

NEW DETERMINANTS OF THE BALANCE OF POWER: FROM NUCLEAR POWER TO THE POWER OF NEW TECHNOLOGIES AND THE CRUCIAL DEBATE ON AUTONOMOUS WEAPONS SYSTEMS

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Abstract

This article explores the global debate on lethal autonomous weapons systems (LAWS), highlighting the “technological” arms race, that gradually seems to become a determining factor in establishing a new world order. It further examines the key positions of the USA, China and the Russian Federation on the issue of LAWS regulation and the probable reasons behind them. The paper also analyzes the turning point reached in discussions related to the establishment of a regulatory framework for these technological weapons at the level of UN institutions.

Keywords: lethal autonomous weapons systems, balance of power, arms race, LAWS regulation

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Introduction

The issue of *Lethal Autonomous Weapons Systems* (LAWS) have been on the international community's agenda for at least a decade. Nevertheless, "at present, no commonly agreed definition of *Lethal Autonomous Weapon Systems* exists"¹ - according to the UN Office for Disarmament Affairs (UNODA). Being part of the office of UNODA, in 2013 the Convention on Certain Conventional Weapons (CCW) established a group of governmental experts to explore regulatory options regarding Lethal Autonomous Weapon System. UN specialists meet twice a year (the years of the covid-19 pandemic were an exception) in the framework organized by CCW to discuss the evolution of this type of weaponry. Since 2013, a total of 97 countries have publicly announced their views on fully autonomous weapons in a multilateral forum, according to reports by Human Rights Watch. They have expressed concerns about the ethical, legal, operational, proliferation, moral, and technological issues surrounding the removal of human control over the use of force. Two-thirds of these countries are among the 125 High Contracting Parties (*states*) to the Convention on Conventional Weapons. Most of them participated in the UN Convention on Certain Conventional Weapons (CCW) meetings on lethal autonomous weapons systems, from the beginning of these meetings, the end of 2013, to the present. "Their active engagement in the CCW talks on *killer robots*"² demonstrates growing awareness of and concerns about removing human control from the use of force. There is widespread acknowledgment that technological developments are enabling militaries to incorporate autonomy into weapons systems. China, Israel, Russia, South Korea, the United

¹ UN Office for Disarmament Affairs (UNODA), *Lethal Autonomous Weapon Systems (LAWS)*, <<https://disarmament.unoda.org/the-convention-on-certain-conventional-weapons/background-on-laws-in-the-ccw/>> .

² Human Rights Watch – an international non-governmental organization that conducts research and advocacy on human rights –, uses the term *killer robots* to refer to autonomous lethal weapons in most of its reports and research. See Human Rights Watch, *Killer Robots*, <<https://www.hrw.org/topic/arms/killer-robots>>.

Kingdom, and the United States are investing heavily in the development of various autonomous weapons systems”³, according to Human Rights Watch report.

Despite the lack of a clear definition of these systems, specialists have outlined several characteristics, as well as guiding principles, that should help create a working tool which to support the evolution of debates. While the question of whether LAWS really exists leads to heated confrontations of ideas, “states are increasingly developing and deploying weapons with autonomous functions”.⁴ A group of governmental experts on emerging technologies in the area of Lethal Autonomous Weapons System within the CCW conclude that “the research and development of new technologies in the field of artificial intelligence is progressing at a rapid pace, potentially enabling novel and more sophisticated weapons with autonomous functions, including those weapon systems that, once activated, can identify, select, and engage targets with lethal force without further intervention by an operator.”⁵ Lethal Autonomous Weapons Systems (LAWS) is the product of the development of AI and other emerging technologies. The discussion regarding AI cannot continue without emphasizing an extremely important detail, namely the obvious fact that nowadays the term *AI* is overused, going beyond the scope of definitions and even logic and reason, most of the time with the aim of misleading. Therefore, we must start this discussion, at least, from a simple definition, but also accepted in the academic environment. *Narrow AI* is the most common form of artificial intelligence that we

³ Human Rights Watch, Stopping Killer Robots: Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control, <<https://www.hrw.org/report/2020/08/10/stopping-killer-robots/country-positions-banning-fully-autonomous-weapons-and>>.

