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Impact of Artificial Intelligence in Arms Race, Diplomacy, and Economy: A Case Study of Great Power Competition between the US and China

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Abstract: *In the contemporary era, the demand for Artificial Intelligence (AI) is paramount, with existing applications in weak AI seen in products like smartphones, employing features such as Siri, voice recognition, and image recognition. The proliferation of AI extends beyond consumer goods to impact the arms race, diplomacy, and the economy. The emergence of advanced AI models like ChatGPT has intensified the global AI competition among states and tech companies. While nations integrate AI into military technologies, concerns arise about the implications of Artificial General Intelligence (AGI). Scholars debate its potential role in global dominance, job displacement, and economic impact. Despite predictions of job creation, the shift towards AGI requires careful consideration to ensure positive outcomes rather than detrimental consequences for humanity's future in the realm of Artificial Intelligence.*

Key Words: Artificial General Intelligence(AGI), International Relations, Digital Connectivity, Arms Race, Autonomous weapons, United Nations, United States of America, China

Introduction

The 21st century is marked by technological convergence, blending artificial intelligence (AI), computing power, big data analytics, and digital connectivity with traditional diplomacy (Loader, 1997). This fusion reshapes statecraft, diplomacy, and international cooperation, introducing a new paradigm that blurs physical and virtual boundaries. AI, a pivotal technology in this era, holds implications for global security and democratic systems (Loader, 1997). Integrating AI into international relations presents complex challenges and opportunities, including the use of unmanned drones with facial recognition and autonomous armed robots (Siddarth, 2023b). AI also enhances diplomacy through predictive modelling and international cooperation (Siddarth, 2023b). Realism theory views AI as a tool for enhancing power and security, aligning with the

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historical arms race dynamics (Wivel, 2017). Economic competition in AI mirrors realist dynamics, intertwining economic, military, and geopolitical power (Poudel, 2021). In contrast, Liberalism sees AI as a catalyst for international collaboration, envisioning nations pooling resources to address global challenges (Ndzendze, 2023). The COVID-19 pandemic exemplifies AI fostering cooperation in tracking the virus and optimizing resource distribution (Firouzi, 2021). The study focuses on major global powers, including the United States, China, and Russia, to explore AI's impact on state interactions and its potential to promote global peace and stability.

This qualitative research employs an inductive approach to present data in a theoretical form, utilizing narratives and descriptions to explore the impact of Artificial Intelligence (AI) on global relations, diplomacy, and the economy. The study employs an inductive approach, initiating research without a specific problem statement, aiming to create new theories. Additionally, explanatory research is applied to delve into AI's relations in the arms race, autonomous weapons, and digital diplomacy. Secondary sources, encompassing academic books and journal articles, form the basis of this study.

This research is significant for addressing the literature gap and enhancing understanding of AI's role in international affairs. It contributes to a more comprehensive grasp of technology's impact on global relations, diplomacy, and the economy. The study's insights are actionable for policymakers and valuable for International Relations (IR) students, fostering informed discussions in academia and policy circles. This research focuses on elucidating AI's role in the arms race, diplomacy, and the economy, with a temporal scope spanning the beginning of the 21st century to 2023. The rapid evolution of AI poses challenges in exploring its development, but the research aims to provide current trends and future developments. Geographically, the analysis centres on great powers, prioritizing the United States and China, given their significant investments in AI and aspirations for global leadership by 2030.

Research Objectives

In recent years, the escalating influence of Artificial Intelligence (AI) in international relations has garnered significant attention, though some scholars remain indifferent to its implications. Debates persist between those foreseeing the benefits and those anticipating potential future devastation from AI. Acknowledging the inevitability of AI's progression in the contemporary world, this research aims to delve into the challenges and opportunities arising from its integration into International Relations. Notably, the study investigates the complex implications of AI, including the development of lethal drones with facial recognition capabilities, unbeatable autonomous robots, and fighter jets operated through AI, posing challenges in the field. Conversely, AI presents promising prospects in diplomacy and the economy, with the potential to enhance data analysis, and predictive modelling, and streamline international cooperation, thereby automating routine tasks and fostering more efficient diplomatic and economic processes. The study's objectives include examining AI's role in lethal drones, autonomous weapons, and robots, as well as

understanding its contributions to diplomatic and economic opportunities in international relations.

Literature Review

A prevailing belief suggests that the world stands at the cusp of another revolution, wherein artificial intelligence (AI) will reshape warfare akin to the transformative impacts of gunpowder, tanks, aircraft, and nuclear weapons in the past. Nations are actively vying to leverage AI for strategic superiority.

In the article "AI and Global Security; Navigating Risks and Opportunities," Abu Rayhan predominantly delves into how autonomous weapons can reduce casualties and enhance surveillance capabilities, but fails to address the downsides of surveillance and autonomous weaponry. For instance, China is already deeply involved in surveillance practices, closely monitoring its citizens. Additionally, AI may usher in an era similar to Snowden's revelations (Rayhan, 2023).

Kamal Heidar Tamini, in his article "Dominion by Design; The Global AI Race and its Geostrategic Implications," focuses on the impact of intelligence and power dynamics between China and the USA. However, a gap exists in exploring how this AI race influences their diplomatic relations. Some scholars argue that Tamini overlooks the role of state actors. Nevertheless, this research aims to investigate how these two giants shape global affairs through their AI investments (Tamini).

