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WHY OUTLAW LAWS?:
AN ARGUMENT FOR A PROBATIONARY PERIOD FOR LETHAL
AUTONOMOUS WEAPONS SYSTEMS UNDER MEANINGFUL
HUMAN CONTROL.

By: Katherine E. Vuyk, J.D. Candidate*

*If we continue to develop our technology without wisdom or
prudence, our servant may prove to be our executioner. – Omar N.
Bradley¹*

I. INTRODUCTION

In 2020, a viral news story reported a “distracted AI with a crush,” referring to an artificial intelligence (AI) camera system live-streaming a soccer game that repeatedly confused a bald referee’s head with the ball.² In 2018, an Amazon computer program was built to review job applicants’ resumes with the aim of searching for top talent in turn taught itself gender bias and consistently recommended male candidates over female candidates.³ In late 2023, General Motors’ Cruise autonomous vehicle was recalled after the car’s system inaccurately characterized a collision, resulting in the vehicle dragging a pedestrian about twenty feet down the road and pinning them beneath a tire.⁴ These eye-catching news pieces labeled as AI “fails” can range from funny to problematic to extremely dangerous. The future is here, but the technology that drives it is fragile and new. For a technology that relies on patterns and predictability to function, its nature is volatile and inherently unpredictable.

This is why AI implementation into the military sphere is concerning to so many. The development of lethal autonomous weapons systems (LAWS), weapons that can select and engage targets without intervention

* Associate Member, 2023-2024, *University of Cincinnati Intellectual Property and Computer Law Journal*. A special thanks to I.V. and S.B. for their aid in completing this paper.

1. General Omar N. Bradley, Armistice Day Address (Nov. 10, 1958).

2. James Vincent, *AI Camera Operator Repeatedly Confuses Bald Head for Soccer Ball During Live Stream*, THE VERGE (Nov. 3, 2020, 8:07 AM), <https://www.theverge.com/tldr/2020/11/3/21547392/ai-camera-operator-football-bald-head-soccer-mistakes>.

3. Jeffrey Dastin, *Insight – Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women*, REUTERS (Oct. 9, 2018, 11:43 PM), <https://www.reuters.com/article/amazon-com-jobs-automation/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against-women-idINKCN1MK0AH?edition-redirect=in>.

4. OFFICE OF MGMT. & BUDGET, NAT’L HIGHWAY TRAFFIC SAFETY ADMIN., 23E-086, PART 573 SAFETY RECALL REPORT (2023).

after an initial activity, seems to upend the widespread notions of ethics and morality in war.⁵ The government, and particularly the United States military, has more than just national security and international relations concerns in its reach – it holds the lives of its citizens, soldiers, and international friends and foes in its very hands. This is a significantly heavier weight to balance than the proper live stream of a soccer game.

As these weapons have gained traction in the military sphere, so have worldwide calls to ban them from humanitarian groups and governments.⁶ AI, and thus LAWS which rely on AI technology, seem to lack an understanding of the complexities of the real world and pose serious risks. Still, their application as deployable weapons offer the military serious advantages such as force multiplication and, ironically, an ethical alternative to sending human beings to warzones.⁷ Will these vulnerable and young systems pave the way for a new kind of safer and cheaper warfare, or will these systems crack under the pressure?

This Comment argues that in LAWS regulation, a probationary period with meaningful human control should be required as opposed to a standard of appropriate levels of human judgment in order to maintain legal compliance in our deployment of these weapons. Section II delves into the separate ideological approaches to LAWS themselves as well as LAWS regulation and the legal implications of these separate ideas. Section III of this paper follows with examination of why LAWS bans are a hasty and heedless solution in the face of global conflict and inevitable change, and the proper language standard to provide a check against AI weaponry in the military sphere. Further, it examines the impact of the “Urgent Military Need” waiver on legal compliance and underlies the discussion by illustrating the practical advantages and disadvantages of LAWS development and deployment. Section IV concludes by recapitulating the need for development of LAWS and the simultaneous need for a check against them, while highlighting the idea that meaningful human control may not be the proper standard forever, but it is the proper standard now.

II. BACKGROUND

This precise balance—the ability to reap the benefits of LAWS without

5. U.S. DEP’T OF DEF., DIR. 3000.09, AUTONOMY IN WEAPONS SYSTEMS, 21 (Jan. 25, 2023) [hereinafter DODD 3000.09].

6. *Global Survey Highlights Continued Opposition to Fully Autonomous Weapons*, IPSOS (Feb. 2, 2021), <https://www.ipsos.com/en-us/global-survey-highlights-continued-opposition-fully-autonomous-weapons>.

7. Amitai Etzioni & Oren Etzioni, *Pros and Cons of Autonomous Weapons Systems*, MILITARY REVIEW 72, 72 (2017).

harming the wrong individuals—is why current U.S. policy is insufficient in terms of AI use in the military. Current policy must comply with hurdles of the Law of Armed Conflict (LOAC) all while taking into consideration hefty national security concerns, international relations, and public opinion. Due to the distinct need for the U.S. to stay competitive in a tense geopolitical atmosphere and the potentially extreme benefits that LAWS may provide, the U.S. Government and the Department of Defense (DOD) should oppose an outright ban on LAWS despite an international push, given the potential benefits. However, the U.S. and DOD should also push for a heightened level of human involvement to develop and deploy LAWS. The principle of “meaningful human control” is a more sufficient level of regulation than an “appropriate level of human judgment,” the current standard.⁸

For generations, people have often been scared and resistant to new technology. There was widespread hesitation and trepidation to use cars,⁹ computers,¹⁰ and telephones—all of which seem unthinkable to most in today’s day in age.¹¹ Still, remnants of the Cold War lay latent in our society with tensions rising between the U.S. and Russia, and proliferation and nuclear threat fears are at the highest they have been since the Cold War.¹² LAWS add a new layer to these founded fears. To ban LAWS is to ignore the immense benefits they can provide, but the full-throttle ahead approach is to turn a blind eye to the potentially severe disadvantages. Here, fears and concerns should not be the answer, and instead should become the informant. A proper approach is one that is wrought with foresight, circumspection, and one that is not hesitant to lay the necessary boundaries to ensure that LAWS as they are used in the military are always the servant—and never the executioner.

The topic of LAWS and their widespread moniker, “Killer Robots,” provokes futuristic and cold visions of metal beings armed with guns and ammunition, killing everything in their path.¹³ These are images that

8. DODD 3000.09, *supra* note 5, at 3.

9. Alexander Winton, *Get A Horse! America’s Skepticism Toward the First Automobiles*, SATURDAY EVENING POST (Jan. 9, 2017), <https://www.saturdayeveningpost.com/2017/01/get-horse-americas-skepticism-toward-first-automobiles/>.

