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High Commission on Technology

MACMUN 2018 | UNHCT Background Guide



The following content was developed by members of the McMaster Model United Nations conference planning team for the sole purpose of framing delegate discussions and debate at the conference and does not represent any official position of the University or anyone engaged in preparing the materials. Delegates should use this information to guide their research and preparation for the conference but should not assume that it represents a complete analysis of the issues under discussion. The materials should not be reproduced, circulated or distributed for any purpose other than as may be required in order to prepare for the conference.

“We live in a complex world. The United Nations cannot succeed alone. Partnership must continue to be at the heart of our strategy. We should have the humility to acknowledge the essential role of other actors, while maintaining full awareness of our unique convening power.”
– UN Secretary General António Guterres

Committee Overview

Dear Delegates,

Welcome to the 2018 McMaster Model United Nations Conference! We are pleased to welcome you to the United Nations High Commission on Technology. The topics under discussion for the UNHCT are:

1. The Militarization of Space
2. Cyber Security and Protecting Against Cyber Warfare
3. Use of Autonomous Weapons

This Background Guide serves as an introduction to the topics for this committee. However, it is not intended to replace individual research. We encourage you to explore your Member State's policies in depth and use the bibliography to further your knowledge on these topics.

Mandate and Function of the Committee

In 1952, the General Assembly created the United Nations Disarmament Commission, UNDC. After resolution 502 (VI), Security Council proposed treaty for regulation, and limitation of armed forces and weapons of mass destruction. However, this was not carefully maintained. In 1978, the General Assembly made the Disarmament Commission a subsidiary organ of the Assembly. It included all Member States of the UN and was made to focus on disarmament that reports to the General Assembly annually.

UNDC/ DISEC/ UNHCT's role is described by the following:

- I. Analyze and make recommendations on problems with disarmament, while considering ways to enhance the functioning of the overall committee
- II. Discuss ways to enhance the committee's function and making improvements to the effectiveness of the committee
- III. Ensuring that decision is made by consensus and result-oriented discussion
- IV. Promote, and establish peace to prevent weapon proliferation and global crisis

The committee functions to achieve resolutions through innovative and critical thinking that deeply analyzes past, current and future resolutions and outcomes. Note there is very limited resource on UNHCT but the committee is very similar to DISEC and UNDC. Please use those committees to do research.

Simulation Style/Composition of the Committee

Simulation Style/Composition of the Committee The Macmun simulation will consist of a simplified version of actual UNHCT procedure in order to accommodate the short duration of the conference and ensure all students are afforded equal opportunity to engage and learn. Rather

than having student delegates assume leadership roles as members of the Bureau, the function of the Bureau will be assumed by the conference Chairs. The Chairs will moderate committee meetings, wherein preselected issues will be debated and discussed with the ultimate goal of collectively forming a resolution to address the issue. In addition to accepted delegates, non-state stakeholders may be invited to contribute to the discussion on relevant issues. Delegates are expected to research their country's stance and prepare for the issues, which are outlined in this package. Additionally, depending on the flow of the meetings, hypothetical crises may also be presented to the committee and discussed.

The UNHCT committee will be composed of Chairs responsible for maintaining the course of debate in accordance to the Model UN rules and procedures. The Chairs will announce the opening and closing of each committee meeting, recognize any points or motions on the floor and facilitate discussion. They are given the final rule on any disputed points, and declare when questions are to be voted on by the body. It is also the decision of the Chairs to pass any draft resolution to be introduced for debate.

The committee will consist of up to 80 delegates representing their assigned states. Delegates are expected to research the following topics and be prepared to debate based on their countries global stance and foreign policy. The submission of a position paper is optional.

A representative of a non-governmental organization or non-state stakeholder may present their stance on the topic to the committee at the discretion of the Chairs during designated times in the meetings. NGOs and other non-state stakeholders do not have the same rights as full members of the committee and will not be able to vote on substantive matters nor be sponsors or signatories of draft resolutions.

One page will be present during committee meetings to pass notes between delegates. Pages will be screening notes to ensure appropriate content and to maintain a professional environment.

