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U.S.-China Strategic Competition: Conventional Deterrence & the Changing Face of Modern Warfare

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Abstract

This paper explores the future prospects of conventional deterrence in the context of the United States and China's rapidly advancing military technology, focusing on artificial intelligence (AI). As global technological advancements accelerate, modern warfare is increasingly characterized by deploying sophisticated tools such as AI, transforming military capabilities across multiple domains. Technologies like AI, demonstrated by long-operating Mars rovers like Spirit and Opportunity, showcase machines growing abilities to learn, plan, and make decisions autonomously, paralleling human intelligence. The study adopts critical analysis to describe the dynamics of modern warfare between the US and China. AI's integration into military operations raises questions concerning national security, command structures, and global stability. Yet, the strategic competition between the US and China shapes conventional deterrence in multifaceted spheres. Recent conflicts, such as the ongoing war between Ukraine and Russia, underscore the profound impact of AI-driven tools, including drones, satellites, and cyber technologies, on contemporary military strategy. By examining these developments, this paper aims to highlight the implications of AI and emerging technologies for conventional deterrence strategies, providing insights into the evolving contours of security and power in the 21st century.

Keywords: Artificial Intelligence, Conventional Deterrence, UAV, China, U.S.

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Introduction

The rise of artificial intelligence (AI) and related advanced technologies is reshaping global power structures and introducing profound changes to military strategy and capabilities. As the United States and China engage in a complex rivalry, their conventional deterrence strategies (Michaels, 2024) are increasingly influenced by technological advancements that have far-reaching implications for global security. This paper examines the evolving nature of conventional deterrence within this geopolitical context, focusing on how innovations in AI and other technologies are transforming military power and international relations.

In recent years, the rapid development of AI has allowed machines to perform tasks that require human-like intelligence, such as learning, planning, and decision-making. AI technologies—exemplified by systems like the Mars rovers, Spirit, and Opportunity—illustrate the significant strides in autonomous capabilities. The adoption of AI in military contexts signals a shift towards highly automated warfare, where tools like drones, satellites, and cyber operations are redefining how conflicts are conducted. For instance, the ongoing conflict between Ukraine and the Russian Federation highlights the transformative role of advanced technologies in modern warfare, as both sides utilize drones, satellite-based intelligence, and cyber operations as critical elements of their strategies.

The implications of AI's integration into military frameworks are significant. While AI promises enhanced efficiency, innovation, and operational effectiveness, it also raises pressing questions about the stability of command structures, national security, and the ethics of autonomous warfare. Leaders such as Russia's President Vladimir Putin have underscored the strategic importance of AI, suggesting that it may fundamentally alter global power dynamics and reshape future warfare.

This paper aims to analyze these developments by exploring the future of conventional deterrence between the U.S. and China amid these technological shifts. The methodological approach of the study is qualitative, and the research design is descriptive, which explains the dynamics of new warfare. Although the study applies critical analysis to review the existing literature, the last part of the paper applies comparative analysis to examine the current military capabilities of both states. By examining current trends, potential challenges, and emerging capabilities, this study seeks to understand how AI and advanced technologies will influence the balance of power and international security structure in the coming decades.

What Makes U.S. Conventional Military Power Stand Out

As a major world power, the United States has a wide range of foreign interests, which makes it necessary for the military to be prepared to defend the nation and protect national interests everywhere. With its many allies, reliance on international trade, and ongoing threats from powerful rivals looking to erode its influence in strategic areas, the United States cannot afford to focus on any one region or particular threat. Thus, in order to safeguard the freedom to utilize the global commons sea, air, space, and cyberspace that are essential to the American economy and political influence, the U.S. military has to be suitably big, armed, and ready. But as earlier iterations of the Index of U.S. Military Strength have made clear, the U.S. military is not adequately equipped to carry out its duties and is incapable of managing several Major Regional Contingencies (MRCs). Over the last two to three years, things have become worse.

The United States encounters increasing obstacles from significant rivals like China and Russia, in addition to the destabilizing influence of terrorist and rebel factions in critical areas. The continued conflict and Russia's massive invasion of Ukraine in February 2022 demonstrate that warfare is still a problem in today's world, impacting China's ambitious military build-up and its threats against Japan and other allies of the United States in the Indo-Pacific. Though development varies, nations like Poland, Germany, Lithuania, and Japan have acknowledged these challenges and are dedicated to strengthening their military capabilities. In contrast, the United States has not made a similar commitment, and as a result of inflation eating away at its spending, its military might have shrunk even more (The National Institute for Defense Studies, 2022).

From Munitions to Target Model

During the Cold War, the United States assessed its military requirements in relation to the Soviet threat using a symmetrical correlation of forces technique. To ascertain the needs of the fleet, army, and air force, planners directly compared tanks, planes, and ships with their Soviet counterparts. These comparisons have become more difficult since the late 1980s due to developments in guided precision bombs and surveillance technologies. As demonstrated by wars such as Nagorno-Karabakh and Ukraine, modern fighting now centers on munitions-versus-target instead of platform-versus-platform. By reducing the quantity of ammunition required, precision weapons raise operational lethality and complicate contemporary warfare (Waseem & Jamil, 2023).

Due to the widespread use of precision-guided munitions, the number of *smart munitions* that the opponent has must be taken into account when calculating the number of platforms and soldiers needed for battle. Unmanned systems introduce additional intricacy. Precision and technology advancements make it possible to be more effective with fewer resources, but they also increase the cost of deploying such weapons (Haddal & Hayden, 2018).

