

Artificial Intelligence and Evolution of the Global System

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Abstract

The rapid technological developments of artificial intelligence technologies in the 21st century have contributed to the development of the global system. This development has not been limited to one side but has extended to include development in the system's hubs. The global technology companies have emerged and are beginning to take an important geopolitical position in the system alongside states. The capabilities of the world order are evolving as we face advanced military, economic, knowledge, cultural, industrial, and medical capabilities that are not traditional, compared to traditional capabilities in the past decades. It has evolved into the strategic principles and beliefs of wars as well as the evolution in the nature of international interactions, competition, cooperation, and conflict. The evolution of the global system resulting from the development of the Artificial Intelligence technologies predicts a change in the global system for the foreseeable future.

Keywords: Global system, Artificial Intelligence, Global technology Companies, Smart wars.

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Introduction

Artificial Intelligence (AI) is one of the modern cognitive mechanisms contributing to the development of the global system in the 21st century. AI has become a key mechanism that enters various fields and contributes to the completion of tasks in quick ways, at a lower cost, and with high efficiency.

Accordingly, the research addresses the following problem: "The process of development in the world order is due to calculated material variables adopted hundreds of years ago of the system's life, but the technological and information developments that have contributed to the creation and construction of new non-material variables attributable to the fundamental change in the world order, which has weakened traditional capabilities and non-traditional capabilities are beginning to develop and grow and become essential in bringing about change in the global system".

The research is based on the premise that "if the development of unconventional variables accelerates in countries directed at the world order, it will have the greatest impact on the developments affecting the types of wars and threats to the regime, and the nature of capabilities, goals and interpretations in the global system for the foreseeable future."

Accordingly, the research is divided into three parts:

- i. Artificial Intelligence.
- ii. The global system.
- iii. The implications of Artificial Intelligence for the development of the global system.

Artificial Intelligence

The beginning of the emergence of the AI dates back to the second quarter of the 19th century as a mathematical logic by George Paul in his theory of forced logic, later called polycarbonate algebra, the basic theory on which computer science was established. It was based on the

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representation of variables in any mathematical process on two values 1-0.¹

He then used AI in the World War II in 1941, when now mathematician Turin Alan Turing decoded the aligma god used to encrypt the Second World War messages of the Germans, and Alan Turing helped invent the bam machine to decipher, and invented the method of computer intelligence and machine.² In 1943, Warren McCulloch and Walter Bates developed the synthetic retinal neuron model based on three main pillars: first, basic physiology, two; and neurons in the brain, and third Turin's mathematical theory.³

In the 1950s, Princeton University mathematics PhD student Marvin Minsky was able to implement the first computer to use artificial neural networks. In 1956, a conference was held at Dartmouth College, which resulted in the first formal term for the launch of the term 'Artificial Intelligence,' and the establishment of AI laboratories at the Massachusetts Institute of Technology⁴ by scientist John McCarthy, who knew Artificial Intelligence, as "the science and engineering of making smart machines, especially smart computer software."⁵

The goal of AI is to produce independent intelligent machines and robots capable of performing complex tasks using reflexive processes similar to those performed by humans such as thinking, learning-creating and

¹ Muhammad Lahlah, "Introduction to artificial intelligence and learning machine," edited by Jamil Belloni, (Egypt: Academy hsoub, 2020), 41.

² Absani Badra, Purida Nafisa, "Contributions of Artificial Intelligence in the field of neurotransmitters with aphasia," in a group of authors "Studies on Artificial Intelligence and Digital Humanities," coordinating supervision: Sabah Qalamin et al.(Algeria:Qazi Publishing and Translation House (2021), 232.

³ Stuart J. Russell and Peter Norvig, "Artificial Intelligence A Modern Approach", (New York: Library of Congress (1995), 17.

⁴ Adel Abdul Nourin, "Entrance to the World of Artificial Intelligence", (Riyadh: Saudi Arabia King Abdul Aziz City of Science and Technology (2005), 22.