10. Adrienne LaFrance, *When People Feared Computers*, THE ATLANTIC (Mar. 30, 2015), <https://www.theatlantic.com/technology/archive/2015/03/when-people-feared-computers/388919/>.

11. Adrienne LaFrance, *When the Telephone Was Dangerous*, THE ATLANTIC (Sept. 6, 2015), <https://www.theatlantic.com/technology/archive/2015/09/when-the-telephone-was-dangerous/626742/>.

12. Daniel De Visé, *Americans’ Nuclear Fears Surge to Highest Levels Since Cold War*, THE HILL (Oct. 14, 2022, 6:00 AM), <https://thehill.com/policy/defense/3687396-americans-nuclear-fears-surge-to-highest-levels-since-cold-war/>.

13. *Killer Robots: Military Powers Stymie Ban: But Momentum for New Treaty on Autonomous Weapons is Growing*, HUMAN RIGHTS WATCH (Dec. 19, 2021, 7:01 PM), <https://www.hrw.org/news/2021/12/19/killer-robots-military-powers-stymie-ban>.

could be likened to scenes from science fiction classics such as *The Terminator*,¹⁴ *The Fifth Element*,¹⁵ or *Minority Report*.¹⁶ While our society is likely far off from the technology that seems to appear in every cautionary tale regarding the advancement of society, such as single-family flying cars, autonomous weapons have been in development for decades.¹⁷ Land mines, for example, are autonomous, and the U.S. has missiles that lock on and pursue a target.¹⁸ The difference here is that LAWS will practice independent decision-making.¹⁹ As the fabric of society changes and so follows the military reality, this vision of the future and the idea of war not in the hands of a human but rather in the terms of a computer has stepped out of the screen and is as terrifying as it is intriguing.

A. Ideological Approaches

Needless to say, LAWS do not look like humanoid bots with cold eyes and giant guns and instead resemble military technology of our present time, but envisioning LAWS is not the only challenge. Defining LAWS is an obstacle almost as robust as envisioning them, but less so than the challenge of determining a policy stance toward them. There is not a seamless worldwide agreement as to what specifically a “lethal autonomous weapon system” is, likely a result of different viewpoints and levels of understanding of their purpose, capacity, and implications.²⁰ Air University, which holds itself as the academic center of the U.S. Air Force, notes the three approaches to LAWS, being the Pessimists, the Realists, and the Optimists, which lends itself to a discussion of the definitions under these viewpoints.²¹

1. Optimists support the development and use of LAWS.

The U.S. and its current policy fall under the Optimists, who believe that robots are more effective than humans in certain military situations

14. THE TERMINATOR (Hemdale Film Corporation 1984).

15. THE FIFTH ELEMENT (Gaumont Film Company 1997).

16. MINORITY REPORT (20th Century Studios, Inc. 2002).; *Killer Robots*, *supra* note 13.

17. Shayne Longpre, et al, *Lethal autonomous weapons systems & artificial intelligence: Trends, challenges, and policies*, MIT SCIENCE POLICY REVIEW 47, 48 (AUG. 2022).

18. Eric Lipton, *As A.I.-Controlled Killer Drones Become Reality, Nations Debate Limits*, THE N.Y. TIMES (Nov. 21, 2023), <https://www.nytimes.com/2023/11/21/us/politics/ai-drones-war-law.html>.

19. *Id.*

20. Sitara Noor, *Laws on LAWS: Regulating the Lethal Autonomous Weapons Systems*, J. OF INDO-PACIFIC AFFS. 20, 21 (SEPT. 2023).

21. *Id.*

and support their development.²² LAWS, the Optimists argue, take emotion out of decision-making and can reduce noncombatant casualties and collateral damage.²³ The current guiding principle on autonomous weapons systems in the United States Armed Forces is DOD Directive 3000.09 (DoDD 3000.09), which defines an autonomous weapons system as one that “once activated, can select and engage targets without further intervention by an operator.”²⁴

The key characteristic of the Optimists is their belief that LAWS can comply with the longstanding principles of the LOAC when being deployed. The crux of this debate is the idea that a lack of human control and the ability of the weapon to make the decision to deploy lethal force itself will ultimately be a benefit, as opposed to a danger. The Optimist viewpoint toward LAWS does not seem to necessarily ignore the various perceived disadvantages of LAWS, but instead believes that a level of human oversight combined with proper AI development and implementation into the weapons system will create no more danger than other manual weapons used and wielded by human beings.

2. Pessimists support a ban on LAWS.

The Pessimists include at least thirty countries, such as Argentina, New Zealand, and others, who believe that LAWS should be likened to weapons of mass destruction and consider the risks too high to outweigh their military advantages, if there are any.²⁵ Those falling under this category often support a ban on the development and deployment of LAWS and believe that regardless of use, they would not be able to comply with the Law of War.²⁶

In direct contrast with the Optimists, Pessimists believe that LAWS cannot comply with International Human Rights Law and the Law of War principles, and thus should be banned in their entirety. Thus, Pessimists believe that the lack of complete human control in the deployment of lethal force will be uncontrollable and ultimately more of a danger than a benefit.

22. *Id.* at 25, 26.

23. *Id.*

24. DoDD 3000.09, *supra* note 5, at 21.

25. *Stopping Killer Robots*, HUMAN RIGHTS WATCH (Aug. 10, 2020), <https://www.hrw.org/report/>; Noor, *supra* note 20, at 23-5.

26. *Id.*

3. Realists support the development and use of laws, with limitations.

Somewhere in the middle of Optimists and Pessimists falls the Realists, who believe that there should be a better understanding of the development and implementation of LAWS given the fact that LAWS are here to stay.²⁷ The People's Republic of China (PRC) falls within this group, with their definition of LAWS, as follows:

LAWS should include but not be limited to the following 5 basic characteristics. The first is lethality, which means sufficient pay load (charge) and for means to be lethal. The second is autonomy, which means absence of human intervention and control during the entire process of executing a task. Thirdly, impossibility for termination, meaning that once started there is no way to terminate the device. Fourthly, indiscriminate effect, meaning that the device will execute the task of killing and maiming regardless of conditions, scenarios, and targets. Fifthly evolution, meaning that through interaction with the environment the device can learn autonomously, expand its functions and capabilities in a way exceeding human expectations.²⁸

In the case of the PRC, their ultra-specific definition of LAWS helps to combat this all-or-nothing approach to LAWS policy. Weapons that fall within the very narrow definition will fall under the appropriate level of scrutiny as required by the policy, where other weapons that may come close but do not fall into the definition (such as those that do not lack human control during the entire process) will fall under a likely less strict function. While all weapons must comply with the LOAC, the definitional difference can play a massive role in determining the level of human involvement and oversight in LAWS and autonomous weapons systems.

B. Differences in the Definition of LAWS

The U.S. definition and the Chinese definition of LAWS differ greatly

27. *Id.* at 26-7.