⁴ *Ibidem*.

⁵ UNODA, 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, Non-exhaustive Compilation of Definitions and Characterizations, <[https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_\(2023\)/CCW_GGE1_2023_CRP.1_0.pdf](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW_GGE1_2023_CRP.1_0.pdf)>.

encounter today. “It is programmed to perform singular tasks such as facial recognition, language translation, or playing chess, and it does so with proficiency often surpassing human capability.”⁶ This is the AI variant we will refer to throughout the preset article. As explained on the UNODA website, artificial intelligence is not a prerequisite for the functioning of autonomous weapons systems but when incorporated, AI could further enable such systems. However, it is necessary to clarify one aspect. All of the AI armament are within reach based on current technologies, using them on the battlefield requires no major new breakthroughs in AI research. Not to be confused with what specialists call artificial general intelligence (AGI), a technology still in its utopian (or perhaps even dystopian) stage – thinking machine with the ability to perform any intellectual task that a human can.

However, despite regular discussions and approaches to the problem at various levels, the multinational group within the CCW is unable to reach a consensus on the issue of regulating LAWS. The Director of the Disarmament, Arms Control and Non-Proliferation Department of the Austrian Foreign Ministry and participant in the discussions within the CCW, Alexander Kmentt, explained that these disagreements “persist over what constitutes adequate predictability, understanding, and control, so there is disagreement also as to where any lines of prohibition should be drawn.”⁷

While specialists and academic researchers are trying to see if we can really talk about the existence of LAWS, a brief monitoring of publications, reports and websites in the field of defense and security, as well as war news on news agencies, show that on the Ukrainian front, at least, weapons are being used that are claimed to be technologically classified as LAWS. But such examples have been encountered at least in the last two years in many other armed conflicts.

⁶ DeepAI, Understanding Narrow AI: Definition, Capabilities, and Applications, <<https://deepai.org/machine-learning-glossary-and-terms/narrow-ai>>.

⁷ Alexander Kmentt, Geopolitics and the Regulation of Autonomous Weapons Systems, *Arms Control Association*, <<https://www.armscontrol.org/act/2025-01/features/geopolitics-and-regulation-autonomous-weapons-systems>>.

A.I. Begins Ushering In an Age of Killer Robots – headlines The New York Times, a report by journalists Paul Mozur and Adam Satariano. The article writes about Ukrainian companies that are creating a technology that makes human judgment about targeting and firing increasingly tangential. “The widespread availability of off-the-shelf devices, easy-to-design software, powerful automation algorithms and specialized artificial intelligence microchips has pushed a deadly innovation race into uncharted territory, fueling a potential new era of killer robots”,⁸ according to Paul Mozur and Adam Satariano. Nonetheless, The Center for Strategic and International Studies, recently published research showing that “the Ukrainian military’s objective is to remove warfighters from direct combat and replace them with autonomous unmanned systems.”⁹ An objective that represents the necessity of preserving a finite human resource and overcoming weaknesses like exhaustion or stress. And these are just a few of the examples that demonstrate that the reality on the battlefield seems to be somewhat more advanced than the theory, definitions and discussions regarding the LAWS.

The Control of New Technologies and Power Relations

Countless pages have been written about the parallel between nuclear proliferation and the balance of power. All the directions dictated by geopolitical strategies in the post-Cold War era were dictated to a large extent by The Treaty on the Non-Proliferation of Nuclear Weapons (commonly known as the Non-Proliferation Treaty or NPT) and all the debates surrounding its principles. But the new power relations today are dictated by technological capabilities. This is demonstrated by the analyses of

⁸ Paul Mozur and Adam Satariano, *A.I. Begins Ushering In an Age of Killer Robots*, *The New York Times*, July 2, 2024, <<https://www.nytimes.com/2024/07/02/technology/ukraine-war-ai-weapons.html>>.

