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Arms Race of Artificial Intelligence: Need for International Regulating Mechanism

Khaqan Ahmad
PhD Scholar in IR at NDU, Islamabad
amish.khaqan@gmail.com

Abstract

The geopolitics of 21st century has been witnessing the emergence of strategic technologies such as Artificial Intelligence. Historically, whenever strategic technologies emerged and got integrated in matrix of national power and also conformed with the consensual regulating mechanism in order to avoid the unintended consequences. From invention of gunpowder to nuclear nukes, the aforesaid pattern remained relevant though faced challenges. In context of nuclear domain of international security, there is a definite presence of regulating mechanism in the form of treaties, norms, regimes and protocols among relevant states that serve as catalyst to the securitization of nuclear dimension of international security. On the contrary, an increasing trend of incorporating autonomous features into weaponry and defence systems is going on. But there is less attention to develop a consensual regulating framework at international levels despite the fact that many significant individuals and organizations raised their concerns that artificial intelligence may become more lethal than that of nuclear nukes. Thus, in the given context, the paper argues and explains the ongoing trend of arms race of artificial intelligence with secondary and primary data in support and draws the attention of international community to develop consensual regulating framework to shun the potential unintended consequences.

Keywords: *Artificial Intelligence, AI Arms Race, Need for AI Regulating Mechanism.*

1. Introduction

Arms race of artificial intelligence has engulfed multiple domains of international peace and stability. The competition for superiority in artificial intelligence is becoming more intense with the time. It refers to intensification of development and usage of cognitive features in military domain such as weaponry, defence systems and doctrines. It is being labeled as 'arms race' because there is an ongoing competition to develop innovative AI technology for military purposes in similar fashion that countries used to develop nuclear nukes during the Cold War. Interestingly, the fundamental reason behind this race is fear of losing strategic leverage over the adversary. Moreover, great powers are striving for achieving maximum AI superiority. There are multiple reasons for this. However, three reasons are critical. Firstly, AI may change the fundamentals of matrix of national power, according to renowned scholars. (Michael C. Horowitz, 2018) Secondly, it may also alter the existing balance of power especially among the great powers such as United States of America (USA) and Peoples Republic of China (PRC). (Michael C. Horowitz, 2018) Lastly, the future prospects of AI in military domain may amend not only character but also nature of warfare. It is because of these reasons, the competition for AI arms race is experiencing intensification that would cause colossal havoc if the incorporation of AI features into weaponry and defence systems are not regulated at international level.

In the pursuit of strategic superiority, a great number of important countries have launched either their specific National AI Strategies or made AI an unavoidable part of National Security Policies by the end of second decade of twenty first century. PRC, USA, Russia, Canada, France, UK, Taiwan, Japan, EU Commission, Singapore, South Korea, India and many others have released their National AI Strategies. In other words, the race to become global leader of AI weaponry has begun. (Galindo, L., K. Perset and F. Sheeka 2021)

In recent times, several individuals, communities, organizations and states raised their voice against use of AI in military domains. Many articles, news shows, seminars, webinars, workshops and memorandums were surfaced. Scholars such as Nick Bostrom and Yuval Noah Harari tried to get the attention of leaders of states regarding the said concern. (..An Open Letter, FoL, 2023) Tech giants such as Geoffrey Hinton, Elon Musk and Sam Altman warned the international community relating to the issue. (..An Open Letter, FoL, 2023) Some countries issued ethical principles and guidelines with regard to military use of AI but void of required global consensus regarding for the greater level of implementation of such principles and guidelines. For instance, only UK and USA adopted AI guidelines specific to military domain. Australia, Canada and France only issued instruments such as ethical principles regarding use of AI in defence domain. Twenty six out of 193 states have adopted ethical AI principles. (Stanford University, HAI Index Report 2023) Unfortunately, these voices have not resulted in a well concerted and organized regulating mechanism of military use of AI.

