressively pursuing it."¹⁴⁶ And China is already selling this technology to buyers such as Saudi Arabia, Pakistan, and the United Arab Emirates.¹⁴⁷ This is like the military leaders of Nazi Germany in the 1930s who saw that outmoded forms of warfare, which relied principally on infantry, were being replaced by mobile units of tanks, planes, and artillery to gain superiority on the

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¹³⁸ Id. at 21–22.

¹³⁹ Id. at 22, 24.

 $^{^{140}}$ Id. at 24.

 $^{^{141}}$ Id.

¹⁴² Morelock, *supra* note 120.

¹⁴³ See AMNESTY INT'L, AMNESTY INTERNATIONAL REPORT 2020/21: THE STATE OF THE WORLD'S HUMAN RIGHTS 119 (2021).

¹⁴⁴ See supra notes 1–6 and accompanying text.

 $^{^{145}}$ Gregory C. Allen, Ctr. for a New AM. Sec., Understanding China's AI Strategy: Clues to Chinese Strategic Thinking on Artificial Intelligence and National Security 5–6 (2019).

 $^{^{146}}$ Id. at 5.

¹⁴⁷ *Id.* at 6.

battlefield.¹⁴⁸ In the 1920s and leading up to World War II, "the majority of maneuver forces were still horse-drawn and unable to keep up with the fast-paced armored units under development."¹⁴⁹ One well-known German military theorist of the time, Heinz Guderian, saw tanks as the "main war platform when it came to future ground battles . . . assisted by other mobile forces, especially aircraft."¹⁵⁰

D. The Dilemma of Enforcement

Some of the most well-meaning legislation can have devastating unintended consequences. The Treaty of Versailles and Neville Chamberlain's diplomatic resolution did not stop World War II for lack of good intentions; rather, they failed for lack of enforcement.¹⁵¹ This is the crucial problem with preemptively banning LAWS.

The great fear of LAWS turning into a Terminator-like Skynet which is what a preemptive ban of LAWS is supposed to prevent—is most likely to occur in a civilian, commercial context. While the international debate of LAWS continues, commercial AI and military AI are technologically nearly identical.¹⁵² In other words, even if there was international agreement on preemptively banning LAWS, the technology is already advancing commercially, and it is the same. This type of technology is often called "dual-use" because it has uses in both civilian and military contexts.¹⁵³

A great example of dual-use technology is Microsoft's HoloLens, designed for civilian use for "technicians, doctors[,] and gamers."¹⁵⁴ The United States military is now contracted with Microsoft to provide augmented reality goggles for combat and training.¹⁵⁵ The purported end goal will increase lethality by increasing accuracy, detection, and targeting.¹⁵⁶ It is relatively well known that the leaders in AI development are in the civilian sector; it is only later that the military adopts the

¹⁵⁶ Id.

¹⁴⁸ See Thomas A. Hughes & John Graham Royde-Smith, World War II: Forces and Resources of the European Combatants, 1939, ENCYC. BRITANNICA, https://www.britannica.com/event/World-War-II/Forces-and-resources-of-the-Europeancombatants-1939 (Mar. 7, 2023).

¹⁴⁹ Tal Tovy, *1930s German Doctrine: A Manifestation of Operational Art*, MIL. REV., May–June 2015, at 56, 57, 61.

¹⁵⁰ Id. at 61; Heinz Guderian, ENCYC. BRITANNICA (Feb. 15, 2023), https://www.britannica.com/biography/Heinz-Guderian.

¹⁵¹ See How Britain Hoped to Avoid War with Germany in the 1930s, IMPERIAL WAR MUSEUMS, https://www.iwm.org.uk/history/how-britain-hoped-to-avoid-war-with-germanyin-the-1930s (last visited Feb. 4, 2023); *supra* notes 109–15, 126–129 and accompanying text.

¹⁵² ALLEN, *supra* note 145, at 9.

¹⁵³ Daan Kayser & Alice Beck, *Don't Be Evil: Should the Tech Sector Prevent Killer Robots?*, CLINGENDAEL SPECATATOR (Sept. 25, 2019, 2:40 PM), https://spectator.clingendael. org/en/publication/dont-be-evil-should-tech-sector-prevent-killer-robots.

 $^{^{154}}$ Id.

