

1st DISEC

*Advanced
GA*



TOPICS: Preventing Non-State Actors From Acquiring Weapons of Mass Destruction, Use of Lethal Autonomous Weapons
CHAIRS: Slater Smith, Colin Freelin

LAIMUN XXIX

December 2-3

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Letter from the Secretaries-General

Dear Delegates,

On behalf of our entire staff, it is our pleasure to welcome you to Session XXIX of the Los Angeles Invitational Model United Nations (LAIMUN) conference. LAIMUN XXIX will take place on Saturday, December 2 and Sunday, December 3 of 2023 at the Mira Costa High School (MCHS) campus.

Our staff, composed of over 120 MCHS students, has been working tirelessly to make your debate experience the best it can be. You will find your dais members to be knowledgeable about the issues being debated and MUN procedure. We pride ourselves in hosting a conference that is educational and engaging, and we hope you take advantage of that as you prepare and debate.

At LAIMUN, we value thorough research and preparation. We ask that delegates write position papers following [these directions](#). The deadline to submit position papers to be considered for Committee and Research Awards is Friday, November 24 at 11:59 PM PT. The deadline to submit to be considered for Committee Awards is Thursday, November 30 at 11:59 PM PT.

We also encourage all delegates to read the [LAIMUN Rules of Procedure](#) for conference-specific information and as a reminder of points and motions that can be made during committee.

Feel free to reach out to our staff with any questions or concerns you may have. Delegates can find their chairs' contact information next to their committee profile and the Secretariat's email addresses on the staff page. Any member of the LAIMUN staff will be happy to assist you.

We look forward to seeing you in December!

Sincerely,

Akash Mishra and Lily Stern
Secretaries-General, LAIMUN XXIX
secretarygeneral@mchsmun.org



Introduction to the USG

Welcome, Delegates, to LAIMUN XXIX!

My name is Naomi Kim, and I am so excited to conclude my fourth and final year at Mira Costa Model UN by being the Under-Secretaries General of the General Assembly!

Every year, we select the GA committee topics to reflect the diversity of issues present in our rapidly modernizing world, and this year is no exception. I am excited to hear the novel, creative, and detailed solutions each of you have to address these complex problems, and I hope that all of you can leave LAIMUN not just having given an awesome speech and spectacular formal caucus sessions, but with an enriched and diversified outlook.

But in order to have another amazing LAIMUN, I want to remind you all of our strict no pre-written resolutions policy. Under no circumstances is pre-written resolutions acceptable; additionally, delegates are only allowed to work on resolutions during committee sessions, not during breaks. Your chairs will outline this policy in greater detail before the start of debate, and we urge you all to comply.

Our staff have worked incredibly hard to create an informed, professional environment, and we hope that you enjoy it. Come equipped with knowledge, strong solutions, and your sleek WBA, but do not forget—MUN is fun!

If you have any additional questions or concerns, feel free to contact me at the following address: GA@mchsmun.org. If not, I look forward to seeing you all in December!

Best Regards,

Lily Stern and Akash Mishra
Secretaries-General

Naomi Kim
Under-Secretary General

Introduction to the Dias

Howdy!

My name is Slater “Big Dawg” Smith and I am a senior at Mira Costa High School. I have been in Costa’s MUN program for all four years of high school, and I am currently a TA for the Intro to MUN freshman class. In school, I’ve started on our varsity football team as an offensive and defensive lineman for the past two years, and have had fun!!! I also have enjoyed collecting magnets for the past 15 years and could talk about them for hours. My parents didn’t buy many toys for me as a child so my days mostly consisted of eating butter and playing with magnets, which kickstarted my obsession into what it is today. I currently have three fridges in my room just to hold all my magnets, and I’m in the process of buying a fourth as the previous three have been getting fairly cramped. Outside of school, I enjoy hanging out with my friends and going to the beach. I look forward to chairing your committee at LAIMUN, and if you have any magnets lying around, please do bring them to me!

Sincerely,

Slater “Big Dawg” Smith

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Hello Delegates!

My name is Colin Freelin and I will be your co-chair along with Slater for 1st DISEC Advanced! I am currently a junior at Costa and have been part of the MUN program since freshman year. I've participated in multiple local conferences, and last year, I traveled to the Bay Area for BMUN. Outside of MUN, I am a member of our school's jazz band, as well as the treasurer for the Cybersecurity program. In my free time, I enjoy playing beach volleyball, spending time near the ocean, watching movies with my friends, and going to concerts.

In 1st DISEC, I would like to see a broad range of solutions that thoroughly address the subtopics of each issue. Remember to keep your solutions creative and thought-out so that we can have an interesting and nuanced debate. If you have any questions or concerns, feel free to reach out to us at disec.adv.laimun.xxix. I look forward to seeing you all this December, and best of luck to you in debate!

