

The Militarization of Artificial Intelligence and the Transformation of the Dynamics of the Global Arms Race

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Abstract:

This study focuses on the concept of the militarization of artificial intelligence, which refers to the integration of intelligent technologies into the military domain and the production of autonomous weapons. It seeks to analyze this concept and link it to the global arms race, which has undergone significant transformations due to this militarization, shifting towards a smart arms race among major powers competing to invest in the development of AI-powered weapons, thereby creating a security dilemma. The study concludes that the militarization of artificial intelligence has contributed to reshaping strategic balances and the emergence of new alliances, in addition to increasing the risk of military escalation, as traditional wars have evolved into smart wars. This necessitates an urgent international response to regulate the use of these technologies and mitigate their risks to global security and peace.

Keywords: Artificial Intelligence; Militarization; Arms Race; Autonomous Weapons; Geopolitical Balances.

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1. INTRODUCTION

The field of international relations today is witnessing new developments that require countries and organizations to adapt to them. One of the most prominent of these developments is the emergence of artificial intelligence, which has become an integral part of the strategies of major countries, such as the United States, China, and Russia. This has led to the creation of a new type of Cold War based on competition in artificial intelligence and technological superiority, which differs from the traditional Cold War based on nuclear weapons. It has also changed the nature of the arms race. Smaller countries, which lack large armies, can now achieve relative balance if they possess artificial intelligence systems and invest in cyber warfare.

Superiority in artificial intelligence and its militarization has become a decisive tool for achieving dominance at the international level, as it becomes an effective element in the global balance of power. Self-controlled military weapons, such as drones and killer robots, are changing the international system into a more multipolar one, where several major countries are striving to develop these smart weapons are emerging, thereby enhancing their global influence.

Amid this intersection between supporters of using artificial intelligence in military affairs, who view it as an effective tool for carrying out attacks and enhancing international security, and those who oppose it due to the security threats it poses to international peace and stability, as well as its contribution to escalating the arms race, researchers are calling for the establishment of legal frameworks to regulate the use of these technologies in military weaponry production.

Research Problem:

Given the increasing reliance on artificial intelligence in the military field, many major countries have rushed to invest in these technologies due to their advantages in data processing, speed, and improving the ability to carry out attacks and defense. This has led to the militarization of these technologies and the emergence of a new type of arms race known as the "smart arms race." Therefore, this study raises the following problem:

How is the militarization of AI shifting the dynamics of the global arms race? What are the indicators of this shift?

Study Hypotheses:

To answer the research problem, we propose the following research hypothesis:

- The transformation of wars and conflicts into smart wars is a result of major powers adopting artificial intelligence systems in military affairs.
- The militarization of artificial intelligence reshapes the balance of global power and increases the risk of the arms race in smart weaponry.

Study Methodology:

To address the research problem, **the descriptive-analytical method** was adopted, as it provides a framework for examining the phenomenon of artificial intelligence and its applications in military contexts and warfare, along with the consequences arising from its use. Additionally, **the systems approach** was utilized, viewing artificial intelligence as a dynamic force within the international system and exploring its impact on international relations particularly on the global arms race through inputs represented by emerging variables introduced by this technology, and outputs reflected in the arms race itself, its implications for global security, shifts in the balance of power, and the ways in which states respond to these developments.

Study Objectives:

This study aims to achieve the following objectives:

- To understand the concept of artificial intelligence and clarify its nature.
- To highlight the most important military weapons supported by artificial intelligence technologies and their uses in wars and conflicts.
- To explain the framework of the smart arms race by addressing the major powers dominating military artificial intelligence systems.
- To deduce the most significant geopolitical consequences resulting from the militarization of artificial intelligence.

Previous Studies:

MA in International Relations and European Studies by researcher Carlos Miguel Branco Sandels, titled: “**The Beginning of the Artificial Intelligence Arms Race: A China–U.S.A. Security Dilemma Case Study**”, (2019). This study, based on the realist approach, addressed the Sino-American competition over artificial intelligence technology and explored whether an arms race particularly in autonomous weapons might occur between the two sides. The study indicated that an arms race is indeed underway, which could potentially lead to future conflicts. However, our own study has provided a detailed analysis of the implications and indicators of this race.