Sample Timeline

9:30-9:40 – Roll Call

9:40-9:55 – Setting the Agenda

9:55-12:30 – Debate on the Agenda Topic and Motions

12:30-1:30 – Lunch

1:30-4:00 – Debate on the Agenda Topic, Motions, and Draft Resolutions

4:00-4:30 – Voting on the Draft Resolutions

4:30 – Closure/Adjournment of Debate

Forming Resolutions

Resolutions represent the opinions of the United Nations body as a comprehensive solution to the issue at hand. It is a final result of the discussions and negotiations regarding a topic that details a

recommended course of action. A resolution is first considered a draft resolution prior to being voted on by the body. During the course of debate delegates can decide to work alone or collaborate with others to write a draft resolution. The delegates writing the resolution are considered “sponsors” and must recruit a certain number delegates as “signatories” in order for their resolution to be introduced by the Chairs to the committee. Signatories are members who wish to bring the resolution to debate but do not have to support the document. Once brought to debate, amendments can be made until the final resolution is voted on by the body.

Position Papers

The Position Paper is a detailed essay of your country’s policies and position on the topics that are going to be discussed in your committee. The creation of your position paper is an important task because it will help you, the delegate, to organize your thoughts and ideas about MACMUN topics so that you can successfully engage with the rest of the committee. Additionally, the position papers will be judged by the conference hosts, and the writer of the top position paper in each committee will be recognized at the conference award ceremony. Please note that to be considered for any award at MACMUN 2018, you must submit a position paper.

Your goals are to research your assigned country in depth, to examine the stance they take on the given topics, and to summarize this information in one position paper. The length should not exceed one page per topic, single spaced.

A strong MACMUN position paper should include the following:

1. How your country is affected by the issues
2. Your country’s policies with respect to the issues
3. Quotes from your country’s leaders about the topics
4. Actions that your country has taken with regard to the issues
5. What your country believes should be done to address the issues
6. What your country would like to accomplish in the committee’s resolution
7. Description of your relations with other countries’ as it relates to the issues at hand

Important Notes:

- Include your name, assigned country, and committee
- Please do not include illustrations, diagrams, decorations, national symbols, watermarks, or page borders
- Include citations and a reference page, making sure to use a standardized citation style of your choice consistently, giving due credit to the sources used in research (the reference page is not included in the page limit)

The deadline to submit your position paper is ***January 30th, 2018 at 11:59PM***; submissions should be emailed to usgcommittees@macmun.org.

Topic #1: The Militarization of Space

“Every gun that is made, every warship launched, every rocket fired, signifies in the final sense a theft from those who hunger and are not fed, those who are cold and are not clothed.

– Dwight D. Eisenhower, the 34th president of the United States

Introduction

Although our understanding of space remains limited, our knowledge is growing at an unprecedented rate. While the rapid technological developments that are allowing scientists to explore further into the cosmos have many positive implications, they also muddle many of the existing international agreements and laws regarding outer space. In other words, the international community must be mindful of, and consider renewing, the current framework regarding space security.

Outer space presents particularly complex issues because no actors truly understand its full extent. Nations cannot claim sovereignty over or occupy parts of space. Although the international community has established a number of regulations and guidelines preventing the utilization of weapons in space, the weakness of these policies lies in the fact that they lag behind scientific progress. As such, it is imperative that the world addresses the drawbacks of status quo policies.

This topic is a highly pertinent issue that ties in seamlessly with many of today’s relevant issues including space exploration, global security, international policy, and the potential drawbacks of technological development. Delegates will be able to engage with a topic that has serious and tangible implications for international security. An arms race in outer space may not be out of the question if the issue is not dealt with properly. Finally, it is important to note that this topic is one that requires a high level of cooperation and communication between delegates in order to come up with the most effective resolution.

Timeline

June 5, 1927 — The Verein für Raumschiffart (Vfr, Society for Space Travel) is founded.

October 3, 1942 — Germany conducts its first successful V-2 rocket test; the V-2 rocket was the world’s first long-range guided ballistic missile.

October 4, 1957 — The Soviet Union successfully launches Sputnik I, the world’s first artificial satellite.

January 31, 1958 — The United States successfully launches Explorer I, America’s first artificial satellite.