⁵ Ra aele Cio, Marta Travaglioni, Giuseppina Piscitelli, Antonella Petrillo, and Fabio De Felice, "Artificial Intelligence and Machine Learning Applications in Smart Production: Progress", Trends, and Directions, Sustainability, 2020, 1, 12. www.mdpi.com/journal/sustainability

communicating.⁶ Some of the most important characteristics of AI technologies are:⁷

- i. Integration with a variety of applications as disparate devices are connected together to improve performance.
- ii. AI applications are dual-use, i.e. these applications have military and civilian uses at the same time.
- iii. Provides a multiplying effect of the force by enhancing human capabilities.
- iv. Change the way information is understood, processed and analyzed, and improve the quality of information.
- v. Exceeds the time factor in terms of speed.
- vi. Contribute to the creation of new industries and the creation of new jobs.

Areas of artificial intelligence can be classified as shown in the table below:

Table: Areas of ARTIFICIAL INTELLIGENCE CLASSIFICATION

Areas of ARTIFICIAL INTELLIGENCE CLASSIFICATION			
Genetic algorithms	Expert systems	Distributed Artificial Intelligence	Data exploration
Review information	Artificial life	Programming	Thinking
Improving theory	Statistical analysis	Representation of knowledge	Computer systems
And the theory of arithmetic	And neural networks	Understanding natural language	Machine learning

Source: Ra aele Cio, Marta Travaglioni, Giuseppina Piscitelli, Antonella Petrillo, and Fabio De Felice, "Artificial Intelligence and Machine Learning Applications in Smart Production: Progress", Trends, and Directions, Sustainability, 2020, 1-12. www.mdpi.com/journal/sustainability

⁶ Abdullah Musa and Ahmed Habib Bilal, "Artificial Intelligence Revolution in The Technologies of the Time", (Cairo: Arab Group for Training and Publishing, Egyptian Book House (2019), 23.

⁷ "Artificial Intelligence and National Security," Congressional Research Service, (November 10: 20) ,4-30-31 . <https://crsreports.congress.gov>

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AI is one of the outcomes of the Fourth Industrial Revolution. It has provided a different model of a combination of material and symbolic worlds. It was for the purpose of creating new technologies characterized by speed, efficiency and intelligence to accomplish daily tasks and develop AI techniques to bypass human intelligence.⁸

Artificial Intelligence is a fast-growing technological field with potentially significant implications in multiple areas,⁹ as well as transformative technology that will support future economic and military power. AI will be the driving force behind global transformations with an evolutionary impact on the global system, if not a profound radical one.¹⁰

The use of AI in the 21st century has expanded significantly due to the emergence of GPU instead of CPU, digital transformation of Internet-connected devices that are key sources of big data, the spread of the World Wide Web globally,¹¹ the development of smart robots for doing work that has not been programmed before. They are super-intelligent robots with the ability to learn, deduce and perform several tasks automatically without previous programming. The development of artificial retinal neurons,¹² as well as the ability of spatially conscious AI technology to create social environments and connect people in the local spaces. AI technology overcomes geopolitical barriers.¹³ This has contributed to the transition of AI from science fiction to reality. It is the beginning of the journey of technological investment and the opening up

⁸ Abdullah Musa, Ahmed Habib Bilal, 15-16.

⁹ Artificial Intelligence and National Security, 1.

¹⁰ Gregory Allen and Elsa B. Kania, "China is Using America's Own Plan to Dominate the Future of Artificial Intelligence," (September 8:2017), <https://foreignpolicy.com/2017/09/08/china-is-using-americas-own-plan-to-dominate-the-future-of-artificial-intelligence>

¹¹ Abdullah Musa, Ahmed Habib Bilal, 33.

¹² Ben Yahia, "Smart robots between the recognition of legal personality and the extent of civic responsibility," in a group of authors of "Studies on Artificial Intelligence and Digital Humanities," co-ordinated supervision: Sabah Qalamin et al, (Algeria:Qazi Publishing and Translation House (2021), 60.

¹³ Eric Gordon and Adriana de Souza e Silva, "digital status the importance of the site in a tangled world, translated by Mohamed Hamed Darwish," (Cairo:Dar Hindawi,2017), 79.