28. China, Position Paper, U.N. Doc. CCW/GGE.1/2018/WP.7 (Apr. 8, 2018).

both in requirements and specificity. Since the U.S. and China are in a push-and-pull battle for world power, it is imperative to understand how the differences in their definitions bring about different legal compliance issues.²⁹ The broad American definition lends itself to many different interpretations, and arguably more room for regulation. However, the specificity of the Chinese definition lends itself to less regulation and interpretation. A LAWS, under Chinese law, must be fully autonomous and self-learning to qualify as a LAWS, which leaves unaddressed lower levels of lethal autonomy.³⁰ Under the current U.S. definition, it stands to reason that any drone, gun, tank, or other system that can find a target via infrared or other tracking and fire systems could be defined as a LAWS. Because LAWS under the U.S. definition are weapons that can select and engage targets without further operator intervention, the current definition does not require LAWS to lack human intervention to be labeled as such.

The U.S. was the first country to issue an official LAWS policy.³¹ Other worldwide definitions vary in their level of specificity but seem to take note of U.S. principles. The International Committee of the Red Cross (ICRC), an independent and neutral organization that ensures humanitarian protection and aims to assist victims of war and armed violence, defines LAWS as any weapon system with autonomy in its critical functions.³² The ICRC defines critical functions as targeting through detection, identification, tracking, and selection, and attacking through force, neutralization, damaging, or destroying without any human intervention.³³ Switzerland, for instance, vaguely defines LAWS as weapons systems that can carry out tasks governed by International Humanitarian Law in partial or full replacement of a human in the force, notably in the targeting cycle.³⁴

Though not the focus of this paper, a streamlined definition stops countries from relying on fanciful language tricks and loopholes in order to avoid liability. It requires countries to have a more holistic and upfront

29. Nectar Gan & James Griffiths, *The great power race between the US and China is on. And Beijing is confident of winning*, CNN (Apr. 30, 2021, 6:38 AM), <https://www.cnn.com/2021/04/30/china/biden-xi-china-us-mic-intl-hnk/index.html>.

30. Elsa B. Kania, *China's embrace of AI: Enthusiasm and challenges*, EUR. COUNCIL ON FOREIGN RELATIONS (Nov. 6, 2018), https://ecfr.eu/article/commentary_chinas_embrace_of_ai_enthusiasm_and_challenges/.

31. Noor, *supra* note 20, at 25.

32. INT'L COMM. OF THE RED CROSS, <https://www.icrc.org/> (last visited Dec. 1, 2023).

33. *Autonomy, artificial intelligence and robotics: Technical aspects of human control*, INT'L COMM. OF THE RED CROSS, Aug. 2019, at 1, 5.

34. Switzerland, *Towards a "compliance-based" approach to LAWS*, (30 March 2016) (unpublished Working Paper) (found at [https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Informal_Meeting_of_Experts_\(2016\)/2016_LAWS%2BMX_CountryPaper%2BSwitzerland.pdf](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Informal_Meeting_of_Experts_(2016)/2016_LAWS%2BMX_CountryPaper%2BSwitzerland.pdf)).

policy. Particularly, there needs to be a streamlined definition in order for a unified standard to mean anything. Calls for bans are merely lines drawn in the sand when there is little to define any individual weapon as a LAWS as opposed to a semi-autonomous weapon system (SAWS). In this case, the importance of the definition of LAWS is more than just having a streamlined label, as the definitional differences affect the legal implications and liability of LAWS and their use under the LOAC and under the purview of International Human Rights.

C. Legal History

The present guiding principle in the United States Armed Forces is the 2023 version of DoDD 3000.09, which has been updated to clarify ambiguities from its previous version released in 2012.³⁵ The directive covers AWS and SAWS whether applying lethal force, non-lethal force, kinetic force, or non-kinetic force.³⁶ These terms are similar, but vary in the intent of the force applied, rather than the result. Kinetic forces are those that include physical damage, alteration, or destruction of the target, whereas non-kinetic forces are those that do not include physical damage, alteration, or destruction of the target.³⁷ Non-lethal forces are those that use means other than gross physical destruction to defeat targets and the intent is to have reversible effects on the enemy, whereas lethal forces are the opposite.³⁸ The difference is subtle, as kinetic forces and non-kinetic forces both can be lethal or nonlethal, and lethal forces can be kinetic or non-kinetic.³⁹

The directive does not cover autonomous or semi-autonomous cyberspace capabilities, autonomous or semi-autonomous unarmed platforms, manual munitions, unguided munitions, mines, unexploded explosive ordnances, and other non-weapons systems that are not autonomous or semi-autonomous.⁴⁰ DoDD 3000.09⁴¹ requires extensive testing, review, management oversight, and approval of any autonomous weapons systems.⁴² The directive specifies that AWS, SAWS, and consequentially LAWS will be designed to allow commanders and

35. DoDD 3000.09, *supra* note 5, at 1.

36. *Id.* at 3.

37. Maj. Carri Salas, *Integrating Lethal and Nonlethal Effects*, AIR LAND SEA BULLETIN 2017-02, 1, 3 (2021).

38. OFF. OF GEN. COUNS., U.S. DEP'T OF DEF., DEPARTMENT OF DEFENSE LAW OF WAR MANUAL, § 6.5.10.2 (12 June 2015) (C3 13 Dec. 2016) [hereinafter LAW OF WAR MANUAL].

39. Salas, *supra* note 37.

40. DoDD 3000.09, *supra* note 5, at 3.

41. Rebecca Crootof, Note, *The Killer Robots Are Here: Legal and Policy Implications*, 36 CARDOZO L. REV. 1837, 1849 (2015).

42. DoDD 3000.09, *supra* note 5, at 4.

operators to exercise “appropriate levels of human judgment” over the use of force.⁴³ The DOD commits itself to tactics, techniques, and procedures that will be applicable to the system in question while providing sufficient confidence that these systems will function as anticipated, taking both realistic and practicable countermeasures.⁴⁴ It does this through rigorous hardware and software verification, and validation and realistic system developmental and operational test and evaluation.⁴⁵ The directive also notes that it will conduct analyses of “unanticipated emergent behavior.”⁴⁶

The further review is required prior to the development and implementation of LAWS.⁴⁷ This senior review will be conducted for autonomous weapons systems including those that are simply modifications of non-autonomous weapons systems.⁴⁸ The review is not required, however, for a variety of semi-autonomous and non-autonomous weapons, such as AWS that are not applying lethal or kinetic force against material targets.⁴⁹

The review process for autonomous weapons systems is robust, as it must be approved by the Under Secretary Defense for Policy, the Under Secretary of Defense for Research and Engineering, and the Vice Chairman of the Joint Chiefs of Staff before formal development, and again before implementation.⁵⁰ To pass, the system must comply with domestic and international law, DOD AI-ethics principles, and they must comply with the requirement for appropriate human judgment.⁵¹

However, there are a number of waivers to this review process available, including waivers for AWS or SAWS that fall within a previous senior review and waiver, that only apply non-lethal, non-kinetic force against material markets, or are operator-supervised, anti-material systems to defend remotely piloted or autonomous vehicles or vessels.⁵² The waiver that is the cause for the most concern, however, is the specific exemption that allows for a waiver in the broad and seemingly all-encompassing case of “urgent military need.”⁵³ In the case of “urgent military need,” which is undefined by the directive, the Under Secretary

43. *Id.* at 3.