2. What is Artificial Intelligence?

There are multiple definitions with regard to defining artificial intelligence. There is lack of consensus among the scholars regarding the definition of AI. However, few aspects have become standards that define the character of autonomy and cognition in machines. If the behaviour of machines falls within the said standards then it may be inferred that such machines reflected autonomous behaviour. This type of ambiguity surfaces because AI is an interdisciplinary concept and perhaps this is the reasons it involves lack of greater objectivity. Due to this specific reason, many organizations and states issued definition of artificial intelligence. For this research, definitions released by United Nations Conference on Trade and Development (UNCTAD), Organisation for Economic Co-operation and Development (OECD) and National Defense Authorization Act (NDAA) have been taken as the criterion of autonomy in machines.

The Organization for Economic Cooperation and Development (OECD) defines artificial intelligence as “a machine-based system that can, for a given set of human defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments.” (OECD, Science and Innovation Outlook, 2019) While definition of artificial intelligence provided by United Nations Conference on Trade and Development (UNCTAD) is as “the ability of machines and systems to acquire and apply knowledge, and to carry out intelligent behaviour. This includes a variety of cognitive tasks (e.g. sensing, processing oral language, reasoning, learning, making decisions) and demonstrating an ability to move and manipulate objects accordingly.”(UNCTAD, 2017) Because of incomplete definition National Defense Authorization Act (NDAA) directed the Secretary of Defense to produce a definition of artificial intelligence. Thus, the FY2019 NDAA came up with a concrete definition of artificial intelligence in 2019. Accordingly, the definition of artificial intelligence is given in the points mentioned below;

i. Any artificial system that performs tasks under varying and unpredictable circumstances without significant human oversight, or that can learn from experience and improve performance when exposed to data sets. (CRS Report, 2017)
ii. An artificial system developed in computer software, physical hardware, or other context that solves tasks requiring human-like perception, cognition, planning, learning, communication, or physical action. (Timothy R. Heath, 2017)
iii. An artificial system designed to think or act like a human, including cognitive architectures and neural networks. (CRS Report, 2017)
iv. A set of techniques, including machine learning that is designed to approximate a cognitive task. (Timothy R. Heath, 2017)
v. An artificial system designed to act rationally, including an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communicating, decision-making, and acting. (Timothy R. Heath, 2017)

3. Research Methodology

The undertaken research is qualitative as well as quantitative in nature. It takes primary and secondary data sources into account in order to bring rationality while interpreting the data. Moreover, the research also involves critical realism that aims at bringing maximum amount of causality when it comes to deal with emerging issues such as artificial intelligence. Therefore, the interplay of dependent, independent and intervening variables should be taken into account in the aforementioned research methodology for incisive insights.

4. Relationship between AI and Arms Race

The debate between technology and weapon is as old as the history of technology and weapons. However, the incorporation of technology into weapons remained crucial. Any technology that assists or become integral part of a certain weapon then it may be called weapon not only technology. For instance, information or communication devices are essential part of intelligence domain of warfare yet these are also considered as weapons specifically during the war times. All the command and control systems are considered as the part of warfare. The other example is of fissile material and enrichment technology. Once enrichment technology was considered only a technology but when it became part of nuclear weapons then it began to be recognized as a part of nuclear weapon. In similar manner, artificial intelligence is being incorporated in various dimensions of weaponry specifically in command, control, selection, detection and execution of targets; therefore, it is now part of weapons. And when a technology becomes unavoidable part and parcel of weapon then it may also be called weapon. This is how technology gradually become part of weapon and then eventually recognized as weapon.

In the given context, artificial intelligence began to evolve during the 1950s specifically after the Dartmouth Conference as a computer science discipline. (Stuart Russell and Peter Norvig, 2009) Many scholars called it futile exercise because they think that artificial intelligence is nothing but a science fiction myth and it will have no practical significance. But with the passage of time the evolution of artificial intelligence began to become reality. From 1970s to 2010, it had undergone through phases and stages. After 2010, scholars began to believe it as a reality. Today, artificial intelligence has become or is becoming part of almost every machine or computer system. (Khaqan, 2019) In other words, it is now an unavoidable technology not only for individuals and companies but also for states.