In the article "Harnessing Artificial Intelligence to Increase Well-being for All: The Case for a New Technology Diplomacy," Jason Walley provides a comprehensive overview of international AI competition and discusses different policy paths. However, it neglects the implementation of new technology in diplomacy and lacks coverage of the current situation and implications of AI (Feijóo, 2020).

Philippe Aghion's article "Artificial Intelligence and Economic Growth" focuses on economic growth but overlooks how AI can boost the world's economy. The research uses numerical explanations, which may hinder readers' understanding of the concept (Aghion et al., 2017).

Ajay Agrawal's book "The Economics of Artificial Intelligence: An Agenda" primarily focuses on economic growth and state decisions but overlooks broader aspects, such as how AI is changing the world order and benefiting major powers like the USA and China. This research will address AI's integration and development in the arms race, economy, and diplomacy, along with the USA and China's competition (Agrawal, 2019).

According to a report by the Carnegie Endowment for International Peace, over 70 out of 190 countries use AI for surveillance. Currently, three major nations are striving for AI leadership, with China expressing its ambition to lead by 2030. Similarly, Russian President Vladimir Putin asserts that dominance in AI could lead to global rule (Anatolyevich, 2022). To counter challenges from China and Russia, the United States has adopted a "third offset" strategy, investing significantly in AI, autonomy, and robotics for defence. Paul Scharre, a former military analyst, underscores the transformative potential of AI in warfare, mentioning its capability to create more deadly and efficient weapons (Lee, 2021).

Scharre's quote underscores the potential benefits and dangers of AI in warfare, capturing the strong interest of military experts in exploring AI's military applications. Ben Buchanan and Andrew Imrie, in a recent publication, liken AI to a groundbreaking discovery comparable to the discovery of fire. They predict that autonomous AI-controlled weapons will become more precise, faster, and deadlier than human-operated ones, shaping the future of warfare. Scharre identifies four battlegrounds – data, computing, talent, and institutions – and asserts that control over these will confer an advantage in AI. "Four Battle Grounds" examines the escalating competition between China and the United States, particularly in the realms of data and AI. While the USA leads in talent, research, and technology, China possesses a significant data advantage with 900 million internet users. China's digital economy surpasses that of the United States, with apps like WeChat. China's government actively monitors and harvests citizen data, employing facial recognition technology in cities. State control provides regulatory advantages, making China a model of digital authoritarianism (Scharre, Four Battle Grounds, 2021; Mueller, 2022).

There is a gap in the literature regarding how AI impacts key aspects of International Relations, including the arms race, diplomacy, and the economy. Online information about the investment strategies of major powers in AI and their specific goals is lacking. This research seeks to fill this void by investigating the influence of AI on international relations. While Jason Walley's article touches on diplomacy, it overlooks the arms race. Similarly, existing books focus on AI's contribution to economic growth and mention the US-China rivalry briefly, but this research comprehensively covers all three aspects: AI's role in the arms race, diplomacy, and the economy, along with the rivalry between the US and China in the field of Artificial Intelligence.

Conceptual Framework

This study's conceptual framework revolves around realism and liberalism in international relations. Realism, a significant theory, views the world as marked by competition and conflict among nations, emphasizing concepts like Statism, self-help, and survival (Waltz, 2000). In the context of AI, realism predicts a shift to cyber warfare and the rise of AI robots globally (Devrim, 2020).

Realism foresees a future where states with advanced AI capabilities, such as China, Russia, and the United States, may dominate global affairs (Cotting, 2023; Li, 2021). Despite the U.S. advantage in chip development, China's commitment to AI leadership and Russia's investments pose formidable competition (Cotting, 2023; Li, 2021). These nations are actively developing AI-powered weapons, with the U.S. showcasing AI drones (Li, 2021). The study recognizes the broader applications, including autonomous medical evacuation vehicles.

However, AI, with its benefits and drawbacks, poses threats to state sovereignty, raising concerns about espionage and confidentiality loss (Johnson, 2019, 2023). Liberalism, in contrast, sees AI positively, envisioning it as a tool for global problem-solving, conflict resolution, human rights, and economic growth (Monteiro, 2022; Cummings, 2018). The study notes liberalist perspectives on AI transforming

diplomacy and playing a crucial role in economic growth (Kļaviņš, 2021; Harrari, 2018).

The study integrates James N. Rosenau's concept of "turbulence" to recognize AI's rapid adoption, accelerated by external factors like the COVID-19 pandemic (Rosenau, 1992). It acknowledges AI's extensive consequences on policy, economic expansion, and concerns about privacy, safety, and security, emphasizing the need for standards to mitigate unintended consequences (Harrari, 2018).