An article titled: “**Arms Race in the 21st Century: Consequences and Mitigating Measures**” by Abdulmajid M. Na’inna & Vladimir Anti-Dwanso, in Global Journal of Social Sciences, (2022). The study addressed the most significant global arms races prior to the 21st century, aiming to understand the motives behind arms races, the main actors involved, and their impact on global security and peace. It confirmed that the Cold War marked a turning point toward a deeper examination of the arms race by relevant stakeholders. Historically, it has been shown that arms races between rival states often led to the outbreak of wars, as seen in the First and Second World Wars.

What distinguishes our study is its focus on providing insight into the artificial intelligence systems used by major powers for deterrence, and the transformations in the nature of wars and conflicts where confrontations are increasingly taking place in cyberspace, and arms races are being managed on regional levels without the need for direct military engagements.

Study Plan:

To cover all aspects of the topic, the study was divided into the following sections:

1. Conceptual Framework of the Study Variables
2. Indicators of the Transformation of the Dynamics of the Global Arms Race
3. Challenges and Effects of the Militarization of Artificial Intelligence

2. Conceptual Framework of the Study Variables

Before delving into the definitions of the study's key concepts, it is essential to highlight that there is no universally agreed-upon, precise, and comprehensive definition of artificial intelligence. This is due to the fact that artificial intelligence is a constantly evolving field undergoing rapid and substantial changes. Consequently, a wide range of definitions have emerged, varying according to the perspectives of researchers and experts in technical sciences, as well as the specific lens through which they examine the topic. Additionally, artificial intelligence has also found its way into the humanities and social sciences -fields that include numerous branches and specializations- which has further deepened the lack of consensus about the nature of artificial intelligence.

2.1 Definition of Artificial Intelligence

The term “artificial intelligence” originates from Alan Mathison Turing, often regarded as the “father of computer science”. Turing made a famous assertion, widely known as the “Turing Test”, in a groundbreaking article published in October 1950 in the philosophy journal “Mind”. Central to his research was the fundamental question: “Can a machine think?”, this question captivated the attention of scientists at the time. Through a series of tests, which later became known as the Turing Test, Turing demonstrated that it was indeed possible for machines to think and learn in a way similar to humans. He argued that if a machine could convincingly simulate human behavior to a knowledgeable observer, it should be considered intelligent¹.

Following this series of research, a conference was held at Dartmouth College in 1956, where the term Artificial Intelligence was officially coined and defined by John McCarthy at the time as “the science and engineering of making intelligent machines² especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable³, AI is concerned with methods of achieving goals in situations in which the information available has a certain complex character. The methods that have to be used are related to the problem

presented by the situation and are similar whether the problem solver is human, a Martian, or a computer program”⁴.

Some authors define AI as the field of computer science focused on designing systems that exhibit intelligence in areas such as understanding language, learning, reasoning, problem-solving, and more⁵.

Meanwhile, the European Commission defined it in its 2018 communication on AI in Europe as systems that exhibit intelligent behavior by analyzing their environment and taking actions -with some degree of autonomy- to achieve specific goals. These AI based systems can be purely software-based, acting in the virtual world (such as voice assistants, image analysis software, search engines, and facial recognition systems), or they can be embedded in hardware devices (such as advanced robots, autonomous cars, drones, or Internet of Things applications)⁶.

Through the various definitions provided for the term artificial intelligence, it becomes evident that there is considerable difficulty in offering a specific, comprehensive definition due to the differing intellectual approaches, cognitive frameworks, and areas of expertise among researchers. Each researcher offers a unique perspective on the concept, yet it is possible to identify key elements that define the nature of artificial intelligence:

- Intelligence or artificial cognitive processes that rely on machines (computers) and aim to simulate human thought.
- A close connection to technology, digitization, and biotechnology, utilizing a range of techniques and algorithms to process large datasets with a level of accuracy that surpasses human capability.
- The integration of advanced technologies across various sectors, including social, economic, political, and military spheres.

2.2 Characteristics of Artificial Intelligence

Artificial intelligence is a unique branch of computer programming that seeks to replicate certain facets of human intelligence, such as reasoning, perception, planning, problem-solving, and language comprehension. therefore, we can identify the following characteristics of AI among its many others:

- **Pattern Recognition and Adaptation:** AI utilizes algorithms to analyze vast datasets, uncover patterns, and adapt based on the insights it gains.
- **Autonomous Decision-Making:** AI enhances human capabilities by offering insights, boosting efficiency, and independently making decisions without direct human involvement.
- **Continuous Learning:** Through iterative processes of trial and error, AI systems refine their analytical models and improve their ability to perform specific tasks.
- **Futuristic Perspective:** AI serves as a forward-thinking tool that enables individuals to reimagine data analysis and information integration, using the derived insights to make more informed decisions.
- **Mobility and Sensory Perception:** AI systems can perceive their surroundings and, in some cases, demonstrate motion capabilities⁷.
- **Autonomy and Cognitive Simulation:** AI operates independently, learning and identifying patterns to make judgments and reach conclusions based on analyzing various scenarios. It mimics human cognitive processes and exhibits intelligent behaviors⁸.