Best regards,

Colin Freelin

Committee Description

DISEC or the Disarmament and International Security Committee is one of six committees under the General Assembly of the United Nations. It is tasked with the maintenance of international security, dealing with issues of disarmament and global threats to peace. Following the creation of the United Nations (and DISEC) after the conclusion of the first world war, DISEC set about to return the world to a state of peace, with its first resolution being an attempt to moderate and regulate the proliferation of nuclear weapons. This goal of maintaining global stability and peace is echoed throughout the history of DISEC. All member states of the United Nations having an equal voice, DISEC has proven to be one of, if not the most influential of all the United Nations bodies (in spite of the fact that it's mandate limits its action to suggestions). DISEC committee sessions are structured in three stages: general debate, thematic discussions, and closing with actions on drafts. This proceeding allows for DISEC to best solve challenges to international security, and work efficiently in creating regulations for various armaments. DISEC works closely with other UN bodies such as the United Nations Disarmament Commission and the Geneva-based Conference on disarmament, which has helped achieve lower levels of international armaments. The dais hopes that delegates take the role of DISEC into account when preparing for debate at LAIMUN XXIX.

Topic A: Preventing Non-State Actors from Acquiring Weapons of Mass Destruction

I. Background:

Non-state actors are defined as any organization, group, or individual that is not affiliated with an international government, but more importantly, this term often refers to corporations or terrorist groups that hold great political power and influence despite their lack of government affiliation.¹ In today's ever-changing society, the dangers of weapons of mass destruction are prevalent and have extended past traditional government bodies to encapsulate non-state actors as well.

While biological warfare was used prior to 1914, World War 1 (WW1) is commonly cited as the main contributor to the use of weapons of mass destruction in warfare. France was the first country in WW1 to weaponize the use of chemical weapons, specifically nerve agents. The German government soon caught onto the utility of nerve agents and using their own chemical weapon program led by Franz Haber, developed chlorine gas in 1915. Chlorine gas is a deadly agent that can infiltrate and destroy the lungs of anyone who were to breathe in the gas, quickly killing them, causing pushback against such weapons and advocacy for change after the war.²

¹“Non-State Actors.” ESCR, www.escr-net.org/resources/non-state-actors. Accessed 15 June 2023.

²“Gas in the Great War.” Gas in The Great War, [www.kumc.edu/school-of-medicine/academics/departments/history-and-philosophy-of-medicine/archives/wwi/essay/s/medicine/gas-in-the-great-war.html#:~:text=It%20is%20estimated%20that%20as,%2C%20diphosgene%20\(trichloromethane%20chloroformate\)](http://www.kumc.edu/school-of-medicine/academics/departments/history-and-philosophy-of-medicine/archives/wwi/essay/s/medicine/gas-in-the-great-war.html#:~:text=It%20is%20estimated%20that%20as,%2C%20diphosgene%20(trichloromethane%20chloroformate)). Accessed 15 June 2023.

On top of using nerve agents in WW1, the German army is also credited as having used biological weapons to help their war effort as well. Anthrax is a bacterial disease that commonly infects livestock such as sheep and cattle, however, humans can also contract this disease by coming in contact with infected livestock or inhaling Anthrax spores. Those who contract Anthrax can develop skin ulcers, begin to have difficulty breathing, and if left untreated, the victim can die not long after. While vaccines exist now for Anthrax, there was no such treatment in the early 20th century, causing it to be potentially devastating if used in warfare. The German army capitalized on this and infected livestock with this disease with the intention being to trade it to the Allied forces. While the disease didn't have a devastating effect, it was credited with killing around 200 mules and was shown to be dangerous if used on a larger scale.³

After WW1, the international community came together to create the Geneva Protocol in 1925, completely prohibiting the use of chemical and biological weapons in warfare.⁴ These protocols were respected all throughout the second world war, however, a greater threat to humanity was soon to reveal itself when the world's first atomic bombs were infamously dropped on Hiroshima and Nagasaki in June of 1945 to end World War II. In doing so, the US revealed a new type of weapon of mass destruction to the world.

A weapon of mass destruction was officially defined by the UN in 1948 as any weapon intended to cause harm to a great number of people including biological, chemical, radiological,

³“History of Anthrax.” Centers for Disease Control and Prevention, 20 Nov. 2020, www.cdc.gov anthrax/basics/anthrax-history.html.

⁴“History.” OPCW, [www.opcw.org/about-us/history#:~:text=The%201925%20Protocol%20for%20the,\(biological\)%20weapons%20in%20war](http://www.opcw.org/about-us/history#:~:text=The%201925%20Protocol%20for%20the,(biological)%20weapons%20in%20war). Accessed 15 June 2023.

and nuclear weaponry.⁵ Almost two decades later, the UN general assembly enforced upon all member states to observe the previous 1925 Geneva Protocol in order to ensure the international community's commitment to disarming these now named weapons of mass destruction.⁶ Two years after that, the UN then tried to minimize any possibility of countries and their governments from proliferating their nuclear weapon stockpiles and created the Nuclear Non-Proliferation Treaty, or the NPT in 1968. This treaty prevented any non-nuclear state from acquiring nuclear weapons and encouraged those who already had nuclear weapons to disarm them.⁷ While almost every UN member state has ratified this treaty, there are still a handful of countries that haven't that are seen as potential threats by many members of the international community.⁸

Despite the banning of the proliferation and use of all forms of weapons of mass destruction, a new threat to the international community has emerged: non-state actors. As previously stated, non-state actors are not affiliated with government bodies and therefore have not ratified or recognized the same treaties or protocols as the international community. And while the same liabilities lie upon any non-state actors who are to breach international laws, it is oftentimes hard to attribute crimes to certain groups, therefore often leading to a lack of

⁵“Weapons of Mass Destruction.” Weapons of Mass Destruction | Homeland Security, www.dhs.gov/topics/weapons-mass-destruction. Accessed 15 June 2023.