Understanding Artificial Intelligence

Artificial Intelligence is making intelligent machines, that understand and absorb the surrounding's knowledge, and it can converse with humans. It's like creating an intelligent machine that can behave somewhat like a clever human. It is a computer-controlled robot in which AI (software) thinks intelligently (Wang, 2019). AI is studying patterns of the human brain and it analyses the data and makes outcomes on the basis of data and AI becomes intelligent software. Artificial Intelligence, in the contemporary world, is one of the highly trending terms in the tech industry, and this is justified by the potential that it offers. In the last few years, the world has seen many achievements and innovations that were once exclusively confined to the realm of science fiction now gradually transforming into tangible reality (Turney, 2013). It will also serve as a factor of production, possessing the potential to introduce new sources of growth and fundamentally transform the industries (Aghion et al., 2017)(Aghion et al., 2017). A report conducted by PwC mentioned that Artificial Intelligence can produce $15.7 trillion to the economy of the world by 2035 (Roumate, 2022).

There are two types of AI one is known as weak AI and the other is known as AGI or Strong AI.

Weak Artificial Intelligence

Weak AI is system is specific. It is designed to perform limited tasks such as Siri, Voice recognition, and image recognition. It operates within its domain and it doesn't go outside its boundary (Tizhoosh, 2018).

Strong Artificial Intelligence

Strong AI is known as Artificial General Intelligence; it performs a wide range of activities with intellect that is on par with or higher than that of humans. It would possess the capability to comprehend reason, learn, and utilise knowledge to solve intricate problems, akin to human cognition (Pei, 2019). However, the AGI is in the theoretical phase, and to date time it has not been achieved. Artificial General Intelligence can also pose risk at a broader level (McLean et al., 2021).

However, there are two main parts that run artificial intelligence Machine Learning and Deep learning.

Machine Learning

It focuses on the creation of algorithms that enable computers to learn from data and make predictions without relying solely on predefined instructions. For instance, predictive text (predicting the next word in Smartphone based on the user's history), email filtering (emails are classified as they are spam or not based on content), language translation (Google translation), and forecasting weather (Duggal, 2023).

Deep learning

It falls under the umbrella of machine learning and involves the training of artificial neural networks based on the human brain's structure and function to learn from data. For instance: image recognition, speech recognition, autonomous vehicles, and Tesla autopilot (Janiesch, 2021).

Autonomous Weapons

Autonomous weapons are characterised as the third revolution in warfare following the advent of gunpowder and nuclear weapons. Autonomous weapons use artificial intelligence to select, identify, and kill targets and the decision is made by algorithm not by human operators. In the contemporary world, states have UAVs and autonomous tanks, and most importantly they are moving towards autonomous fighter jets. In the 1900s, Clara Haber's suicide followed her husband Fritz Haber's involvement in the first chlorine gas attack in World War I. Fritz, known for ammonia synthesis, shifted to chemical warfare (Bretislav, 2017). Despite his Nobel Prize, chemical weapons are now prohibited by the Chemical Weapons Convention and the Geneva Protocol. However, with the advent of new technologies, they pose challenges and compromise implementation in the future. The advancement in Artificial Intelligence technology has led to the development of machines capable of causing harm to human lives autonomously. If Artificial Intelligence is integrated with chemical weapons and all are controlled by robots. It has raised concerns about safety as most CEOs and top companies have banned Narrow Artificial Intelligence from asking about anything related to unethical (Armitage, 2019). The world is reaching a point where multiple weapons are capable of attacking without human guidance or intervention.

Kargu-2 is a rotatory wing strike drone made by Turkey's STM that can fire at targets without a human operator's command. It has already been used in Haftar's forces in Libya according to a United Nations report. (Bode, 2023). It is a small portable rotatory-wing kamikaze drone programmed with artificial intelligence machine learning algorithms. Russia deployed Zala Lancet-3 in the Ukraine war (Jasper, 2023). It has autonomous target-seeking capability and uses the camera to find a target without human guidance. It is equipped with a 3 kg warhead to destroy targets. These suicide drones file into the target and explode on impact. Artificial Intelligence fighter jets being developed by USA firm calspun fitting L-39 Albatross jets having fitted with artificial intelligence systems. It aims to create jets that can do aerial combat without a human pilot. There is a plan for live dogflight by 4 artificial intelligences-enabled L-39s in 2024. There is a weaponized robot dog developed by Sword International Ghost Robotics. Its name is SPUR or special purpose unmanned rifle. It has a board sighting system that can be controlled via an app and a machine gun on top can remotely load and unload the first round. There is an emerging threat most states are developing new miniature insect-like drones that can kill most people and cities. They all will be integrated with CBRNE (Chemical, Biological, Radiological, and nuclear weapons) and all artificial weapons will be undetectable.

Unmanned Aerial Vehicle

It is an unmanned aerial vehicle and the skill is artificial intelligence. Its flying itself process can react 1000 times faster than humans. The stochastic motion is an anti-sniper feature. It has cameras and sensors, just like phones and social media apps (J. Johnson, 2021). It also has facial recognition inside there are 3 grams of shaped explosives that kill humans. The United States of America and its allies are working on autonomous weapons and they have already made but they are trying to advance its autonomous weapons as USA made Reaper 1 now, they have reached Reaper 9 has a speed of 485 km/per hour and its range is 1800 km and it was created by General Atomics Aeronautical Systems (GA-ASI). Another is Northrop Grumman RQ-4 Global Hawk, a remotely piloted surveillance aircraft with a high-altitude capability (Biass, 2020). It was designed by Ryan Aeronautical and it was introduced in 2001. It is designed for extensive and systematic surveillance, featuring long duration over target areas. The RQ-4 offers a comprehensive aerial view, covering an expanse of 40,000 square miles (100,000 km2) per day that is equivalent to the size of South Korea and Iceland. Turkey has also made Bayraktar and used it in Syria and Iraq against the People's Protection Units (YPG) and Kurdistan Workers Party (PKK) and several other states in their conflicts such as Azerbaijan and forces of Ukraine, forces Ethiopian is also using against Tigray people (Sukhankin, 2020).

