



Security Council

Topic B: Creation of strategies and protocols to reduce the impact of disruptive technologies in future Belic conflicts.

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President:

Moderator:

Official Assistant:

Introduction to the Committee

The United Nations Security Council (SC) is one of the six main organs of the United Nations. Since its responsibility is to maintain international peace and intervene whenever peace is menaced, this organ can make decisions that may force member states to execute these resolutions; all member states of the United Nations must accept the verdicts of the Security Council. The first session of this committee took place on January 17, 1946, at Church House, Westminster, London. This Council comprises 15 members, with five permanent members (the G5): China, France, the Russian Federation, the United Kingdom, and the United States of America, plus ten non-permanent members. This year's non-permanent members are Albania, Brazil, Gabon, Ghana, India, Ireland, Kenya, Mexico, Norway, and the United Arab Emirates.

Disruptive technologies are specific innovations that substitute an already existing

product or technology; consequently, they create a new way of work. Nowadays, disruptive technologies' higher potential is reflected in the market. These new technologies left the "traditional models" aside. The new is used to optimize the market results, but this is not only applied in the market. Since technology is evolving daily, in every type of competition, conflict, or market, it is crucial to be updated on this technology because the group that does not consider them is surpassed in every aspect. In the modern era, technology represents a significant influence. There are many examples of disruptive technology in daily life, such as streaming platforms; they represent an

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overshadow over television programs and the DVD market. Platforms are not the only ones affected; online encyclopedias completely changed the entire market. This meant an evolution because only a mobile device was needed to enter, having a readaptation from schools, students, and book producers.

In an international context, this technology is used on equipment to create an advantage over the other armed forces. The Observer Research Foundation (ORF) describes the relationship between the armed forces and disruptive technologies as "almost a symbiotic." After the 11th century, technological innovations affected the dynamics and tactics in the fields and changed the ways of defending and attacking territories by increasing the lethality of its equipment. Nowadays, technological innovations create a military advantage. However, this advantage means that the technology can cause more damage to the armed forces. Consequently, it also causes more damage to civilians, cities, and the nation's integrity.

There is a new concept known as "Tecno-Wars", in which disruptive technologies and cyberattacks are the main offensive in armed conflicts. In these Tecno-Wars, the most developed nation generally overshadows the other because the technology dramatically impacts the conflict, so a minimum difference in equipment quality mainly assures the defeat. Moreover, a considerable part of disruptive technology arms work with radiation, so they contaminate the area, not only affecting human beings but also flora and fauna of the place. To exemplify the repercussions of the atomic bombs on Hiroshima and Nagasaki in 1945, the radiation spread by the bombs is still active in the present.

Historical Background

The use of weapons in history has been present since humanity's beginning.

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However, some organizations try to implement strategies to stop these weapons' disruptive use. The first time that most countries united to eliminate this problem was after World War I, when the countries created the league of nations in 1920. The main objective of this organization was to prevent a second world war, but the countries started leaving this organization because of their thoughts. The League of Nations ended in 1946 because it failed its primary objective. The UN was created after World War II ended, this happened on July 28, 1945, by a vote in which 89 countries were in favor, and two were against. The main objective of the UN is "The maintenance of international security" (UN, 2022), and it remains in the present.

Industrial Revolution. The industrial revolution was an economic development that took place in the 1800s in Europe and America. This also led to a massive change in the weapons used because of the new technologies discovered during this period. In 1803 the British army started using shrapnel shells; they contained a large amount of ammunition released at high velocities, the Chinese invented this earlier, but the British perfected it. The first submarine used for Belic purposes was the "Craft Turtle" in 1775, and the Americans created it. The revolver was created in the 1836s by the Americans after making some modifications to the revolving gun. Between 1876 and 1883, a schoolteacher built the Fenian Ram. Mass production started a problem during this period because the countries did not know what to do with many weapons. Many things influenced the mass production of weapons, like the machine, the new technologies discovered, and militarism (Michael Marshall, 2009).