There are multiple reasons for this. One of the critical reasons is its use or incorporation in military domain. Countries such as USA, China, Russia, India, Israel, France and UK are on the path to modernize their militaries with artificial intelligence. Many countries have made artificial intelligence as the precondition for their security and defence. A specific portion of budget is being spent on research and development and on other advance stages. And because of this development, the prospects for AI arms race have become exponential. The absence of any concrete regulating mechanism further provides space to countries to indulge in AI arms race as it happened in the case of nuclear arms race and space race during the Cold War.

5. Position of Major Countries

The positions of major countries regarding artificial intelligence are given in the following section.

a. United States of America

United States of America has been the paramount leader in innovative technologies since decades. Great tech giants such as IBM, Google, Microsoft and Intel belong to it. These tech giants have been heavily investing on emerging technologies and specifically on artificial intelligence. American Department of Defence (DoD), has already released multiple documents that aim at incorporating artificial intelligence in crucial military domains. It also invested around $1.7 billion in AI based research and development initiatives. (OECD, 2022) DoD also initiated relating to military and defence applications of AI. Few specific initiatives include National AI Strategy, Strategic Competition Act, Innovation and Competition Act and Joint Artificial Intelligence Center. US armed forces are already using numerous AI applications such autonomous drones, Unmanned under Water Vehicles, Unmanned Ariel Vehicles, jets and early threat detectors. Lloyd Austin, US Secretary of Defence said that America will invest on AI driven military applications to counter China's growing military capabilities. (DoD, 2021) Both countries are involved in intense strategic competition that is greatly being driven by artificial intelligence.

b. Peoples Republic of China

Peoples Republic of China (PRC) is another noteworthy player in AI arms race. It has made significant progress in artificial intelligence in last decade. Now it is aiming at to become global leader in artificial intelligence by 2030. (Pablo Robles, 2018) It has allocated billions of dollars for numerous AI based research and development projects. Regarding research and development, China's AI related research publications has surpassed Europe and USA. It has become leading country in facial recognition technology that has been deployed on greater scale for surveillance purposes. (Pablo Robles, 2018) It has unveiled its Next Generation AI Development Plan in 2017 that declared AI as the strategic technology. (OECD, 2023) That is why USA and European countries have declared that China's growing capabilities in AI are threat to national and international security. America has taken and taking measures to contain China from becoming critical player in artificial intelligence. Overall, China's progress in the arms race of artificial intelligence is momentous, and the country remains a vital player in the development of AI technologies. Furthermore, Peoples Liberation Army (PLA) has been integrating and incorporating AI features into its weaponry and defence systems. PLA Strategic Support Force (SSF) is yet another alarming initiative that is on the forefront to integrate AI to modernize its military. (Amy J. Nelson and Gerald L. Epstein, 2022) President Xi incessantly saying that China's commitment to dominate artificial intelligence is crystal clear and also named it

'intelligent warfare.' CCP and PLA view artificial intelligence as vital for next generation warfare. China is proactively working on twelve crucial military applications of AI. China and America are facing head to head regarding semiconductor industry. It is likely that arms race of artificial intelligence between China and USA is going to be intensifies in near future that may result in unintended consequences.