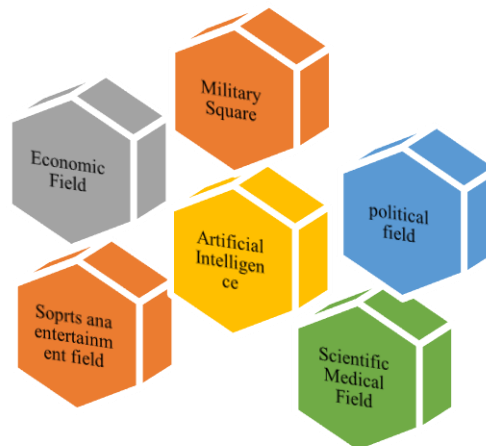
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of new horizons for AI to employ in multiple fields. One of the most important AI cloud companies is Apple, apart from Microsoft, Amazon, Google, Alibaba, Huawei, and Ten Cent.¹⁴

Due to the rapid developments of Artificial Intelligence technologies in our time and their function in various fields of military, economic, political, medical, educational and recreational sports, there are those who believe that the effects of AI machines and smart robots will eventually reach a stage where they control the world and, therefore, difficult for humans to control. The other section believes that smart machines have positive repercussions in all areas of life and will contribute to achieve a prosperous future of security, peace and well-being.¹⁵

Employing Artificial Intelligence in the fields below:

Figure 1: Fields of Artificial Intelligence



Source: Prepared by the researcher.

¹⁴ Bhaskar Chakravorti, "Big Tech's Stranglehold on Artificial Intelligence Must Be Regulated," (August 11: 2021), <https://foreignpolicy.com/2021/08/11/artificial-intelligence-big-tech-regulation-monopoly-antitrust-google-apple-amazon-facebook/>

¹⁵ Adel Abd Al Nourin, 90.

The Global System

Talk of a New World Order began after the fall of the Berlin Wall in 1989, by the former US President George W. Bush, when he said that a new peaceful world order should now emerge, in which the conduct of states is subject to the rule of law and democratic transitions, and free political and economic institutions can spread very quickly.¹⁶ The new world order also points out at the shift of the world's situation towards the facets of environment, economy, governance, informatics, digitization and the international community, and the transformation of the system from state-centered to extended multi-centered institutions, to include other countries and entities with the capacity, influence and role of global politics.¹⁷

The global system of the 21st century is liberal, politically unipolar and economically multipolar. The system is characterized by multilateral cooperation and interdependence, and proceeds from governance arrangements that include international law and regulations and institutional rules.¹⁸

Some of the most important mechanisms of the global system are:¹⁹

- i. Economic mechanisms: the global economic system is liberal, based on the rules of free trade and the private sector, economic integration, global and regional economic organizations, namely “the World Trade Organization, the G20, the European Union, ASEAN, Shanghai, BRICS, Mercosur, APEC, NAFTA, OECO,

¹⁶ Henry Kissinger, “World Order Reflections on the Forefront of Nations and the Path of History,” translated by Fadel Jetker, (Beirut: Arab Book House, 2015), 307.

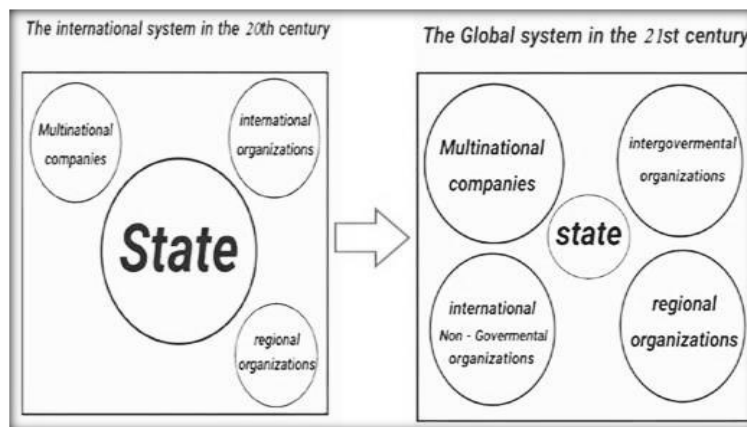
¹⁷ Jörg Sorensen, “Review of the New International Order,” Translated by Osama Al-Ghazwli, *World of Knowledge Series* (480), (Kuwait: National Council for Culture, Arts and Literature, 2020), 54- 63.