United States of America's UAV

One of the most significant but still in the early stages initiatives to progress AI is the classified U.S. Air Force initiative known as Next Generation Air Dominance. This program involves approximately 1,000 drone "wingmen," referred to as collaborative combat aircraft, working in conjunction with 200 manned planes. Douglas Shaw, a senior advisor at the Nuclear Threat Initiative, foresees a future in which drones outnumber human personnel significantly in the armed forces (Grant Jr, 2020). Retired U.S. Air Force Gen. Charles Wald sees this development as a force multiplier, addressing a critical challenge faced today in military recruitment. However, there are a few drones that are used publicly but some drone innovation is not publicly (Gruba, 2018).

Loyal Wingman MQ 28

Advanced unmanned systems can fly alongside existing manned aircraft and use artificial intelligence (AI) to carry out missions in groups. It can conduct surveillance, reconnaissance, and early warning missions.UAV was constructed as part of the Loyal Wingman advanced development program and Its purpose is to safeguard and support Australia's most crucial warplanes, including the Joint Strike Fighter (JSF), Super Hornets and Growlers, and their pilots. Drones will contribute to enhancing the flexibility and capabilities of the Australian Defence Force. The drone, previously referred to as the Boeing Air Corporation System ATS was officially designed as the MQ-28A Ghost Bat in March 2022. However, the name continues ATS for global customers.UAV has a range of 2,000 miles and a combat radius of 900 miles and can be tasked with detecting and absorbing enemy fire (Cook, 2023).

MQ-9b STOL

The MQ-9B STOL is an unmanned aerial vehicle (UAV) capable of executing diverse missions, such as intelligence, surveillance, and reconnaissance (ISR), anti-submarine warfare, fleet defence, maritime domain awareness, anti-surface warfare, airborne early warning, and surface strike (Avanzini, 2003). Notably, it has the ability to carry out these missions continuously without requiring frequent returns to the base for refuelling and maintenance.

Black Hornet

A few years back Black Hornet cost around $80,000 and now it is an eighth of price. It was designed for reconnaissance and surveillance of groups of enemies or those actors who are harming the state's interests. It is micro drones however there are several micro drones in the USA such as RQ-28A, ANAFI, and laniux but the black hornet is the smallest of all of them (Lee M. S., 2009).

China and UGV

Sharp Claw 2

A larger version of the Sharp Claw was designed as a logistics support unit. The Sharp Claw II can operate autonomously or be controlled remotely. The front bumper can be equipped with sensors that detect mines and IEDs (Improvised Explosive Devices). The Sharp Claw II can also be used to take off and land drones, as it has a landing pad suitable for small quadcopters (Guy, 2022).

Shanyi 05.

This small UGV is only 7 inches tall and weighs 24 pounds. It can be used to map the battlefield and locate enemies in small urban environments.

Luwa 8x8

The Chinese military has the Luwa 8x8, an amphibious UBV that provides fire support to troops raiding the coast. It provides support troops in battlegrounds and its capability is to kill hundreds (Keller, 2020).

China and UAV

Caihong 4 (CH-4)

One of its top-selling models is the CH-4, which was designed and built by the Chinese Academy of Aerospace Aerodynamics. The CH-4 is virtually identical to the General Atomics-built Mq-9 Reaper, which can be used as a spy or bomber (Okpaleke, 2023).

GJ-11

The Hongdu GJ-11 resembles a smaller B-2 stealth bomber, but there's a good reason why it's an unmanned aerial stealth aircraft. The GJ-11 is expected to reach speeds of up to 1,000 miles per hour and fire precision rounds at targets. This unit was first introduced in the year 2013 and has been repeatedly optimized by the Chinese military. In 2022, a model of three GJ-11s operated in groups, flown by Chengdu J-20 fighters, was confirmed, similar to the US Air Force's Royal Wingman concept. However, it will also support the development of autonomous missions, and autonomous executions (Dahm, 2020).

Wing Loong 2

China also has the Wing Loong ID and its extended version of Wing Loong 2, an unmanned aerial vehicle (UAV) that can be

remotely controlled by a human operator. Fitted with infrared cameras and sensors, the Wing Loong 2 can be used to surveillant supply lines or to conduct strike attacks. Although it demands a runway of half a mile for take-off, it boasts impressive 35-hour endurance in flight (Fu, 2020). Chinese drones are getting more advanced. Earlier the year of 2020, a group of PLA researchers claimed to have defeated a human-controlled UAV in a drone battle. According to the researchers, the AI-powered drone was able to outmanoeuvre its human-controlled counterpart by predicting it would crash into the ground and thus win the battle (González Peralta, 2020). The test lasted only 90 seconds, according to the researchers, as the human operator was unable to avoid the AI-powered. And like the American military, Chinese military officials are testing the ability of floating drones to use multiple units to attack or monitor targets through a single network system. such units can be used to "kamikaze" targets by attacking them and releasing small explosives that damage them (Agarwal, 2023).