⁶Historic Archives - Procedural History - Office of Legal Affairs, legal.un.org/avl/pdf/ha/cpdpsbttwd/cpdpsbttwd_ph_e.pdf. Accessed 16 June 2023.

⁷“NPT.” The Nuclear Threat Initiative, 14 Oct. 2022, www.nti.org/education-center/treaties-and-regimes/treaty-on-the-non-proliferation-of-nuclear-weapons/.

⁸Alexander, Kena. “Treaty on the Non-Proliferation of Nuclear Weapons.” UNODA Treaties, treaties.unoda.org/t/npt. Accessed 15 June 2023.

punishment.⁹ The risk of a non-state actor such as a terrorist organization acquiring weapons of mass destruction has grown in recent decades for a multitude of reasons.

For starters, knowledge of how to create deadly weapons such as atomic bombs is no longer kept secret as it was during the 20th century. In fact, the necessary information on how to create an atomic bomb has become public knowledge with an abundance of research journals being published on the subject¹⁰. Not to mention that the growth of the internet in the 21st century has allowed this knowledge to become even more accessible for terrorist organizations. While this knowledge is useless without proper materials and construction, similar nuclear programs have been built in the past from scratch in isolated countries such as North Korea.¹¹

On top of this proliferation of knowledge regarding how to make weapons of mass destruction, there is also the risk of help from foreign countries that do have access to such technologies. The Russia-Ukraine war has galvanized nuclear warfare back into the spotlight of international discussions. As Ukraine continues to push against the Russian invasion, the risk of nuclear weapons being used as a last resort grows. While Russia might not want to use this technology directly, they also have the ability to arm terrorist groups with these weapons, similar

⁹Berkes, Antal. "The Responsibility of Non-State Actors (Chapter 6) - International Human Rights Law beyond State Territorial Control." Cambridge Core, www.cambridge.org/core/books/abs/international-human-rights-law-beyond-state-territorial-control/responsibility-of-nonstate-actors/9468030CF6682FD47D541BC0723D4009. Accessed 15 June 2023.

¹⁰"NPT Milestones." U.S. Department of State, history.state.gov/milestones/1961-1968/npt. Accessed 15 June 2023.

¹¹"These 5 Things Help Make Sense of North Korea's Nuclear Tests and Missile Launch." The Washington Post, 7 Dec. 2021, www.washingtonpost.com/news/monkey-cage/wp/2016/02/18/these-5-things-help-make-sense-of-north-koreas-nuclear-tests-and-missile-launch/.

to how the US armed the Mujahideen (modern-day Taliban) during the Cold War to fight against Russia.¹²

Lastly, the security surrounding weapons of mass destruction has been diminished in recent years. The Nuclear Threat Initiative reports that the global security of nuclear weapons especially has decreased significantly in only two years. As a result, the risk of theft or sabotage has increased, leaving the door open for non-state actors to capitalize on the opportunity. This overall increases the probability of a non-state actor risk smuggling materials or even weapons themselves from these countries with poor security where they can then use or even study them to replicate in the future.¹³

The risk of a non-state actor acquiring a weapon of mass destruction is evergrowing in today's world. With technology and education constantly improving, and tensions between world powers increasing, the risk of a non-state actor coming into possession of a weapon of mass destruction is more prevalent than ever.

II. UN Involvement:

The Committee of Disarmament and International Security, better known as "DISEC", was established alongside the creation of the United Nations. This committee was originally established to discuss disarmament regarding the newfound discovery of atomic weaponry, causing them to pass the first-ever UN resolution which established a commission to deal with problems raised by these weapons. Since then, numerous other resolutions and treaties have been

¹²"Afghanistan: Remembering the Long, Long War We Would Rather Forget." War on the Rocks, 5 Feb. 2019, warontherocks.com/2019/02/afghanistan-remembering-the-long-long-war-we-would-rather-forget/.

¹³Losing Focus in a Disordered World - NTI Nuclear Security Index, www.ntiindex.org/wp-content/uploads/2022/01/2020_NTI-Index_Report.pdf. Accessed 16 June 2023.

passed regarding nuclear, chemical, and biological weapons which have thrust weapons of mass destruction into becoming one of the main focal points of the United Nations, however, a majority of these don't address the problems raised by non-state actors.

In 1959, for the first time, all UN member states sponsored a resolution to establish the goal of complete disarmament under international control, including nuclear disarmament.¹⁴

Around a decade later, the UN passed the Nuclear Non-Proliferation Treaty (NPT). The NPT was created to prevent the proliferation of nuclear weapons while simultaneously promoting the disarmament of them and the proliferation of safe nuclear energy uses. While almost every country has ratified this treaty, the same rules and restrictions do not apply to many of the world's superpowers that already had nuclear weapons prior to the treaty's ratification; these countries include the United States, Russia, United Kingdom, China, and various others.¹⁵

A few years after the NPT's ratification, the UN DISEC committee shifted its focus back to biological weapons and drafted the Biological Weapons Convention or BWC. The BWC is a treaty outlawing the production, proliferation, or storing of any biological weapons, equipment, or delivery vehicles for the 183 member states that have ratified it up to this point.¹⁶ Despite its ratification, many countries have been accused of violating the BWC's terms including the former Soviet Union, North Korea, and Iraq to name a few. While none of these countries have utilized these weapons in combat, the risk of future breaches is apparent.