World War I. World War I was one of the most significant conflicts that humankind had suffered. It took almost 10 million people's lives, and the arms that had been used since the Industrial Revolution evolved, like the tanks that the British Army implemented in 1914. Chlorine gas was created by a Jewish German named Fritz Haber. The bayonet was invented at the beginning of the

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XVII century, but it was perfected in World War I. Fire Thrower was created by a German named Richard Fiedler. Germans made grenades after watching the strategies used during the Russian-Japanese conflict in 1904; they had an estimated seventy thousand grenades. Although Hiram Maxim perfected the Machine Gun invented during the industrial revolution, they were not used because of their significant weight (Michael Marshall, 2009).

World War II. World War II was the most significant conflict from 1939 to 1945 that humankind suffered; with 50 million lives taken, arms started to evolve. The PPSH-41 was a very used rifle in the World War II product of the Soviet Union and lighter than other armaments. MP40 was a submachine gun used by the Germans in World War II. Edward Uhl invented bazookas, and American artillery developed them to derive tanks. Manhattan project was the research about a bomb that could use nuclear energy to generate big disasters around the world; it started in 1942 and was used against Japan in this conflict (Marshall, 2009).

Cold War. The Cold War started in 1945 and lasted almost 45 years. The conflict was mainly between the USSR and the United States of America. At this time, some armed disputes had taken place, and these two countries saw which one was better by helping the country currently in a conflict. Also, the Cold War led these countries to start a race to see which one of the two would go first to space and have the best armament. This led to the discovery of new technologies used for disruptive purposes. One of these was the FN-FAL; its primary goal was to replace the weapons used in World War II with better ones. The hydrogen bomb, which the American Edward Teller developed, is a thermonuclear weapon of the second generation and has a more dangerous power than the first-generation atomic bombs. The Orange Agent was used in Vietnam War; its main purpose was to clear the battlefield to see the Vietnamese hiding; however, this resulted from two chemicals that were very

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harmful to human beings (RT en español, 2017).

Precision strikes by Tomahawk. The development of the missile Tomahawk started in the 1940s. Still, it was not until 1970 that its technology started to be developed by the American company General Dynamics and used more by the countries. The missile can be charged with nuclear energy, but with the top of the atomic race, the government that has access to this weapon has decided to stop using it. Therefore, it is only operated by the United States and the United Kingdom. The Gulf war was the first military use of this missile; they dropped more than 280 units of this weapon. Mainly on the first night of the conflict, they were used to neutralize the air force and the Iraq bases. After that, they were used in Libya during the military operation of the OTAN against the government of Muammar Gaddafi in 2011. Finally, the missiles were used in 2014 when the United States bombed the auto-denominated Islamic State; in Siria. They used 47 tomahawks dropped from two bunkers, according to the pentagon. They were used in the pentagon when the United States bombed three installations of radars in Yemen. (J.P. Rafferty)

Gulf War. The Gulf War, or Persian Gulf War, was a conflict between a coalition and a single nation. This war started when Iraq invaded its border country Kuwait in the 1990s, with reasons for Iraq to obtain oil and pay its debt after the war with Iran. The UN saw this issue and started to put sanctions on Iraq to make them back out from Kuwait; January 15, 1991, a coalition was formed with 34 nations and leaders by the United States of America, and under the mandate of the United Nations, this was to free the Persian Gulf because it was one of the crucial Gulfs of exportations, there were also used some weapons that were prohibited in military conflicts like the chemical and biological weapons.

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Current Relevance

The disruptive era affected the armed forces creating a new period of instability; some also defined it as the Fourth Industrial Revolution. This disruptive era had significant Artificial Intelligence (AI), Biotechnology, and Robotics innovations. According to the World Economic Forum Global Risks Report of 2020, disruptive technologies are affecting the economic, demographic, and technological forces. Besides the innovations in the previous fields, the new era is giving way to new battlefields because of all the new armament and equipment, and improvements with the changes in the armed conflict fields are obstructing the international peace negotiations (Think Tank of Peru's Armed Forces, 2020).

