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Redefining Security: The Militarisation of Artificial Intelligence and the Future of Global Order

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ABSTRACT:

This study investigates the militarisation of artificial intelligence (AI) and its implications for the evolving international security architecture. Grounded in the realist tradition of international relations theory, the research posits that AI accelerates the pursuit of strategic advantage among great powers operating in an anarchic system, where technological superiority is equated with national survival. Employing a qualitative, interpretivist methodology, the analysis focuses on the military strategies of the United States, China, and Russia. Drawing upon official defence publications, scholarly literature, and institutional reports, the study examines how AI integration transforms decision-making structures, enhances operational capabilities, and reshapes doctrines of deterrence and warfare. Findings reveal that AI-enabled systems are increasingly central to modern combat operations, compressing decision cycles and altering the balance of power through autonomous weapons, predictive surveillance, and algorithmic command. These developments exacerbate geopolitical rivalries and strain existing ethical and legal norms, particularly in terms of accountability and proportionality in conflict. The study concludes that AI represents not merely a technological innovation, but a profound epistemic shift in strategic practice, one that undermines traditional assumptions of human agency, territorial defence, and arms control. It advocates for pragmatic frameworks of algorithmic transparency and anticipatory governance to address the regulatory vacuum that presently endangers global stability.

1. Introduction

Artificial Intelligence (AI) is fundamentally reshaping the global security architecture. Its rapid advancement and integration into military strategies revolutionise how modern warfare is conceived and conducted. AI is no longer limited to civilian uses; it has become a dual-use technology capable of automating decision-making, enhancing surveillance, deploying autonomous weapons, conducting predictive threat analysis, and executing cyber and psychological operations with unprecedented speed and precision (Ahmed, 2025; Erendor, 2024). These abilities are not only transforming traditional notions of conflict but also sparking new forms of geopolitical rivalry and raising pressing questions about law, ethics, and governance.

Central to this transformation is a strategic arms race among the major global powers, each striving to achieve technological superiority through the militarization of artificial intelligence. The United States, China, and Russia have each declared AI a national defence priority, investing vast resources to embed it within their doctrines and military modernisation efforts. China's Next Generation Artificial Intelligence Development Plan outlines its goal to lead the global AI landscape by 2030, while the U.S. continues to focus on AI through its Third Offset Strategy aimed at maintaining battlefield dominance (Sarkin & Sotoudehfar, 2024; Matsehora, 2024). Russia, despite lagging in civilian AI, continues to emphasize AI's military potential in both cyber and kinetic domains, reflecting broader trends of realist-driven strategic behavior in international politics (Roumate, 2024).

The ongoing AI arms race embodies the central principles of political realism, which assert that in the absence of a supranational authority, states operate within an anarchic international system where the maximisation of power and the safeguarding of national survival are paramount objectives (Matsehora, 2024; Ndzendze & Marwala, 2023). As Özdemir (2024) argues, AI has become a symbol of national prestige and technological superiority, reinforcing competitive dynamics in an already polarized international environment. The dual-use nature of AI, where the same algorithm can power civilian logistics or autonomous weapons, intensifies uncertainty among adversaries, heightening the security dilemma (Osimen et al., 2024). As states race to secure AI leadership, mutual suspicion escalates, undermining trust and multilateral cooperation.

Operationally, the militarisation of AI introduces novel challenges in both kinetic and non-kinetic warfare. One of the most striking developments is the emergence of Lethal Autonomous Weapons Systems (LAWS), which can identify and engage targets without direct human intervention. These systems also offer speed, precision, and reduced personnel risks. LAWS also complicates the application of international humanitarian law (IHL), which depends on human judgment to ensure distinction between combatants and civilians and proportionality in the use of force (Sarkin & Sotoudehfar, 2024; AlKuwari, 2021).

In cyber and information warfare, the impact of AI is even more diffuse. Machine learning algorithms are now deployed in cyberattacks, phishing operations, and deepfake propaganda campaigns designed to manipulate public opinion and destabilise democratic institutions. Erendor (2024)

documents how AI-driven hybrid warfare has been increasingly used by state and non-state actors alike, with Russia and China leveraging these tools to blur the lines between peace and conflict. Attribution becomes harder, retaliation more uncertain, and the risk of escalation correspondingly higher.