Artificial General Intelligence

Artificial General Intelligence possesses the capability to surpass humans in the design, production, and utilization of military weapons (McLean et al., 2021). In the contemporary world, weak AI already exists, and scholars estimate that it may take 60 to 80 years to develop AGI. If AGI is created, it has the potential to become an integral part of the Earth, integrated into various aspects of society on a large scale. However, concerns arise regarding the possibility of AGI controlling humans, leaving them unable to protect themselves. Many movies have explored the theme of machines becoming masters in an age dominated by machines. Another concern is the potential development of slaughter bots, resembling terminators, designed to eliminate targets until their objectives are successfully achieved (Gabriel Wood, 2020).

Artificial Intelligence and Military Technology

Over the last 2000 years, the world has witnessed significant developments in military warfare. In the initial stages, wars were fought between states using swords. However, with the advent of gunpowder, military capabilities evolved, leading to the use of cannons and rifles. The 18th and 19th centuries marked a transformation with the Industrial Revolution, as states began incorporating the Air Force into military strategies. These technological advancements played a crucial role in enhancing military capabilities. During World War II, the USA successfully tested its nuclear bomb, a project led by Oppenheimer (Siracusa, 2020). This nuclear weapon significantly altered the dynamics of warfare. In subsequent years, the USSR also conducted a successful nuclear test, introducing terms like Mutual Assured Destruction (MAD) and Nuclear Deterrence (Jeremy, 2019). States possessing nuclear capabilities wield the power of nuclear deterrence, allowing them to instil fear in other, less powerful states. However, in response to MAD, many states turned to conventions such as nuclear proliferation, leading to the signing of agreements in the 1970s. Afterwards, a new era emerged with space warfare. In the current context, Artificial Intelligence is fundamentally transforming the dynamics of warfare.

However, since the beginning of the 21st century, some states have been employing weak AI, which is already integrated into our smartphones and has found application in the military. Numerous drones have been developed, navigating either by remote control or autonomous AI. Ayman al Zawahiri was killed by the USA in a drone airstrike (Pantucci, 2022). The use of artificial intelligence has raised concerns about the development of slaughter bots, which could profoundly impact the norms and values of democracy. If states proceed to create slaughter bots in the future, replacing traditional soldiers, governments may no longer seek public approval for war or consider public opinions. The future is going to be mysterious as it depends on the state's policy and development.

Ethical Consideration in AI

Opportunities

Lower risk for human soldiers in conflict zones as in USA soldiers died in the Vietnam War after that USA changed its war tactics as they started to fire from the sky and send its military in limited numbers. Higher attack accuracy increases and collateral damage risk is reduced (Basit, 2021). Some weapons are not dependent on GPS giving them immunity in case a country's satellites are shot down by enemies.

Challenges to Ethical Consideration

The debate is on whether the risks outweigh the advantages autonomous weapons can lead to large-scale violence as it will not be limited to the number of human soldiers available. There will also be a technical malfunction that could cause serious civilian casualties during wars. Soldiers on the ground can be held accountable but not machines. These weapons also make it easier for the aggressors to hide their identities (Humble, 2023). Another threat is that killer robots would make ethnic cleansing easier by using facial recognition. These threats have led many human rights and peace organizations to call for a complete ban on autonomous weapons some international discussions have been held on the issue. The most important factor will raise concern about privacy as most states are already monitoring the activities of people which will lead us to the era of Snowden. Once Lin said, "When people start to believe that machines are thinking, they're more likely to do crazy things" (HIrsh, 2023).

Understanding Diplomacy

Realists argue that diplomacy is a tool for states to advance their interests and increase their power (Fierke, 2005). However, liberals argue that, in order to achieve shared objectives and mutual benefits among states, diplomacy should be viewed as a method for promoting shared values, establishing international institutions, and encouraging collaboration (Moravcsik, 1992). Diplomacy is primarily a political activity that, based on its resources and skillfulness, constitutes an essential ingredient in power. It aims to enable countries to ensure the objectives of their international policies in a manner that does not require force, propaganda, or legislation. Communication between professional diplomatic agents and other officials to establish agreements is the main means of achieving this objective.

However, it is also characterised by small activities such as data collection, explanations of intentions, and the

promotion of goodwill (Berridge, 2022). The age of Artificial Intelligence in diplomacy reflects the quotation by Alan "I believe that at the end of the century, the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted" (Rheingold, 2000). Artificial Intelligence can play a role in diplomacy in several ways.

Role of AI in Diplomacy

Ministry of Foreign Affairs are more likely to integrate AI into their work if they can identify specific areas where AI could have the greatest impact on the task at hand and use these areas as further testing grounds. It is believed that this increases the likelihood of taking a positive attitude (Ritchie, 2003). There are also possible purposes for using AI transformations. For example, in diplomatic operations that involve primarily repetitive and routine tasks (consular duties, pre-deployment training), the first entry point will be the tasks most effectively transformed by the introduction of assistive AI systems. When making structured decisions, they initially support the decision-maker and may later replace the decision-maker (Konovalova, 2019).