⁹ Kateryna Bondar, *Ukraine’s Future Vision and Current Capabilities for Waging AI-Enabled Autonomous Warfare*, *Center for Strategic & International Studies (CSIS)*, <<https://www.csis.org/analysis/ukraines-future-vision-and-current-capabilities-waging-ai-enabled-autonomous-warfare>>.

modern wars, which are in full swing, but also by the approaches of the great powers to the problem of technological armament. As I mentioned earlier, the way in which these powers position themselves regarding the development and regulation of LAWS reveals the vision of each state on the new configuration of the world order, on how the balance of power is currently perceived. In the following lines we will analyze how the United States, Russia and China present themselves when it comes to investments in autonomous lethal weapons, weapons that use artificial intelligence and how interested they are in regulating the field. In the volume *The Age of AI. And Our Human Future*, the authors Henry A. Kissinger, Eric Schmidt and Daniel Huttenlocher make a detailed comparison of the nuclear age to the new era of artificial intelligence. "The unresolved challenge of the nuclear age was that humanity developed a technology for which strategists could find no viable operational doctrine."¹⁰ However, the three authors argue that the new era and the dilemma of AI will be different. The management of nuclear weapons, the endeavor of half a century, remains incomplete and fragmentary. They also noticed that challenge of assessing the nuclear balance was comparatively straightforward, while the capabilities of AI "are not fixed, they are dynamic"¹¹. And as a result, monitoring the level of armament of each state that invests in AI-powered weapons (like LAWS) will be very difficult if not impossible to do. Then, perhaps, even the idea of discouraging the production of lethal autonomus weapons may no longer be of interest at some point. Moreover, despite the debates on the issue of regulating this type of weaponry at the UN level, a group of states would prefer not to draw any lines at all. However, the vast majority of states that have expressed their position on such autonomous systems to date believe that human decision-making, control, or judgment are critical to the acceptability and legality of weapons systems. There is even widespread agreement on the need to retain

¹⁰ Henry Kissinger, Eric Schimidt, Daniel Huttenlocher, *The Age of A.I. and our Human Future*, London, John Murray, 2021, p. 169.

¹¹ *Ibidem*, p. 170.

some form of human control over the use of force, including targeted attacks, Human Rights Watch reports also show. However, in the following lines we will focus on the arguments of those who stand out of the majority, having certain goals behind, goals that deserve to be deciphered.

In 2018, Austria, Brazil and Chile recommended launching negotiations on a legally binding instrument to ensure meaningful human control over critical functions of weapons systems. “Banning fully autonomous weapons means prohibiting weapons systems (LAWS) that lack meaningful human control.”¹² At least 30 states have called for a ban on these fully autonomous weapons. It is worth noting that, in 2018, at the time of the debate in question, China only requested a treaty banning the use of lethal autonomous weapons systems, but not their development or production. Previously, in 2017, China’s State Council released the country’s strategy for the development of artificial intelligence, entitled the “Next-Generation Artificial Intelligence Development Plan” (AIDP). This strategy outlines China’s goals to become a world leader in artificial intelligence by 2030 and to monetize this industry, which is currently worth over \$150 billion. Furthermore, China aims to lay the foundations for a regulatory and ethical framework and set standards for the use of artificial intelligence, which it can then impose internationally. In other words, it aims to become a benchmark even in terms of regulating this technology, but at the same time it opposes regulations proposed internationally.

This Chinese artificial intelligence development plan publicly presents only a general approach to the role that this technology has in the country’s economic development. Regarding the strategy for using artificial intelligence in security and defense, China remains quite opaque. And this ambiguity that continues regarding the development of LAWS actually demonstrates that the Chinese military knows that it must keep up with the competition coming from the United States and the Russian Federation in terms of the

¹² Human Rights Watch, *Stopping Killer Robots: Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control*, August 10, 2020, <<https://www.hrw.org/report/2020/08/10/stopping-killer-robots/country-positions-banning-fully-autonomous-weapons-and>>.