¹⁸ Zaman Majed Auda, *Interdependence and Regional Security Association Southeast Asian –Case Study-*, (Cairo: daralfajr, 2020), 28.

¹⁹ Michaelj-Mazarr, Miranda Priebe, Andrew Radin, Astridstuth Cevallos, “Understanding the current international system,” (Rand National Defense Research Institute: 2016), 12-14.

- COMESA, and GCC.” International financial institutions are the International Monetary Fund, the World Bank for Reconstruction and Development,” bilateral and regional trade treaties, businessmen, international trade markets.
- ii. Security mechanisms: collective security institutions, international security and military alliances such as: NATO, nuclear non-proliferation treaties and agreements, treaties and agreements to exchange security expertise and information, and establish military bases.
 - iii. Rules for the dissemination of democracy, human rights and self-aid treaties.
 - iv. A global system based on intelligent technology/technologies as a result of the Fourth Industrial Revolution.
 - v. A global system based on the globalization of the American culture.

Figure 2: Comparison between the international system of the last century and the global system of the present century



Source: Prepared by the researcher.

It is clear from the figure above that there is a shift in the nature of the system from the international system in which the state is concentrated and is the main actor with the first role and influence with a small role for international and regional organizations, and multinational companies in

the 20th century. Transition to a multi-center global system, in which the role and influence of the state is reduced as the role of non-state foals, represented by intergovernmental and non-governmental organizations, regional blocs, multinational companies and particularly global technology companies, increases as well as the proliferation of illegal networks and groups in the 21st century.

Implications of AI on the development of the global system.

Based on a statement by economic theorist Milton Friedman," Radical changes can only occur if there are exceptional compelling cases such as, tsunamis, explosions, and volcanoes."²⁰ He suggested that adding what AI is doing in the global system is not a change, but profound developments that have taken root more and more and can contribute to changes in the world order in the foreseeable future. One of the most important developments in the global system due to AI technology is:

1. Evolution in the nature of actors and structure of the global system :

AI has contributed to reducing the functions of the nation-state, eroding borders and geographical barriers between countries and shifting the state sovereignty from national sovereignty to people's sovereignty,²¹ with the increase in the strength of the transnational companies, particularly global technology companies such as, Apple, Microsoft, Amazon, Google, Alibaba, Huawei, and Ten cent. They have become strong and independent geo-political actors engaged in the economic and social interactions and act as business entities. They seek to build bases for the users and businesses in areas with markets of commercial and strategic importance. They have also been able to impose sovereignty over the

²⁰ Emile Khoury, "5G Conflicts," (Beirut: Publications for Distribution and Publishing Company, 2016), 15.

²¹ Kenichi O'May, "Nature of the State in the 21st Century", Group of Authors of "This Is How the Future Is Made", (Abu Dhabi: Emirates Center for Strategic Studies and Research ,2001), 153- 154

digital²² space, thanks to the power of its algorithms and services, provided to its users, reaching to 4.7 billion people in 2020,²³ as well as its influence and economic power, competing with the countries as the capital of these companies exceeded the total domestic production of a number of countries.²⁴ Global technological companies also play a major role in the global system due to their large activities and the breadth of their transnational business. Their tendency is to be highly concentrated and monopolize production, and thus their ability to achieve the strategic goals and interests of the mother state.²⁵

In addition, AI technologies have contributed to the following²⁶:

1. Giving small countries a chance to take their place in the global system.
2. To provide the opportunity for non-state foals and illegal groups to play a role in the world order through the ability of these groups to weaken and threaten the functions of the state and disrupt some of its organs due to its enormous financial capabilities that enable it to keep up with and employ advanced technology represented by AI.