Opportunities and Challenges Ahead

Precision and stealth weapons are examples of technological advances that enable smaller forces to have a greater impact. Contemporary U.S. military assets, including computers, telecommunications, space-based systems, and networked operations, increase combat effectiveness. However, as seen in Ukraine, certain military tasks, such as seizing and protecting land, still require a sizable labor force. Each element makes up a higher percentage of the total battle power when the troops are fewer. Sustaining high-intensity operations can be negatively impacted by casualties or equipment losses, particularly when numerous theatres are involved.

Future battles may be decided more by the skill and operational ability of the opposing forces than by differences in technology as sophisticated technology becomes more widely available and inexpensive. Capacity and preparedness will thus be essential. Because of the complexity and potential for bias in defense plan evaluations, budget submissions, and leadership comments, evaluating America's military might take careful consideration. Reliance on perhaps edited or restricted documents is inevitable in the absence of such assessments.

The U.S. Joint Force and the Strategy of Modern Warfare

This section of the study assesses America's defense strategy with regard to conventional hard power, which is the capacity of the American military to confront and subdue adversaries on a scale commensurate with critical national interests. Certain elements, like necessary strength, opponent expertise, political will, and speed—can be measured, while others—like future military requirements, range, detection likelihood, and radar cross-section, remain subjective and require judgment and experience. Our evaluation combines quantitative and qualitative elements and is based on an in-depth analysis of military and outside knowledge. Effectiveness in the military is both a science and an art. While individual military instruments such as weapons, platforms, and units can have an influence, their combined

and coordinated might is greatly increased. Although difficult to measure, this employment principle is vital to combat and is acquired by experience.

This study does not analyze Reserve and National Guard components, which make up around one-third of the U.S. armed force, instead concentrating on the state of hard power itself. It is difficult to regularly assess these components because of a variety of variables, including availability, cost, reaction time, and political issues. However, without Reserve and Guard personnel, the U.S. military is unable to manage significant wars. The research takes into account the baseline combat power available in the Active component of each service in order to ensure consistency in yearly assessments. There are exceptions where substantial resources improve the preparedness of certain Reserve units, as four Army National Guard BCTs in the 2020 Index demonstrate (*Introduction: An Assessment of U.S. Military Power, 2022*).

Aligning the Defense Budget with Strategic Goals

The amount allotted to defense does not inherently determine the strength or posture of the US military. Increased military might does not always follow from higher defense budgets if money is wasted or misappropriated. A competent, up-to-date, and prepared force requires an adequate budget, yet funding on its own is insufficient. There is a general correlation between defense spending as a percentage of the federal budget or GDP and the military's status because the costs of equipment, personnel, and readiness are in line with general economic costs and technological advancements. The defense budget is a reflection of the priority given to national defense in federal spending (Smithberger, 2021).

The United States government strikes a balance between defense expenditure and other governmental priorities when there is no serious threat to the country's survival. The optimal process for establishing defense requirements involves recognizing national interests, analyzing the costs involved, assessing risks, and figuring out what has to be done to fight such threats. The security interests of the United States are in danger from any disparity between estimated requirements and actual defense spending.

Linking interests, threats, needs, resultant force, and budget is the methodology used in this index. Policy discussions on where to take risks in force modernization, capability for large-scale or numerous simultaneous operations, or force readiness occur when less money is spent than needed for a two-MRC force. The emphasis on competing with China and Russia has

made these challenges more crucial. The resource requirements of war and the potency of well-trained and armed military formations have been brought to light by Russia's conflict with Ukraine (McInnis, 2023).

The Joint Force performs a variety of tasks, such as large-scale combat operations, regional participation, crisis management, strategic deterrence, aid to civilian authorities, and support for US diplomacy. While significant combat operations are rather seldom happening, approximately every 15 years, the military continuously performs other vital tasks.

The Indo-Pacific Command (INDOPACOM), Southern Command (SOUTHCOM), Africa Command (AFRICOM), European Command (EUCOM), Central Command (CENTCOM), and Northern Command (NORTHCOM) of the United States have all made plans to interact with the nations in their respective areas (US Central Command, 2016). These interactions strengthen ties, advance knowledge of regional dynamics, and highlight American security objectives. They can take many forms, from small-unit training with a single partner to large-scale multilateral exercises. The services offer units that are either permanently based or temporarily rotated in various locations to support COCOM objectives. A base force big enough to consistently train, deploy, support, receive back, and prepare troops in order to satisfy COCOM demand is necessary to maintain these rotations.

The ratio of time spent at home to time deployed, or operational tempo or OPTEMPO, should ideally be at least 3:1 in order to allow soldiers to retain a healthy family life and provide units enough time for training and preparation. For instance, before redeploying, a unit that has been deployed for six months should spend eighteen months at home. This ratio requires an adequate number of soldiers, troops, ships, and aircraft (Herrera, 2020). The Joint Force may be scaled to satisfy forward-based and forward-deployed demands if the main goal was peacetime involvement. Nevertheless, in order to seize a large combat operation, one must weigh the military might require winning potential war scenarios against the needs of COCOM, historical study of previous wars, assessment of present threats, and U.S. capabilities. Evaluations of possible conflicts with China or Russia during peacetime tend to underestimate the conditions necessary to prevail in a war. Estimates made during peacetime may miss the harsh truths that war exposes.