use of new technologies in security. A careful analysis of the ongoing debate within the ranks of the People's Liberation Army of China about the transformations that the country's security is undergoing under the global influence of artificial intelligence - what they call "smart warfare" - clearly reveals that this Chinese strategy is adapting to the transformations in the field and the operational concepts imposed by new technologies. China is actually coming up with a strategy, described by the Asia-Pacific security expert Jeffrey Engstrom, as one of dominance in a "confrontation of systems". This method refers to having control through technological means, which are above those strictly related to military force. Of course, the two must coexist, and artificial intelligence can provide a critical means to this end¹³. The intention to dominate in the field of new technologies is demonstrated in the People's Republic of China by the investments that the Chinese Communist Party usually announces in the well-known laudatory style. In 2018, China began the construction of the largest autonomous vehicle testing center – UAV and UUV (Autonomous Underwater Vehicles) – in the South China Sea. The center is underwater and covers an area of over 21 square kilometers, near Guangdong province.¹⁴

Since 2023, the United Nations has adopted several resolutions on lethal autonomous weapons. "An algorithm should not have full control over decisions that involve killing," – thus explains one of the drafts resolution on lethal autonomous weapons systems adopted in the UN First Committee in October 2023.

After 11 recorded rounds of voting, on the provisions of the draft resolution as a whole, it was approved by a recorded vote, with 164 votes in favor, 5 against – Belarus, India, Mali, Niger, Russian Federation, with 8 abstentions – China, South Korea, Iran, Israel, Saudi Arabia, Syria, Turkey,

¹³ Jeffrey Engstrom, *Systems Confrontation and System Destruction Warfare*, RAND Corporation, California, 2018, p.66.

¹⁴ Xinhua, China Starts Building Test Site for Unmanned Ships, February 13, 2018, <http://www.xinhuanet.com/english/2018-02/13/c_136972132.htm>.

United Arab Emirates, according to the UN meetings coverage¹⁵. This resolution requests the Secretary-General to seek the views of Member States and observer states on lethal autonomous weapons systems, on ways to address the challenges and concerns they raise from humanitarian, legal, security, technological and ethical perspectives and on the role of people in the use of force, and to submit to the General Assembly a substantive report reflecting the full range of views received. Even though the UN Committee is asking for nothing more than the possibility of creating a legal framework through this act, the Russian Federation opposed it on the grounds that the text seeks to undermine what has already been created under the UN Convention on Certain Conventional Weapons, which, the Russian representative argued, is currently successfully operating. In practice, it does not consider a new dedicated legislative framework necessary, a “counterproductive” issue. The representative of the Russian Federation in the committee also added that the draft resolution is unbalanced and only leans towards discussions of risks and challenges, given that these weapons can play an important role in defense and the fight against terrorism. “These weapons systems can be more effective than a human operator and can reduce the possibility of error. Also, international law fully applies to these weapons systems and does not require any adaptation to these specific weapons. The Russian Federation opposes the development of any international legally binding instrument and a moratorium on developing and using these systems.”¹⁶ However, the Russian Federation has shown itself to be quite open to international collaborations at a declarative level, unlike China, which gives clear signs that it wants to establish itself as a leader in the field, but on its own terms. Moreover, at a declarative level the Russian presidency manifests itself as a great supporter of innovations brought by the field of artificial intelligence and insists that this field should not be monopolized, obviously alluding to

¹⁵ UN General Assembly, First Committee Approves New Resolution on Lethal Autonomous Weapons, November 2023, <<https://press.un.org/en/2023/gadis3731.doc.htm>>.

¹⁶ *Ibidem*.

the position of the United States of America. "If we become leaders in this field, we will share this know-how with the whole world, in the same way that we share our nuclear technologies today,"¹⁷ declared Vladimir Putin. Furthermore, the Russian Ministry of Defense has repeatedly tried to show that the Russian Federation has a well-developed strategy regarding the developing military capabilities equipped with artificial intelligence. And the main Russian agency that deals with research in this field is called the Advanced Research Foundation (ARF or Фонд перспективных исследований – ФПИ). The institute consists of 46 laboratories, and in 2018 it had 15 ongoing projects¹⁸. In April 2021, the Ministry of Defense of the Russian Federation announced its intention to create a special department dedicated to the development of artificial intelligence, under the ministry. A report prepared this year by the Center for Naval Analyses in the United States shows that the Russian Federation has about 150 systems that use artificial intelligence, which have reached various stages of development.