July 29, 1958 — The United States Congress passes the National Aeronautics and Space Act, creating the National Aeronautics and Space Administration (NASA).⁴¹

December 13, 1958 — The General Assembly establishes the United Nations Office for Outer Space Affairs.

December 12, 1959 — The General Assembly establishes the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS) as an ad hoc committee.

August 5, 1963 — The Partial Test Ban Treaty is signed, prohibiting the testing of nuclear weapons in the atmosphere and outer space.⁷

January 27, 1967 — The Soviet Union, the United Kingdom, and the United States of America sign the Outer Space Treaty, which effectively made space weapons unlawful.⁸

January 11, 2007 — China conducts an anti-satellite missile test, destroying a weather-watching satellite that had been orbiting Earth since 1999.⁹

February 21, 2008 — The United States Navy destroys malfunctioning U.S. spy satellite USA-193.

Historical Analysis

The first tangible foundations of space exploration were laid in the First World War, during which international military powers had been developing and using solid fuel rockets as weapons. In 1927, the Verein für Raumschiffahrt (VfR, Society for Space Travel) was founded in Germany, and in 1930, the group began to experiment with liquid-fuel rockets. After several successful developments, several members of the society joined the military to assist with its rocket research, eventually leading to the creation of the infamous V-2 missile in 1942. The V-2 missile made its debut in 1944, during a devastating German rocket attack on London.

Following the end of WW2, the bulk of progress in space technology can be attributed to the United States and the Soviet Union. One major event that sparked this ‘Space Race’ was the Soviet Union’s successful launch of Sputnik I, the world’s first artificial satellite. The following year, the United States launched a satellite of its own, the Explorer I, and in the 1960s, both nations began to use reconnaissance satellites to monitor each other’s military installations. Although the United Nations had established the United Nations Office for Outer Space Affairs to ensure the pacific use of space, the ambiguity of the resolution allowed for both sides to continue reconnaissance, which further increased tensions.

The Space Race lasted throughout the rest of the Cold War (up to 1991). Amidst the tensions, the world saw the introduction of the intercontinental ballistic missile (ICBM), which was revolutionary due to its ability to strike any target on Earth in a matter of minutes.

Due to the threats posed by the newly developed weapons, the United States launched a series of programs intended to protect the nation from Soviet ICBMs and gain space supremacy, such as

the Nike-Zeus Program, Project Defender, the Sentinel Program, the Safeguard Program, and the Strategic Defensive Initiative. Likewise, the Soviet Union also made several efforts to outdo the United States. Most notably, the R-360RB Fractional Orbital Bombardment System and Polyus orbital weapons system had potential to carry out successful attacks on the United States if not for international treaties that forced the Soviet Union to phase out the weapons.

In 1991, the Cold War came to a close, signalling the end of the Soviet Union and the Space Race. However, space research continued to progress at a quick rate, leading to the enhancements of pre-existing space technologies and the introduction of new ones. Specifically, Global Positioning Systems (GPS) and military communication systems have added further layers of complexity to the current state of space militarization. Another crucial post Cold War development was the increased number of nations getting seriously involved in outer space. In the past couple of decades, countries such as France, Italy, China, India, and Japan have launched military satellites into space, creating a much broader array of international competition for space supremacy compared to the space race that took place during the Cold War.

Past UN / International Involvement

Strategic Arms Limitation Talks (SALT)

The Strategic Arms Limitation Talks (SALT) were negotiations between the Soviet Union and the United States during the Cold War, aimed at limiting the manufacture and possession of nuclear weapons. The first series of SALT negotiations produced two critical sets of agreements: the Treaty on Anti Ballistic Missile (ABM) Systems and the interim SALT agreement. The ABM treaty placed strict limitations on the number of missile-launching sites and interceptor missiles for both parties. The SALT II treaty was signed in Vienna in 1979. The treaty restricted the quantity of and placed a variety of other limitations on both nations' nuclear forces. However, the U.S. Senate did not ratify the treaty as a result of the soviet invasion of Afghanistan.

Partial Test Ban Treaty (PTBT)

The Partial Test Ban Treaty (PTBT), is a treaty signed by 126 countries prohibiting all test-detonations of nuclear weapons except for those occurring underground. Thus, the PTBT effectively banned nuclear weapon tests in outer space.