¹⁴“June 2023 Monthly Forecast.” Security Council Report, www.securitycouncilreport.org/. Accessed 15 June 2023.

¹⁵“NPT.” The Nuclear Threat Initiative, 14 Oct. 2022, www.nti.org/education-center/treaties-and-regimes/treaty-on-the-non-proliferation-of-nuclear-weapons/.

¹⁶“Fact Sheets & Briefs.” The Biological Weapons Convention (BWC) At A Glance | Arms Control Association, [www.armscontrol.org/factsheets/bwc#:~:text=The%20Biological%20Weapons%20Convention%20\(BWC\)%20is%20a%20legally%20binding%20treaty,force%20on%20March%2026%2C%201975](http://www.armscontrol.org/factsheets/bwc#:~:text=The%20Biological%20Weapons%20Convention%20(BWC)%20is%20a%20legally%20binding%20treaty,force%20on%20March%2026%2C%201975). Accessed 15 June 2023.

By the 1990s, the UN decided to rework the 1925 Geneva Protocol into a more comprehensive and effective document. The result was the Chemical Weapons Convention (CWC) treaty being passed in 1997. The CWC is similar to both the BWC and its successor, the Geneva Protocol, in that it banned the use, production, and transfer of chemical weapons of any ratifiers. By 2018, every member state except for Egypt, South Sudan, and North Korea had signed the treaty, rendering it one of the most effective policies when it comes to disarming weapons of mass destruction.

In more recent years, the UN has shifted its focus to preventing these weapons of mass destruction from falling into the hands of non-state actors. In 2004, the UN Security Council passed Resolution 1540 which aimed to prevent member states from supporting the production of or allowing any weapons of mass destruction to fall into the hands of non-state actors.¹⁷ In 2016, the UN Security Council adopted Resolution 2325, once again taking aim at non-state actors, and called for a framework to be created to formally prevent non-state actors and more specifically, terrorist groups, from acquiring weapons of mass destruction.¹⁸ While these resolutions are a step in the right direction to preventing non-state actors from acquiring weapons of mass destruction, nothing formal has been put into place, and no plans on how to ensure compliance has been established, leaving these resolutions all but effective and causing new legislation to be put into place.

III. Topics to Consider:

¹⁷<https://documents-dds-ny.un.org/doc/UNDOC/GEN/N04/328/43/PDF/N0432843.pdf?OpenElement>

¹⁸“Security Council Adopts Resolution 2325 (2016), Calling for Framework to Keep Terrorists, Other Non-State Actors from Acquiring Weapons of Mass Destruction | UN Press.” United Nations, press.un.org/en/2016/sc12628.doc.htm. Accessed 15 June 2023.

A. Black Market

The black market has forever been known as an accessible and minimally regulated system for criminals to acquire illegal goods. In the case of weapons of mass destruction, black markets are able to provide the technology, equipment, and materials necessary for non-state actors to build their own weapons.¹⁹ Specifically, the Abdul Qadeer Khan Network has been a black-market operation running since the mid-1970s. In that time, Khan has been able to provide the materials and technology to create weapons of mass destruction to numerous states and terrorist groups in the Eastern hemisphere. Khan's black market is not the only one in effect, however. Many remote areas around the world often go unchecked by governments, allowing for many smaller black markets to pop up in areas easily accessible to terrorist groups. Regulating not only Khan's black market but also other black markets stationed around the world is crucial to preventing the further proliferation of materials and weapons of mass destruction to non-state actors and states in general.

B. Private Corporations

While terrorist organizations are the main risk associated with non-state actors receiving weapons of mass destruction, private corporations are also another variable in the equation. As corporations around the world become more powerful, they are becoming increasingly involved in governmental work. An example of this is NASA enlisting the help of Space X and its rockets in order to transport goods and astronauts from the international space station and back.

¹⁹“The Nuclear Black Market: Transnational Threats Project Past Task Forces.” CSIS, www.csis.org/programs/former-programs/transnational-threats-project-archive/transnational-threats-project-past-5. Accessed 15 June 2023.

As technology itself continues to advance, private corporations are becoming increasingly involved in developing technology for governmental use. Currently, private corporations are not held to the same international standard as UN member states and do not share the same restrictions on employment requirements as government organizations do. Many corporations already develop arms and weapons for countries, but if this work expands to the point of developing weapons of mass destruction, ensuring regulations and legislation to regulate these corporations is a must in order to ensure security and prevent the proliferation of these weapons to other non-state actors.

C. Government Leaks

Nearing the end of World War 2, as many as eight spies were caught leaking secrets from the US's Manhattan Project to the Soviet Union. As a result, the Soviet Union was able to expedite the development of their own atomic bomb way faster than they would have using conventional methods.²⁰ Similar spying and governmental leaks are still being carried out today, with many non-state actors gaining access to knowledge that would otherwise be classified. The internet has only increased accessibility to these governmental leaks in the modern era. The internet has become accessible in even the most remote areas in the world, allowing non-state actors to be able to exploit this technology in order to access published government leaks or information regarding weapons of mass destruction. Ensuring the minimized risk of spying and government leaks is detrimental to preventing non-state actors from accessing even more

²⁰<https://www.osti.gov/opennet/manhattan-project-history/Events/1942-1945/espionage.htm> (“Manhattan Project: Espionage and the Manhattan Project, 1940-1945”)

information regarding how to obtain, build, or steal weapons of mass destruction than they already have access to.