44. *Id.* at 9-14.

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.* at 5.

49. *Id.*

50. *Id.* at 4.

51. *Id.* at 3-4.

52. *Id.* at 18.

53. *Id.* at 16.

of Defense for Acquisition and Sustainment, Under Secretary of Defense for Policy, Under Secretary of Defense for Research and Engineering, or the Vice Chairman of the Joint Chiefs of Staff may request a waiver from the Deputy Secretary of Defense to sidestep the requirements for development and implementation under the directive.⁵⁴

International Humanitarian Law and the LOAC regulates the fighting of war while balancing two core issues: weakening the enemy while limiting their suffering.⁵⁵ In it, there are five main principles (underpinned by the DOD Law of War Manual) which form the basis for war crimes and have the main purpose of reducing suffering in times of war.⁵⁶ These five principles, sometimes noted as three with two subprinciples, are (1) military necessity, (2) humanity, (3) proportionality, (4) distinction, and (5) honor.⁵⁷ These principles serve as the basis for which compliance is required to implement LAWS, just as they do for the implementation of all other weapons systems.⁵⁸

The first principle of military necessity “justifies certain actions necessary to defeat the enemy as quickly and efficiently as possible.”⁵⁹ It asks whether the target is a military objection and whether it is necessary to defeat the enemy. This analysis is generally based upon the facts and circumstances of the situation, and individuals are able to take into consideration the broader imperatives of winning the war in an efficient and quick manner in order to evaluate military necessity.⁶⁰

The second principle of humanity asks whether the weapon will create unnecessary suffering.⁶¹ This principle protects combatants and civilians by preventing the use of weaponry and methods that cause suffering disproportionate to the military advantage.⁶² This is posed as the inverse of the principle of military necessity, in the idea that if “certain necessary actions are justified, then certain unnecessary actions are prohibited.”⁶³

The principles of proportionality and distinction are sometimes seen as a subset of the principles of military and necessity and the way to measure

54. *Id.* at 17.

55. *The laws of war in a nutshell*, INT’L. COMM. OF THE RED CROSS (Oct. 19, 2016), <https://www.icrc.org/en/document/what-are-rules-of-war-Geneva-Conventions>.

56. JENNIFER K. ELSEA, CONG. RESEARCH SERV., LSB10709, WAR CRIMES: A PRIMER 1 (2023).

57. LAW OF WAR MANUAL, *supra* note 38, at § 2.1.2.3.

58. *Methods and means of warfare*, INT’L. COMM. OF THE RED CROSS (Oct. 29, 2010), <https://www.icrc.org/en/doc/war-and-law/conduct-hostilities/methods-means-warfare/overview-methods-and-means-of-warfare.htm>.

59. LAW OF WAR MANUAL, *supra* note 38, at § 2.1.2.3.

60. *Id.* at § 2.2.3.1.

61. *Id.*

62. *Id.* at § 2.3.

63. *Id.* at § 2.3.1.1.

the space between them.⁶⁴ The principle of proportionality in the Law of War prohibits attacks against military objectives that have an expected loss of civilian life or livelihood that would be excessive in comparison to the direct military advantage.⁶⁵ According to this principle, it is an inevitability of war that there will be incidental damage to human life and property.⁶⁶ Thus, it is permissible when a human life is unintentionally taken as collateral in an attack, unless the anticipated incidental civilian death outweighs the anticipated and direct military advantage expected to be gained.⁶⁷

Working in tandem with the principle of proportionality, the principle of distinction is the idea that military operations must be directed against enemy combatants and *not* directed against enemy civilians.⁶⁸ Specifically, civilians must not be made the object of a military attack.⁶⁹ This verbalizes the necessity for soldiers and weaponry to be able to distinguish the difference between a civilian and a combatant. IHL and the Law of War notes that “persons using force must discriminate between legitimate and illegitimate objects of attack in good faith based on the information available to them at the time.”⁷⁰

The final principle is that of honor, which calls for fairness in both offensive and defensive conduct as well as a mutual respect between forces.⁷¹ This prohibits behavior like fighting in the enemy’s uniform, misusing certain signs, and otherwise.⁷² This underpinning principle ensures that even in war, humanity remains.

These principles are founded in a spirit of humanity, morality, and ethics. Weapons that are incapable of compliance with the principles listed above, specifically those of distinction and proportionality, are prohibited from use in the warzone.⁷³ Thus begs the question of whether LAWS can withstand this scrutiny. LAWS must be able to comply with the principles, but specifically they must be able to make decisions that comply with the principles of distinction and proportionality. Like the example of the AI confusing a soccer ball with a bald man’s head, LAWS must be able to tell the difference between civilians and combatants. In

64. JENNIFER K. ELSEA, CONG. RESEARCH SERV., LSB10709, WAR CRIMES: A PRIMER I (2023), *supra* note 56.

65. LAW OF WAR MANUAL, *supra* note 38, at § 2.4.

66. *Id.* at § 5.10.

67. *Id.*

68. *Id.* at § 2.5.

69. *Id.*

70. *Id.* at § 2.5.3.

71. *Id.* at § 2.6.

72. *Id.* at § 2.6.3.2.

73. *Methods and means of warfare, supra* note 58.

today's age of insurgency and guerrilla style warfare, there may be few differences between the way a civilian and a combatant looks, a LAWS may not be able to comply with the principles of distinction in distinguishing between the two populations, leading to a violation of the Law of War and IHL. The principle of proportionality poses an issue as well, mainly whether LAWS are capable of properly calculating what is proportional incidental loss and what is not.

Consider for a moment the implications of machines in the battle sector. The LOAC applies strictly to humans, so the introduction of machines and machine learning systems into the warzone has massive implications on legal liability for wrongdoing and noncompliance with the law.⁷⁴ The Law of War Manual published by the DOD discusses this:

The law of war rules on conducting attacks (such as the rules relating to discrimination and proportionality) impose obligations on persons. These rules themselves do not impose obligations on weapons themselves; of course, an inanimate object could not assume an 'obligation' in any event... The law of war does not require weapons to make legal determinations, even if the weapon (e.g., through computers, software, and sensors) may be characterized as capable of making factual determinations, such as whether to fire the weapon or to select and engage a target... Rather, it is persons who must comply with the law of war.⁷⁵

In sum, human beings cannot delegate their legal burden to a machine, nor can a human delegate its judgment in determining whether an attack wielded by the LAWS is compliant with the LOAC and all other applicable laws.⁷⁶

The current stance of some leaders around the globe is that LAWS do not comply with these standards of humanitarian considerations.⁷⁷ United Nations Secretary-General António Guterres urged experts in early 2019

74. Paul Scharre, *Human judgment and lethal decision – making in war*, HUMANITARIAN L. & POLICY (Apr. 11, 2018), <https://blogs.icrc.org/law-and-policy/2018/04/11/human-judgment-lethal-decision-making-war/>; LAW OF WAR MANUAL, *supra* note 38, at § 6.5.9.3.