c. Russia

The role of Russia in military technology remained critical. In relation to Artificial Intelligence, President Putin says that the nation that leads in Artificial Intelligence will be the leader of the world. Moreover, it regards AI as the strategic technology that would shape the defence priorities and balance of power. In 2018, Russian issued its first ever AI strategy that is comprised of ten points. In the first place, it seeks to prioritize Big Data as the foundation of AI development. Algorithms analytics is another point of priority in Russian AI Strategy. Monitoring global AI development and holding annual AI conference are also part of AI Strategy that reflects the significance of AI for Russia. Perhaps the most important point of Russian AI strategy is holding Ministry of Defence for organizing AI war games. (Stephanie Petrella, Chris Miller, and Benjamin Cooper, 2020) This shows the impact of AI on Russian weaponry, strategic thinking and overall strategic culture. Russia's urgencies and concerns regarding AI are reflecting the future course of her behaviour. It would not be plausible to expect Russia would not indulge in AI arms race while countries such USA and China set to modernize their militaries by incorporating autonomous features. Almost similar type of arms race regarding nuclear nukes occurred during the Cold War when USA and Soviet Union involved in enhancing nuclear capabilities. (Stephanie Petrella, Chris Miller, and Benjamin Cooper, 2020) In matter of twenty five years, the number of nuclear nukes rose to approximately seventy thousand. This worrisome increasing trend witness sharp decline because nuclear regulating mechanism in the form several treaties such as Nuclear Non-Proliferation Treaty (NPT) and non-proliferation regimes like Nuclear Supplier Group (NSG).

d. United Kingdom and France

In June 2022, United Kingdom released its official Defence Artificial Intelligence Strategy. It also organized its strategic coherence by creating few departments. In this regard, Defence AI and Autonomy Unit (DAU) and the Defence AI Centre (DAIC) are held responsible to manage strategic frameworks regarding development, adoption and use of AI in military domains. (LATHAM, 2022) On the other hand, France also released its National Strategy for AI (SNIA) with €1.5 billion budget. (Inria, 2023) Moreover, National AI Research Program (PNRIA) is also launched that aims at research and development, coordination with other departments and use of AI in other critical areas such as cybsersecurity, digital influence, cognitive combat, reconnaissance and decision making. (Inria, 2023) From the aforementioned descriptions, it may be inferred that there is an increasing trend of arms race of artificial intelligence among the technologically advanced countries.

6. Military Applications of AI

In recent times, growing trend of military applications surfaced as a dominant feature in the field of artificial intelligence. Contextually, generative AI is bringing incredible leap forward in terms of

autonomous capabilities that is creating an environment in which major countries are trying to have technological upper edge. Since, there is enough space for innovation and advancement in AI, therefore, the likely scenario for having strategic superiority would be determined by AI driven weaponry. In this regard, crucial areas of AI military applications are identified below.

i. Weaponry and Weapon Systems

Firstly, autonomous features of AI are rapidly being incorporated in modern Weaponry and weapon Systems. This may be regarded as cognitive revolution in military applications of AI. In retrospect, the evolution of weaponry and weapon system used to revolve around the quantitative attributes of weaponry. From sword to bow, gunpowder to bullets, guns to tanks, jets to missiles and from submarines to nuclear nukes experienced quantitative features. These may be identified in terms quantitative qualities such as speed and reach. These have been characterized by quantitative features that used to be manifested in terms of force multipliers. (Forrest E. Morgan, Benjamin Boudreaux, et al, 2020)The incorporation of AI in weaponry, on the other hand, is causing a cognitive shift that is bringing increasing degree of autonomy in each domain of weaponry. In this manner, traditional orientation of warfare is being autonomised in which machines are getting leverage over the humans.

ii. Changing Warfare Orientation

Throughout the history, technology has greatly been influencing the warfare orientation. However, this situation cannot be simulated into a logical conclusion as we don't know the limits of autonomy. Warfare has been characterized by quantitative features that used to be manifested in terms of force multiplayers. (SDI, 2023) The incorporation of AI in weaponry, on the other hand, is causing a cognitive shift that is bringing increasing degree of autonomy in each domain of weaponry. In this manner, traditional orientation of warfare is being autonomised in which machines are getting leverage over the humans. And for this reason, the arms race of artificial intelligence may likely to continue for an indefinite future. If this happens to continue, the competition for AI superiority is going to be the core battle ground for the major player such China and USA.