D. Border Security

A main component of the transportation and smuggling of weapons of mass destruction is a lack of border security. Not enough identification and screening systems are put into place at border checkpoints, allowing for materials or even weapons of mass destruction themselves to go unnoticed while being moved across borders. This lack of security is not unique to just land borders, however as many water ports lack a lot of the screening techniques and technology to identify cargo of interest to be investigated further. Especially in unstable political environments, many border and port workers are susceptible to bribery to help non-state actors get materials and weapons across borders and into the country of interest. By improving the technology surrounding borders and points of interest, the international community can minimize the number of weapons and materials being transported across borders to be used by non-state actors.

IV. Case Study: 1995 Tokyo Subway Sarin Attacks

The Tokyo Subway Sarin Attacks was an attack carried out by the domestic terrorist group “Aum Shinrikyo” in March of 1995.²¹ Tokyo is notorious for having one of the most crowded and densely populated subway systems in the world, allowing it to become an easy target for the Aum Shinrikyo to attack. During the early morning rush hour on March 20, 1995, five men who were part of the terrorist group boarded different subway system lines with liquid

²¹“Aum Shinrikyo: The Japanese Cult behind the Tokyo Sarin Attack.” BBC News, 6 July 2018, www.bbc.com/news/world-asia-35975069.

sarin wrapped in newspaper. Sarin is a deadly chemical nerve agent developed by the Nazis prior to WW2, and its volatility caused it to evaporate from its liquid to gas form with celerity, allowing it to spread quickly. Each of the five members of the terrorist group punctured their liquid sarin packets at the same time, allowing the sarin gas to seep through their packets and into the subway cars as the members of the group made their escape.

Within minutes, the nerve agent was able to spread throughout their respective train cars, poisoning many passengers and causing them to feel sick. Passengers attempted to leave the train cars at upcoming stations, further spreading the toxic gas into the underground subway stations and poisoning even more people. Soon enough, passengers began coughing, throwing up, passing out, and bleeding from their noses or mouths. It didn't take long for some of the packets to be disposed of, but that didn't stop the effects from lingering. The gas clung onto the passengers' clothes and bodies, further spreading the toxin to people who came into contact with the victims or attempted to help them.²² Within two hours, all affected subway lines were stopped and the city began trying to mitigate any further spread of the Sarin to other areas.

In total, 12 people were killed during the attacks with up to 6,000 more being injured by the nerve agent including paralysis and blindness.²³ Japan was a country that had long prided itself on its lack of crime and healthy citizens, however, this attack completely shifted the international community's outlook on terrorism. If a safe and healthy country such as Japan fell victim to a terrorist attack carried out using weapons of mass destruction, what would prevent a

²²Staff, WIRED. "March 20, 1995: Poison Gas Wreaks Tokyo Subway Terror." Wired, 20 Mar. 2009, www.wired.com/2009/03/march-20-1995-poison-gas-wreaks-tokyo-subway-terror-2/.

²³"Tokyo Subways Are Attacked with Sarin Gas." History.Com, www.history.com/this-day-in-history/tokyo-subways-are-attacked-with-sarin-gas. Accessed 15 June 2023.

similar attack from happening in another area of the world? The 1995 Tokyo Sarin Attacks highlighted the catastrophic effects of what would happen in the event that a non-state actor was to come into possession of a weapon of mass destruction, and why proper regulations and legislation need to be put into place to prevent any more attacks from occurring in the future.

V. Guiding Questions:

1. How can countries regulate black markets and prevent non-state actors from obtaining the materials and equipment needed to create a weapon of mass destruction?
2. How can countries ensure the security of their weapons of mass destruction to prevent smuggling?
3. What can the UN do to regulate private corporations' involvement in the creation and storage of weapons of mass destruction?
4. How can disarming countries' arsenals of weapons of mass destruction help prevent non-state actors from acquiring their own?

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Topic B: The Use of Lethal Autonomous Weapons

I. **Background:**

Lethal autonomous weapons (LAWs) are a growing concern in the realm of military technology, although they have been around for several centuries. These weapons, identified by their ability to operate and make decisions without human intervention, have the potential to completely revolutionize warfare. However, their implementation raises profound ethical and legal questions that need to be carefully considered.

The historical roots of LAWs can be traced back to the invention of landmines in the 1600s. These early versions of autonomous weapons were rudimentary but set the stage for the development of more sophisticated, and deadly, systems. As computer technology rapidly advanced in the 20th century, so too did the capabilities and applications of LAWs in warfare.

In the modern era, LAWs encompass a range of autonomous systems, including drones, missiles, and unmanned vehicles. These advanced machines can be equipped with artificial intelligence (AI) algorithms that enable them to view their surroundings, gather information, and make decisions based on predefined rules or machine learning algorithms. According to a report by the Stockholm International Peace Research Institute (SIPRI), the number of countries deploying military drones has increased significantly in recent years, growing to over 100 nations.²⁴

²⁴Boulanin, Vincent, et al. “Autonomous Weapon Systems and International Humanitarian Law: Identifying Limits and the Required Type and Degree of Human–Machine Interaction.” *SIPRI*, <https://www.sipri.org/publications/2021/other-publications/autonomous-weapon-systems-and-international-humanitarian-law-identifying-limits-and-required-type>. Accessed 20 June 2023.