2. Developments in the capabilities of the global system

AI has contributed to profound and comprehensive developments in the capabilities of the global system and its transition from traditional to non-traditional capabilities developed in various fields. The first of this is in the field of scientific and methodological knowledge, as AI technologies have contributed to the availability of a broad database and the availability of information production and design, the development of analysis,

²² Henry A. Kissinger, Eric Schmidt, Daniel Huttenlocher, "The Age of AI And Our Human Future," (New York: 2021), 96-97.

²³ Evan Dorroy, "When multinational corporations take power in a group of researchers, who rules the world?," 2017, supervised by Bertrand Paddy and Dominic Vidal, translated by Naseer Marwa (Arab Thought Foundation: 2016), 234.

²⁴ Ibid. 227.

²⁵ Abdelkader Mohamed Fahmy, "Partial and Holistic Theories in International Relations," (Oman: Al Shorouk Publishing and Distribution House, 2010), 51- 52

²⁶ Ihab Khalifa, "Post-information society the impact of the fourth industrial revolution on national security," (Cairo: *The Future of Research and Advanced Studies*, Arab publishing and distribution, 2019), 26.

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interpretation, and conclusion processes, easy access to knowledge, and the speed of transmission of ideas.²⁷ Artificial Intelligence has also worked to digitize information and increase technological innovations and scientific patents, establishing many research centers and advanced scientific laboratories. Thus contributing to the development in various fields of the political, military, economic, medical, and engineering, and sports sciences.²⁸

In the military field: AI has made a qualitative shift in the development of concepts and theories of military science and national security strategies for many countries and in restoring the balance of military power in the world by the development of military capabilities today as compared to the traditional military capabilities in the past. On the security side, knowledge and complete solutions have contributed to the development of digital security means and forensic tools that include speech analysis, voice manufacturing, detection of forgery, impersonation and electronic extortion, and helps to speed up data matching at security and border checkpoints and airports, and the development of intelligence services and monitoring devices that include fingerprint, eye and voice in the security investigation process, and the development of databases, information, software tools and security logistics. AI also has the ability to simplify complex processes and contributes to preventing criminal and terrorist activities.²⁹

On the military side, AI has contributed to the use of drones to follow enemy movements and direct remote communications, to change the cognitive aspects of war, to develop the means of cyber warfare and sophisticated air defenses, the development of submarine-based maritime

²⁷ Luciano Floridi, "Fourth Revolution: How the Information Cover Reshapes Human Reality," translated by Louay Abdul Majid Al Sayed, *World of Knowledge Series* (452), (Kuwait, National Council for Culture, Arts and Literature :2017), 117-118.

²⁸ Remy Revel, "The digital revolution, or a cultural revolution?," Translated by Saeed Belmbkhout, *World of Knowledge Series* (462), (Kuwait: National Council for Culture, Arts and Literature, 2018), 27- 30.

²⁹ Ralph Thiele, "Artificial Intelligence-A key enabler of hybrid warfare," *Hybrid CoE Working Paper 6*, (March: 2020).6-10.

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sensor networks, intelligent satellites capable of monitoring the launch of missiles, and the development of anti-satellite missiles.³⁰

In the economic field: AI has contributed to the development of the economic capabilities of the countries through the automation of factories as the degree of automation contributes to changing the proportion of industries, and to improve the quality of products, and thus raises the competitive benchmarks between the countries.

AI improves the overall economic productivity and promotes industry profits and innovation as we note that the higher the degree of the integration of AI in the process of economic development, the higher will be the economic growth. AI is expected to contribute about \$13 trillion to the growth of the global economy, an increase of about 1.2 per cent annually by 2030. Hence, we can look at AI as a new production factor that contributes to increased economic growth, cost reduction and risk reduction through the following:³¹

1. Completing complex physical tasks.
2. AI complements the workforce and improves the capacity of workers and thus increases the capital efficiency.
3. AI promotes innovation and spreads to all industrial businesses.

Through cloud computing companies, AI has also contributed to the transition of trade to e-commerce, rapid transportation of the goods, ideas and services, security market trading, airline scheduling and commercial shipments. And in changing the rules of the game within the market by creating innovative new services and new job models, and then in creating and developing new markets of high economic value.³²

³⁰ Paul Scharre, "Military Applications of Artificial Intelligence: Potential Risks to International Peace and Security," Discussion Paper | A US Perspective, in "The Militarization of Artificial Intelligence," (New York, NY: United Nations, 2019), 13.