The United States needs a force that is up-to-date, prepared, and efficient in all areas of combat to meet the challenges posed by these highly developed nations, according to national security policies from 2017 to 2023 (National Security Strategy, 2022). The Biden Administration carried on the pattern of

growing non-defense spending faster than defense spending in FY 2023. For the DOD base discretionary budget, $773 billion was the original proposal, representing a 4.1 percent increase from the year before. In contrast to the 10% increase in non-defense funding proposals for other federal agencies, this increase was, however, negligible. Congress decided that the defense budget was insufficient and added $45 billion to it in order to combat inflation and expedite the execution of the National Defense Strategy (Michael, 2024).

A Closer Look at China's Conventional Military Power

The People's Republic of China (PRC) is the main rival of the United States, according to its 2022 National Security Strategy, and it has the intention and increasing ability to change the global order. Congress is given access to China's political, economic, and military goals through the Department of Defense's yearly report on military and security developments involving the PRC, which highlights Beijing's objectives. Consolidating all facets of national power is the main goal of the PRC's policy in order to maintain a "leading position" in a long-term battle between various systems ("U.S. Dept. Of Defense, Military and Security Developments," 2022).

The PRC poses the greatest and most pervasive threat to American national security as well as the free and open international order, according to the 2022 National Defense Strategy. In this pivotal decade, it is imperative to comprehend the military strategy, present operations, capabilities, and future modernization objectives of the People's Liberation Army (PLA). In 2021The PRC has increasingly leveraged the PLA as a tool of statecraft, taking a more assertive and forceful approach in its actions across the Indo-Pacific region. The PLA now plans to further integrate mechanization, informatization, and intelligence by 2027 after apparently achieving its modernization objective of 2020 ("Implications of PLA Modernization," 2023). If successful, these developments might improve the PLA's capacity to serve as the Chinese Communist Party's (CCP) reliable military tool, especially when it comes to seeking Taiwan unification. Beyond conventional capabilities, the PRC is stepping up nuclear force modernization, diversification, and growth to bolster its *strategic deterrent*. Concerns over China's unwillingness to talk about its growing nuclear, space, and cyberspace capabilities, however, are growing since they present threats to the strategic stability of the world. his research underscores Beijing's ambition to reshape the current international order as it pursues its goal of national rejuvenation by 2049, the centenary of the PRC. To achieve its strategic aims, which are articulated through initiatives like Xi Jinping's Global Development and Global Security Initiatives, China seeks a supportive global environment (Amonson, 2023).

Decoding China's Military Strategy

In its latest National Strategy, China introduced the concept of "the great rejuvenation of the Chinese nation," with the aim of realizing this vision by 2049. This involves a focused effort to modernize the country across military, social, and political spheres to strengthen national power, enhance governance, and reshape the global order in a way that aligns with Beijing's objectives. The PRC believes that serious obstacles to its national plan exist because the US is using a whole-of-government strategy to restrain China's ascent. China sees strategic competition as a conflict between strong countries and diametrically opposed ideologies. Chinese officials blame the U.S. for becoming more combative and structural changes in the international system for the escalating rivalry. China's strategy consists of concentrated efforts to build up and strengthen its national power on the inside as well as the outside, with the goal of securing a leading position in an ongoing systemic competition. The PLA's 2027 centennial goals will be significantly impacted militarily and strategically by the results of the 20th CCP National Congress. According to the Congress study, the PLA should modernize more quickly over the next five years, with a focus on strengthening its *system of strategic deterrence.* The Central Military Commission (CMC) was led by Xi Jinping, who also chose members with political continuity, military modernization experience, and operational experience in Taiwan. Establishing a *community of common destiny* to bolster its national rejuvenation plan is the goal of China's foreign policy. Beijing's national policy and the political and administrative structures of the CCP are the sources of its revisionist aspirations for the international order. In 2021, China employed various diplomatic tactics to undermine the influence of the U.S. and its allies. These included emphasizing the U.S. withdrawal from Afghanistan and criticizing security partnerships such as the Quad (comprising Australia, India, Japan, and the U.S.) and AUKUS (a trilateral security pact between Australia, the United Kingdom, and the U.S.) (Johnstone, 2024).

In order to create a unified National Strategic System and the necessary capabilities to meet its objectives for national rejuvenation, China's Military-Civil Fusion (MCF) plan integrates its security and development agendas (Joshi, 2023). To strengthen China's total national might, this strategy focuses on creating and purchasing cutting-edge dual-use technology for military purposes as well as reorganizing the country's defense science and technology sectors. The MCF strategy is comprised of six interconnected initiatives:

- Integrating Defense and Civilian Industries: Combining China's economic foundation for defense with its industrial and technological sectors for civilian use.

- Leveraging Innovations in Science and Technology: Applying advances in science and technology to both military and civilian applications.

- Developing Talent: Combining civilian and military experience and knowledge.

- Integrating Military Requirements with Civilian Infrastructure: Using civilian buildings for military objectives and integrating military requirements with civilian infrastructure.

- Using Civilian Services for Military Objectives: Making use of civilian transportation and services for military objectives.

- Extending National Defense Mobilization: Improving China's system for mobilizing the national defense to incorporate all pertinent facets of the economy and society in preparation for both conflict and diplomacy (Fritz, 2019).

Assessing China's Military Power and Its Role on the World Stage

In order to function as an efficient combined force, the PLA seeks to modernize and improve its capabilities in all combat areas, including land, air, sea, nuclear, space, counter-space, electronic warfare, and cyberspace. The PLA is the main ground force of the PLA, with around 975,000 members serving on active duty. It concentrated on standardizing training techniques and creating realistic training situations in 2021. Examples of these were joint exercises with Russia on a wide 2023).