Decision Analysis

AI will be able to optimally improve the task at hand. While everyday diplomatic tasks like visa applications may not need advanced algorithms for predictive modelling to achieve their goals, they can benefit from employing data discovery methods that assist in analysing and describing information (Bjola, 2019). There is a possibility that you will receive accurate data and at the same time, diplomatic projects face the challenge of ambitious goals and restricted budgets, such as international negotiations, require AI-driven simulations and complex event processing to manage and manage political uncertainty using prescriptive analytics.

Form of Knowledge

The integration of AI contributes to knowledge embodiment and raises questions about whether it fosters collaboration among users or promotes cooperation between them. For example, routine diplomatic tasks may facilitate various levels of knowledge embodiment, potentially extending to the automation of physical and cognitive tasks independently such as passport renewal (emancipation), thereby lessening the workload and enhancing efficiency. On the other hand, other tasks where human control is considered more important may prefer forms of knowledge embodiment where only cognitive effort is required (equipping) such as in international crises where accuracy and reliability of real-time information is considered more important. Knowledge embodiment therefore raises the issue of practical feasibility, i.e., whether the organisation would accept the AI system irrespective of its practical benefits.

Diplomatic Chatbots

If Artificial Intelligence is integrated into diplomacy, it can free humans from workload as most of the work can be done by chatbots. As, humans can ask questions from chatbots regarding travel, or study abroad. It will be available on the websites and apps of the Ministry of Foreign Affairs (Bjola, Trends and counter-trends in digital diplomacy." In New Realities in Foreign

Affairs, 2019). This technology is not going to replace humans but it will help humans in several ways. Chatbots will be available 24 hours.

Predictive Analysis

AI can play a role in prediction by offering insights based on vast amounts of data, including articles, books, journals, and geopolitical shifts. This capability assists diplomats in making decisions informed by these shifts. Moreover, AI can contribute to crisis management, addressing situations like natural disasters or political unrest. It provides real-time information, facilitating swift actions to protect people from potential disasters **(Bjola, 2022)**.

Understanding the Economy in State's Development

In the 15th and 16th centuries, politics played a crucial role in state affairs, defining power through the dominance of kings who sought to acquire vast territories. In the contemporary world, the power of a state is defined through the lens of economy. Power can be categorized into two types: tangible and intangible. In the intangible aspect, he emphasized that the economy plays a significant role in the development of a state (Eustace, 2000). In the contemporary era, if a state wants to influence others it needs to use soft power, and soft power requires a strong economy. With the advancement of technology, economic growth has accelerated. For instance, the invention of the wheel facilitated transportation, and the Industrial Revolution played a significant role in state development. Mercantilists believe that states should categorize industries, prioritizing those that benefit the state and leaving aside those that incur losses. In the contemporary world, the focus is primarily on cyber and tech companies. On the other hand, liberalists believe that states should provide welfare and minimize intervention in economic matters (Oatley, 2022).

In 1960, the total volume of the global economy was $1.3 trillion. By 2020, it had reached $84 trillion, and in 2022, the global economy amounted to $100 trillion. Over the last 100 years, technology has played a crucial role in economic growth. In 2017, PwC predicted a 14 per cent impact on the worldwide Gross domestic product by artificial intelligence advancements in 2030. They assessed the possible commitment of Artificial Intelligence to the overall economy to be roughly $15.7 trillion (Mhlanga, 2022).

Role of AI in Economic Growth

The role of AI in economic growth plays in two ways it be positive and negative as it will boost the economy of states. However, AI will also affect jobs and many jobs will be vanished in the future with the advancement of AI.

Possibilities of AI in Economic Growth

AI has a high likelihood of significantly boosting productivity, comparable to the transformative effects brought about by electrification or the advent of computing. Pioneer of the internet, Scott Bradner of Harvard University, once mentioned that the internet that 'the platform for all subsequent revolutions' (Cummings M., 1995). The statement can also be applied to Artificial Intelligence. However, while this technology is used for general purposes, as observed with computers, the innovations occurring in AI have the potential to spark revolutions in every field. The incorporation

of AI and robotics, as demonstrated by the embrace of autonomous vehicles and advanced automation, has the capability to profoundly transform the worldwide economy. In areas like transportation, McKinsey anticipates a considerable economic influence, estimating a range from $200 billion to $1.9 trillion per year by 2025. This move toward efficiency driven by AI extends across diverse industries, leading to cost reductions and heightened productivity. Take the example of the self-driving car, automating taxis, ride-sharing, and delivery vehicles has the potential to significantly save labour costs, reduce fuel consumption, and reduce accidents (Groshen, 2019). Beyond simple cost savings, the use of AI opens up opportunities for innovation that were previously unattainable. Companies like German online retailer Otto are using predictive models and deep learning algorithms to improve customer service and streamline operations. The result is faster shipping, fewer returns, and a positive environmental impact. Some experts, such as Robert Gordon, argue that AI and robotics may not bring as much productivity gains as previous technological advances. However, this perspective may not take into account recent advances in AI, and other economists such as William Nordhaus have predicted an "economic singularity" with endless exponential growth (Naudé, 2022).