³¹ Yugang HE, "The Importance of Artificial Intelligence to Economic Growth," Korean Journal of Artificial Intelligence, 7(1), 2019, 17-19. <http://www.kci.org.kr>

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In addition to AI contribution to the development of the energy sector, it has started from exploration to export and shipping operations through the use of AI technologies that allow communication between networks and smart meters to work to improve the planning and management of energy systems and reduce their waste and production costs, control energy quality, and facilitate the use of clean renewable energy sources.³³ It also improves the reliability and efficiency of transmission and distribution networks of electric, thermal, solar and wind power.³⁴

In a recent study conducted by the McKinsey Global Institute, AI is able to add 16 per cent, or about \$13 trillion, in 2030 to global economic output, an annual increase of about 1.2 per cent.³⁵

In the political field: AI technologies contribute to the development of political theories in proportion to reality, and in building new foundations in political action that have the ability to understand the paths and challenges facing the future of political power and government.³⁶ It provides a broad database that enables decision-makers to make decisions quickly and effectively, help them manage crises and find quick solutions to complex political problems by analyzing and interpreting information, monitoring the progress of treaty, bilateral and multilateral treaty, conventions and alliances.³⁷ In the diplomatic field, AI has had an indirect impact in changing the dynamics of the diplomatic work by supporting the functions of diplomacy and the daily tasks of diplomats. Developing

³² Jonathan Gillham, "The Economic Impact of Artificial Intelligence on the Global Economy," *Technical Report* (June: 2017), 25. <https://www.researchgate.net/publication/318340470>

³³ Baloko Makala and Tonci Bakovic, "Artificial Intelligence in the Power Sector," *International Finance Corporation*, (World Bank Group: 2020), 1-5 .www.ifc.org.

³⁴ *Ibid.*, 4.

³⁵ Lyving Wladawsky-Berger, "The Impact of Artificial intelligence on the World Economy," (November 16:2018). <https://www.wsj.com>

³⁶ Alfredo G. A. Valladao, "Artificial Intelligence and Political Science," (*Policy Paper, OCP Policy Center*: September 2018),7. www.policycenter.ma

³⁷ Jacob Parakilas and Hannah Bryce, "Introduction: Artificial Intelligence and International Politics," in book, "Artificial Intelligence and International Affairs Disruption Anticipated," (London: Chatham House, the *Royal Institute of International Affairs*, 2018), 2-3.

modern diplomatic means, today called digital diplomacy based on virtual space, negotiating, exchanging views and discussions between the diplomats/ambassadors, and improving communication between governments and the foreign public by reducing language barriers between countries is yet another smart contribution of AI. Enhance mission security through image recognition techniques, improve data reliability and quality, analyze information, support humanitarian operations by monitoring elections and ensuring self-help payments.³⁸ In addition to developing the levels of scientific diplomats, countries are now obliged to have efficient and effective diplomatic cadres that keep pace with the technological developments and have the ability to employ digital diplomacy in their work³⁹ For example, the Chinese Foreign Ministry announced its plan to use AI technologies in China's Belt and Road Initiative to facilitate the work of diplomats, and to benefit from the information and data provided by AI technology.⁴⁰

Medicine and Health Sciences: AI technologies have played a role in the development of medical and health sciences, the development of the medical devices industry, medicines and effective treatments, and a role in alleviating and eliminating viruses and epidemics. For example, AI technologies have contributed to mitigating the physical and human effects and damage caused by corona pandemic, by collecting and analyzing epidemiological, clinical and genetic data. Developing strategies to improve resources, designing effective analysis tools, rapidly diagnosing the epidemic, strengthening surveillance, follow-up and predicting the developmental stages of infection and identifying the effects on humanity, and then to find an effective treatment also has a significant contributions by AI. Contribution to the global health by reaching out to the effectiveness of multiple vaccines (Pfizer, Sinopharm,

³⁸ Corneliu Bjola, "Diplomacy in the Age of Artificial Intelligence", (Abu Dhabi: *EDA Working Paper*, The Emirates Diplomatic Academy, January 2020), 12-23.