People's Liberation Army Navy (PLAN): With over 340 ships and submarines, including 125 significant surface combatants, the PLAN is the largest navy in the world in terms of quantity. Even with the handover of 22 corvettes to the China Coast Guard, the PLAN is modernizing with the launch of new amphibious assault ships and cruisers ("U.S. Dept. Of Defense, Military and Security Developments", 2022). With more than 2,800 aircraft, including 2,250 combat aircraft, they collectively constitute the third biggest aviation force in the world as well as the largest in the area. The PLAAF is quickly modernizing, bringing in UAVs and aircraft manufactured in the country, and it has unveiled the H-6N, the first air-to-air refuellable bomber

with nuclear capability ("U.S. Dept. Of Defense, Military and Security Developments", 2022). The PLARF, or People's Liberation Army Rocket Force, is in charge of China's nuclear and conventional troops stationed on key ground. It launched more ballistic missiles for training and testing in 2021 than the rest of the world combined (excluding war zones), with over 135 launches. With the goal of having at least 300 additional ICBM silos, China is continually expanding its ICBM silo fields (Mihal, 2021).

The main goals are space dominance and information sphere control, which are crucial for contemporary "informatized warfare." The SSF makes investments in robotic space exploration, human spaceflight, satellite communication, navigation, weather, and space-based ISR (IMR: 2023). China's policy seeks to limit American access in the larger Indo-Pacific area and to prevent American presence close to its borders. The PLA doctrine highlights the significance of precision strikes in contemporary battles in all areas of warfare. Precision weapons are regarded as instruments for "war control" to moderate escalation and as force multipliers. China has a strong Integrated Air Defense System (IADS) that stretches 300 nautical miles (556 kilometers) from its coast and covers its land areas. Surface-to-air missile (SAM) systems, fighter aircraft, and early warning radar networks are all part of this system. The IADS range is further increased by radars and air defense missiles stationed on South China Sea installations. Strategic objectives are shielded from airborne assaults and long-range cruise missiles by point defenses. This system is intended to target foreign military sites and fleets in the Western Pacific and may eventually replace certain earlier Short-Range Ballistic Missile (SRBM) systems (Panda, 2017).

Assessing the Military Power of the U.S. and China: A Comparative Study

Due to globalization, World politics is dominated by the United States and China in the current structure of the world and each of these power's actions affects the stability of the world. They are rivals to the bitter end so far as the military strength is concerned. The existence of similarities and differences in the analysis of the powers of the two countries with regard to military strength is converted in this research through the factors of the defense budget, manpower, technology, and strategic strength of the United States and China, respectively. Technology plays an important role in the modern world, especially in the forces. Both nations are involved in the production of the most modern military systems like artificial intelligence, smart ammunition, and cyber warfare. The United States employs technical supremacy to maintain its hegemony in several domains concerning the kinetic operation, namely the air, the sea, and outer space domains. Human resources still retain a very significant place and value in military power. The labor force is

considered to be highly skilled and voluntary in the United States military where the tools and instructions deployed are also considered to be up to date. The People's Republic of China, with the largest number of standing armies in the globe continues to modernize it, with absorption and quality highlighted.

Strategic capabilities include nuclear dissuasion, presence projection, and globe-encompassing. Thus, the United States of America is capable of carrying out a vast number of operations through such military stations globally, hence admitting to providing sustainable operations and rapid deployment (Lippert et al., 2020). Thus, China's policy is preoccupied with building the capacity to exert power beyond its shores and managing the region, especially the Indo-Pacific region.

Comparing the given countries, this paper elucidates the strengths, resources, workforce, and technology because they define the tendencies of the global military and explain the complexity of military competition between the US and China. China has hiked up its defense budget by a great deal over the past two decades or so. Stockholm International Peace Research Institute

(SIPRI) estimates suggest that China is the second-largest military spender after the USA, though China is not nearly as transparent with its budget as the USA. China is projected to spend $252bn on defense in 2021(SIPRI Military Expenditure Database, 2023). At present, China is strengthening its defense system, focusing on the creation of missiles, influence in cyberspace, and the development of naval forces.

Artillery is one of the primary elements or weapons for achieving military domination, and for its control, new technologies should be created. Over time, the United States has been regarded as the world's superpower in military technology due to the developments that have been made in information technology, armaments, and aircraft. According to Stanford University data, US defense companies such as Lockheed Martin, Boeing, and Northrop Grumman Industry are part of the defense industry that makes modern weaponry, including accurate guided missiles, stealth airplanes, and UAVs (The US Defense Industry and Arms Sale n.d). These weapons make the US troops tactically superior for many reasons. However, China has been animated in recent years concerning enhancing military technologies. Schemes like the 'Made in China 2025' intend to give high-tech industries in China a competitive advantage in the world market and minimize dependence on foreign counterparts. They have proved their growing muscle in stealth, cyber, and missile defense with the development of new generation weapon systems such as Type 055 destroyer, DF-21D anti-ship ballistic missile, and J-20 stealth fighter aircraft (McBride & Chatzky, 2019). As all forces and operations in the military entail, quality of labor is as important as quantity in

the military. Today, the United States of America hosts an all-volunteer force of about 1.3 million active-duty personnel famous for their professionalism, training, and technical expertise, backed by about 800,000 reservists and National Guard troops. Cognitive training, modern education, and training courses are offered to American soldiers so that they are ready for various tasks. That is, China has the largest reserve army in the world today, with roughly 2 million people on active duty. Currently, the PLA focuses on training quality enhancements, equipment, and the profession. Another capability, that is, a reserve army together with paramilitary formations, adds to the manpower strength of China's military.