However, the statements coming from the officials of the Russian Federation and their concrete actions seem to be in major dissonance. In all subsequent discussions within the CCW on the position on lethal autonomous weapons, the Russian Federation seems to be leaning towards the argument that this type of weaponry can bring benefits, rather than being an unstoppable danger. As a result, banning them is out of the question for Russia. In May 2023, Konstantin Vorontsov, deputy head of the Russian delegation to the United Nations, stated in a speech to his counterparts: "We understand that for many delegations the priority is human control, for the Russian Federation, the priorities are somewhat different."¹⁹ In other words,

¹⁷ Russia Today, 'Whoever leads in AI will rule the world': Putin to Russian children on Knowledge Day, September 2017, <<https://www.rt.com/news/401731-ai-rule-world-putin/>>.

¹⁸ Samuel Bennet, "The Development of Artificial Intelligence in Russia", in Nicholas D. Wright, ed., *Artificial Intelligence, China, Russia, and the Global Order*, Maxwell, Alabama, Air University Press, 2019, pp. 168-177.

¹⁹ Eric Lipton, 'As A.I.-Controlled Killer Drones Become Reality, Nations Debate Limits', *The New York Times*, November 21, 2023, <<https://www.nytimes.com/2023/11/21/us/politics/ai-drones-war-law.html>>.

the Russian Federation showed itself before 2022 to be extremely open to discussions within the CCW regarding the development of LAWS, but vehemently opposed their prohibition. Instead the invasion of Ukraine and, and more precisely, the analyses of the situation on the battle front revealed a very technologically underdeveloped Russian Federation or at least a state far from what it claimed to be. As a result, the openness to sharing know-how that President Vladimir Putin was talking about at one point seems to have no concrete basis. Even if the Russian Federation has not proven to be a leader in research into new technologies, it would be a serious mistake to underestimate the capabilities of developing artificial intelligence in the field of security. However, it remains obvious that in this area, at present, the real battle is being fought between China and the United States, each accusing the other of the desire to hold hegemony, declaring its willingness to collaborate with competent international institutions, such as the CCW, on possible regulations, but continuing to act on its own.

The United States launched the “National Strategic Plan for Research and Development of Artificial Intelligence” in 2016, which emphasizes the need for innovation in the military. And the United States Department of Defense (DOD) established a special unit, the Defense Innovation Unit Experimental (DIUx), which aims to maintain close collaboration between the Pentagon and Silicon Valley and accelerate the process of introducing commercial technologies into the military.

Then, in 2018, the so-called Joint Artificial Intelligence Center (JAIC) was created, which is a subdivision of the United States Armed Forces. The organization’s stated goal is to “transform the US Department of Defense by accelerating the adoption of AI.” And one of the most important structures remains the “Defense Advanced Research Projects Agency” (DARPA). The US Congressional Research Service makes it clear that US policy “does not prohibit the development or use of LAWS. Although the United States is not known to have a LAWS inventory, some senior military and defense leaders have stated that the United States could be forced to develop LAWS in the

future if other international competitors of the US choose to do so.”²⁰ In other words, the United States is working on such weapons because, in the absence of international regulation, other states are developing this type of weaponry, which forces the US to keep up with this “imposed” development. The report by the Congressional Research Service also shows that, since 2014, the United States has been actively participating in international discussions on LAWS systems, “sometimes colloquially referred to as killer robots,” in particular the debates held under the auspices of the United Nations Convention on Certain Conventional Weapons (UN CCW). In 2017, these discussions moved from informal stages to the creation of a formal “government expert group” tasked with examining the technological, military, and ethical and legal dimensions of LAWS. In 2018 and 2019, after discussions with experts from other states, this expert group announced that it was considering proposals from partners to issue regulatory proposals for lethal autonomous weapons. The report also notes that the US government does not currently support a ban on lethal autonomous weapons, but is addressing ethical concerns about the systems in a so-called Lethal Autonomous Weapons White Paper, released in 2018 under the title, “The Humanitarian Benefits of Emerging Technologies in the Area of Lethal Autonomous Weapons.”²¹ The report notes that “automated target identification, tracking, selection and engagement capabilities can enable weapons to strike military targets more precisely and with less risk of collateral damage or civilian casualties.” The report also notes that while the UN CCW is a consensus-based forum, the outcome of its discussions could have implications for US policy on lethal autonomous weapons. However, despite the growing

²⁰ Kelley M. Sayler, “Defense Primer: U.S. Policy on Lethal Autonomous Weapon Systems”, Congressional Research Service (CRS) Report, February 1, 2025, <<https://crsreports.congress.gov/product/pdf/IF/IF11150>>.