One of the central ethical concerns surrounding LAWs is the degree of human control in their decision-making processes. Currently, LAWs are classified into three categories: Human-in-the-loop, Human-on-the-loop, and Human-out-of-the-loop.²⁵ In the Human-in-the-loop category, a human operator is required to begin any action, giving them the final say in using deadly force. This configuration provides a level of human oversight but may introduce delays in important decision-making. Israel's Iron Dome defense system serves as an example of this system. It functions by detecting incoming missiles and analyzing their flight paths. Subsequently, the system relays this information to a human soldier who then makes the decision whether to fire or not in response to the detected threat.²⁶ This system has been utilized for defense purposes in the ongoing Gaza-Israel conflict, as part of the Palestine-Israel conflict and broader Arab-Israeli conflict.

In the Human-on-the-loop category, humans have the ability to intervene and abort actions that were initiated by the autonomous system. While this setup aims to strike a balance between automation and human judgment, it raises questions about the timing and reliability of human intervention, particularly in high-pressure combat situations. An example of this system would be the SGR-A1 sentry robots in use along the Korean Demilitarized Zone. The robot uses low-light pattern recognition to detect intruders and in response issue a verbal warning.

²⁵“Losing Humanity: The Case against Killer Robots | HRW.” *Human Rights Watch*, 19 November 2012, <https://www.hrw.org/report/2012/11/19/losing-humanity/case-against-killer-robots>. Accessed 20 June 2023.

²⁶Paul Marks, “Iron Dome Rocket Smasher Set to Change Gaza Conflict,” *New Scientist Daily News* online, 20 November 2012, accessed 7 Jun 2023, <https://www.newscientist.com/article/dn22518-iron-dome-rocket-smasher-set-to-change-gaza-conflict/>.

Following the verbal warning, the robot has a machine gun that can be fired remotely by a soldier, or independently in a fully autonomous mode.²⁷

The most ethically ambiguous category is Human-out-of-the-loop, where no human action is involved in the decision-making process. In these set-ups, the responsibility for life-or-death determinations is delegated completely to the autonomous system. According to a study by the International Committee of the Red Cross (ICRC), there is a growing concern over the lack of human control and accountability in the deployment of fully autonomous weapons.²⁸ While no such systems are officially in use, development is currently underway in places such as the US, UK, EU, and Russia.

Another concern is the risk associated with deploying fleets of human out-of-the-loop LAWs. While such systems could significantly enhance military capabilities, their oversight would rely on a limited number of human operators. This concentration of power poses challenges in terms of ensuring responsible and ethical decision-making. According to a report by the Campaign to Stop Killer Robots, more than 30 countries have expressed concerns about the potential dangers posed by fully autonomous weapons.

An even deadlier dilemma that might eventually be realized is the use of LAWs when it comes to nuclear weapons. Russia, one of the few nuclear superpowers, has previously stated its interest in using autonomous systems to run submarines, some nuclear-armed, under their control. Furthermore, the United States has been a key player in the development of LAWs, and

²⁷Ibid.; Patrick Lin, George Bekey, and Keith Abney, *Autonomous Military Robotics: Risk, Ethics, and Design* (Arlington, VA: Department of the Navy, Office of Naval Research, 20 December 2008), accessed 7 June 2023, http://digitalcommons.calpoly.edu/cgi/viewcontent.cgi?article=1001&context=phil_fac.

²⁸“What you need to know about autonomous weapons.” *International Committee of the Red Cross*, 26 July 2022, <https://www.icrc.org/en/document/what-you-need-know-about-autonomous-weapons>. Accessed 20 June 2023

it is not impertinent to assume that they could grant autonomous systems control over tactical nuclear arms in the near future.

An additional threat posed by LAWs is their potential adoption into use by non-state actors. If non-state actors were to acquire significant capabilities in the realm of LAWs, they could significantly bolster their reach without needing to expand their workforce. In the most extreme scenarios, LAWs could allow a small group of people, or even one person on their own, to lead a massive fleet of drones and missiles.

The use of AI in LAWs further raises these ethical dilemmas. As AI algorithms become increasingly sophisticated and capable of learning and adapting in real time, the decision-making processes of LAWs become less transparent and, therefore, less predictable. The lack of accountability in the development and use of AI-enabled LAWs has been a subject of concern raised by numerous organizations, including the Future of Life Institute and Human Rights Watch.

In conclusion, the rapid advancement and implementation of lethal autonomous weapons present a complex array of ethical and legal challenges. Balancing military effectiveness with human control, accountability, and adherence to humanitarian law is of extreme importance. By addressing these concerns through international cooperation and comprehensive regulations, the international community can strive for the responsible and accountable use of LAWs in warfare.

II. UN Involvement:

United Nations (UN) involvement in addressing the ethical and legal challenges posed by LAWs has been significant in promoting international dialogue and cooperation on this issue.

Recognizing the potential risks and implications of LAWs, the UN has been actively engaged in discussions and initiatives aimed at addressing these concerns and establishing guidelines for their use in a responsible manner.