Table 1: Comparison of Hard power

Country	Active Personnel	Reserve Personnel	Paramilitary Forces	Defense Budget
China	2,035,000	510,000	6 25,000	2.27 trillion
US	1,328,000	799,500	0	8.3 trillion

Table 2: Air Power

Country	Total Aircraft	Fighter Aircraft	Dedicated Attack	Transports	Trainers	Special Mission	Helicopters
US	13,209	1,854	896	957	2,648	695	5,737
China	3,304	1,207	371	289	402	112	913

Table 3: Land Power

Country	Tanks Strength	Armored Vehicles	Self-Propelled Artillery	Towed Artillery	Mobile Rocket Projector
US	4,657	360,069	1,595	1,267	694
China	5,000	174,300	3,850	1,434	3,180

Table 4: Naval Power

Country	Fleet Strength	Aircraft Carriers	Heli Carriers	Submarines	Destroyers	Frigates	Corvettes	Mine Warfare
US	472	11	9	64	75	0	23	8
China	730	2	3	61	49	42	72	36

Source: Global Fire Power (2020 World Military Strength: 2020)

How Conventional Deterrence Influences U.S. and China's Military Alliances and Influence

Any military force projection strategy must, in this way, consider a nation's presence in the region and alliances. The United States of America has numerous military facilities around the world, forward operations, allied exercises, and sustainment. Significant and strategically important American facilities and bases on the Pacific Rim assets like those that are in Guam, Japan, or South Korea allow for a speedy response to threats that include potential wars in the Korean Peninsula or the South China Sea. Official defense agreements that the United States has with Australia, South Korea, Japan, and the Philippines also support the US security interests in the Pacific (Stevenson, 2020).

Unlike the USA which is more spread out, China has been leveraging on the BRI to grow its strategic outreach. This infrastructure development program takes steps to increase the interaction and trade between countries in Eurasia and other parts of the world through funds for ports, trains, and infrastructure in more than Southeast Asia, Africa, and the Middle East (Yu, 2024). China also deepens its military cooperation with neighbors within the framework of the SCO and bilateral defense agreements. Thus, in the contemporary system of armed forces, one can speak about the growing roles of cyber and space warfare. Many investments have been made by both the US and China within these sectors. Cyber warfare is well developed in the United States; the NSA and the United States Cyber Command engage in cyber operations while at the same time protecting against cyber operations. Another important factor

of military operations is space-based assets for communication, surveillance, and navigation relevant to the USA.

China's information warfare capabilities are growing rapidly as state-backed hackers attack firms, governments, and key assets. For instance, the Chinese military has formed cyber teams to interrupt the communication of the opposition, spying on them, and psychological warfare. Apart from manufacturing anti-satellite (ASAT) weapons, China has also sent its communication and navigation satellites into orbit (Gertz,2024). These developments make it possible for some countries to develop space weapons, yet the superior military strength of the US in space still needs justification.

The research discusses the future prospects of conventional deterrence between the US and China. It is significant to highlight the current trend in the world, especially the advancement of technology, and recent developments have been witnessed, especially in the military as well. Modern warfare has been characterized by the deployment of technologies, particularly AI of the 21st century, that are rapidly revolutionizing the capacities in different fields (Rashid et al., 2023). AI, for instance, the Mars rovers, Spirit, and Opportunity that have been in operation since 2001 has given machines the ability to learn, plan, and decide like humans.

However, although AI has the potential to improve knowledge exchange and innovation, its incorporation into military operations creates profound questions about a nation's security, command structures, and global stability. For instance, the President of Russia, Putin, has pointed to the importance of AI in changing global power relations, not to mention the fact that AI is set to redefine future warfare.

The use of AI in military conflicts, for example, in the war between Ukraine and the Russian Federation, is a prime example of modern warfare's contentious but present phenomenon. Some of the tools and technologies applied in contemporary wars include drones, satellites, and cyber, and they have been crucial in recent wars, which shows that warfare technology is rapidly changing.

Problems associated with the creation of Lethal Autonomous Weapon Systems (LAWS) include strategic miscalculations and the destabilization of nuclear states. Today, most countries, such as Russia, China, and the United States, invest heavily in developing AI technology for military systems.

Incorporating AI in UAVs, missile systems, submarines, and aircraft is an ongoing process of using technological dominance in defense mechanisms. Approaches such as the US National Security Strategy 2022 focus on the coordinated acquisition and application of AI systems by like-minded partners to protect mutual military interests.

Prospectively, China's plan to become an AI superpower by 2030 and the development of AI in defense systems depict a race to attain technological superiority. However, nations like Russia and Israel are steadily developing AI applications in specific areas, such as naval and anti-missile functions.

Deterrence is the core characteristic of nuclear weapons, which are political instruments used to prevent the use of force rather than to apply force (Jervis, 1979). Should decision-making on the use of force be delegated to artificial intelligence systems, the efficacy of threats and the long-standing norm not to use nuclear weapons could be undermined, which may change the nature of threats and threats' coercion in the relations between the nuclear states (Fitzpatrick, 2019).