²¹ US Department of Defence, Group of Governmental Experts..., Humanitarian Benefits of Emerging Technologies in the Area of Lethal Autonomous Weapon Systems, April 3, 2018, <[https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_\(2018\)/CCW_GGE.1_2018_WP.4.pdf](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_(2018)/CCW_GGE.1_2018_WP.4.pdf)>.

number of activists and think tanks – including Nobel Peace Prize laureates – who are trying to argue for a treaty banning LAWS in the new world order, where war has resurfaced, their proposals no longer seem likely to succeed. As a result, such groups suggest that perhaps the debate should now focus on devising mechanisms to manage these systems, rather than stopping their development. At the same time, the US Congress reinforces this clear position of the United States through an official declaration. “U.S. policy does not prohibit the development or employment of LAWS. Although the United States is not known to currently have LAWS in its inventory, some senior military and defense leaders have stated that the United States may be compelled to develop LAWS if U.S. competitors choose to do so. At the same time, a growing number of states and nongovernmental organizations are appealing to the international community for regulation of or a ban on LAWS due to ethical concerns.”²² As a result, as Eric Schmidt also notes, the dilemma posed by AI-related weapons technology²³, such as LAWS, is that keeping up research and development is essential for a state survival, without it one loses its competitiveness and relevance, and I would add, it categorically loses its great power status.

Conclusion

All these strategies and statements by world leaders, like US and China, come to emphasize once again the potential and importance of new technologies in terms of security. With each new institution designated to find a solution regarding the regulation of artificial intelligence, with every war started or every armed operation that exemplifies the impossibility of banning these new technologies, we can take in the complexity of the issue. At the same time, specialists point out that proliferation inherent in the new technology has so far thwarted any attempt at negotiated restraint, even conceptually. “Each major technologically advanced country needs to

²² Kelley M. Sayler, *op. cit.*

²³ Hnery Kissinger, Eric Schmidt and Daniel Huttenlocher, *op. cit.*, p. 170.

understand that it is on the threshold of a strategic transformation as consequential as the advent of nuclear weapons — but with effects that will be more diverse, diffuse, and unpredictable”, note Kissinger, Schmidt and Huttenlocher. The authors emphasize that it is essential that the world’s primary AI powers — the United States and China — should seek consensus that they will not enter into a technologically advanced war with each other. For this to be possible, regulations in the field are absolutely necessary. This was demonstrated by the dynamics of the great powers during the Cold War and the emergence of the NPT. The foundations for creating a legislative framework for at least cutting-edge defense technologies, such as lethal autonomous weapons, already exist. But the challenges of creating a treaty that strictly concerns laws seem extremely difficult to overcome at the present time. The international community seems to be unable to produce many tangible results in this regard. Fully autonomous weapons contravene the Martens Clause, which is found in numerous international humanitarian law treaties. The clause states that, in the absence of specific law on a subject, civilians are protected by the principles of humanity and dictates public conscience. As a result, Human Rights Watch experts show that fully autonomous weapons would undermine the principles of humanity, given their inability to show compassion or respect human dignity. International law, including international humanitarian law, is insufficient in this context because its fundamental rules were designed to be implemented by people and for people, not by machines. In the end, it remains to be seen whether the great powers will be more interested in maintaining a status quo and continuing to fight in a competition to develop the most powerful weapons of the future, or will if they will also try to be examples of ethics and good practices.