2.3 The Relationship Between the Militarization of Artificial Intelligence and the Arms Race

The term “militarization of artificial intelligence” refers to the integration of intelligent technologies and systems into military affairs, with the aim of improving military performance and enhancing decision-making capabilities in military operations. This also involves increasing the speed of data and intelligence analysis, assisting military forces in executing precise strikes, and, in many cases, replacing human involvement with military robots.

“Arms race” refers to the massive increase in military resources by two or more countries with the aim of achieving global dominance. During the Cold War, the arms race revolved around nuclear-armed countries, primarily the United States and the former Soviet Union. This had a significant impact on the nature of the international system, as it contributed

to defining its nature and existence as unipolar, bipolar, or multipolar, depending on the distribution of power among the major powers of that period.

However, with the tremendous technological advancements witnessed in recent decades, along with the outputs of the biotechnological revolution and the developments brought about by automation, the concept of the traditional arms race has evolved. It has become significantly influenced by these new developments, now referring to “an intelligent arms race”, which involves the enhancement of countries destructive capabilities through smart weapons and advanced technologies.

As a result, the issue of the global arms race is considered one of the most significantly affected areas by artificial intelligence. In terms of weapon types, the current international system is shifting from conventional and nuclear weapons to autonomous systems with immense destructive capabilities. In terms of actors, there is also a growing emergence of new players beyond traditional state actors. The acquisition of such advanced military weapons by armed and terrorist groups will have serious repercussions that threaten international security and stability, and undermine the dominance of states.

3. Indicators of the Transformation of the Dynamics of the Global Arms Race

3.1 Military Applications of Artificial Intelligence:

As a result of the tremendous developments that artificial intelligence now enables in the military field, many major countries have sought to benefit from the advantages it offers to enhance their military capabilities. The introduction of these smart technologies has brought about significant changes in the international system, which has required countries to keep pace with them. In this section, we will discuss the most prominent military weapons supported by artificial intelligence technologies and how they operate autonomously, including the lethal autonomous weapons system.

3.1.1 Autonomous Weapons Systems (AWS)

The United States Department of Defense (DoD) has outlined various

definitions regarding Autonomous Weapons Systems (AWS), based on their levels of autonomy and the interaction between human operators and machines⁹. These definitions are widely cited:

- **Semi-autonomous Weapon Systems:** These systems have limited autonomy, as decisions related to targeting and engagement remain under human oversight. They are used for tasks such as intelligence gathering, surveillance, and reconnaissance. Examples include fire-and-forget munitions, loitering torpedoes, and smart anti-submarine or anti-tank mines. Referred to as "human-in-the-loop" systems, they allow operators to maintain control, even remotely. However, the secrecy surrounding their development raises concerns about the level of human oversight, creating uncertainties about their capabilities and potential risks. For instance, in the U.S. Air Force, unmanned aerial vehicles (UAVs) are employed for reconnaissance, strikes, transport, and specialized missions. A notable example is the X-47B, a UAV strike fighter capable of autonomously taking off and landing on aircraft carriers¹⁰.
- **Human-supervised Autonomous Weapon Systems:** These are autonomous systems that enable human operators to monitor and intervene when necessary, including during system malfunctions, to prevent unacceptable levels of damage.
- **Fully Autonomous Weapon Systems:** These systems, once activated, can independently select and engage targets without any further input from human operators¹¹.

Among the most prominent types of these lethal weapons used in wars are:

3.1.2 Swarms of Drones

Many nations are heavily investing in the development of drone swarm capabilities, the use of these swarms in combat scenarios introduces unparalleled complexities. These drone swarms can be categorized based on their purpose some having tactical roles, while others serve strategic objectives. The progression in drone technology spans from micro-drones to the advanced concept of Nano-drones. From launch to target detection,

selection, and execution, drone swarms are poised to become a central focus in the evolving arms race¹².