Outer Space Treaty

The Outer Space Treaty of 1967 by the UN outlines the basic framework on international space law. As of 2017, 107 countries have signed the treaty. The treaty outlines three key principles:

1. The exploration and use of space shall be for mutual benefit of all countries
2. Space is free from national claims of sovereignty
3. States cannot place WMD in outer space

Current Situation

The international community is now placing greater focus on preventing further militarization, which refers to the deployment of weapons in outer space with the intention of attacking space or ground targets, or terrestrial weapons intended to attack space targets.

Intercontinental Ballistic Missile (ICBM)

The ICBM, designed for nuclear weapons delivery, is particularly deadly as it can be launched from and directed at either Earth or space and strike long range targets. Nations in possession of ICBMs include Russia, India, the United States, China, France, Israel, and North Korea.

Military Satellites

Military satellites are considered the foundation of most space-related military activities. They serve purposes such as reconnaissance, navigation, and communication. With advancing technologies, weaponization of satellites in the near future is more likely. As a result, international rules surrounding them should be updated.

Anti-Satellite Weapons (ASAT)

Anti Satellite Weapons (ASATs) are space weapons designed specifically to attack and destroy satellites. In the last decade, the United States, China, and the Russian Federation have all conducted ASAT tests.

Possible Solutions and Controversies

Compromise regarding national space arsenals or defense systems will play a crucial part in negotiations. Hence, delegates should try to identify their policies and priorities during their research. Although previous international agreements have set out a framework for space exploration and usage, many contain loopholes and flaws that can be exploited. Moreover, technology has advanced at an unprecedented rate since the Cold War, regulations and definitions must be updated to reflect the realities of the 21st century.

Bloc Positions

United States

Since the dawn of the space age, the United States has been the most successful nation in this field. It currently possesses the greatest number of military satellites in the world. However, the gap between the United States and other countries is closing fast. The United States does not necessarily look favourably upon further limitations and regulations in terms of developing, possessing, and using space arms and satellites. In 2015, the United States opposed China and Russia's proposed treaty to ban arms in outer space.

China

China has seen substantial developments in its space capabilities in the Post-Cold War era, and now possesses advanced technologies such as ICBMs and ASATs. China wishes to continue its progress in its space militarization efforts and develop its programs.

Russian Federation

In the post Cold War era, Russia remains one of the world's leaders in space technology. Russia, much like the United States and China, has militarized space, and possesses a substantial space arsenal.

European Union

European Nations generally do not possess space arsenals, with the United Kingdom, France, and Germany being notable exceptions. It is worth noting that these countries are allied with the United States and will likely support the United States in international agreements.

Other Nations with Developed Space Programs

In addition to the aforementioned traditional superpowers, there are a number of other nations that have satellite launch capability, substantial space intelligence, and in some cases, nuclear arsenals. These nations include India, Japan, Israel, and Canada. Although these nations have varying foreign policies, they all desire a level of freedom to continue to develop their space programs.

Nations Without Space Technologies

Most developing countries lack space capabilities; however, these countries are no less relevant to the topic. These countries tend to be highly concerned with the potential harms of space weaponization and would thus support tighter regulations.

Focus Questions

1. Does your nation have a space program?
2. Should there be a ban on conventional space armaments?
3. Should individual nations have more freedom to do what they wish in space, or is it an international body's responsibility to oversee all actions regarding space?
4. Has your nation signed the Outer Space Treaty? Why or why not?
5. In international space law, how should the following terms be defined? 'Pacific use', 'outer space', 'weapons of mass destruction'.
6. If a new treaty were to be constructed, which new set of rules or regulations, if any, would your nation seek to include?

Topic #2: Cyber Warfare

*“To assure their own cybersecurity, [countries] will sometimes intrude into the strategically important networks of other [countries] and will threaten—often unintentionally—the security of those other [countries], risking escalation and undermining stability”
– Ben Buchanan, a fellow at Harvard’s Cyber Security Project and author of *The Cybersecurity Dilemma**

Introduction

Ensuring international peace and security in cyberspace is currently one of the most prevalent topics of discussion due to the multitude of cyber attacks that threaten states’ stability development. The threats not only originate from possible escalations of cyber warfare among states, but also activities of non state actors such as criminals and terrorists.