iii. Nature and Character of Warfare

Generally, it has been believed that nature of warfare unchanges while character of the warfare does. Many theoreticians of warfare maintained this argument. The most prominent one military strategist is Carl von Clausewitz. He, in his seminal work 'On War' incisively advanced this argument. One of the few factors is battleground in this regard. (Khaqan, 2019) Traditionally, there has been a deep relation between geography and battleground and because of geographical variable the nature of warfare remained unchanged despite of the continuous technological advancement. This traditional notion is in transition as the emergence of cyber space acting as an intervening variable. This virtual characteristic is void of physical violence, material destruction and kinetic manifestations. In other words, this transition is acting as a foundation of decision making and of threat perception that may easily be manipulated by cognitive algorithms. By taking aforementioned developments into account, both USA and PRC are competing to out power in cognitive dimension of warfare where its nature is also in transition.

iv. Shifting Strategic Decision Making

One of the essentials of warfare is strategic decision making. In retrospect, this has been the territory

of homo sapiens as technological advancement occurred in terms of quantitative features. With the technological progression, the cognitive variable in weaponry brought gradual qualitative change. The twenty first century is witnessing a time where the role of humans in decision-making-loop facing significant decline. This development generating a situation in which strategic decision making is shifting away from humans to machines. In this scenario, Command, Control, Communications, Computers (C4) Intelligence, Surveillance and Reconnaissance (C4ISR) are bound to go through aforesaid shift. In recent study, this situation is apprehended by scholars such Paul Scharre as America and China are following this course in order to sustain cognitive leverage. (Khaqan, 2019) In the absence of global regulating mechanism, this type of militarization of AI would be the crucial area of competition like it happened when arms race of space used to be the order of time between USA and Soviet Russia.

v. Swarms of Drones

Combat drones are the new addition to modern weaponry. Most countries are focusing on developing capability of swarms of drones. In the conduct of warfare, this would bring unprecedented complexities. One type of drone swarm may be of tactical nature and other may be of strategic nature. The journey may go from micro-drones to nano-drones. From takeoff to identification of target and from selecting target to execution of target swarms of drones are going to be another core area of arms race. (SDI, 2023)

vi. Killer Robots

Another attribute of AI weaponry are killer robots. In simple words, they can be termed as autonomized soldiers. Many countries are focusing to fully develop these AI driven soldiers who may have night vision capabilities with immense precision and mobility. USA and China are modernizing their militaries on this pattern that would be extremely dangerous if not regulated or controlled. (Ali Rogin and Harry Zahn, 2023)

vii. Cyber-Space

As mentioned above, cyber-space would be the new battle ground for existing militaries. In this regard, internet and big-data are likely to play crucial role in the twenty first century. Most of the warfare activities are being driven by cyber-space. (Ali Rogin and Harry Zahn, 2023) Hence, the notions of cyber-violence and data manipulation are being considered unchartered territories of contemporary warfare as a foundation and as a manifestation.

viii. AI Driven Surveillance

As a variable of warfare, the criticality of surveillance is increased to an enormous extent. Moreover, it is being engulfed because of uncontrolled inertia of technological advancement. In this context, states are in a position to control information directly or indirectly. This notion is more relevant in authoritarian regimes where almost micro activities of masses are being monitored. On the other side of the story, the absence of any regulating mechanism is brewing an un-ending arms race of AI driven surveillance. (Dr Margarita Konaev, 2021)

7. Dangers of AI Arms Race

The arms race of Artificial Intelligence may generate multiple potential dangers. Some of the critical concerns are discussed below.

i. Uncontrolled Autonomous Weaponry

Development of AI driven weaponry and defence systems such as killer robots, autonomous drones and UAVs may take the uncontrolled direction because of absence of international regulating mechanism. This type of development would gradually drive humans out from the decision making loop. The obvious result may cause unintended dangers. Moreover, any adventure like deployment of autonomous weaponry for the sake of power projection in a competitive environment would further speed up AI arms race among the major stake holders. (Dr Margarita Konaev, 2021)

ii. Misuse of Cyber Warfare

The Cyber warfare is being intensified and AI is also being utilized to multiply offensive and defensive capabilities. The core reason behind this is the AI driven algorithms that determine the niche of political narratives. These autonomous algorithms may also being employed to proliferate disinformation with sophisticated cyber-attacks to manipulate the information in favour or against. Large scale disruption, damage and anarchy in cyber space are no longer an issue due to large language models that are critical for AI driven cyber warfare. (McNeish et al., 2020) It is worth mentioning that most of the warfare will locate in cyber space as lethality of the weapons has become colossal and to avoid the consequences of destruction.