Because of all the new armament, geographical distances are stopping to be an issue, the threats can appear in a moment by a directed missile or an atomic bomb, but the threats are not just physical. Cyber threats are a fundamental concept, so due to technological innovations, there is no necessity to take a "Physical Action" to defend or attack a nation. Because all of these risks or threats can appear in a moment and there is no type of advice or a way to stop the attacks, the global situation at this moment (regarding armed forces and conflicts) is denominated a grey zone of conflict; this is a "constant manifestation with different levels of danger" according to the Think Tank of Peru's Armed Forces.

The constant danger of being attacked compels the armed forces to be in a permanent 360° defense position; this obligates them to use the same technology they are defending. Consequently, the international armed forces need to innovate on defenses and attack technology and create a loop of new weapons and dangers, each more dangerous than the last. In the words of the Secretary of Defense of the United States of America, Lloyd James Austin the

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third, "Ultimately, readiness and lethality depend on more than just new technology and organizational changes. To realize the full potential of our efforts, we must also modernize the way we fight" (Lloyd James Austin III, 2020).

Use of guided missiles. These types of missiles are characterized by their tactic of guidance and their short-range missiles. They are mainly used as an immediate tactic in combat, there are short-range and long-range missiles, and these second ones are characterized by their point of energy which is air. One of the most emblematic missiles is the Congreve rocket. This missile was created in 1806 and was used against the British and the Americas.

Technology is crucial for the use and improvement of these arms. For this, many guided missiles have been improved through time, making them stronger and giving them new characteristics such as underwater resistance. Nowadays, these rockets are used for training armed forces, technology advances, and mainly, for stock.

Use of Multiplier Launched Systems. The botnet technology is a force multiplier for organized crime. The economic resources the organizer crime has recollected this year have been used to create a "fertile technology incubator for the Darkside hacker." The way these Alternative way works is the following.

Their primary victims targeted to become clients are the innocents, the elderly, the young, and the non-computer literate. Many of the botherder schemes also target this vulnerable group. However, the appetite for power does not stop there. In the DDoS attack, bots have grown big enough to threaten major corporations and nations (Norman, 2014).

Robotics has evolved from simple agents who play games with users to an army of demoralized mercenary robots ready to carry out the crimes of their designers. Starting with Hunt the Wumpus, we now have botnets that collect

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information about specific bank customers and then target those customers using specialized bot clients with features designed to circumvent or circumvent that bank's security. Today's robots are easily customizable, modular, adaptable, targeted, and unobtrusive. As a result, they are moving to a more decentralized approach and diversifying their C&C technology (Norman, 2014).

Law enforcement has begun to catch some botnet developers and operators. The Microsoft Bounty Fund has proven to help the improvement of law enforcement's ability to spot bad actors. Unfortunately, the court system is in dire need of change. For crimes that end in seconds, investigations take months. The cases dragged on for years, so the companies involved could not assist law enforcement. If anything happens, the penalties rarely imposed affect the responsible for the crime. In many cases, those arrested will exchange information with little or no punishment. Public coverage of light sentences and fines sends the message that crime does have a price, and a person may never have to pay the piper (Norman, 2014).

Use of Biotechnology. “As it simplest, biotechnology is the technology based on biology, biotechnology harnesses cellular and biomolecular processes to develop technologies and products that help improve human lives and the health of the planet” (Biotechnology Innovations Organization, 2022). The BIO's use of this tech has three main purposes: Heal the World, biotech is helping to heal the world by damaging nature's toolbox and using our genetic makeup to heal, and guidelines of research by reducing infectious diseases, saving the lives of millions of children, changing the odds of severe, life-threatening illnesses that affect millions of people around the world; treatments tailored to the individual to minimize health risks and side effects: create more accurate disease detection tools; and combat acute diseases and everyday threats facing developing countries (Biotechnology Innovations Organization (BIO, 2022). Finally, fuel the world, Biotechnology uses biological

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processes such as fermentation and bio-catalysts such as enzymes, yeast, and other microorganisms to become microscopic production facilities (Biotechnology Innovations Organization, 2022).