 $^{^{155}}$ Id.

technology for its purposes.¹⁵⁷ This leads to different outcomes based on countries. For example, commercial companies in the United States are "often reluctant to partner" with the military while companies in China have no meaningful choice because they are forced to partner with the Communist Party.¹⁵⁸ So even if legislation is passed preemptively banning LAWS—and in the unlikely scenario that China chooses not to go ahead and implement LAWS—the technology is readily available in the commercial world.¹⁵⁹ In sum, concerning technology, a preemptive ban is a moot point; the technology is being developed in the civilian world and is easily adaptable for military use.

However, this leads to another problematic aspect of the enforcement of bans on LAWS: there is no settled definition of LAWS.¹⁶⁰ Suddenly, the philosophical debate over definitions takes on a practical form. If one country disagrees over what LAWS are, how can it properly enforce a ban on them? Assuming a workable definition existed, then how could it be monitored? There is, as of yet, no AI-sniffing dog to see whether a robot is LAWS compliant or not.¹⁶¹ Technology such as a landmine or biological weapon is easy to spot, thereby enabling monitoring and potential enforcement of such technology. But how is a ban on LAWS enforced when there is no feasible way to detect and therefore monitor?

More than that, the inability to monitor LAWS gives non-compliant countries a way to disguise their compliance, and it possibly even

¹⁵⁷ See DANIEL S. HOADLEY & KELLEY M. SAYLER, CONG. RSCH. SERV., R45178, ARTIFICIAL INTELLIGENCE AND NATIONAL SECURITY 16 (2020).

¹⁵⁸ Id. at 18; Maaike Verbruggen, The Role of Civilian Innovation in the Development of Lethal Autonomous Weapon Systems, 10 GLOB. POLY 338, 340 (2019) ("[I]n China[,] the divisions between the military and civilian domain are much less clear, and government R&D in AI is explicitly dual-use. Every big company has members of the communist party [on] their board of directors, so there is much less freedom to conduct business independently from state interests.").

¹⁵⁹ See Meia Nouwens & Helena Legarda, China's Pursuit of Advanced Dual-Use Technologies, INT'L INST. FOR STRATEGIC STUD. (Dec. 18, 2018), https://www.iiss.org/blogs/research-paper/2018/12/emerging-technology-dominance ("The development of China's national research and development capacities has also been utilised in civil-military integration (CMI) efforts, with commercial innovation spilling over into military applications.").

¹⁶⁰ See Apoorva Chandrachur & Shreya Chamaria, A Study on Lethal Autonomous Weapons System Under International Humanitarian Law with Special Focus on Killer Robots, 3 INT'L J.L. MGMT. & HUMANITIES 1605, 1607 (2020) (noting there is no universally accepted definition of LAWS); supra notes 22–46 and accompanying text.

¹⁶¹ See Sarvjeet Singh & Sharngan Aravindakshan, *Killer Robots or Soldiers of the Future: Legal Issues and India's Role in the Lethal Autonomous Weapons Debate*, 16 INDIAN J.L. & TECH. 103, 104 (2020) ("[A]ny attempts to regulate this technology is premature since it is almost impossible to predict how and what an actually lethal autonomous weapon would look like in the future.").

incentivizes noncompliance.¹⁶² A security-conscious, ban-compliant government must risk its national security on the word or promises of other countries where there is no enforcement or monitoring.¹⁶³ Further, a nation is reasonably incentivized to secretly develop LAWS to protect itself when there is no real enforcement of LAWS.

Also, practically speaking, enforcement and monitoring must occur in the civilian sector.¹⁶⁴ Suddenly, regulators must monitor Amazon, Google, Alibaba, and Apple to see whether LAWS (or its potential) is being developed. This is a regulatory nightmare that has not been thoroughly thought out.¹⁶⁵ Would each tech company be required to submit reports to a regulatory board and be subject to expensive audits? Even with a workable definition of LAWS, this would create a difficult, if not impossible, issue subject to many problems identical to enforcement in the public sector.¹⁶⁶

Furthermore, a different enforcement problem exists: different countries' political/military motivations. Would any country or military willingly give up control solely into the hands of a machine? The answer is obvious: of course not! Vladimir Putin will not give over complete control of the Russian military to a robot without a kill switch or some way to retain power. In other words, they will only use AI so long as it fulfills their objectives of greater control and more efficient military operations. So, while a country has an incentive to develop LAWS, it has an equally strong incentive to retain control over any LAWS. Enforcement of "meaningful human control" remains, in that sense, a foregone conclusion. China's vague and somewhat useless definition highlights this exact problem—the People's Republic of China does not plan on creating any LAWS it cannot retain control over.¹⁶⁷