The applications of AI-enhanced drones can be outlined as follows:

- **Nuclear Intelligence, Surveillance, and Reconnaissance (Nuclear ISR):** AI-powered drones play a vital role in locating and monitoring mobile missile systems, including both nuclear and conventional launchers, as well as their corresponding command, control, communications, and intelligence (C3I) networks.
- **Optimizing Sensors and Targeting Systems:** AI enables drone swarms to significantly enhance the speed and accuracy of sensor platforms and automated target recognition (ATR) systems, allowing for swift identification of targets while avoiding enemy defenses.
- **Assisting Combat Aircraft and Precision Strikes:** Drones provide essential intelligence, such as satellite imagery, to assist stealth fighters and armed drones in accurately neutralizing designated targets.
- **Neutralizing Enemy Air Defenses:** Drones are deployed to disrupt and weaken hostile air defense systems, clearing a path for hypersonic delivery systems capable of carrying both conventional and nuclear payloads.
- **Transporting and Launching Hypersonic Weapons:** Drones support the delivery of hypersonic glide vehicles (HGVs), which can carry either conventional or nuclear warheads, ensuring precision deployment during critical missions¹³.

3.1.3 Killer Robots

Another characteristic of AI-powered weaponry is the development of lethal robots. Simply put, they can be described as autonomous soldiers. Numerous nations are actively working on creating these AI-driven combatants, equipped with advanced night vision, exceptional accuracy, and high mobility. The United States and China are modernizing their military forces based on this concept, which could pose significant risks if proper regulations and controls are not implemented¹⁴.

3.2 The International Competition for Supremacy in Military Artificial Intelligence Technology

Currently, the United States, Russia, and China are engaged in an accelerating arms race in the field of military artificial intelligence. The three countries are striving to exploit advanced technologies such as AI, robotics, and autonomous systems to achieve strategic military objectives, not only in land and naval warfare but also in outer space. This makes the arms race more complex and impactful on the balance of power in the international system, which we will examine in this section.

The competition between the USA, Russia, and China in these domains is intensifying, especially with Russia's statement that it would dominate globally if it becomes a leader in artificial intelligence, and China's 2017 New Generation Plan, which outlines its strategy to take the lead in AI by 2030. Additionally, the USA has issued an executive order establishing the American AI Initiative¹⁵.

3.2.1 The United States of America

According to a 2019 report from the Congressional Research Service, the integration of AI, robotics, and autonomy is expected to shape future military operations, with the development of smart, interconnected, and self-regulating command and weapon systems. However, human oversight will remain crucial for decision-making during operations, whether on land, sea, air, or space. The United States has developed autonomous weapons such as the SGR-A1 sentry gun and the modular advanced armed robotic system¹⁶.

In 2022, the US Army acquired and tested the TSM-800 drone swarm, produced by Booz Allen. During trials at Fort Irwin, the Army successfully launched a pre-programmed swarm of 97 TSM-800 drones to strike a targeted location. Furthermore, the US Navy has experimented with super-swarms, which resemble flocks of birds in both appearance and flight patterns, to mislead enemy radar systems¹⁷.

3.2.2 Russia

Notable autonomous military weapons developed by Russia in the 21st century include the Nerekhta Unmanned Ground Vehicle (UGV),

autonomous nuclear submarines, intelligent swarm robotic missiles, and the advanced Armata T-14 tank. For instance, the Nerekhta UGV is designed to approach a target covertly before detonating with enough force to destroy fortifications or enemy tanks¹⁸. Additionally, several ground robot models, such as the Marker, Platforma-M, Soratnik, and Uran-9, have been deployed by manufacturers to supply equipment for use in the conflict with Ukraine¹⁹.

Russia's missile systems also have a history of incorporating autonomy into targeting algorithms, most notably under the Perimeter program, a Soviet-era algorithm designed to coordinate an automatic retaliatory nuclear strike.

Currently, Russian authorities are upgrading equipment returning from the Ukrainian battlefield with advanced technology, such as remotely operated fire modules, automated target tracking systems, and enhanced propulsion mechanisms. For example, an AI-powered control capability is being developed for the S-500 air defense system, enabling threat assessment and damage estimation for potential ballistic missile strikes²⁰.