75. *Id.*

76. Scharre, *supra* note 74.

77. United Nations General Assembly, Joint Statement on Lethal Autonomous Weapons Systems First Committee, 77th United Nations General Assembly Thematic Debate – Conventional Weapons (Oct. 21, 2022).

to continue restrictive work in the development of LAWS.⁷⁸ As early as 2013, the Human Rights Watch and other nongovernmental organizations (NGOs) launched the “Campaign to Stop Killer Robots,” likening the threat of “killer robots” to the severity of climate change in terms of its threat to human existence.⁷⁹ The campaign released a report which notes, as of 2020, that ninety-seven countries have publicly elaborated their views of fully autonomous weapons, expressing a vast variety of ethical, moral, and other concerns over, among other things, removing human control factors from the use of force.⁸⁰

This underlines the core of the issue regarding LAWS and their use in modern warfare. To ban LAWS, the campaign says, is simply to ban weapons lacking meaningful human control as required by international law.⁸¹ This sentiment correctly notes that the lack of meaningful human control is a legal, ethical, and moral issue, but it does not have to mean the end of LAWS and their use as we know it.

III. DISCUSSION

“Technologies evolve. Things are going to change next week, next year, next decade. And what wins today might not win tomorrow,” noted DOD Chief Digital and AI Officer Craig Martell.⁸² The newly released DOD AI Adoption Strategy discusses the need for AI-enabled systems in order to help commanders make more informed and efficient decisions.⁸³ This note argues that LAWS at this point are not illegal per se, meaning that, unlike atomic bombs and landmines, they are not automatically in violation of the LOAC principles. Thus, the U.S. can and should oppose an outright ban on the development, production, and implementation of LAWS into the warzone. LAWS, however, can be misused the same as any other weapon and come with severe risks due to their unpredictable nature. Consequentially, the U.S. must amend their current policy to change the standard of human involvement from appropriate human judgment to meaningful human control.

78. António Guterres (@antonioguterres), X (Mar. 25, 2019, 1:28 PM), <https://twitter.com/antonioguterres/status/>.

79. *Stopping Killer Robots*, *supra* note 25.

80. *Id.*

81. *Id.*

82. Joseph Clark, *DOD Releases AI Adoption Strategy*, U.S. DEP'T OF DEF. (Nov. 2, 2023), <https://www.defense.gov/News/News-Stories/Article/Article/3578219/dod-releases-ai-adoption-strategy/>.

83. *Id.*

A. *The DOD should oppose outright bans on LAWS development and implementation into the battlefield.*

Of all the potential solutions to LAWS and the upheaval that they have and will certainly continue to create in the political, military, and legal spheres, none is hastier than that of the call for an outright ban on LAWS. The Human Rights Watch’s “Campaign to Stop Killer Robots” views LAWS, or “killer robots,” as a critical risk to human life as opposed to a mere matter of legal distinction.⁸⁴ They seek a policy or instrument that is legally binding, perhaps an addition 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, more commonly referred to as the Convention on Conventional Weapons (CCW).⁸⁵ The campaign seeks to maintain meaningful human control over the use of force and deems LAWS in any capacity to be incapable of the principles of distinction and proportionality.⁸⁶

Discussions of LAWS cannot exist in isolation of the hesitation for cold metal killers to replace human soldiers with hearts, brains, and carefully tuned moral systems under their armor. American Film Institute compiled lists of the top heroes and villains of Hollywood history—heroes defined as having a dramatic sense of morality, courage, and purpose, whereas villains were to be characters with a wickedness of mind and a selfishness of character.⁸⁷ The only character to make both of these lists was *The Terminator*.⁸⁸ The irony here is striking and furthermore indicative of a tug-of-war of conflicting mindsets that people around the world have regarding autonomous weapons systems, whether they look like humanoid robots or not.

A ban, at face value, does not seem unreasonable when considerations over whether advanced AI weaponry can comply with IHL standards, and the principles of distinction and proportionality plague nations tasked with determining both if and how LAWS should be used. To be clear, the U.S. has not participated in a ban of any sort. “No such requirement appears in [the 2012 policy] DODD 3000.09, nor any other DOD policy,” stated the director of the Artificial Intelligence Governance Project in reference to the concern over whether LAWS have been banned by U.S.

84. *Stopping Killer Robots*, *supra* note 25.

85. *Id.*, United Nations 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, (Oct. 10, 1980).

86. *Stopping Killer Robots*, *supra* note 25.

87. *AFI’s 100 Years... 100 Heroes & Villains: The 100 Greatest Heroes & Villains*, AM. FILM INST. (2003), <https://www.afi.com/afis-100-years-100-heroes-villains/>.

88. P. W. SINGER, *WIRED FOR WAR: THE ROBOTICS REVOLUTION AND CONFLICT IN THE 21ST CENTURY* 67 (Penguin 2009).

law.⁸⁹ To rule out the use of LAWS now is not a workable standard, it is not even a realistic one. The widespread concerns over an emerging arms race do little to support a ban when the arms race is already in effect.⁹⁰

In August of 2023, the U.S. government announced that it was to buy thousands of autonomous drones, citing a desire to expand the U.S. military's capabilities in the face of impending conflict with China.⁹¹ Beijing has joined other states in their support for a prohibition, but solely for their use in the warzone – not in development and production capacities.⁹² Chinese President Xi Jinping is pushing the country on a timeline to become a world leader in the AI realm, including in LAWS production, by 2023. In addition to China's interest in LAWS, other major world powers are joining the race. Russian President Vladimir Putin noted that AI comes with opportunity and threat, both of which are difficult to predict.⁹³ “Whoever becomes the leader in this sphere,” he said, “will become the ruler of the world.”⁹⁴ As autonomy capacities increase, as does the risk. The effect on the sociopolitical and military balance in the globe would be massive.

While President Putin of Russia was speaking to the fact that AI leaders can share the technology and therefore reap the benefits of being the first, as opposed to becoming a dominating world power with AI technology by its side, it does help to put into perspective how important AI is in weaponry to world powers such as Russia, China, and the U.S. The desire to lead in AI is more than a mere goal, it is *the* goal. The LAWS race is not soon to come, it is here. When the U.S.'s two largest power competitions are just as concerned with the emergence of LAWS and are aggressive in their production, it becomes a non-option for the U.S. to simply take a backseat and implement a LAWS production and development ban, let alone an outright and all-encompassing ban.