Despite these dangers, existing global governance structures remain inadequate. The Geneva Conventions, along with customary IHL, were not designed to regulate algorithms, neural networks, or autonomous decision-making processes. As Jafariandehkordi (2024) argues, the Geneva Conventions and existing international humanitarian law were never designed to regulate algorithms or autonomous military systems. The lack of enforceable norms or verification mechanisms allows major powers to expand AI capabilities without meaningful oversight.

Yet, AI is not solely a threat. When governed responsibly, it offers significant potential for advancing global security. Predictive analytics can support early warning systems and conflict prevention strategies, while autonomous systems may enhance disaster response and logistics for peacekeeping operations (Kimaita & Irungu, 2024; Anwar, 2025). However, as Ahmed (2025) notes, these benefits cannot be realised without effective regulation that ensures transparency, accountability, and equitable access to AI technologies. Without such frameworks, even peaceful AI applications may be coopted for harmful purposes.

Recent scholarship has laid critical groundwork in examining the ethical, legal, and strategic dimensions of AI militarization. For instance, Asaro (2020) offers a comprehensive ethical critique of autonomous weapons, focusing on the erosion of human agency in warfare and the implications for moral accountability (Asaro, 2020). Maas (2019) evaluates the feasibility of international arms control for military AI by drawing historical parallels to nuclear regulation, yet concludes that AI's complexity and dual-use nature pose unique verification challenges (Maas, 2019). Farr (2021) discusses the regulatory voids in current arms control regimes, especially concerning Lethal Autonomous Weapons Systems (LAWS), while Garcia (2024) advocates for a governance model grounded in global public interest (Farr, 2021; Garcia, 2024). Aleessawi (2025) extends the analysis by linking AI arms races to evolving geopolitical fault lines, stressing the ethical and security risks posed by unregulated technological competition.

Whilst these studies offer valuable contributions, they frequently address the militarisation of artificial intelligence from compartmentalised disciplinary standpoints, focusing variously upon technological developments, legal frameworks, or ethical concerns in relative isolation. What remains insufficiently examined is a thorough, security-oriented analysis that draws together the strategic, operational, and regulatory implications of AI in military affairs. This study aims to fill that lacuna by examining how AI is reshaping state conduct, deepening geopolitical rivalries, and disrupting the established architecture of international security, with a particular focus on developments in the United States, China, and Russia.

2. Methodology

This study adopts an interpretivist epistemological stance, whereby international relations and global security are viewed not as immutable or objectively determined phenomena, but rather as constructs shaped by the perceptions, decisions, and actions of principal actors. Such a perspective proves especially apt for examining how states understand and engage with the multifaceted challenges and prospects introduced by artificial intelligence (AI) in military affairs.

The inquiry employs a qualitative research design, intended not to establish universal laws but to elicit a nuanced appreciation of how states interpret and respond to the militarisation of AI. Particular attention is paid to the ethical, legal, and strategic dimensions of this phenomenon. The objective is to identify and interpret the motivations, contextual pressures, and policy choices that inform national approaches to AI integration within the defence domain.

In pursuing this aim, the study draws upon a diverse corpus of materials, including official government policy papers, peer-reviewed academic literature, and analyses issued by established research institutions such as the Brookings Institution, the RAND Corporation, and the Centre for a New American Security (CNAS). These sources furnish a robust empirical foundation for evaluating how the United States, China, and Russia formulate AI-related defence strategies, articulate national security objectives, and navigate the broader dynamics of the international security landscape.

3. Theoretical Framework

This study adopts realism as its theoretical foundation to examine the militarisation of artificial intelligence (AI) and its implications for global security. Realism is a core theory in international relations that views the international system as anarchic—lacking a central authority to enforce rules. It emphasises the role of states as rational actors that pursue power, prioritise survival, and act in their national interest to manage uncertainty and threat (Waltz, 1979; Mearsheimer, 2001).