3.2.3 China

China has introduced the Rainbow-7 and Blowfish A2 drones as its leading autonomous weapons of the 21st century²¹. It has demonstrated significant advancements in the field of autonomous underwater vehicles (AUVs), marked by the first successful preflight test of the Hongdu Lijian – Sharp Sword UAV in 2013. Moreover, developments in the private sector have further bolstered China's dominance in AUV technology, with innovations like the Fei Long-2, Fei Long-71, CH-7, Star Shadow, Tian Ying, and XY-280²².

Another category of semi-autonomous systems equipped with firepower includes armored combat vehicles such as tanks. China has been modernizing its older ZTZ-59 tanks, integrating advanced technology to enable their operation without a human driver. Similar autonomy in tanks has been developed by companies like Howe & Howe, Textron Systems, and FLIR Systems with their Ripsaw M5 Robotic Combat Vehicle (RCV). Displayed in 2019, the Ripsaw M5 is an unmanned, lightweight combat

vehicle designed for use in various terrain conditions. In addition, China has showcased its latest unmanned maritime systems, such as the JARi-USV in 2018, the JARi-USV features stealth capabilities and remote-control functionality. One of its standout technologies is its AI system, which enables the vessel to autonomously navigate and engage in combat operations²³.

3.3. The Multiplicity of New Actors in the Militarization of Artificial Intelligence

Similar to major powers that have developed their defensive and offensive systems using artificial intelligence technology, there are also many institutions and private companies that have begun to play a pivotal role in the military field. Among these are:

Anduril: The company makes defence hardware, including long-flying drones and surveillance towers that connect to a shared software platform it calls Lattice OS. Lattice OS is an autonomous sensemaking, and command and control platform that serves as the core platform for its suite of capabilities²⁴.

Rafael Advanced Defense Systems: it is an Israeli defence technology company. It was founded as Israel's National R&D Defense Laboratory for the development of weapons and military technology within the Israeli Ministry of Defense; in 2002 it was incorporated as a limited company²⁵.

Thales Group: it is a multinational defence and aerospace company that provides advanced technology solutions in the areas of AI, cybersecurity, and autonomous systems. In February 2023 Thales announced an agreement with LuxCarta, a company specialized in the production of geospatial products derived from satellite imagery, with the organizations joining forces to offer AI-enhanced solutions for intelligence and military cartography²⁶.

3.4 The Changing Nature of Wars and Conflicts

Before the integration of artificial intelligence into military affairs, interstate wars and conflicts were often fought on the battlefield using armed military forces, with direct military interventions being the norm.

However, with the advancement of technology and the emergence of artificial intelligence, the situation has changed dramatically. Killer robots have replaced military soldiers, reducing reliance on human forces in wars. Additionally, unmanned aerial vehicles (drones) have emerged, capable of executing precise offensive strikes targeting sensitive locations within a very short time. Moreover, intelligent systems have contributed to the rapid and accurate analysis of data, aiding in decisive decision-making on the battlefield.

Artificial intelligence has brought about fundamental changes to the nature of traditional warfare and the geopolitical balance, leading to the emergence of the concept of “smart wars” or “digitized warfare”. For instance, cyberwars have become a significant part of modern state strategies, where cyberattacks target critical infrastructure, such as energy grids and economic institutions, without direct military intervention. Furthermore, fake content (Deep fake) has become a tool used to destabilize social and political stability, adding further complexity to these conflicts and amplifying their impact on international security.

5. Challenges and Effects of the Militarization of Artificial Intelligence

The militarization of artificial intelligence raises numerous issues related to its geopolitical implications on the international stage and global power dynamics, as well as the way conflicts and wars are managed. Thanks to its advanced technologies, artificial intelligence offers tremendous potential to enhance offensive and defensive strategies, thereby increasing the likelihood of military escalation. Despite the military benefits it provides, it has become a dangerous weapon that significantly impacts international dynamics. Below, we will examine the most prominent geopolitical effects of this phenomenon.

5.1 Redrawing the Strategic Balance on the Global Stage

Mackinder once stated that whoever controls the Heartland (Eurasia) controls the world, referring to the role of geographic dominance in shaping global politics and international relations. However, in today's world, with technological advancements and the biotechnology revolution, it can be said that geographic dominance has somewhat declined, being replaced by

technological dominance. This is summed up by Putin in his statement that whoever controls artificial intelligence controls the world, due to the advantages AI technologies offer to countries, particularly in military and defense fields. Consequently, artificial intelligence has become the new "Heartland" that determines the global balance of power.