Many countries are using biotechnology to improve their armed forces, including China. The People's Liberation Army had been part of a series of experiments to create super soldiers. According to their national intelligence director, they are working with gene editing and technology to enhance humans. They seek better soldier performance and expect to create strong genes that can treat genetic diseases (NBC news, 2020).

Use of Cyberattacks Against Enemy Commands. An organization is singled out in a targeted attack because the attacker has a particular interest in a company or has been paid to target them. The preliminary work for the attack could take months, so the attacker finds the best way to deliver their malware directly to the systems (or users). A targeted attack is often more damaging than an un-targeted one because it has been specifically tailored to attack the systems, processes, or employees, in the office and sometimes at home (National Cyber Security Centre, 2015).

Cyberspace operations are naturally suited to such an approach, given that adversary military forces are increasingly dependent on this domain. There is nothing unusual about using cyberattacks against enemy communications. It is simply an evolution of a familiar operational script with a new tool. However, the technological characteristics of cyberspace make it especially attractive, with a large number of attack surfaces, the ability to position malware well in advance, and the ability to sabotage weapons systems that rely on sophisticated software and increasingly complex supply chains (Joshua Rovner, 2021).

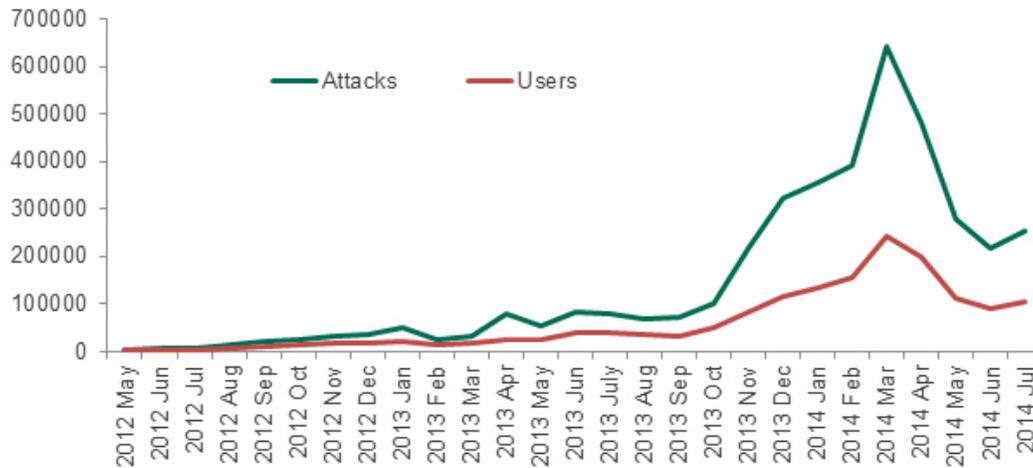
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A Joint Study by Kaspersky Lab and INTERPOL (Securelist, n.d.).

Military Balance Report 2021. The Military Balance 2021 was published at the end of a year that was dominated by the coronavirus pandemic. Although the pandemic affected almost all countries, meeting this common challenge did little to improve relations between states. Conflicts and confrontations did not abate, and great-power competition among major powers dominated some countries' defense planning considerations and procurement decisions (IISS, 2021).

The unstable security environment was also evident in the continuing tensions in defense relations between states—even between allies when it came to NATO—and in the continuing challenge to the remaining elements of the post-World War II rules-based order, particularly arms control agreements. The United States withdrew from the Open Skies Treaty in November 2020, just over a year after it officially withdrew from the Intermediate-Range Nuclear Forces Treaty, in which case it also accused Russia of violating the treaty. Furthermore, the failure of the Trump administration's plan to include China in a

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successor to the Russia-U.S. agreement, New START, left the new Biden administration little time to extend the treaty (IISS, 2021). Meanwhile, military conflicts continued in Libya, Syria, and Yemen. Turkey sent military help to Libya in 2020, supporting the recognized government in Tripoli, while Egypt, Russia, and the UAE supported opposition forces. Contributions from regional states were modest, but they were still able to maintain their presence, indicating their developing military capabilities. In Syria's Idlib province, the Turkish army clashed with government forces for the first time in February and conducted joint patrols with Russia in late 2020 to monitor a ceasefire.