Key contributors to realist theory include Hans Morgenthau, who linked political behaviour to human nature and the inherent drive for power. Kenneth Waltz advanced neorealism, arguing that the structure of the international system shapes state behaviour. John Mearsheimer, through offensive realism, contends that great powers are compelled to seek dominance to secure their position and deter rivals (Mearsheimer, 2001).

Realism rests on several core assumptions: anarchy, self-help, power maximisation, and the security dilemma. These ideas align closely with the dynamics of AI militarisation. States view AI as a strategic asset that enhances military capabilities, decision-making, and deterrence. As they develop AI for defence, rivals respond in kind, creating a cycle of competition and mistrust (Maas, 2019; Tinnirello, 2018).

The AI arms race among the United States, China, and Russia illustrates these dynamics. Matsehora (2024) shows how each power integrates AI into national defence to maintain or shift the global balance of power. In such a system, trust is limited, and fears of relative loss and technological disadvantage constrain cooperation.

This realist logic also explains why global governance has struggled to regulate military AI. States are reluctant to commit to binding agreements without enforcement mechanisms or mutual guarantees. As Marijan (2025) argues, the opacity and complexity of military AI systems pose a challenge to the transparency and trust necessary for effective multilateral regulation. Furthermore, Maas (2019) highlights how AI's dual-use nature makes verification problematic, as states fear exposing sensitive capabilities, thereby reinforcing mistrust.

4. AI and the Reshaping of Military Strategy and Decision-Making

The integration of Artificial Intelligence (AI) into the military doctrines and operational systems of the United States, China, and Russia marks a significant departure from traditional models of strategic planning and battlefield management. No longer relegated to auxiliary functions, AI now occupies a central role in shaping state military capabilities and decision-making across both strategic and tactical levels.

In the United States, the launch of *Project Maven* in 2017 signalled an early turn toward AI-augmented operations. The programme employed machine learning to automate video analysis from drone surveillance, thereby enhancing both the speed and precision of intelligence assessments. This automation reduced the cognitive burden on analysts and improved the targeting cycle (Wilson, 2020). Building upon this foundation, the *Joint All-Domain Command and Control* (JADC2) initiative seeks to create an integrated combat environment by linking land, maritime, air, cyber, and space domains through AI-enabled data fusion. By generating a unified operational picture in real time, JADC2 enhances decision-making efficacy and mission adaptability (Voloshchuk & Banakh, 2025).

China's military doctrine has similarly embraced AI through its concept of "intelligentised warfare." This model aims to embed AI in command support, simulation-based planning, and electronic warfare. The People's Liberation Army (PLA) utilises AI to anticipate adversarial strategies, conduct adaptive battlefield simulations, and refine its decision-making processes in complex and dynamic conditions. As Hunter, Albert, and Henningan (2023) observe, these tools reflect China's ambition to shape future conflict through superior information processing and autonomous capabilities. Furthermore, Chinese defence literature emphasises AI's role in logistical coordination, ISR (Intelligence, Surveillance, Reconnaissance), and wargaming platforms, though specific technical details remain classified (Raska & Bitzinger, 2023).

Russia, while operating under more constrained resources, has leveraged AI to modernise key aspects of its military command structure. The *Poseidon* autonomous underwater vehicle, for instance, illustrates Moscow's use of AI in strategic deterrence. Designed to operate independently over long distances, Poseidon represents a move toward algorithmically guided nuclear posturing. Russia's broader efforts include the deployment of loitering munitions such as the *KUB-BLA* and *Lancet*, which are designed to navigate and engage targets with limited human oversight—an approach suited to asymmetric theatres of conflict (Hetherington, 2021). Additionally, AI has been adopted in operational simulations and predictive logistics planning to enhance battlefield efficiency (Shakirov, 2023; McDermott, 2020).

Notably, U.S. exercises such as *Scarlet Dragon* further illustrate how AI compresses the decision cycle in live operations. By linking satellite feeds and sensor data through AI algorithms, commanders can identify and engage targets with unprecedented speed (Borchert, 2024). These developments represent a fundamental shift from reactive command models to pre-emptive, data-driven execution environments. AI thus acts not merely as a tool, but as an organisational force multiplier within network-centric warfare.