One significant forum for discussion on LAWs within the UN is the Convention on Certain Conventional Weapons (CCW). The CCW, which operates within the UN, is a key international framework that seeks to regulate specific conventional weapons that cause excessive harm or result in indiscriminate effects. Within the CCW, the Group of Governmental Experts (GGE) on Lethal Autonomous Weapons Systems has been established to explore the challenges associated with LAWs.²⁹

These GGE meetings serve as a platform for UN member states, experts, and non-governmental organizations to discuss, share insights, and propose solutions related to LAWs. These meetings facilitate the exchange of ideas and perspectives on various aspects, including ethical considerations, human control, accountability, transparency, and the role of artificial intelligence. By fostering dialogue and information sharing, the UN aims to build consensus and establish norms to guide the development, deployment, and use of LAWs.

In addition to the CCW, other UN entities have also been involved in addressing the issue of LAWs. The United Nations Institute for Disarmament Research (UNIDIR) has conducted research and provided analysis on autonomous weapons, examining their potential impact on international security, stability, and humanitarian concerns. UNIDIR's reports and publications

²⁹“Convention on Certain Conventional Weapons - Group of Governmental Experts (2022) | United Nations.” *UNODA Meetings Place*, <https://meetings.unoda.org/ccw/convention-certain-conventional-weapons-group-governmental-experts-2022>. Accessed 20 June 2023.

are valuable resources for understanding the issues associated with LAWs and can be used to provide various insights.³⁰

Furthermore, the Office for Disarmament Affairs (ODA) within the UN Secretariat plays a crucial role in coordinating efforts related to disarmament, including discussions on LAWs. The ODA provides support to the CCW and other relevant UN bodies, facilitating the sharing of information and expertise among member states. Their publications, briefings, and statements demonstrate the UN's commitment to addressing the challenges posed by LAWs.

The UN's foremost shortcoming in addressing this issue is the lack of binding agreements pertaining to LAWs. While numerous UN offices and entities have worked to deal with the challenges posed by LAWs, there has not yet been a concerted effort within the general organs of the UN to grapple with the issues caused by such weapons.

In recent years, the development of autonomous weapons has increased, and the diplomatic community has lagged behind in establishing effective resolutions that are updated to the current reality of how LAWs function. In addition to this, there is still some disagreement between member states and international organizations as to what an autonomous weapon actually is and the exact definition and terminology needed to address it.

III. Topics to Consider:

A. Technological Advancements and Risks

³⁰“UNIDIR on Lethal Autonomous Weapons.” *UNIDIR*, <https://unidir.org/sites/default/files/2021-07/UNIDIR%20on%20Lethal%20%20Autonomous%20Weapons%20-%20Final.pdf>. Accessed 20 June 2023.

Technological advancements play a crucial role in the development and deployment of lethal autonomous weapons (LAWs). One key aspect is the integration of artificial intelligence (AI) and machine learning algorithms into autonomous systems. AI enables LAWs to perceive their environment, process information, and make decisions based on predefined rules. While these advancements offer potential benefits in terms of military efficiency and precision, they also introduce significant risks and ethical concerns.

One major risk is the black-box nature of AI algorithms. As AI becomes more complex and capable of learning and adapting in real-time, the decision-making processes of LAWs become less transparent and, therefore, less predictable. The inner workings of AI algorithms may become inaccessible to human operators, making it challenging to understand and explain the reasoning behind the actions taken by LAWs. This lack of transparency hinders accountability and raises public distrust in the deployment of LAWs.³¹

Another risk is the potential for biases and errors in AI algorithms. Machine learning algorithms rely on training data, and if the training data contains biases or inaccuracies, these biases can be continued and even amplified in the decision-making processes of LAWs. Biased decision-making leads to discriminatory targeting, disproportionate use of force, or the misidentification of targets, resulting in civilian casualties and human rights violations. Efforts to address biases and ensure the fairness and accuracy of AI algorithms in LAWs are essential to prevent unjust outcomes.

³¹Lee, Kai-Fu. "AI Weapons Are the Third Revolution in Warfare." *The Atlantic*, 11 September 2021, <https://www.theatlantic.com/technology/archive/2021/09/i-weapons-are-third-revolution-warfare/620013/>. Accessed 20 June 2023.

Moreover, the increasing autonomy and sophistication of LAWs raise concerns about their potential for unpredictable behavior. While AI algorithms are designed to operate within predefined parameters, there is always a risk of unforeseen interactions or scenarios where autonomous systems might exhibit behavior not anticipated by their designers. This unpredictability could have dire consequences in high-pressure combat situations, leading to unintended escalation, civilian harm, and violations of international humanitarian law.

B. Public Perception and Acceptance

Public perception and acceptance of lethal autonomous weapons (LAWs) play a crucial role in shaping their development, regulation, and deployment. The public's understanding and attitudes towards LAWs can influence policy decisions, international cooperation, and their support or opposition to the use of LAWs. Public discourse, as well as media portrayal and popular culture significantly impact how LAWs are perceived by the broader society.

Building public trust and understanding regarding LAWs is essential. Transparency in the development and deployment of autonomous weapons is imperative to address concerns and mitigate fears. Public engagement and education initiatives can help spread accurate information, explain the benefits and risks of LAWs, and foster informed discussions. This can contribute to a more balanced understanding of the ethical, legal, and humanitarian implications associated with autonomous weapons.

Ethical considerations and public values must also be taken into account. Open and inclusive dialogue that involves diverse members, including experts, policymakers, human rights organizations, and the general public, can help shape ethical frameworks and guidelines for the

responsible use of LAWs. Public opinion can influence policy decisions and encourage governments and international organizations to prioritize the development of regulations and international agreements.