Cyber Security: “the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance, and technologies that can be used to protect the cyber environment and organization and user’s assets.”

Cyber Attacks: “the unauthorized penetration of computers or digital networks.”

Cybercrime: “any illegal behavior directed by means of electronic operations that target the security of computer systems, the data processed by them (...) illegal possession and offering or distributing information by means of a computer system or network.”

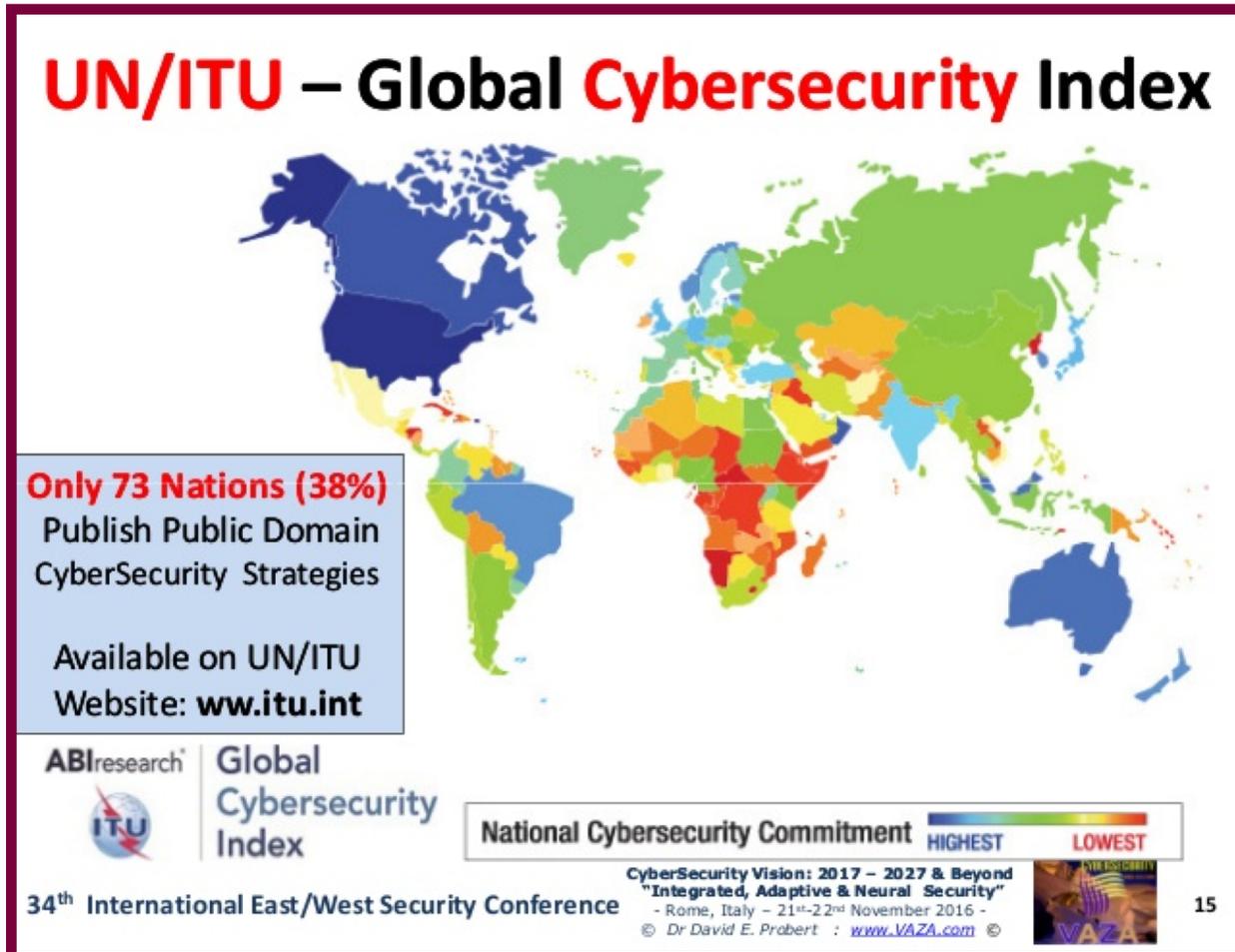
Cyber Warfare: the involvement of a state “to attack and attempt to damage another state’s computers or information networks through, for example, computer viruses or denial-of service attacks.”