This is due to its ability to transform the way that international debates on the involvement of human beings in the management of military technology are conducted. There are some who propose that LAWS should not be used in the first place and that there should be no development of these systems at all. The Confidence Building Measures (CBMs) and non-binding Transparency and Confidence Building Measures (TCBMs) are regarded as provisional solutions to these severe global security threats.

Political scientists recommend temporarily banning AI-driven military applications, which are regarded as the most efficient strategy for addressing these novel threats until a legally non-binding treaty is reached (Johnson, 2020).

Autonomous battlefields under the Umbrella of Deterrence

Unmanned aerial vehicles are among the recent revolutionary technologies taking root in modern warfare and are ranked as the third revolution in warfare, with gunpowder and nuclear weapons as the other two. Their effectiveness was seen in the Second Nagorno-Karabakh War, where Azerbaijan armed with Israeli and Turkish drones, including the lethal 'Harop 'loitering munitions, provided the beating edge against Armenia's conventional forces. This was a turning point, with the national militaries actively procuring unmanned aerial systems.

The US National Security Commission on AI also explains how self-governing technologies redefine warfare and calls for significant expenditures in this domain. Today, China, Russia, Great Britain, and Israel are actively developing and purchasing new generations of drones, expecting their operational advantages.

Technological developments like Li-ion batteries facilitate the production of cheap micro and small drones capable of coordinated operations in swarms. If incorporated into a network and working at a pace as fast as a machine, these swarms can overtake old radar systems and pose a threat to high-value military equipment.

Of specific worry are self-flying quadcopters. They are endowed with a computer vision for the identification and locking of targets and could be used in 'targeted killings' besides the conventional combat zones. This development adds a new strenuous dimension of persistent and remote threats.

Military drones are another revolutionary factor in recent military actions. They can be seen as the element with both direct coercive power and strategic challenges that have an impact on contemporary warfare doctrines and defense worldwide.

The Evolution and Impact of Contemporary Strategic Approaches in Global Military Affairs

In this context, the signaling aspect is a key component underlined in the framework to support the use of LAWS for deterrence. AI-based systems bring uncertainty to the interactions between users and adversaries. Governments have the dilemma of making the large-scale and real-world tests for their algorithms transparent while keeping the data from foreign adversaries, resulting in deliberate ambiguity. Open testing serves to eliminate uncertainty for the potential LAWS users as well as communicate technical capacity to potential adversaries, while the safeguarding of these trials maintains a veil of exclusivity and decreases the likelihood of an AI-precipitated security dilemma within the Great Power system.

Transparency helps in the deterrence function and assists with the testing and evaluating LAWS, thus improving the signaling of capabilities. Research has found that clarity of the initial signal of capability and intention is the best way to prevent aggression; ambivalence provokes aggression. The signaling process becomes challenging when it has to do with automated systems because different autonomous platforms analyze the messages received. PLA strategists expect future warfare to be characterized by UAVs, MUMTs, and

AI-driven decision-making to counter the opponents. These advances are heading to solve PLA leadership's problem in decision-making where the conditions are already unknown or unpredictable (Purdy &Williams, 2023.

The PLA's Academy of Military Science issued a report in 2013 that strategic military deterrence is supplemented by the principles of using high-tech equipment and Informa-ionization, as well as introducing uncertainty and randomness in the assessment of the opponent through new military concepts and theories. LAWS translates into new unpredictabilities regarding China's capability to foresee its forces' actions and manage adversary autonomous systems, thereby raising the possibility of accidental escalation and great power war.

China's AI military research focuses on autonomous hardware that includes robotic tanks, swarms of drones, and remotely operated submarines. Intelligentized warfare is considered the fourth revolution in military affairs and has had a major influence on conventional military operational concepts. Intelligentized warfare is founded on artificial intelligence and incorporates the latest technologies into commanding, equipment, tactics, and decision-making at various levels of conflict. They consist of human-machine integrated groups of vehicles where self-driving systems have authoritative positions. An example is *latent warfare,* whereby LAWS are placed in strategic positions and are then set on autopilot for aggression against the hostile party or structures. Thus, the U.S. military considers AI and LAWS as necessary tools to accomplish the mission in the present and future conflicts. The Americans see autonomy as providing fundamental protection and lethality benefits and helping the commanders to decide more speedily and accurately in rivalry and emergencies. The United States and China are developing disruptive capabilities, weapon systems, and military concepts involving LAWS. Still, there is no shared understanding of how each side will interpret the other's actions in competitive scenarios, and thus, the risk of inadvertent escalation to conflict is high (Cox & Williams, 2021).

Furthermore, the need for high-quality adversary data to achieve sufficient quantities to assure predictable performance of LAWS in conflict situations can breed 'Military Deception.' This would deceive the adversary to doubt their information and, therefore, the capacity of autonomous platforms to face real enemies

Advent of Autonomous Weapon: more Room for conventional Deterrence in National security Strategy

The proponents of autonomous weapons systems have noted the following advantages in the military. First of all, these systems increase the efficiency of missions by using fewer people, being force multipliers. They also increase the theater of operations, get to places that were previously inaccessible, and decrease the loss of human life by taking soldiers out of harm's way.

The Department of Defense's Unmanned Systems Roadmap (2007-2032) also offers further reasons for more autonomy in weapons. Hence, robots are more appropriate to be used for boring, toxic, or lethal' operations: for example, sustained search and rescue operations, contact with toxic substances, or dealing with improvised explosive devices (Unmanned Systems Roadmap, 2007-2032, 2007). Lethal autonomous robots pose a threat, as Major Jeffrey S. Thurnher of the U. S. Army has explained; they are fast and accurate when it comes to striking, even when their links to the controlling authority are cut off (Thurnher, 2012).