Moreover, the integration of AI across ISR (intelligence, surveillance, and reconnaissance) and C2 (command and control) functions in all three powers is redefining command hierarchies and battlefield roles. Real-time data fusion enables force redeployment, reclassification of threats, and a dynamic response to evolving combat scenarios. As Laird (2021) notes, commanders now serve increasingly as supervisors of algorithmic processes, rather than sole arbiters of battlefield judgement. This transition from platform-centric to information-dominant warfare underscores the growing centrality of decision speed and system adaptability in military success.

Nevertheless, such reliance on AI is not without risks. Johnson (2024) highlights concerns over algorithmic opacity, which may lead to miscalculations or escalation, particularly when deployed in ethically divergent contexts. While AI enhances operational responsiveness, it does not resolve enduring dilemmas of proportionality, accountability, or lawful command—raising critical questions that remain underexplored within contemporary military codes.

5. Strategic and Geopolitical Consequences of AI Arms Races

The competitive advancement of artificial intelligence (AI) in military affairs by the United States, China, and Russia is contributing to a new form of strategic arms raceone characterised less by the quantity of weaponry than by the speed, precision, and autonomy of command. This development is reshaping geopolitical dynamics and deepening mistrust amongst the major powers, whilst undermining the stability of the international security system. In the case of the United States, AI has been placed at the heart of defence modernisation. Through initiatives such as the Department of Defence AI Strategy, the United States aims to integrate AI across its command infrastructure, supported by collaborations with private sector firms such as Palantir and Anduril (Hunter, Albert, & Henningan, 2023). Operational constructs like the Joint All-Domain Command and Control (JADC2) reflect the American emphasis on decentralised data fusion and machine-driven threat analysis. Whilst intended to confer battlefield agility, such initiatives also signal a resolve to maintain technological superiority—thus triggering defensive countermeasures by rival powers (Johnson, 2021).

China has responded with remarkable vigour. Under the rubric of its "Next Generation AI Development Plan" and the strategic vision of "intelligentised warfare," China is integrating AI into simulation, logistics, surveillance, and operational command. Civil-military integration remains a hallmark of this approach, with commercial giants such as Baidu and Huawei actively contributing to AI research with military applications (Matsehora, 2024). As Rauf and Iqbal (2023) contend, China's efforts go beyond technological modernisation; they represent a bid to displace Western norms regarding military transparency and ethical oversight, thus challenging the existing international order.

Russia, for its part, has focussed its AI strategy on deterrence and asymmetric capabilities. Notably, the development of autonomous systems such as the Poseidon nuclear-powered underwater drone illustrates Moscow's emphasis on strategic surprise and deterrent resilience. At the operational level, Russia has utilised AI to enhance war gaming, battlefield simulation, and logistics forecasting (McDermott, 2020; Shakirov, 2023). These efforts, although less expansive than those of the United States or China, are nevertheless disruptive, particularly when viewed in the context of nuclear escalation postures.

The strategic implications of these developments are manifold. Firstly, the AI arms race has hardened geopolitical alignments. The Indo-Pacific region, for example, has witnessed intensified U.S. military engagements aimed at counterbalancing China's technological rise. At the same time, China has

drawn closer to Russia in joint exercises and defence dialogue (Schmid et al., 2025). This bifurcation of the international system undermines collective security efforts and renders global norms on AI weaponry more challenging to negotiate.

Secondly, the integration of AI into early warning systems and autonomous platforms compresses decision-making timelines in crisis scenarios. Human deliberation may be circumvented by automated threat assessments, increasing the probability of pre-emptive action based on algorithmic judgment. Özdemir (2024) observes that such developments may erode traditional mechanisms of escalation control, thereby aggravating the risk of miscalculation or accidental conflict.

Thirdly, the diffusion of AI capabilities beyond the great powers threatens to exacerbate instability in volatile regions. Middle powers, particularly those with limited oversight and weak institutions, are acquiring AI-enabled surveillance and strike systems. According to Sarkin and Sotoudehfar (2024), this proliferation risks entrenching authoritarian practices and fuelling regional arms competitions—without the stabilising effect of mutually understood deterrent postures.