³⁹ Fatima Roumate, "Artificial Intelligence and Digital Diplomacy Challenges and Opportunities," (Switzerland AG: Springer Nature, 2021), x.

⁴⁰ Didzis Kļaviņš, "Diplomacy and Artificial Intelligence in Global Political Competition," 221. www.degruyter.com

Astrazeneca) in record time to reduce pandemic damage as much as possible⁴¹ is also a major contribution of AI.

Evolution in the nature of wars and threats:

AI has contributed to changing the strategic and tactical options by which wars are managed, and in developing ways of waging armed wars.⁴² It also contributed to the decline in the risk of threats and wars of the fifth generation based on the penetration of computer systems and computer piracy. It has decreased the risk of nuclear and biological wars in the face of nanotechnology wars, smart weapons, laser, space and radiation waves, threats of bioterrorism, bio-errors, genetically modified bacteria and more dangerous deadly viruses are monitored. ss⁴³ monitored are.

In the coming decades, the world will witness intelligent wars led by smart weapons capable of disrupting the military systems of major powers and using high-powered micro-wave electromagnetic bombs. Smart weapons supported by AI technologies are one of the most dangerous weapons that threaten humanity because of the difficulty of identifying their source, monitoring their location and predicting their range to avoid devastating dangers⁴⁴. Moreover, the world will witness wars between intelligent robots that operate automatically without pre-programming based on their AI⁴⁵. Smart machines send notices to satellites to mislead the direction of the missiles, in addition to their ability to penetrate the opponent's defense systems.⁴⁶ Former US Secretary of State, Henry Kissinger said AI is more dangerous and deadly than nuclear weapons because of the inability to control robots on the one hand, and the scale of

⁴¹ Francesco Piccialli, Vincenzo Schiano di Cola, Fabio Giampaolo and Salvatore Cuomo, "The Role of Artificial Intelligence in Fighting the COVID-19 Pandemic," (*Springer Nature*: 2021), 1467-1471. www.Springer.com

⁴² Henry A. Kissinger, Eric Schmidt, Daniel Huttenlocher, 158.

⁴⁴ *Ibid.*, 42.

⁴⁴ *Ibid.*, 42.

⁴⁵ M. L. Cummings, "Artificial Intelligence and the Future of Warfare," (*The Royal Institute of International, Research Paper Affairs*: January 2017), 2.

⁴⁶ Henry A. Kissinger, Eric Schmidt, Daniel Huttenlocher, 152-158.

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destruction caused by smart weapons, which exceeds the destructive capability of the nuclear weapons on the other hand.⁴⁷

4. Evolution in the nature of interactions in the global system.

In the 21st century, AI contributed to the development of the nature of interactions and the transformation of digital space into a new field of competition, conflict, and cooperation, as those interactions moved from physical to digital.⁴⁸

In terms of competitive dynamics, we believe that AI is creating a new type of international competition in the global system as countries seek to acquire AI technologies.⁴⁹ In this regard, the US is the world leader in AI and has achieved technological excellence by the help of many specialized research centers in this field.⁵⁰

The US believes that ceding leadership to China, Russia or other foreign countries could have serious implications for its national security. In addition, it is preparing several strategic plans to keep up with its competitors and avoid the deficit in military technology.⁵¹

China is the number one competitor to the United States, which is seeking to acquire AI technologies, and since 2017, it has begun to prepare a comprehensive strategic plan to reach the center for Global Innovation in AI, and employ it in the military, economic and political fields by 2030. China's funding for AI startups amounted to 48% of the world's total project financing, surpassing the United States of America.⁵²

⁴⁷ Henry A. Kissinger, Eric Schmidt, Daniel Huttenlocher, 152-158.

⁴⁸ Henry A. Kissinger, "World Order reflections on the forerunners of nations and the course of history," 339.

⁴⁹ Artificial Intelligence and National Security, 8.