Cyber Terrorism: “the use of computer network tools to shut down critical national infrastructures (such as energy, transportation, government operations) or to coerce or intimidate a government or civilian population.”

Strengthening Cyber Security and Prevention Strategies

Maintaining international cyber security and peace in the cyberspace is an important challenge. In May 2017, the “WannaCry” ransomware strike affected more than 150 countries and rendered personal data, hospital records, and transportation systems inaccessible. International disruptions such as this one pose a significant threat to international stability. Although the UN has called upon its Member states to formulate and implement a national cyber security or cyber defence strategy, 50% of the examined countries have not yet developed such a strategy.

Indeed, the UN lack a comprehensive strategy in responding to cyber security threats. For one, there is no consensus on acceptable options that a Member State may use in response to cyber attacks perpetrated by or with the involvement of state actors. Moreover, there is currently no clear definition on what constitutes as an act of war in cyberspace and what measures are appropriate in response. The UN has yet to sufficiently discuss the issue of self-defence,



appropriate responses to cyberattacks that target national critical cyber infrastructure, and how to avoid escalation.

Attempts have been made to set out guidelines in relation to cyber security. To avoid escalation into cyber war, UN experts proposed a norm that allows the affected state to only take actions, which have yet to be determined, that do not involve the use of force in responding or retaliating to a cyberattack.

In essence, with the emergence of new technologies, the need for an international framework is growing and so are the consequences of inaction. The UN faces many difficulties in this task, namely in definitions and the difficulty in attributing cyber attacks. This is compounded by a lack of trust amongst Member States and the fact that half of the world has yet to develop national cyber security strategies and do not realize the threats they face.

Figure 1: The Global Cybersecurity Index. It depicts the national commitment to cybersecurity in the country. Generally those with higher commitment are more secure and less susceptible to cyberterrorism.

Wikileaks

Wikileaks is an international non-profit organisation founded in 2006 working to publish news leaks based on significant ethical, political, and historical implications. The organisation cites Article 19 of the Universal Declaration of Human Rights, which defines expression and access to information as a civil right, as the founding principle for their work. Information disseminated by Wikileaks have destabilised governments such as the US and the UK as in the case of controversies surrounding the Iraq War. The “Iraq War Logs” revealed the cover up of civilian casualties, unreported cases of torture, and covert operations conducted by Syria and Iran. Reports like these lead citizens to lose trust in their governments thereby destabilising the political and social landscapes of many states.

Focus Questions

1. What options are there to bring more clarity to the concepts of cybercrime, cyber warfare, and cyber terrorism?
2. How could capacities be built to identify, prevent, and respond to cyber threats?
3. What role should be played by developed versus developing nations in achieving global cyber security?
4. What hinders international cooperation and which methods can be employed to foster dialogue?
5. How can disagreements be addressed, and compromise reached on issues that are in deadlock while continuing successful work on less contentious areas?

Topic #3: Use of Autonomous Weapons

Lethal autonomous weapons threaten to become the third revolution in warfare. Once developed, they will permit armed conflict to be fought at a scale greater than ever, and at timescales faster than humans can comprehend. These can be weapons of terror, weapons that despots and terrorists use against innocent populations, and weapons hacked to behave in undesirable ways. We do not have long to act. Once this Pandora's box is opened, it will be hard to close.

– Elon Musk in an open letter to the UN Convention on Certain Conventional Weapons

Introduction

War is known to be a fight against mankind. Historically, tactics were made by men, weapons were controlled by men, and the battlegrounds consisted of men. However, there is a new interest in the battlefield and that is autonomous weapons. Autonomous weapons are robots designed to attack military targets without the intervention of humans. These machines can cause huge amounts of damage and mass destruction if used carelessly. As of now, the UN has no policies regarding these machines. With the current problems of terrorism and wars, these weapons serve a huge advantage for nations. It is predicted that countries will fight for the use of these weapons. Therefore, it is up to the members of UNHCT to make regulations for autonomous war machines.