Additionally, addressing misconceptions and unrealistic depictions of LAWs in popular culture is important. Media and entertainment industries have a significant role in shaping public perception. Films such as *The Terminator* portray highly intelligent and powerful automatons that maliciously act without any human input, which is the case with most current day LAWs. Promoting accurate portrayals and highlighting the complexities and ethical dilemmas associated with autonomous weapons can contribute to a more informed public discussion.

C. Implications for Arms Control and Non-Proliferation

The emergence of lethal autonomous weapons (LAWs) presents significant implications for arms control agreements and non-proliferation efforts. The rapid advancement and adoption of these technologies raise challenges in monitoring, verification, and compliance with existing arms control regimes.

LAWs have the potential to alter the strategic balance between states and complicate efforts to limit the proliferation of advanced military technologies. Unlike conventional weapons, LAWs blur the line between offensive and defensive capabilities, making it difficult to categorize and regulate their use. State and non-state actors' rapid development of LAWs could lead to an arms race and undermine stability.

Existing arms control treaties, such as the Convention on Certain Conventional Weapons (CCW), are not specifically tailored to address the unique characteristics of LAWs. The CCW's

Protocol II on landmines and Protocol IV on blinding laser weapons touch upon aspects related to autonomous weapons, but a complete framework specifically addressing the development, deployment, and use of LAWs is yet to be established.³²

Efforts are underway to address this challenge. Discussions within international forums, including the United Nations and the CCW, aim to explore options for developing new international agreements or additional treaties that address the concerns raised by LAWs. These discussions involve the participation of states, NGOs, and technical experts to ensure a comprehensive and inclusive approach.³³

Addressing the implications for arms control and non-proliferation requires proactive measures to adapt existing frameworks and develop new mechanisms that account for the unique characteristics and risks associated with LAWs. Strengthening international cooperation, sharing technical expertise, and engaging in diplomatic negotiations are key steps toward establishing effective regulations and preventing the uncontrolled spread and misuse of autonomous weapons.

IV. Case Study:

A series of drone strikes in Tripoli, Libya, exemplify the morally ambiguous use of lethal autonomous weapons in a wartime conflict. The incident involved the deployment of

³²“UNTC.” *UNTC*,

https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVI-2&chapter=26&clang=_en. Accessed 20 June 2023.

³³Freedberg, J. “Not the right time’: US to push guidelines, not bans, at UN meeting on autonomous weapons.” *Breaking Defense*, 3 March 2023,

<https://breakingdefense.com/2023/03/not-the-right-time-us-to-push-guidelines-not-bans-at-un-meeting-on-autonomo-us-weapons/>. Accessed 20 June 2023.

autonomous weapons that essentially allowed government forces to “fire, forget, and find” the various retreating Libyan rebels.³⁴

In the midst of the ongoing conflict in Libya, an autonomous drone fleet operated by a government force was tasked with targeting rebels retreating from the city of Tripoli. Equipped with AI algorithms and real-time target recognition systems, these drones were intended to identify and engage enemy combatants, minimizing the risk to human personnel. The drone, a Kargu-2, hunted down and remotely engaged the retreating forces. What isn't clear is whether the drone was allowed to pick its own targets, or rather simply just engage them. In either instance, the strike raised questions regarding the ethical and moral implications surrounding LAWs.³⁵

This strike can be placed in the broader context of recent conflicts throughout the Middle East and North Africa. Similar autonomous weapons have been used in wars and insurrections in Yemen and Syria, to just name a few. This demonstrates the rapid increase in the use of these weapons, particularly in the last couple of years.

Advocates for strict limitations argue that events like the Libyan strike demonstrate the urgent necessity for clear rules of engagement and human control mechanisms to prevent the indiscriminate use of lethal force. Conversely, proponents of autonomous weapons argue that incidents like these are outliers and that with continued technological advancements, the benefits

³⁴Hernandez, Joe. “Autonomous Drone Strike In Libya Subject Of Recent United Nations Report.” *NPR*, 1 June 2021, <https://www.npr.org/2021/06/01/1002196245/a-u-n-report-suggests-libya-saw-the-first-battlefield-killing-by-an-autonomous-d>. Accessed 17 September 2023.

³⁵Cramer, Maria. “Libyan Fighters Attacked by a Potentially Unaided Drone, UN Says.” *The New York Times*, 4 June 2021, <https://www.nytimes.com/2021/06/03/world/africa/libya-drone.html>. Accessed 20 June 2023.

of LAWs, such as increased precision and reduced risk to human soldiers, outweigh the risks.

The strike serves as a reminder of the moral and ethical challenges posed by the use of LAWs. It underscores the urgent need for comprehensive international regulations, clear guidelines for human oversight, and transparent accountability mechanisms to ensure that the deployment of autonomous weapons is conducted in a responsible and ethically sound manner.

V. Questions to Consider:

1. What level of human control should be maintained over the decision-making and use of lethal autonomous weapons?
2. What ethical frameworks and guidelines should govern the development, deployment, and use of LAWs?
3. How can existing legal frameworks, such as international humanitarian law, be adapted to effectively regulate the use of LAWs?
4. What are the potential humanitarian consequences of deploying LAWs in armed conflicts?
5. How can international cooperation be fostered to address the challenges LAWs pose?

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