In Yemen, the Iran-backed Houthis demonstrated increasing military competence by using weapons such as uninhabited aerial vehicles (UAVs), long-range missiles, and cruise missiles. Conflicts continued in Ukraine and Africa, including the protracted military conflict in the Sahel. Fighting in Ethiopia threatened stability in East Africa, not only because of cross-border incidents but also because Addis Ababa had made an essential contribution to regional peacekeeping efforts. In Nagorno-Karabakh, an old conflict flared up again, with Azerbaijan regaining much of its territory (IISS, 2021)

Control and Communication Systems. The way people communicate has changed as the world has gone digital. Consider the introduction of the iPhone, which revolutionized how people make phone calls, text messages, and surf the Internet. About a decade later, 81% of adults own a smartphone, whether iOS or Android, according to the Pew Research Center (University of Southern California, 2022). The business world must quickly adapt to this "new" world and find unique ways to reach consumers with handheld devices, smartwatches, sensors, cloud infrastructure, Big Data, and all the business intelligence tools that people from all walks of life are already using. Technologies such as robotics, nanomaterials, artificial intelligence, bioinformatics, the Internet of Things (IoT), and biotechnology, to name a few, biotech, are changing the world in ways most people could not have imagined

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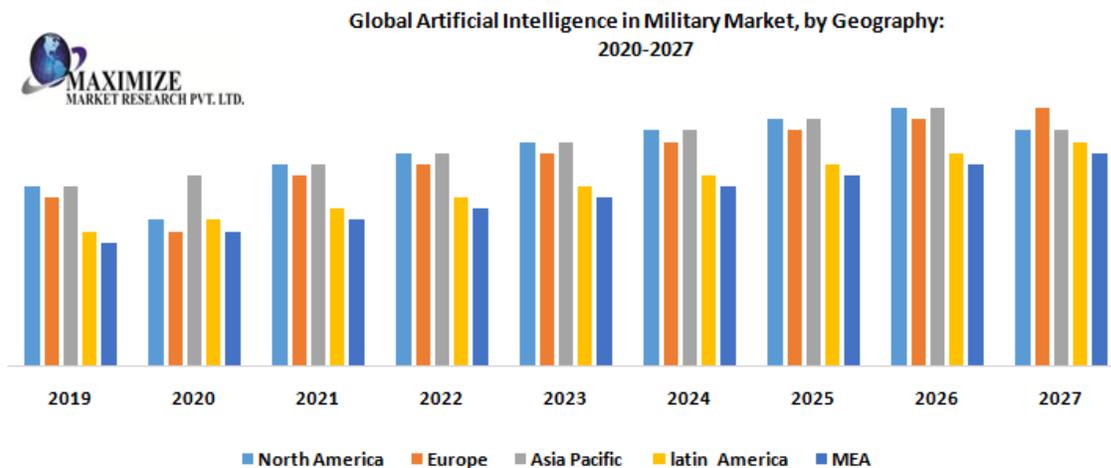
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just a few years ago. As a result, these innovations are becoming increasingly commonplace across all sectors and industries (University of Southern California, 2022).



Global artificial intelligence in military market by geography .(maximize market research, n.d.).

International Actions

Some international organizations have been preventing armed conflicts between countries. An example of this organization is the Campaign for Nuclear Disarming, which has protested since the mid-1960 to disarm the United States of America because of the big disasters that nuclear explosives did to Japan at the end of World War II. The same organization protested again in 1978 because of the decision to deploy US and Pershing missiles in Britain and several other countries. At the same time, the Soviet Union was deploying its new SS-20 missiles in Eastern Europe. Suddenly, massive protests started taking place in western Europe and Britain, increasing the Campaign for

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Nuclear Disarming (CND) members. Another organization is The World Peace congress which Professor Rajani Kannepalli Kanth founded in 2007. It made an event in 2010 that was about a three-day workshop on medicine in Thailand. The purpose was to educate the public to apply healing methods when needed; Morkeaw, a natural medicine practitioner, facilitated the workshop.