As different powers advance competing ethical and legal frameworks, the prospect of achieving a global consensus on the governance of military AI appears increasingly remote. Yaqub, Ali, and Kumar (2024) warn that opacity in AI development, especially in states with centralised political authority, may lead to secretive escalation capabilities that defy arms control verification or oversight.

6. Ethical, Legal, and Policy Challenges of Military Artificial Intelligence

The militarisation of artificial intelligence (AI) has occasioned profound concerns regarding its compliance with established ethical norms, legal instruments, and regulatory structures. Particularly in the domain of Lethal Autonomous Weapon Systems (LAWS), these anxieties pertain to the erosion of accountability, the reliability of algorithmic judgement in lethal engagements, and the challenge of aligning technological innovation with the requirements of international humanitarian law (IHL).

Foremost among the ethical issues is the question of moral agency. Traditional military ethics have rested upon the premise of human responsibility in the exercise of force. LAWS, however, operate with a degree of autonomy that undermines this assumption, raising the spectre of machines making life-and-death decisions absent meaningful human oversight (Crootof, 2015). The concern is not merely theoretical. Algorithms embedded in targeting systems may act upon incomplete or biased data, misidentify combatants, or misinterpret intent—all of which could result in disproportionate or indiscriminate violence (Pagallo, 2011).

Legal challenges stem from the limitations of IHL in its current formulation. The Geneva Conventions and Additional Protocols, while robust in the context of conventional warfare, were not conceived to regulate autonomous decision-making systems. Principles such as proportionality, distinction, and precaution depend upon human judgement—a faculty not yet replicable in machines with any acceptable degree of reliability (Scharre, 2018). The Martens Clause, often invoked to anchor IHL to broader humanitarian principles, remains too vague to be applied systematically to AI deployment in armed conflict.

Verification and accountability mechanisms likewise suffer under the weight of emerging technologies. Where traditional arms control regimes, such as the Nuclear Non-Proliferation Treaty, rely on physical inspection and treaty monitoring, the intangible and dual-use nature of AI renders such approaches inadequate. As Boulanin and Verbruggen (2017) observe, software and algorithms cannot be tracked or audited in the same manner as nuclear material, and their covert development by state and non-state actors complicates enforcement efforts.

Furthermore, the absence of a binding international framework specific to military AI has allowed great powers to forge ahead with development programmes unencumbered by legal restraint. Efforts at regulation, such as those undertaken within the framework of the United Nations Convention on Certain Conventional Weapons (CCW), have yielded limited progress, in part due to definitional ambiguities and geopolitical disagreements (Docherty, 2020). While some states advocate a pre-emptive ban on LAWS, others, including the United States and Russia, resist such moves, citing strategic necessity and the potential military advantages afforded by AI.

The policy vacuum is further deepened by the lack of transparency surrounding military AI initiatives. The classified nature of most programmes precludes public scrutiny, and the rapid pace of development frequently outstrips institutional capacity for oversight. Without comprehensive national or international standards for testing, certification, and deployment, the diffusion of military AI remains largely unchecked (Roff & Moyes, 2016).

The legal and ethical foundations upon which modern warfare has long rested are being tested by the integration of autonomous systems and AI. Absent a concerted effort to reconfigure IHL, institute robust accountability mechanisms, and foster international cooperation, the unregulated militarisation of AI threatens not only battlefield norms but the broader moral architecture of international security.

7. Implications for the International Security Order

Whereas previous technologies such as nuclear weapons, cyber capabilities, or satellite systems primarily reshaped material balances, the rise of AI in military contexts challenges both structural hierarchies and the intellectual foundations upon which strategic doctrines have historically relied. It transforms how threats are perceived, decisions are made, and responses are generated, thereby unsettling the conceptual and legal underpinnings of existing security frameworks.