One possible benefit of using military robots is cutting costs. David Francis, in The Fiscal Times of June 2013, notes data from the Department of Defense that pegs the yearly cost of a soldier in Afghanistan at about $850,000, while the TALON robot, an armed small rover, goes for $230,000. General Robert Cone noted that further reliance on support robots could lower the size of an Army brigade from 4,000 troops to 3,000 but retain the force's efficiency (Thurnher, 2012).

Sensors and sensing compose perception, which includes the physical components and the software components. Planning involves determining a sequence of activities that, when executed, leads to the occurrence of certain events of interest while using algorithms in decisions where people are not involved (Bistron & Piotrowski, 2012). The term learning in the context of AI could mean machines analyzing large data and arriving at usable and, in some cases, better knowledge, such as self-driving cars on the road.

Human-robot interaction focuses on how people interact with robots that exist in the physical environment and must be studied and developed in collaboration with engineers, psychologists, cognitive scientists, and communication specialists. Autonomy involves using natural language processing, which allows systems to work with the language used in the user's instructions, whereby the users provide general objectives instead of specific commands (Harel, Marron & Sifakis, 2020). Finally, distributed tasks entail

assigning work to many robots, software agents, or people, recognizing each capability, and ensuring that collective objectives are met, mimicking human-like cooperation.

Conclusion

The growing military rivalry between the United States and China profoundly reshapes global power dynamics. On one hand, the U.S. maintains a broad, highly advanced military presence worldwide, backed by strong alliances and cutting-edge technology in air, sea, and space. On the other hand, China is rapidly modernizing its military, focusing on its regional influence in the Indo-Pacific, where it seeks to limit U.S. operations and project its own strength.

China's approach includes a blend of conventional military growth and innovative strategies, such as Military-Civil Fusion, in which military and civilian resources are closely linked to drive technological advancements. With extensive investments in areas like missile technology, naval expansion, and cyber capabilities, China is positioning itself to counter U.S. influence, particularly close to home.

While the U.S. continues to lead globally with a highly skilled force and a reach that spans continents, China's military rise is focused and deliberate. It aims to challenge the U.S. presence in Asia without matching its global deployment. This dual approach brings both nations into a more direct and complex competition, where technology, regional alliances, and strategic foresight are essential.

This heightened competition between two superpowers goes beyond military strength and speaks to a deeper question of influence and control in an increasingly interconnected world. It reminds us of the critical role diplomacy and cautious strategy must play in maintaining global stability as both nations navigate their ambitions in ways that could shape the world order for generations to come.

References

Amonson, K., & Egli, D. (2023). The Ambitious Dragon: Beijing's Calculus for Invading Taiwan by 2030. *Journal of Indo-Pacific Affairs*, *6*(3). Retrieved from https://www.airuniversity.af.edu/JIPA/Display/Article/3371474/the-ambitious-dragon-beijings-calculus-for-invading-taiwan-by-2030/.

Bistron, M., & Piotrowski, Z. (2021). Artificial intelligence applications in military systems and their influence on sense of security of citizens. *Electronics*, *10*(7), 871.

Cox, J., & Williams, H. (2021). The unavoidable technology: How Artificial Intelligence can strengthen nuclear stability. *The Washington Quarterly*, *44*(1), 69-85.

Fitzpatrick, M. (2019). Artificial intelligence and nuclear command and control. *Survival*, *61*(3), 81-92.

Fritz, A. (2019, August 2). China's Evolving Conception of Civil-Military Collaboration. *Center for Strategic and International Studies (CSIS).* Retrieved fromhttps://www.csis.org/blogs/trustee-china-hand/chinas-evolving-conception-civil-military-collaboration.

Gertz, B. (2024, January 5). China's Space Warfare Plans. *Real Clear Defense*. Retrieved from https://www.realcleardefense.com/2024/01/05/chinas_space_warfare_plans_1002957.html.

GFP. (2020). Global Firepower –World Military Strength Rankings,"www.globalfirepower.com, 2024, https://www.globalfirepower.com

Haddal, R., & Hayden, N. K. (2018). *Autonomous Systems Artificial Intelligence and Safeguards* (No. SAND2018-9787C). Sandia National Lab. (SNL-NM), Albuquerque, NM: United States.

Harel, D., Marron, A., & Sifakis, J. (2020). Autonomics: In search of a foundation for next-generation autonomous systems. *Proceedings of the National Academy of Sciences*, *117*(30), 17491-17498. https://doi.org/10.1073/pnas.2003162117.

Herrera, G J. (2020). The Fundamentals of Military Readiness. Congressional Research Service(CRS) Reports. Retrieved from https://crsreports.congress.gov/

Implications of PLA Modernization. (2023, August 17).*Indo-Pacific Defense Forum*. Retrieved from https://ipdefenseforum.com/2023/08/implications-of-pla-modernization/.

Introduction: An Assessment of U.S. Military Power. (2022, October 18). *The Heritage Foundation*. Retrieved from https://www.heritage.org/military-strength/intro-assessment-us-military-power.

Jervis, R. (1979). Deterrence theory revisited. *World Politics*, *31*(2), 289-324.

Johnson, J. (2020). Artificial intelligence: a threat to strategic stability. *Strategic Studies Quarterly*, *14*(1), 16-39.