These murky waters, the fight between banning them and not, make it difficult for the U.S. in their game of sink-or-swim. However, as the DOD

89. Patrick Tucker, *When May a Robot Kill? New DOD Policy Tries to Clarify*, DEFENSE ONE (Jan. 25, 2023), <https://www.defenseone.com/policy/2023/01/when-may-robot-kill-new-dod-policy-tries-clarify/382215/>.

90. Melissa K. Chan, *China and the U.S. Are Fighting a Major Battle Over Killer Robots and the Future of AI*, TIME MAG. (Sept. 13, 2019, 9:45 AM), <https://time.com/5673240/china-killer-robots-weapons/>.

91. Eric Lipton, *Pentagon Vows to Move Quickly to Buy More Drones, Citing China Threat*, THE N. Y. TIMES (Aug. 28, 2023), <https://www.nytimes.com/2023/08/28/us/politics/pentagon-drones-china.html>.

92. Chan, *supra* note 89.

93. David Meyer, *Vladimir Putin Says Whoever Leads in Artificial Intelligence Will Rule the World*, FORTUNE (Sept. 4, 2017, 7:30 AM), <https://fortune.com/2017/09/04/ai-artificial-intelligence-putin-rule-world/>.

94. *Id.*

has, the U.S. should continue to support the development and implementation of LAWS into the battlefield and oppose any outright ban. Because of the lack of use of LAWS and the early nature of their being, there is little evidence in either direction that would suggest LAWS could or could not comply with the principles of distinction and proportionality, thus rendering them legal or illegal under IHL standards and U.S. legal standards. At this point, LAWS should not be considered illegal weapons, as a heightened standard of human involvement can ensure their compliance with the LOAC and IHL principles.

A ban is unnecessarily overburdensome and denies the U.S. the advantages of LAWS in the military sphere. However, a proper standard must be put into place to address compliance of LAWS with the LOAC principles, particularly those of distinction and control. The First Committee of the Disarmament and International Security Section of the United Nations approved a resolution on LAWS in November of 2023, noting with particularity that LAWS and their algorithms should not be in full control of decisions involving killing.⁹⁵ The resolution marks hesitation as to the potential consequences of allowing LAWS to be used on global security and stability.⁹⁶ The question as to what standard is appropriate, given the conflict between the more liberal “Appropriate Human Judgment” standard and the more conservative “Meaningful Human Control” standard.

The legal oversight required by DoDD 3000.09 must ensure that LAWS are compliant with legal standards prior to their development or acquisition, let alone their implementation into the battlefield. The implementation of a workable standard will enable the U.S. to allow the usage and development of LAWS within compliance of the LOAC while still maintaining a preservation for the sanctity of human life and keeping in mind humanitarian concerns. At this point, it would be against the American best interest, in terms of national security, to hinder AI usage on the battlefield and cease development and eventual deployment given the current state of worldwide affairs.

B. The DOD should adopt language that requires “meaningful human control” as opposed to an “appropriate level of human judgment.”

The crux of the issue regarding the level of human involvement

95. U.N. GAOR, 78th Sess., 28th mtg., First Committee Approves New Resolution on Lethal Autonomous Weapons, as Speaker Warns ‘An Algorithm Must Not Be in Full Control of Decisions Involving Killing.’ (Nov. 1, 2023).

96. Gen. Assembly, *Lethal autonomous weapons system: draft resolution*, 1, U.N. Doc. A/C.1.78/L.56 (Oct. 2023).

required to issue LAWS is their compliance with LOAC requirements. International policies vary in terms of standards of human involvement but generally cycle between the use of the same key words.⁹⁷ There is “substantive,” “meaningful,” “appropriate,” and “sufficient” for terms of the level of control, among others, and “control,” “judgment,” “responsibility,” and “participation,” for terms of the type of supervision LAWS require.⁹⁸ The vast differences in policies may seem like an inconsequential choice between words, a roll of the dice with a thesaurus open, but the ultimate choice of verbiage can have substantial implications for the military, legal, and political spheres when it comes to compliance.

There is a fierce debate between “meaningful human control” and “appropriate levels of human judgment” as the frontrunners for the level of human involvement in the development and deployment of LAWS.⁹⁹ Both sides of the debate agree that humans have an imperative role in the use of LAWS and both assume that LAWS cannot intrinsically comply with the existing LOAC principles.¹⁰⁰ However distinct, there is a difference in the standard of involvement required between meaningful human control or appropriate human judgment.

A United Kingdom-based NGO was the first to propose the idea of meaningful human control as the workable standard for LAWS.¹⁰¹ Like most terms in this field, it still lacks a streamlined definition.¹⁰² This is a more conservative standard for LAWS implementation, though how much more conservative is unsure in comparison to appropriate human judgment considering the lack of real-world implementation of LAWS under either standard.¹⁰³ The Republic of Korea outlined three specific dangers that would arise because of the implementation of LAWS without a “meaningful human control” standard, being a heightened risk of

97. Yeti Kakko, *Meaningful Human Control as an Exceptional Concept: Added Value and Common Ground for CCW Discussions on Lethal Autonomous Weapons Systems*, EU NON-PROLIFERATION AND DISARMAMENT CONSORTIUM, Jan. 2022, at 1, 6.

98. *Id.*

99. Heather M. Roff, *Meaningful Human Control or Appropriate Judgment? The Necessary Limits on Autonomous Weapons*, ARIZ. STATE UNIV. GLOBAL SEC. INITIATIVE, 1, 6 (Dec. 2016).

100. *Id.*

101. *Killer Robots: UK Government Policy on Fully Autonomous Weapons*, ARTICLE360 (Apr. 2013), https://article360.org/wp-content/uploads/2013/04/Policy_Paper1.pdf; Thompson Chengeta, *Defining the Emerging Notion of ‘Meaningful Human Control’ In Weapons Systems*, 49 N.Y.U. J. INT’L L. & POL. 833, 836 (2017).

102. *Id.* at 837.