This study argues that AI causes an epistemic rupture, where decision-making authority is no longer solely human but increasingly shared with autonomous systems. Strategic choices, once grounded in political deliberation, are now influenced by algorithmic outputs. This raises profound questions concerning accountability, transparency, and the legitimacy of military action. The shift undermines established norms of command responsibility, as autonomous systems often operate through probabilistic reasoning rather than explicit legal or ethical judgement (Crootof, 2015; Scharre 2018)

A further implication lies in the de-territorialisation of strategic advantage. AI allows for influence and coercion through data manipulation, predictive modelling, and remote interference—without the need for physical force. As a consequence, conventional pillars of deterrence and defence, such as control of territory, the physical deployment of troops, and the accumulation of armaments, are becoming increasingly peripheral to strategic thinking.

This evolution introduces new forms of sub-threshold coercion that elude legal classification and invite miscalculation (Garcia, 2024; Rickli & Mantellassi, 2023).

Existing arms control models prove inadequate. Unlike nuclear materials, AI systems cannot be readily tracked or verified. Their dual-use nature and software-driven architecture render inspection regimes ineffective. Efforts within forums such as the Convention on Certain Conventional Weapons (CCW) have stalled due to definitional ambiguities and strategic rivalry, with key states opposing limitations on AI development (Docherty, 2020; Boulanin & Verbruggen, 2017).

Yet, this study identifies a prospective shift from legalistic disarmament to technical assurance regimes. AI systems could be embedded with compliance protocols such as automated logs, interpretability functions, and ethical constraints—which act as digital analogues to arms inspectors. These mechanisms would provide verifiable behavioural evidence of lawful deployment, moving beyond mere declarations of intent. Such innovation invites the formation of an AI-specific framework for security governance, rooted in technical transparency rather than arms reduction alone (Roff & Moyes, 2016).

This shift also presents opportunities for smaller states. Unlike nuclear technology, AI does not require extensive infrastructure. States lacking strategic depth may still contribute as norm entrepreneurs, advocating for inclusive standards that emphasise human oversight, accountability, and algorithmic ethics. This reconfiguration allows for a more equitable security discourse, in which power is distributed not only through arms but through influence over rules and norms.

8. Conclusion

This study has examined the multifaceted implications of artificial intelligence (AI) in the reconfiguration of global military strategy, the intensification of geopolitical rivalries, and the erosion of established security norms. Focusing on developments in the United States, China, and Russia, it has demonstrated how AI is no longer a peripheral innovation but a central determinant in the shaping of national security agendas and strategic conduct.

First, the integration of AI into military doctrine and command systems represents a paradigmatic shift in the nature of decision-making and force projection. From Project Maven and JADC2 in the United States to intelligentised warfare in China and autonomous deterrence systems in Russia, AI is redefining how military institutions process information, allocate resources, and initiate action. This strategic realignment prioritises speed, data integration, and predictive capacity over traditional metrics of strength such as force size or geographic control.

Second, the study has shown that AI is accelerating strategic competition among great powers, thereby exacerbating pre-existing rivalries. Unlike past arms races grounded in visible or countable weapon systems, AI introduces opacity, asymmetry, and dual-use ambiguity, which in turn amplifies mistrust and escalatory potential. The lack of standardised norms or verification mechanisms further complicates efforts at cooperation or restraint, reinforcing the security dilemma and impeding the formation of binding global governance structures.

Third, the analysis has highlighted the legal, ethical, and institutional challenges arising from Al's military application. Lethal Autonomous Weapon Systems (LAWS) pose unprecedented dilemmas for international humanitarian law, undermining traditional concepts of accountability, proportionality, and distinction. In the absence of enforceable international frameworks, state behaviour is largely driven by national interest and strategic expedience rather than ethical constraint.

The findings suggest that the militarisation of AI signals not merely a technological shift but a deeper epistemic disruption. It challenges the fundamental assumptions that have underpinned international security since the Cold War—namely, the primacy of deterrence, the centrality of state control over violence, and the adequacy of existing legal instruments. The traditional architecture of international order appears ill-suited to govern systems whose logic is probabilistic, adaptive, and decentralised.

Accordingly, the study advocates for a renewed international dialogue on AI governance, one that transcends prohibitionist discourse and moves toward pragmatic frameworks of transparency, accountability, and risk reduction. It urges scholars and policymakers to reconsider the foundations of strategic thinking in light of AI's transformative potential and to cultivate mechanisms that anticipate, rather than merely react to, technological disruption.

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