iii. Compromised Strategic Stability

Though, there are various strands of definition regarding Strategic Stability. Often accepted one is, 'a state of affairs in which a country endeavors to attain or maintain strategic superiority in order to have a strategic leverage over the adversary state using nuclear, conventional, cyber or other unconventional means.' In this context, swift incorporation of AI features in weaponry and defence systems is generating new strategic culture where chances of compromised strategic stability are increasing. The balance of power dynamics are also in transition. There is likely scenario of intense competition among the great powers. Warfare revolves around four major elements: weaponry, fields of weaponry, military doctrines, and battle. All elements of warfare have further subdivisions. The first element weaponry is composed of guns and bullets, tanks and jets, missiles and drones, submarines and aircrafts, as well as nuclear and hydrogen weapons. (Defense Innovation Board, 2019; UK Ministry of Defence, 2022) The second element i.e. fields of weaponry includes land and airborne weapons, space, logistics and propaganda. The third element includes military doctrines Anti-Access (A2)/ Area-Denial (AD), Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), Air Sea Battle (ASB), and other strategic doctrines inclusive of first strike, second strike capabilities, massive retaliation rationales and Mutually Assured Destruction (MAD). The last one includes different types of battles and wars. (Gillath et al., 2021, p.1) All of these areas are under heavy transition because of AI features. Lack of regulating mechanism and absence of regimes regarding AI would result in compromised strategic stability.

iv. Economic Disruption

The widespread incorporation of AI features in machines is bringing enormous change in economic field. It is being predicted that AI would contribute $15.7 trillion in global economy till 2035. Interestingly, China's share would be around $7 trillion out of $15.7 trillion. Comparing to China, the share of USA would be about $4.7 trillion. (PwC Analysis, 2016) The share of Asia Pacific region would higher than that of Europe and North America. Moreover, traditional jobs are facing pressure and new jobs are being generated because of AI. Keeping in view this scenario, it would not be an exaggeration that global economy is bound to face economic disruption if regulating mechanism remains absence. (PwC Analysis, 2016)

v. Ethical and Privacy Concerns

The arms race of artificial intelligence creates serious ethical concerns regarding militarization of AI. The absence of regulating mechanism raises questions of fixing accountability and responsibility relating to the widespread of proliferation of AI militarization. Fundamental human rights, civil liberties, privacy rights and freedom of liberty could be compromised due to AI driven surveillance. Moreover, sensitive data breaches on large scale would be of another area of concern in ethical domain. (LAWS; Taddeo et al., 2021)

vi. Challenges to Non-Proliferation

The AI arms race also poses challenges to arms control and non-proliferation efforts. As countries develop advanced AI technologies for military applications, there is a need to establish frameworks and agreements to ensure responsible use and prevent the uncontrolled proliferation of AI-driven weapons. Most of the countries issued their National AI Strategies which are part of their National Security Policies. (LAWS; Taddeo et al., 2021) It reflects that AI has become an area of national security concern as nuclear nukes became serious concern during the Cold War. But nuclear domain of security regulated by non-proliferation treaties such as NPT as well as with other regimes and protocols that played serious role in controlling proliferation. The number of nuclear nukes declined from seventy thousands to thirteen thousands in the four decades because of presence of non-proliferation treaties and regimes. In similar fashion, militarization of AI is generating serious challenges to non-proliferation of autonomous weaponry.

vii. Lack of International Norms and Agreements

The absence of comprehensive international agreements and norms regarding the use and limitations of AI in military applications could lead to a lack of regulation and accountability. This could result in a race where nations prioritize gaining a technological advantage over considering the long-term implications and ethical concerns. (Pragya Jain, 2022)