103. Lena Trabucco, *What is Meaningful Human Control, Anyway? Cracking the Code on Autonomous Weapons and Human Judgment*, MODERN WAR INST. AT WEST POINT (Sept. 21, 2023), <https://mwi.westpoint.edu/what-is-meaningful-human-control-anyway-cracking-the-code-on-autonomous-weapons-and-human-judgment/>.

malfunctioning, a gap in liability and accountability, and general ethical concerns.¹⁰⁴

Conversely, the standard of “appropriate human judgement” seems to be more liberal in terms of the human involvement it requires. Israel, a proponent of the appropriate human judgment scheme, notes that human judgement is intrinsic to the development and building of weapons systems at all stages and thus a requirement of meaningful human control is a redundant and unnecessary compliance standard.¹⁰⁵ The U.S., a major proponent in the “appropriate human judgement” movement, notes that the term “appropriate” is better suited because of its flexibility.¹⁰⁶ The U.S. argues that this flexibility allows a standard to fit different types of weapon systems regardless of their differences, the operational contexts, the type of warfare, or across different functions in a weapon system.¹⁰⁷

The U.S. also provides a helpful working difference between human judgment and human control, tying human judgment to the use of force and human control to the physical weapon itself.¹⁰⁸ Human judgement, the U.S. argues, “is distinct from human control over the weapon.”¹⁰⁹ The following example provided by the U.S. outlines the difference between the two.

For example, an operator might be able to exercise meaningful control over every aspect of a weapon system, but if the operator is only reflexively pressing a button to approve strikes recommended by the weapon system, the operator would be exercising little, if any, judgment over the use of force.¹¹⁰

The U.S. uses this example to show the superiority of “human judgment” as a workable standard.¹¹¹ They argue that a design requirement allowing operators to exercise human judgement as it is needed over the use of force and that these exercises reflect commanders

104. *Killer Robots and the Concept of Meaningful Human Control*, HUMAN RIGHTS WATCH (Aug. 11, 2016), <https://www.hrw.org/news/2016/04/11/killer-robots-and-concept-meaningful-human-control>.

105. *Id.*

106. United States, *Human-Machine Interaction in the Development, Deployment and Use of Emerging Technologies in the Area of Lethal Autonomous Weapons Systems*, 2 U.N. Doc. CCW/GGE.e/2018/WP.4 (Aug. 2018).

107. *Id.*

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

and operators' purposeful decisions of targeting.¹¹²

However, this analysis raises a critical issue. When considering meaningful human control as opposed to appropriate human judgment, it is not the judgment itself that one displays when they are operating the weapon systems that finds itself to be potentially at odds with IHL and LOAC principles, but rather whether the weapon can be controlled. This analysis as to whether an autonomous weapon can implement the proper judgment in order to comply with the laws of war and armed conflict is no different than the analysis taken toward a human wielding a gun. This armed and fictional human being can load and fire on a crowd with no specific target, exercising little, if any, judgement, just as the LAWS operator in the DOD's example. Under the LOAC, the risk that humans can comply with distinction and proportionality principles, but may not always, is one that is justified because there are liability schemes that punish those who do not. Instead, the unacceptable risk is the idea that LAWS, without sufficient control, will go rogue.

AI systems in general, and LAWS, accordingly, are intelligent creatures of human creation. The issue is not *judgment*, it is whether humans are able to retain *control* in the case that this judgment scheme fails. The risk that is not justified under the LOAC is the idea that an AI-based technology with lethal capacity, with a mission to target and terminate on its own, could be deployed without any ability for humans to activate a fail-safe stop system. Further, there is a concern that an active-learning LAWS may learn to override its stop system and disobey orders.

The issue is not that it will not be able to exercise human-level judgment. The issue is that LAWS will become something beyond human-like and instead become hyperrational. The current DOD policy does not address machine learning systems and the management and review they will have to undergo to maintain compliant, which would certainly have to differ from a non-learning system.¹¹³

Imagine a scenario where a commander deploys a LAWS with the initiative to destroy the enemy threat. The LAWS may determine the best and most efficient way to achieve this method is to decimate the enemy population, civilian and combatant the same. The LAWS may also determine that the best way to do this is to decimate its own population, as the enemy cannot threaten what is not there. There is a myriad of

112. *Id.*

113. Gregory C. Allen, *DOD is Updating Its Decade-Old Autonomous Weapons Policy, but Confusion Remains Widespread*, THE CTR. STRATEGIC AND INT'L STUDIES (June 6, 2022), <https://www.csis.org/analysis/dod-updating-its-decade-old-autonomous-weapons-policy-confusion-remains-widespread>.

potential outcomes to this problem, each problematic in its own way.

This is where control becomes not just important, but imperative. The fear is that control will be lost of AI and its lethal capacity will be unleashed at the AI's discretion in violation of any LOAC principles, and not that a human's judgment will lead them to wield it wrongfully. Appropriate judgment is an inherent responsibility within the LOAC and encompassed certainly by the requirement for meaningful human control. The relationship between machines and human autonomy is a push and pull, and the more there is of one, the less there is of the other.¹¹⁴ Heightened levels of machine autonomy lower the system's predictability and lessens the level of allowable human involvement in the system.¹¹⁵ Unlike a machine gun, which is governed by human decision-making, AI weaponry is patently unpredictable. Autonomous weapons alone raise their own issues, but LAWS require a heightened standard due to their lethal and potentially cataclysmic nature.

LAWS must readily obey principles of distinction and proportionality in order to be lawfully deployed. Currently, not enough is known about LAWS to determine if they will be able to comply as implemented in the military sphere without going rogue. While the concept of "Killer Robots" is a bit reductive, the U.S. does have a national security interest in maintaining the development and eventual implementation of LAWS. That very interest is stymied if LAWS do not meet the basic principles of distinction and proportionality, and thus a meaningful human control standard should be implemented as opposed to that of appropriate human judgment.

C. *The "Urgent Military Need" Waiver*

To ensure compliance with legal standards, the "Urgent Military Need Waiver" that allows defense officials to bypass the senior review process should be reverted to its prior version in the 2012 version of the DoDD 3000.09.

Under the 2012 version of the policy, the Under Secretary of Defense for policy, Under Secretary of Defense for Acquisition, Technology, and Logistics, and the Chairman of the Joint Chiefs of Staff were able to request from the Deputy Secretary of Defense a waiver for the requirements outlined for approval in the directive.¹¹⁶ Under the 2023 policy, the Under Secretary of Defense for Acquisition and the Under Secretary of Defense for Policy, the Under Secretary of Defense for

114. Chengeta, *supra* note 101, at 849.

115. *Id.* at 849-50.

116. U.S. DEP'T OF DEF., DIR. 3000.09, AUTONOMY IN WEAPONS SYSTEMS, 8 (Nov. 21, 2012) (C1, May 8, 2017).

Research and Engineering, or the Vice Chairman of the Joint Chiefs of Staff may request the waiver from the Deputy Secretary of Defense.¹¹⁷

There are a few key policy changes here, the first being the shift from “and” to “or” in the policy, which now does not require an agreement between those requesting a waiver. Under the 2023 policy, one of the named individuals may individually request a waiver, instead of all named individuals acting together. Further, the waiver no longer requires the Chairman of the Joint Chiefs of Staff, and instead the Vice Chairman.