History & Background

Historically, land mines were the first automatic lethal weapon. However, anti-personnel landmines were banned by many countries. Then, autonomous radar guided gun used on ships were developed in the 1970s. These were programmed to carefully identify and attack missiles, rockets and aircraft. Several countries have developed a similar system for machine tanks such as Russia, Israel and Germany. Additionally, Israel has even started developing military robots. More developed countries have taken the creation of these weapons very seriously. Russia is developing autonomous robots, missiles, drones, and vehicles with artificial intelligence. Many countries have already created autonomous weapons which adds to the urgency of the topic as here are many associated ethical issues that will be discussed later.

Current Initiatives & Efforts

The Convention on certain Conventional Weapons (CCW), which focused on discussing autonomous weapons, was held in April 2014. In the conference, officials stated there needs to be several conditions that must be met for weapons to be considered lawful under UN protocol.

One prerequisite is that weapons must not cause suffering that has no corresponding military purpose. Furthermore, they cannot inflict unnecessary suffering. However, many machines cannot distinguish between an alive or dead human being. Leaving a combatant in a position where they have unnecessary non-lethal wounds causes unnecessary suffering.

In April of 2015, the CCW called for a meeting on Lethal Autonomous Weapons Systems (LAWS). Experts were called upon to discuss developments and future steps for the UN. A major issue which was established during this meeting was the topic of proliferation. While the nature of the weapons themselves is important, the matter of who possesses the weapons is of extreme importance. The creation of LAWS could possibly begin a new global arms race and intensify global conflict. Many countries will desire possession of these weapons because they will gain an advantage over neighbouring nations.



Figure 2: A map showing the opinion towards LAWS and possible developers of the system.

In addition, there are other ethical issues that must be considered. The idea of roaming killer robots that are capable of mass destruction in an instant without any human control, is very concerning especially for citizens. This raises the question if autonomous weapons are ethical to have, even if they can save the lives of many military soldiers. Additionally, the fact that LAWS have issues with facial recognition could easily lead to the mistakened deaths of innocent people. Moreover, LAWS leads to legal issues as well. It would detriment international agreements that protect citizens and limit military force. Also, it violates the International Humanitarian Law and its principle of distinction that states enemies must be able to identify combatants from non-combatants such as civilians. Furthermore, it violates the principle of proportionality which

explains that there needs to be military purpose for damage among civilians. The fact that LAWS is not controlled by a human operator brings up many legal issues from treaties that have been internationally established for a long time.

On the other hand, a major benefit is that LAWS can be designed to follow all rules of engagement to protect civilians, if implemented with caution. In addition, LAWS limits the risk of human error and casualties of human fighters. It could potentially be used to resolve conflict.

To date, the UN does not produce any legislation on this topic. Fears are beginning to rise that the UN will fail to put forth anything about this topic until it is too late.

Bloc Positions

United States of America

The USA began creating what could eventually be a policy concerning LAWS. They established their first official policy on development of autonomous weapon system and focused on the safety of unintended engagements of autonomous weapons.

United Kingdom

The UK also made policies about LAWS. British government is against the outright ban of LAWS. They use a 5 tiered system to analyze whether a given weapon is legal under humanitarian law and favours that other countries does the same too.

African States

South Africa and Sierra Leone shared similar sentiments in that they both value human rights and international humanitarian law (IHL). This has lead to a deep concern regarding LAWS.

Other Countries

Cuba, Ecuador, Holy See, Pakistan and Egypt seek a ban on the development of LAWS because of risk involved with these weapons and possibility of global destabilization.

Research Questions

1. What are the technical challenges when developing fully autonomous weapons systems and is it worth risking the ethical issues associated with LAWS?
2. What is "meaningful human control" of a weapon system?
3. What would the impact of the development of LAWS on human rights, in particular the right to life and the right to dignity?

4. What ethical questions arise from the development and deployment of LAWS?
5. What are the overall objectives for the discussions on LAWS such code of conduct, regulations, restrictions, prohibition?
6. If there is an error and mass destruction of innocent civilians does occur without military purpose, who is at fault and what will happen?