8. Regulating AI Arms Race

To mitigate these dangers, international cooperation, responsible AI development, and ethical frameworks are very important. Collaborative efforts are needed to establish guidelines and regulations regarding the use of AI in military settings. It can help prevent the risks associated with the arms race

and promote the responsible use of this powerful technology. (Tom Wheeler, 2023),

i. International Cooperation

International collaboration and dialogue are essential for addressing the challenges posed by the AI arms race. Engaging in discussions on norms, regulations, and frameworks can help establish shared principles and guidelines for the responsible development and use of AI technologies. (Brookings, 2021)

ii. Arms Control Agreements

The development of AI-driven weapons necessitates the review and adaptation of existing arms control agreements to account for these emerging technologies. International efforts should aim to include AI within arms control frameworks, considering factors such as human control, ethical use, and non-proliferation. (Adrien Book, 2023)

iii. Role of Leaders

The significance of role of leaders in current times has increased manifolds. National leaders and individuals of tech-giants can play crucial role not only in developing consensual regulating mechanism but also come up with pragmatic implementing strategy. It is worth mentioning that most of leaders of unicorns are in a position to heavily influence the policy framework regarding incorporation of autonomous features into weaponry and defence systems. Therefore, well concerted approach should be adopted by national leaders in combination with unicorn leaders for the regulation of laws and norms of artificial intelligence.

iv. Consensus Development

Consensus development is considered to be the most critical issue regarding AI regulation. Today, there is lack of consensus among the important countries because of few obvious reasons. These include potential economic opportunities, military capabilities, strategic parts of technologies such as big data and semiconductors. In other words, developing countries may enhance their capabilities of national power to a greater extent and pose challenge to the developed countries. The vice versa is also true in this context. Thus, most of the entities whether they are countries or unicorns are in a strategic competition with one another, and therefore, are unwilling to compromise to slow down the pace of incorporating autonomous attributes into machines and weaponry. (UN, 2023)

v. Role of Intellectuals and Media

In discourse setting, the significance of intellectuals and media is of unique nature. Though, both media and intellectuals are projecting the potential dangers of artificial intelligence yet their concerns are not being heard as a prime priority. In order to achieve the desired outcome, intellectuals and media should propagate the narrative on incessant basis by airing the most relevant voices across the globe. In this manner, discourse for creating new norms, regimes and conventions would be strikingly relevant with the passage of time that would eventually result in strong international AI regulating framework. (European Parliament, 2023)

vi. Adherence to International Law

Once international norms and regimes are created, they will lead to create certain international laws that would help to regulate specific areas of artificial intelligence. Interestingly, the creation of non-proliferation regimes and treaties regarding nuclear domain has gone through above mentioned stages and today there is reasonably better regulating mechanism of nuclear nukes. In similar fashion, the consensual creation of international laws will ultimately lead to adherence these laws. (Lawfare, 2023)

9. Conclusion

We live in times of artificial intelligence where lines between opportunities and dangers are blurred. In this antagonistic situation, the magnitude of incorporating autonomous attributes into weaponry and defence systems are evident. In pursuit of harnessing the great opportunities of artificial intelligence, majority of the great powers are developing autonomous robots, killer robots, Lethal Autonomous Weapons (LAWs), unmanned drones and humanoid robots that may disturb the existing balance of power and therefore may potentially resulting in weaponization of artificial intelligence. Many a countries, in this regard, have officially released their National AI Strategies and also increasing the speed of military applications of artificial intelligence. Many individuals such as Elon Must, President Putin, Henry Kissinger, and Nick Bostrom raised their voices regarding the dangers of artificial intelligence. However, there is an absence of international framework that could regulate and limit the weaponization of artificial intelligence. In conclusion, international community should proactively involve itself in developing a pragmatically consensual regulating framework regarding artificial intelligence to escape lethal zone of arms race of artificial intelligence.

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