The reshaping of these strategic balances due to the development of artificial intelligence systems in the military field can occur either in the realm of geopolitical competition or international cooperation. While these technologies increase tensions between countries, they may also open new horizons for international cooperation and the formation of new alliances among the major powers in the international system. Thus, artificial intelligence becomes the primary driver of interactions between nations, leading to changes in the features of the international system.

5.2. The Smart Security Dilemma and the Changing Military Deterrence Strategies

Countries strive to enhance their military and defensive capabilities to bolster their security and address security threats. However, this effort often triggers suspicions among other nations, prompting them to increase their own military power, thereby escalating tensions between states and creating a security dilemma. In the modern era, the dimensions of this concept have shifted due to the integration of artificial intelligence systems into military affairs. Nations are now competing to produce and develop advanced smart military weapons such as drones and combat robots, generating a new arms race in this domain, especially in the absence of legal frameworks to regulate the production and use of such weapons.

The intelligent security dilemma increases the risk of wars between nations and complicates trust-building efforts among international parties, negatively impacting issues that require cooperation and coordination on a global scale. While some countries publicly express their willingness to regulate the use of artificial intelligence in military applications, such initiatives often raise suspicions among other nations regarding the true intentions behind these calls, pushing them to enhance their technological military capabilities to avoid falling into a position of weakness.

In this context, autonomous and semi-autonomous military systems can also enhance defensive capabilities and transform military deterrence strategies. The focus shifts from traditional threats of using force to threats leveraging highly intelligent technologies characterized by speed, precision, and the ability to execute complex operations without direct human intervention. This transformation could alter the rules of the game in international conflicts, where the ability to develop and employ such smart technologies becomes a decisive factor in achieving deterrence and exerting influence. Consequently, it further complicates the security dilemma and reshapes the concept of deterrence to encompass unprecedented technological dimensions.

5.3 Challenges in Verification and Control

These developments create significant challenges for states in managing and resolving such wars and conflicts. For example:

- **Adapting to smart weapons:** Traditional strategies based on imposing and maintaining peace must adapt to the new challenges posed by smart weapons.
- **International treaties:** Disarmament or the regulation of smart weapons requires the establishment of new treaties that align with the nature of these technologies and provide clear guidelines for their usage.

As for internal conflicts, the greatest threat lies in the acquisition of artificial intelligence weapons by armed groups and terrorist organizations. These weapons enable such organizations to carry out advanced cyberattacks that may transcend the borders of a single state, spreading the contagion of conflict to neighboring countries. In such scenarios, identifying the locations of these groups and predicting their operations becomes exceedingly difficult, particularly if the state in question is weak and lacks intelligent systems capable of detecting such threats.

The situation becomes even more complicated due to the absence of strict international laws regulating and limiting the use of artificial intelligence weapons. This legal vacuum allows for the misuse of these technologies, whether by states or armed groups, making it imperative for countries and international organizations to adopt new treaties and

regulations to mitigate the risks posed by these weapons.

6. CONCLUSION

This study has shown that the militarization of artificial intelligence has led to significant geopolitical changes in the international system, primarily the increase in the arms race towards smart weapons based on autonomous and semi-autonomous lethal systems, which threatens to escalate tensions and military confrontation between countries, creating a new type of conflict known as “smart wars”. These wars require states and international organizations to establish legal and ethical frameworks to regulate the use of AI systems in a way that does not jeopardize international peace and security. Consequently, the following results have been concluded:

- The term “militarization of artificial intelligence” refers to the integration of intelligent technologies into military affairs. Opinions on this matter vary among states, with some opposing its use due to the security threats it could pose to international peace, while others support it due to the advanced capabilities it brings to the military sector.
- Among the most prominent smart weapons developed by major powers, particularly the United States, China, and Russia, are autonomous and semi-autonomous lethal weapons such as killer robots and drones. The naming of these weapons differs among countries depending on the military companies that produce them.
- The development of these smart weapons has transformed the traditional arms race, which relied on competition in nuclear weapons, into a smart arms race. A country that possesses such weapons can ensure its national security and threaten their use in case of perceived threats, while also enabling it to assert control over the international system.
- The militarization of AI has changed the balance of global power and the nature of the security dilemma, such that any increase in the smart military capability of one country is met with a corresponding increase from other countries that perceive a threat, leading to the

escalation of wars and conflicts. These conflicts have undergone many transformations, shifting towards digital and smart wars, which have serious implications for international security and stability.

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