Recent poor productivity numbers can be better understood by looking at individual companies. There is often a clear pattern of productivity differences between the best-performing companies in the highest percentile and the rest, with the most innovative and technologically advanced companies perhaps. Early adoption of AI and automation has led to significant productivity gains. For example, from 2001 to 2007, the top 5% of companies experienced labour productivity growth of 4-5% per year, while the remaining companies experienced growth of only 1% on average (Bigsten, 2007). This pattern, known as a winner-take-all scenario, in which the best-performing companies achieve significantly higher productivity, is evident across a variety of analyses and industries and is driven by technological changes that may include AI.

In short, Artificial intelligence stands poised to make significant contributions to enhancing the economic strength of developed nations. Research conducted by Accenture and Frontier Economics, spanning 12 developed countries, suggests that by 2035, AI has the potential to "double annual economic growth rates" and elevates labour productivity by as much as 40 percent (Intelligence, 2016). McKinsey Global Institute is optimistic about the global impact, projecting that AI could generate $13 trillion in economic activity by 2030. PricewaterhouseCoopers goes even further, anticipating a potential boost of up to $15.7 trillion in global GDP growth by 2030, primarily driven by notable increases in productivity (Kumar, 2023).

Impact of job and wages

There is a common belief that Artificial intelligence will lead to the 'jobs apocalypse'. Concerns have been expressed and significant job cuts have been predicted in numerous reports and books. Yuval Noah Harari in his book Homo Deus has mentioned that "AI will render a vast swathe of humanity useless" (Harrari, 2016). Some propose substantial interventions, such as the government providing Universal

Basic Income (UBI) to those whose jobs will vanish due to Artificial Intelligence (Furman, 2019). However, in contrast, the US government issued a report in 1966 in which they discussed that technology eliminates jobs but does not work.

Technological Competition between USA and China

However, there are two great powers who are competing in AI competition such as the United States and China. Both states have made policies related to this but at the international level both states are signing an agreement to ban slaughter bots but both are trying to develop the slaughter bots to enhance the capabilities of the military (Duke, 2022).

China

Xi Jinping, during the 20th Party Congress, prioritized innovation for China's modernization by aiming to become a global AI leader by 2035 (Jinping, 2022). He emphasized self-reliance and securing core technologies. In April, he called for the development of Artificial General Intelligence (AGI). China's ambition is to lead in AI, aiming for a $150 billion AI industry by 2030 (Bazavan, 2022). Ethical guidelines for AI development, data restrictions with a focus on private companies, and regulations on AI algorithms have been implemented. Privacy concerns are addressed through laws like the Personal Information Protection Law. The government aims to expand these regulations into laws by 2030

Challenges in Acquiring

China may face challenges and delays in achieving its goal of integrating AI into the People's Liberation Army (PLA) due to various obstacles. Some hurdles may be realistic as the People's Liberation Army formally achieves full mechanization in 2020; informatization progresses rapidly and pursues cutting-edge capabilities essential for intelligence. But rising operating and maintenance costs for ageing ships, aircraft, and other existing weapons systems are straining budgets and diverting funds from investing in next-generation AI-powered capabilities. If China's domestic economy faces ongoing challenges, there may be limited resources available to advance AI efforts within the PLA (Kania, 2019).

Moreover, even with abundant resources, the technology itself can prove difficult to master. Regulations in technology imposed by the United States and its allies have the potential to affect the Chinese government's capacity to develop and deploy AI-powered systems on a large scale (Hine, 2022). Moreover, China might face challenges in innovating cutting-edge military technology. During the initial phase of military modernization, China successfully replicates the capabilities of the United States, Russia, and other advanced military forces. However, Intelligence operations demand the creation of entirely new advanced military technologies and operational concepts.

United States of America

In the development of Artificial General Intelligence (AGI), the U.S. plays a significant role, with over 50% of its AI workforce and about two-thirds of graduate students in AI fields being foreign-born, primarily from India and China (Omaar, 2022). During the Trump era, an executive

order aimed to sustain America's leadership in AI, emphasizing increased research and development efforts to counter China's initiatives. The order prioritized AI in government activities, identified high-priority federal datasets for public accessibility, and committed to guidance documents for future regulations (Watney, 2019).

Under the Biden Administration, a focus on responsible AI systems is evident, with specific funding allocated for AI research and development in the fiscal year 2023 budget (GCR, 2023). The administration's strategy comprises nine thematic approaches, including sustained investment in ethical AI research, collaboration between humans and AI, addressing ethical and societal consequences, ensuring safety and security, and international collaboration. This strategy aims to maintain U.S. leadership in AI, responding to pressure from both Silicon Valley and the broader tech industry for regulatory measures (Biden, 2023). The plan underscores the importance of investment, public-private partnerships, and international cooperation to advance AI while addressing ethical and societal implications.