Bibliography:

1. Bennet, Samuel (2019), "The Development of Artificial Intelligence in Russia", in Nicholas D. Wright, ed., *Artificial Intelligence, China, Russia, and the Global Order*, Maxwell, Alabama, Air University Press, 168-177.
2. Bondar, Kateryna (2025), Ukraine's Future Vision and Current Capabilities for Waging AI-Enabled Autonomous Warfare, *Center for Strategic & International Studies (CSIS)*,
[<https://www.csis.org/analysis/ukraines-future-vision-and-current-capabilities-waging-ai-enabled-autonomous-warfare>].
3. DeepAI, Understanding Narrow AI: Definition, Capabilities, and Applications, [<https://deepai.org/machine-learning-glossary-and-terms/narrow-ai>].
4. Engstrom, Jeffrey (2018), *Systems Confrontation and System Destruction Warfare*, RAND Corporation, California.
5. Human Rights Watch, Killer Robots,
[<https://www.hrw.org/topic/arms/killer-robots>]
6. Human Rights Watch (2020), Stopping Killer Robots: Country Positions on Banning Fully Autonomous Weapons and Retaining Human Control, August 10, 2020,
[<https://www.hrw.org/report/2020/08/10/stopping-killer-robots/country-positions-banning-fully-autonomous-weapons-and>].
7. Kissinger, Henry, Schmidt, Eric, Huttenlocher, Daniel (2021), *The Age of A.I. and our Human Future*, London, John Murray.
8. Kmentt, Alexander (2025), Geopolitics and the Regulation of Autonomous Weapons Systems, *Arms Control Association*,
[<https://www.armscontrol.org/act/2025-01/features/geopolitics-and-regulation-autonomous-weapons-systems>].
9. Lee, Kai-Fu, AI Super Powers. China, Silicon Valley and The New World Order, Houghton Mifflin Harcourt, New York, 2018.

10. Lipton, Eric (2023), As A.I.-Controlled Killer Drones Become Reality, Nations Debate Limits, *The New York Times*, November 21, 2023, [<https://www.nytimes.com/2023/11/21/us/politics/ai-drones-war-law.html>].
11. Mozur, Paul; Satariano, Adam (2024), A.I. Begins Ushering in an Age of Killer Robots, *The New York Times*, July 2, 2024 [<https://www.nytimes.com/2024/07/02/technology/ukraine-war-ai-weapons.html>].
12. Russia Today (2017), Whoever leads in AI will rule the world': Putin to Russian children on Knowledge Day, September 2017 [<https://www.rt.com/news/401731-ai-rule-world-putin/>].
13. Sayler, Kelley M. (2025), "Defense Primer: U.S. Policy on Lethal Autonomous Weapon Systems", Congressional Research Service (CRS) Report, February 1, 2025, [<https://crsreports.congress.gov/product/pdf/IF/IF11150>].
14. UN General Assembly (2023), First Committee Approves New Resolution on Lethal Autonomous Weapons, November 2023, [<https://press.un.org/en/2023/gadis3731.doc.htm>].
15. UN Office for Disarmament Affairs (UNODA) (2023), 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, Non-exhaustive Compilation of Definitions and Characterizations [[https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_\(2023\)/CCW_GGE1_2023_CRP.1_0.pdf](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-Group_of_Governmental_Experts_on_Lethal_Autonomous_Weapons_Systems_(2023)/CCW_GGE1_2023_CRP.1_0.pdf)].
16. UN Office for Disarmament Affairs (UNODA), Lethal Autonomous Weapon Systems (LAWS) [<https://disarmament.unoda.org/the-convention-on-certain-conventional-weapons/background-on-laws-in-the-ccw/>].

17. US Department of Defence (2018), 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, April 3, 2018, [[https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_\(2018\)/CCW_GGE.1_2018_WP.4.pdf](https://docs-library.unoda.org/Convention_on_Certain_Conventional_Weapons_-_Group_of_Governmental_Experts_(2018)/CCW_GGE.1_2018_WP.4.pdf)].
18. Xinhua (2018), China Starts Building Test Site for Unmanned Ships, February 13, 2018, [http://www.xinhuanet.com/english/2018-02/13/c_136972132.htm].