⁵⁰ Stephanie Mae Pedron, Jose de Arimateia da Cruz, "The Future of Wars: Artificial Intelligence (AI) and Lethal Autonomous Weapon Systems (LAWS)," *International Journal of Security Studies*, Vol (2) Issue (1), 2020, 14.

⁵¹ Artificial Intelligence and National Security, 20.

⁵² Kai-fu Lee, "AI, Superpowers, China, Silicon Valley and the New World Order," (New York: 2018), 6-19.

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Russia, although not a startup in the field of AI, is also venturing into AI intelligence technologies. Russian President Vladimir Putin said in 2017, that "those who own and control AI have the ability to control and lead the world," so he issued several new strategic plans to gain leadership in AI by 2030⁵³. Vladimir Putin also announced in 2018, that his country would combine traditional and modern technologies by combining the destructive capability of the nuclear weapons with the speed of AI. In addition, Russia looks forward to converting 30% of its military equipment into robots by 2025⁵⁴. To have more weapons-laden satellites, with the ability to destroy the opponent's satellites, as well as to look forward to owning anti-satellite missiles, which actually happened on November 15, 2021, when Russia's first anti-satellite rocket was launched.⁵⁵

The competition is not restricted to the US, China and Russia, but many other countries are looking to develop and employ AI technologies in all fields. In 2017 and 2018, Israel, Canada, Japan, Singapore, the United Arab Emirates, Canada, Denmark, France, the United Kingdom, the European Commission, South Korea and India issued several plans and strategies to promote and develop AI technologies.⁵⁶

As for **the pattern of cooperation**, it also developed into cooperation in the field of research, data and information sharing and exchange of technological expertise. In this regard, the US has prepared an official committee for dialogue with China and Russia to cooperate in the field of military applications of AI in order to develop standards and rules for the development of AI and to secure its uses and employment to serve humanity. Countries have collaborated to employ AI technologies for the

⁵³ John R. Allen and Amir Husain, "The Next Space Race Is Artificial Intelligence," (November 3: 2017), <https://foreignpolicy.com>

⁵⁴ Elias Groll, "How AI Could Destabilize Nuclear Deterrence," (April 24:2018), <https://foreignpolicy.com/2018/04/24/how-ai-could-destabilize-nuclear-deterrence/>

⁵⁵ Ankit Panda, "Fallout of Russia's Anti-Satellite Missile Test," (November 17: 2021), <https://carnegieendowment.org>

⁵⁶ "Artificial Intelligence and Its Military Implications," *Discussion Paper* (New York, United Nations, July 2019), 21.

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purpose of achieving security and peace, and promoting global strategic stability.⁵⁷

In addition to the transition of conflict from the physical world to the electronic digital world, the world has witnessed a new type of conflict, namely, the electronic conflict between countries and global technology companies to penetrate and manipulate information and data or to obtain new information.⁵⁸

Conclusion:

The world order has shifted from the concentration of the state to a multi-center system that expands to include other non-state actors with the capacity and role to influence global politics. Despite the influence and role played by global technology companies in the world order, the state will remain one of the main actors in the global system. This is because of its ability to produce rules governing the movement of other axes, control the capabilities of the system, and the ability to use force and impose sovereignty over physical and digital space.

The development of AI technologies has become so rapid that humans cannot control it. It invites us to predict that in future, the world will see agreements and treaties such as conventions banning the use of weapons of mass destruction, and legalize the use of AI, especially in the military, to avoid harm as much as possible.

AI technologies have contributed to the development of the capabilities of the countries directing the world order. This has contributed in creating a disparity in capabilities with other countries. Consequently, a gap between developed countries and technologically-undeveloped countries will negatively affect the stability of the system. Hence, an amendment or

⁵⁷ Tim Hwang and Alex Pascal, "Artificial Intelligence isn't an Arms Race," (December:2019), <https://foreignpolicy.com/2019/12/11/artificial-intelligence-ai-not-arms-race-china-united-states>

⁵⁸ Lhab, Khalifa.op.cit, 29.

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change of the rules of the system in force becomes inevitable for the foreseeable future.■