Johnstone, C.B. (2024). China's Evolving Counter Intervention Capabilities and Implications for the United States and Indo-Pacific Allies and Partners. *Center for Strategic and International. Studies(CSIS).*Retrieved from https://www.csis.org/analysis/chinas-evolving-counter-intervention-capabilities-and-implications-united-states-and-indo.

Joshi, M (2023, July 21). China's Military-Civil Fusion Strategy, the US Response, and Implications for India, .*Observer Research Foundation(ORF).* Retrieved from https://www.orfonline.org/research/china-s-military-civil-fusion-strategy-the-us-response-and-implications-for-india.

Lippert, B., Perthes, V., & und Politik-SWP-Deutsches, S. W. (2020). Strategic rivalry between the United States and China: Causes, trajectories, and implications for Europe. *Berlin: Stiftung Wissenschaft und Politik -SWP- Deutsches Institut für Internationale Politik und Sicherheit* https://doi.org/10.18449/2020RP04.

Lu, M. (2020. The Three Largest Defense Companies in the World Are. Stanford.edu. https://web.stanford.edu/class/e297a/U.S.%20Defense%20Industry%20and%20Arms%20Sales.htm.

McBride, J., & Chatzky, A. (2019). Is 'Made in China 2025'a threat to global trade? *Council on Foreign Relations*, *13*. https://www.cfr.org/backgrounder/made-china-2025-threat-global-trade.

McInnis, J. M. (2023). Russia and China Look at the Future of War. *Washington, DC: Institute for the Study of War*. Retrieved from https://www.understandingwar.org/sites/default/files/Russia%20and%20China%20Look%20at%20the%20Future%20of%20War_0.pdf.

Mihal, C.J. (2021). "Understanding the People's Liberation Army Rocket Force Strategy, Armament, and Disposition," *Army University Press*.

https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/China-Reader-Special-Edition-September-2021/Mihal-PLA-Rocket-Force/.

Michaels, J. H. (2024). Deterrence Studies: A field still in progress. *Journal of Strategic Studies*, 1-22. doi:10.1080/01402390.2024.2417388.

National Security Strategy.(2022, October 12). The White House. Retrieved from https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf

Panda, A. (2017, December 28). Introducing the DF-17: China's Newly Tested Ballistic Missile Armed with a Hypersonic Glide Vehicle. *The Diplomat*. Retrieved from https://thediplomat.com/2017/12/introducing-the-df-17-chinas-newly-tested-ballistic-missile-armed-with-a-hypersonic-glide-vehicle/

Purdy, M. and Williams, M. (2023, October 6). Decision-making and problem-solving. *Harvard Business Review*. Retrieved from https://hbr.org/2023/10/how-ai-can-help-leaders-make-better-decisions-under-pressure.

Rashid, A. B., Kausik, A. K., Al Hassan Sunny, A., & Bappy, M. H. (2023). Artificial intelligence in the military: An overview of the capabilities, applications, and challenges. *International Journal of Intelligent Systems*, *2023*(1), 8676366.https://doi.org/10.1155/2023/8676366.

SIPRI Military Expenditure Database. (2023). STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE. Retrieved from https://www.sipri.org/databases/milex.

Smithberger, M. (2021). The United States needs to cut military spending and shift money to two pressing threats: Pandemics and climate change. *Bulletin of the Atomic Scientists*, *77*(5), 251-254. Retrieved from https://thebulletin.org/premium/2021-09/the-united-states-needs-to-cut-military-spending-and-shift-money-to-two-pressing-threats-pandemics-and-climate-change/.

Stevenson, J. (2020). Overseas bases and US strategic posture. *Adelphi Series*, *60*(484-486), 9-32. https://doi.org/10.1080/19445571.2020.2092287

The National Institute for Defense Studies. (2022). *The New Normal of Great Power Competition: The U.S.-China-Russia Relationship and the Indo-Pacific Region NIDS International Symposium on Security Affairs 2022.* Retrieved from https://www.nids.mod.go.jp/event/proceedings/symposium/pdf/2022/e_all.pdf.

The U.S. Defense Industry and Arms Sale.(n.d). Retrieved from https://web.stanford.edu/class/e297a/U.S.%20Defense%20Industry%20and%20Arms%20Sales.htm

Thurnher, J. S. (2017). *Legal implications of fully autonomous targeting. Jt Force Q 67: 77–84.*https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-67/JFQ-67_77-84_Thurnher.pdf.

"Unmanned Systems Road Map 2007-2032," Department of Defence Washington DC, 2007, https://www.govinfo.gov/content/pkg/GOVPUB-D-PURL-LPS91893/pdf/GOVPUB-D-PURL-LPS91893.pdf.

US Central Command, "COMPONENT COMMANDS," Centcom.mil, 2016, https://www.centcom.mil/ABOUT-US/COMPONENT-COMMANDS/.

U.S. Dept. Of Defense, Military and Security Developments Involving the People's Republic of China 2022, November 29, 2022. (2022, November 29). *USC_US China Institute.* Retrieved from https://china.usc.edu/us-dept-defense-military-and-security-developments-involving-peoples-republic-china-2022-november-29

Waseem, R. & Jamil, A.(2023). Entanglement of Deterrence: Risk of Inadvertent War in South Asia. *Strategic Perspectives (1)*1.

Yu, H. (2024). China's Push for the BRI in a Changing World: Origins and Motivations. In *Understanding China's Belt and Road Initiative* (pp. 1-21). Singapore: Springer Nature Singapore. https://doi.org/10.1007/978-981-99-9633-9_1.