US Army Research Laboratory. The nation has been working since 1992 on a specialized laboratory focused on disruptive science and army modernization. The researches focus on: Biological and Biotechnology Sciences; Electromagnetic Spectrum Sciences; Energy Sciences, Humans in Complex Systems; Mechanical Sciences; Military Information Sciences; Network, Cyber, and Computational Sciences; Photonics, Electronics, and Quantum Sciences; Sciences of Extreme Materials; Terminal Effects; and Armament Sciences.

Our military's challenges are diverse and complex, ranging from sophisticated cyberattacks to supply chain risks, to defense against hypersonic missiles, to responding to biothreats. To address these challenges, the department must harness the incredible innovation ecosystem, domestically and globally, to stay ahead of our adversaries (DEVCOM, n.d.). In response to this, the government worked hand to hand with the Rapid Defense Experimentation Reserve (RDER) to support joint warfighting concepts such as information advantage, common fires, and joint all-domain command and control. As a result, over 203 ideas were received, from which 32 were selected for funding that could fulfill the joint capability.

To attract top talent and bring innovation into the department, the Department Of Defense (DOD) is awarding STEM scholarships to those who show promise, with a stipulation to work at a department laboratory for a set period, she said. The department also funds STEM summer camps for junior high school students to bolster America's talent (DEVCOM, n.d.).

The United States has been working on the development of specific military

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technologies, such as Artificial Intelligence (AI) such as Lethal Autonomous Armament Systems (LAAS), Hypersonic Arms (HA), Directed Energy Armament (DEA), and Biotechnology.

Combat Cloud Concept. Combat Cloud is a US-financed program developed by the Mitchell Institute of Airpower Studies. The program consists in creating a new generation of systems where information, data management, connectivity, command, and control become core missions priorities making future arms systems shooter nodes that form a “combat cloud” with the potential to deliver much greater combat capability than the traditional segregated use of individual systems. (Mitchell Aerospace Power, 2021).

Combat Cloud explores how it will create itself since it is intended to make every platform be treated as a sensor, what organizational considerations are needed, and specific priorities to address across all future military systems. The combat cloud "inverts the paradigm of combined arms warfare," he writes, making information the focal point of the battle, not the individual domains of air, space, cyberspace, sea, and land. (Mitchell Aerospace Power, 2021).

India’s Military Modernisation and Disruptive Technologies. India has been working with the department of the army. This modernization process was created to improve the capabilities against future threats and to compete with other countries. In this process, some changes have been implemented, such as quantum key distribution, quantum cryptanalysis, and quantum sensing, to transform the military arena completely. Hack-resistant systems are one of the most significant improvements. As mentioned before, disruptive technologies are the way of attack, and information must be safe in all aspects.

Defense Advanced Research Projects Agency (DARPA). It is a research and development agency created on February 7th, 1958. It is from the United States Department of Defense. It is responsible for creating and developing the technology used by the national armed forces. This agency was created as a

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response to the Sputnik 1 launch. Its main functions are to develop projects that break with the international frontiers of science, technology, and the military environment.

In the disruptive technology area, DARPA had worked with the Lasers for Universal Microsale Optical Systems (LUMOS), which integrated heterogeneous materials into lasers. Their most recent discovery was using On-chip optical gain to integrate photonics to substrate disruptive optical microsystems.

UN Actions

Digital tools create unknown threats, taking the increase in cyber-attacks as an example. Although, the use of new technologies suitable for peacekeeping has great potential if managed responsibly, allowing safer and more effective operations, new technologies are blurring the limits between conflicts and peace (Antonio Guterres, 2021).