Upcoming Elections of USA

The upcoming 2024 U.S. elections are anticipated to be heavily influenced by AI, raising concerns about its potential to amplify misinformation. UChicago Harris/APNORC poll in November highlighted widespread apprehension among U.S. adults from various political backgrounds regarding AI's role in spreading false information and its impact on electoral confidence (Kaufman, 2023).

Findings

1. There are diverse types of Artificial Intelligence such as weak AI and Strong AI. Weak AI is already integrated into modern technologies such as Siri, voice recognition, and image recognition and it is also used in weapons. In contrast, Strong AI is only presented in paper and scholars are predicting that this will be achieved in 4 to 5 decades. Strong AI refers to machines that will have the ability to think and it may surpass the humans.
2. The world is entered into a new age which is known as the AI age. Most of states have realized and developed several autonomous drones such as Kargu-2, Luwa 8x8, and Wing Loong. America has already initiated the US Air Force, next-generation air dominance, in which 1000 AI-powered drones collaborate with 200 manned planes to enhance military capabilities. China has also started to integrate AI in drones and led several Plans such as Beijing's 2030 plan.
3. Artificial Intelligence will influence several sectors such as health, education, economy, and diplomacy. In diplomacy, it will help diplomats to analyse the vast data quickly and the Ministry of Foreign Affairs can integrate AI chatbots which will provide the answers to the state's people related to travel and several other things. It can also help diplomats predict the agreement on the basis of historical events, books, and journals. It can also help in decision-making as it can make a diplomat's routine task easy which is time-consuming. Another area as it can help in predictive analysis on the

basis of historical events and current scenarios.

4. Artificial Intelligence will boost economic growth as it already attracts a lot of investment and most companies are trying to integrate it. According to PwC, AI will provide $15 trillion in the global economy by 2035. It will create new jobs as globalization creates jobs and eliminate jobs. Similarly, AI will create new jobs and it will expunge the jobs and those jobs will be created which will require high skill.
5. In the contemporary world it has grown the attention of major powers such as the USA and China and XI Jinping has committed to making China global leader in AI by 2030. To achieve this China has started to transform from mechanization to intelligence in the PLA and initiated a multi-domain precision warfare strategy that targets those areas which are weak points of the USA. Some scholars argue China will face several problems in maintaining its hegemony in AI.
6. The USA has shown a little bit of interest in Biden's era. However, trump initiated a few policies such as making America superior in AI for American citizens but Trump has not released funding. In 2022 some policy makers pressured the Biden government to make policies on AI and nine points policies were released for the development of Artificial intelligence.
7. States are unable to prevent Artificial Intelligence if any state decides to slow down the innovation of Artificial Intelligence, then the enemy will get a vote. For instance, If the USA decides to slow down the process, then China and Russia will get a vote and they can be AI leaders by 2030 (**Saari et al., 2020**). It will also challenge the hegemony of the USA as Artificial Intelligence is going to transform the structure of the world such as automation and robots on the streets. There is the movie Rebel Moon on Netflix which shows how robots can think and kill humans however, the movie shows that robots will not harm humans they will have also feelings of care. They will only kill those people who are bad. There is also a chance that if China succeeds in AI, it will lead to make a new world order.
8. Artificial Intelligence is the need of this century states must have to adopt it as soon as possible and they need to make policies and laws. A few years back there was cybersecurity which was a threat to the state's interest and so many states didn't pay attention to cybersecurity and they became weak against developed countries. Similarly, there are only major powers who are working on weak AI and trying to achieve AGI but developing states are facing issues related to suffering. In the contemporary world, no state is safe from cybersecurity threats even though the USA was hit by security threats from Russia in its campaign against Donald Trump, also hit by China stealing millions of military documents and they named it Shashu Jian plan. Iran also hit the USA as they were surveilling the US Navy for many days. States collectively need to sign an agreement or sign the agreement that was proposed by the United Nations in 2019.
9. Artificial Intelligence is going to influence the 2024 elections of the USA as in 2016 the US elections were influenced by propaganda. In the

contemporary world where AI dominates the world, rival states already acknowledge the capability of the role of AI in deep fake videos and there is a chance the rival states will create the videos and influence the elections of America.

Conclusion

Artificial Intelligence is the need of the contemporary world. States need to think rationally and they must make policies and frameworks related to banning slaughter bots and divert AI in those sectors that will serve humans not lead humans to destruction such as health, education, and economy, and assist humans in every field. China and the USA are working on several sectors but they are trying to achieve leadership in AI and they both are heavily investing in the arms race. However, China's plan to work on multiple domains and attack the USA on weak points, such as GPS, and intelligence means using artificial intelligence, quantum computing, big data, and other new technologies. In Contrast, in the USA Trump gave priority to making America great in AI and Trump also made the Executive order in AI in which Trump issued 3 policies. However, policies failed due to low funding whereas China alone spent $15 billion on Shenzhen. After Trump, Biden became the president of the USA and he didn't pay attention to AI. After some time, tech companies forced the government and come up with the 9 points. There is concern related to the upcoming elections of 2024 Biden also emphasizes its federal agencies to work on the safety of AI. There is no cure for AI as the mightiest power USA was unable to stop itself from the Russian cyber-attacks during the elections of 2016 and the Putin government propagated. Similarly in AI, the enemy states can get votes to influence the elections through the deepfake videos.

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