In fairness, this exception is narrow. Still, urgent military need is undefined in the policy and could be broadly construed depending on the situation and parties at hand. Thus, more checks and balances, and the reversion back to an “and” standard that requires a unanimous vote between the named parties before presentation to the Deputy Secretary of Defense ought to be required. There is a merit to an “urgent military need” bypass, but the standard should remain strict and used only in the direst of circumstances.

D. Advantages and Disadvantages in the Military Sphere

There is a delicate balance between protection of life and the endangering of it, human control and machine autonomy, and the vastness of the advantages and the severity of the disadvantages. With change at lawmakers’ metaphorical fingertips, some find that this Pandora’s box ought to stay closed, whereas others are ready to embrace the good, the bad, and the ugly of LAWS.¹¹⁸

The problem with keeping this Pandora’s box closed and banning LAWS in their entirety, or even in their implementation, is that the “good” of LAWS can have vast lifesaving benefits if used properly and can bring about immense military advantage. Autonomous weapons have higher levels of efficiency and accuracy than human soldier.¹¹⁹ These weapons can also take the place humans in missions that are “dull, dirty, or dangerous,” as noted in the DOD’s “Unmanned Systems Roadmap 2007-2032.”¹²⁰ Dull missions are those that are arduous, long, and lower soldier condition, dirty missions are usually those that pose some sort of long-term risk such as a mission in a nuclear zone, and dangerous missions are

117. DODD 3000.09, *supra* note 5, at 17.

118. Hitoshi Nasu & Col. Christopher Korpela, *Stop the “Stop the Killer Robot” Debate: Why We Need Artificial Intelligence in Future Battlefields*, COUNCIL ON FOREIGN RELATIONS (Jun. 21, 2022, 11:57 AM), <https://www.cfr.org/blog/stop-stop-killer-robot-debate-why-we-need-artificial-intelligence-future-battlefields.>; *Stopping Killer Robots*, *supra* note 25.

119. Etzioni, *supra* note 7, at 72.

120. U.S. DEP’T OF DEF., UNMANNED SYSTEMS ROADMAP 2007 - 2032, 19 (Dec. 10, 2007).

those that pose a risk of injury or death to the soldier.¹²¹ The ability to replace human soldiers with LAWS and unmanned systems in these types of missions can help to preserve soldier's lives and allow for a confidence in the success of the mission without the worry of a grievous injury or fatigue halting mission success.¹²²

The cold and calculated nature of LAWS may serve itself as a benefit, as well. Robots do not have an inclination for anger or retribution.¹²³ This, some argue, makes them more reliable in the battlefield. Unlike humans, they do not become overcome with emotion or inherent bias, instead following the letter of their mission.

The preservation of human life is a large enough benefit itself, but the production and implementation of LAWS in the place of soldiers can provide a monetary benefit as well. Soldiers cost the government to house, outfit, feed, and transport among other things.¹²⁴ Robots, with no concept of comfort and no need for the trivialities of sustenance and shelter, cost only their production, upkeep, and transport.

Cheaper, cleaner, and less deadly wars for countries sounds like a far-away dream, so why are so many opposed? The disadvantages to LAWS, as opposed to the advantages, tend toward the theoretical as opposed to the concrete. The current fact that war is expensive, dirty, and deadly for all sides is perhaps a good thing, thus making war better for the home team may only make war more prevalent and power-hungry political moves more of an accessible option for countries. A less deadly war, for example, may only apply to a country's own combatants.

There are also proliferation concerns with LAWS. Serious concerns about an emerging arms race are cited in the UN's approved resolution for LAWS, as well as a concern regarding increased access of LAWS and autonomous weapons in general to non-State actors.¹²⁵ The "benefits" of LAWS could result in a lower threshold for violence and conflict, ultimately outweighing its benefits of being cheaper, cleaner, and less deadly.

AI and LAWS are highly unpredictable, and the cold and calculated nature of LAWS will be a disadvantage if they cannot adhere to the principles of distinction and proportionality. The severe perils of an uncontrollable lethal robot cannot be understated, which is why the requirement for human involvement stands.

121. *Id.* at 19.

122. *Id.*

123. Etzioni, *supra* note 7, at 76.

124. Jon Harper, *Pentagon Personnel Costs at Historic High*, NAT'L DEF. MAG. (Oct. 19, 2021), <https://www.nationaldefensemagazine.org/articles/2021/10/19/pentagon-personnel-costs-at-historic-high>.

125. *Id.*

This leaves the U.S. essentially at a standstill. The balance, as stated, is fragile. The advantages are too beneficial to ignore. If LAWS could save soldiers' lives, militaries may even have an ethical duty to implement their use at some level. With tensions across the ocean in both Europe and Asia, it is imperative that the U.S. remain not just competitive, but at the forefront of military innovation. Still, the disadvantages could be robust. For this reason, this note proposes a middle-ground approach. To ban LAWS in their entirety is to reject inevitable technological change that certainly could change war and military function for the better. However, embracing them whole-heartedly at this time may have dangerous implications for combatants and civilians worldwide. Thus, proper control mechanisms must be in place at this time to ensure that LAWS operate at the mercy of human control—meaningful human control—and do not go rogue.

IV. CONCLUSION

Early regulation is the best opportunity for the U.S. government to control the use and the scale of the use of LAWS on our battlefields. National security implications are high, and thus LAWS should not be outlawed. The benefits to the battlefield are too advantageous and the stakes are too high. However, the U.S. has an obligation to prevent the use of force against persons that are not intended to be the target of military operations, and thus have an obligation to make sure they follow international law.

To be clear, this note does not argue that LOAC requires human control now and thus will always require meaningful human control. Instead, this note argues that at this time, the only way to ensure that LAWS in their early development and employment comply with the LOAC is to require human control as opposed to mere judgment, which can be satisfied during development alone. In the future, this may and likely will change. Human control may not always need to be present each time a LAWS approves a lethal target. What is known now, however, is that the way AI works is new, constantly developing, and unpredictable. The requirement of meaningful human control now can be considered a probationary period, of sorts, to ensure compliance with LOAC. As LAWS develop and more is understood as to how they work and how liability schemes will play out, then a less conservative standard of human involvement may be implemented as is appropriate.

LAWS, too important to ban but too risky to deploy without any fail-safes, are the future of war. This future is one that ought to be carefully crafted. As General Omar Bradley noted in his 1958 Armistice Day

Address, the development of technology without foresight, wisdom, and prudence may create an executioner as opposed to the servant.¹²⁶ It is easy to look at the current state of AI weaponry and LAWS and decide that it is too futuristic to regulate effectively as it is, but this course of action is one wrought with risk. Given the current state of world affairs and the tension between the U.S., China, and Russia, to name a few, a LAWS ban is not a practical option. Instead, the meaningful human control standard combined with a review scheme without loopholes will ensure that the future of warfare—even with cold, killer robots—is a future that preserves the fabric of our society and the nature of humanity.

126. General Omar N. Bradley, Armistice Day Address (Nov. 10, 1958).