They are changing the scale and speed of attacks and the character and nature of violence and destruction in armed conflicts, with an indelible impact on civilians (Antonio Guterres, 2021). However, that is the reason why the UN is adopting the peacekeeping missions to the new technologies, the initiative that the UN is taking is to boost the technological innovations at the headquarters and the battlefield to take the maximum advantage of the potential that the new technologies have since these can increase the speed and effectiveness of the peacekeeping missions (United Nations, 2021). Then, the Secretary-General talked about the "Digital Transformations" in the peacekeeping concept

NATO. In February 2021, the NATO Defense Minister approved Nurture and Protect NATO's Coherent Implementation Strategy on Emerging and Disruptive Technologies (EDT). This is NATO's overall strategy to guide its relationship

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with the EDT, with two main focuses: encouraging the development and deployment of dual-use technologies, that is, technologies focused on commercial markets and applications, but also including defense and potentially security applications. Strengthen alliance leadership and provide a forum for allies to share best practices that help defend against threats (NATO, 2022).

NATO's EDT focuses mainly on the following areas: Artificial Intelligence, Data and Computing, Autonomy, Quantum-Enabled Technologies, Biotechnology and Human enhancements, Hypersonic Technologies, Space, Novel Materials and Manufacturing, Energy, and Propulsion (NATO, 2022).

NATO is developing specific plans for each of these areas, like artificial intelligence and data, to be implemented by allies and the NATO Innovation Council. In October 2021, the NATO Defense Minister approved the first of these strategies, the NATO Artificial Intelligence (AI) Strategy (NATO, 2022). The AI Strategy focuses on principles for the responsible use of AI for national defense and its implementation. It also outlines how the Alliance will customize AI skills and protect Allied citizens from using them.

UN Global Impact. Disruptive technology is not only for Belic purposes; it can also be helpful for climate change. According to the University of Waterloo, disruptive technologies were beneficial for creating monitoring and environmental, healthcare and data systems. These systems were created to control activities better and analyze health and ecological situations. Almost all types of technology are included in this project, from artificial intelligence to mobile health.

The use of disruptive technologies in daily life greatly influences global warming. This little action contributes to reducing almost 66% of all the gases affecting the climate; this can be one solution as well as teaching the new

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generation how to maintain a good relationship with the environment.

UN Secretary-General Strategy on New Technologies. This strategy aims to define how the UN system supports the use of new technologies such as AI, Biotech, Blockchain, Robotics, and others. The interest of the UN in helping new technologies is because the UN wants to accelerate the achievement of the 2030 Sustainable Development Agenda. Based on the consultations across the UN system, I have defined five principles to guide UN engagement with new technologies. The principles are: protecting and promoting global values, fostering inclusion and transparency, working in partnership, building on existing capabilities and mandates, and continuing to learn (Secretary General, 2018).

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The Security Council encouraged the UN to make greater use of a rapidly expanding array of new technologies — including digital technology — to make its peacekeeping missions more effective in some of the world’s most complex political and security environments, as it held a ministerial-level open debate on the topic (United Nations Security Council, 2021).

The Council added that peacekeepers face asymmetric and complex threats, including those posed by extremist groups, and technological tools must be used to support better situational awareness. It encourages troop- and police-contributing countries and field missions to support technology-driven to the real needs of local end-users in a manner consistent with international human rights law (United Nations Security Council, 2021).

The Council also noted the Secretary-General's ongoing efforts on the interface between technology and peacekeeping, including the Initiative for Peacekeeping and the UNITE AWARE platform for situational awareness. It

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also welcomed the commitment of Member States to use solutions responsibly for environmental UN peacekeeping operations; they increase the use of renewable energy (United Nations Security Council, 2021). The Council also encouraged the Secretary-General to continue working with the Member States to explore technologies and best practices that can help improve the safety of peacekeepers and protect civilians, focusing on cost-effective and fit-for-purpose solutions.



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Points to Discuss

1. Context

- a. Possible development of territorial and political conflicts
 - b. Increase of casualties
 - c. Increase of clashes
 - d. Ethnic tension
- e. Accusations of violating ceasefire regimes

2. Development

- a. Consequences in security ambit
- b. Implementation of security regimes
- c. Collaboration with international organs
 - i. Organization of the Islamic Conference
 - ii. Parliamentary Assembly of the Council of Europe
 - iii. Organization of Islamic Cooperation
- d. Creation of new treaties
- e. Cultural legacy
- f. Consequences of martial law
 - i. What is martial law?
 - ii. When is it used?
- iii. How does it affect the organization of the country?

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