CONCLUSION

Different legal scholars and groups under the umbrella of the Campaign to Stop Killer Robots rally around a preemptive ban of LAWS and the development thereof, "seek[ing] to retain meaningful human

¹⁶² See Melissa K. Chan, China and the U.S. Are Fighting a Major Battle Over Killer Robots and the Future of AI, TIME (Sept. 13, 2019, 9:45 AM), https://time.com/5673240/china-killer-robots-weapons/ (explaining that China is "simultaneously working on the technology while trying to use international law as a limit against their competitors").

¹⁶³ See supra notes 121–27 and accompanying text.

¹⁶⁴ See Charles P. Trumbull IV, Autonomous Weapons: How Existing Law Can Regulate Future Weapons, 34 EMORY INT'L L. REV. 533, 535 (2020) ("Even if States did agree to prohibit [LAWS], much of the underlying technology is dual use and being developed by the private sector. A ban would be difficult to verify or enforce.").

 $^{^{165}}$ See id.

 $^{^{166}}$ *Id*.

¹⁶⁷ See discussion supra Section I.B.3.

control over weapons systems and the use of force."¹⁶⁸ They paint a dire picture of the world with LAWS: an out-of-control arms race, a lower entry threshold for armed conflicts, an ongoing worldwide battlefield, autonomous systems warring, a faster battle pace, accidental wars, militarization in civilian settings, automated oppression, use of LAWS by terrorists, and increased cyber-attacks.¹⁶⁹ This Note has already covered some of the different positions, definitions, and thought-provoking ethical intricacies this involves.

The United States has fully joined this debate, arguing for the ongoing development of LAWS, but at the same time putting a DoD policy in place that "humans must retain judgment over the use of force even in autonomous and semi-autonomous systems."¹⁷⁰ The depth of this debate can, in many ways, be expressed in the eleven guiding principles that were adopted recently by the United Nations.¹⁷¹ The principles highlight much of the discussion by agreeing that international humanitarian law applies to LAWS, human responsibility and accountability in LAWS will be retained, and risk assessments and safeguards should be in place.¹⁷²

Under treaties already in force, the use of lethal force would have to be measured so as not to cause superfluous or collateral injury. This is already binding international law.¹⁷³ However, in their wisdom, the academics want to ban LAWS when the only countries that will follow this restrictive ban are countries that protect human rights. Ironically, disarming the West jeopardizes the rights of those advocating for disarmament.¹⁷⁴

In summary, the famous economist Thomas Sowell once said, "Ours may become the first civilization destroyed, not by the power of our enemies, but by the ignorance of our teachers In an age of artificial intelligence, they are creating artificial stupidity."¹⁷⁵ The answer to potential human rights abuses is not to disarm countries that protect human rights. This would only hamper the military innovation and protection of human rights in the Western world while allowing countries

¹⁶⁸ Wareham, *supra* note 74, at 3.

¹⁶⁹ See Noel Sharkey, Global Security, in CAMPAIGN TO STOP KILLER ROBOTS: CAMPAIGNER'S KIT, supra note 43, at 10, 11–12.

¹⁷⁰ Rebecca Kheel, *Fighting the Rise of the Machines*, HILL (Mar. 6, 2018, 6:00 AM), https://thehill.com/business-a-lobbying/lobbyist-profiles/376851-fighting-the-rise-of-the-

machines; *see supra* notes 89–90 and accompanying text. ¹⁷¹ Group of Governmental Experts LAWS Report, *supra* note 82, annex IV.

 $^{^{172}}$ Id.

 $^{^{173}\;}$ See supra notes 60–64 and accompanying text.

¹⁷⁴ See supra notes 137–144 and accompanying text; cf. Countering a Resurgent Terrorist Threat in Afghanistan, COUNCIL ON FOREIGN RELS. (Apr. 14, 2022), https://www.cfr.org/report/countering-resurgent-terrorist-threat-afghanistan (recounting that as the United States withdrew from Afghanistan, terrorist organizations' presence and influence rose).

¹⁷⁵ Thomas Sowell, Controversial Essays 308 (2002).

that already violate international law to gain a technological military edge that could lead to another Blitzkrieg.

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