Artificial Intelligence as a New Key Element of Power

Abstract

Artificial Intelligence (AI) has rapidly emerged as one of the most transformative technologies of the 21st century, reshaping global power distributions and redefining defence strategy formulation. As states integrate AI into military planning, cyber operations, intelligence gathering, and diplomatic action, the concept of power expands beyond traditional hard and soft elements, incorporating technological capabilities as central determinants of international influence. This paper examines AI as a new key element of power in the international system, drawing from theoretical foundations in international relations and defence studies. It explores how AI functions as a power multiplier within defence strategy, particularly through the lens of the Revolution in Military Affairs (RMA), the Internet of Military/Battlefield Things (IoMT/IoBT), and digital diplomacy. The war in Ukraine is used as a case study to demonstrate the operational significance of AI-enabled systems, including targeting, autonomous drones, cyber defence, and information warfare. The paper concludes by outlining strategic implications and risks related to autonomy, nuclear stability, and misinformation, emphasizing the necessity for ethical, resilient, and internationally coordinated AI frameworks.

Key words: Artificial Intelligence (AI), Security, Defence.

1 Introduction

Artificial Intelligence (AI) constitutes a foundational technological shift with profound geopolitical implications. While traditional international relations scholarship emphasizes material capabilities, military strength, and diplomatic influence as the core determinants of state power, contemporary strategic environments require an expanded understanding that includes emerging technologies [1], [2]. AI now underpins intelligence processing, cybersecurity, diplomatic decision-support systems, autonomous weapons, and information warfare, altering both the capabilities and the strategic behaviour of states.

The integration of AI into national defence strategies is not simply an incremental improvement; it represents a structural transformation. This builds upon the Revolution in Military Affairs (RMA), in which digital systems, network-centric warfare, and autonomous platforms reshape the tempo, precision, and effectiveness of military operations [3]. Moreover, the growing interdependence between AI and global politics has elevated technology into a critical domain of international power competition, particularly among the United States, China, and Russia [4].

The aim of this paper is to conceptualize AI as a new key element of power, technological power, complementing and reshaping traditional hard and soft power structures. Using the war in Ukraine

as an illustrative case, the analysis explores how AI-enhanced strategic capabilities redefine the contemporary battlefield and broader geopolitical dynamics.

2 Background and Related Work

2.1 AI in International Relations and Security Studies

The literature illustrates that AI impacts both national security and global governance, influencing diplomacy, conflict dynamics, and strategic stability [4], [5]. Scholars highlight the potential of AI as a decision-support mechanism in foreign policy, enabling complex scenario simulations and predictive modelling [6]. Others focus on the risks of algorithmic escalation, autonomous weapons, and the erosion of human oversight in nuclear decision-making [7].

Theoretical perspectives rooted in traditional International Relations (IR), such as realism and neorealism, stress that technological capabilities directly affect state behaviour in an anarchic international system [2], [8]. From this lens, AI becomes a material contributor to state power, influencing deterrence, coercion, and strategic competition.

2.2 Revolution in Military Affairs (RMA) and Emerging Technologies

RMA scholarship argues that major leaps in military effectiveness arise from the integration of new technologies, doctrines, and organizational structures. AI continues this trend by powering advanced sensors, command-and-control systems, cyber operations, and autonomous platforms [9]. As part of this transformation, the Internet of Military Things (IoMT) and Internet of Battlefield Things (IoBT) provide continuous data-driven situational awareness, improving real-time targeting, logistics, and multi-domain operations [10], [11].

2.3 Digital Diplomacy and Information Warfare

Beyond the military domain, AI reshapes diplomacy through enhanced data analysis, automated negotiation assistance, and influence operations conducted through social media algorithms [12], [13]. During contemporary conflicts, misinformation and disinformation campaigns have been amplified by AI, affecting public perceptions and political decision-making [4]. Therefore, AI-driven information warfare becomes a central aspect of strategic competition.

3 Conceptual Methodology

This paper adopts a conceptual-analytical approach, drawing from three primary domains reflected in the literature:

- International Relations theory: Power as a combination of material, relational, and ideational components [2], [8].

- Defence and strategic studies: AI as part of the RMA and technological multipliers in operational environments [9].
- Case-based evidence: The Russia–Ukraine war, drawing from policy reports, military analyses, and strategic assessments [14], [15].

The analysis synthesizes these domains to define AI as a new key element of power and illustrate its operational manifestations.

4 Artificial Intelligence as a New Element of Power

4.1 Traditional Concepts of Power

Power in international relations has historically been understood through the frameworks of Morgenthau, Waltz, and Nye. Morgenthau frames power as the ability to control outcomes and influence others, anchored in material capabilities. Waltz complements this by emphasizing structural distributions of capabilities within an anarchic system [2], [8].

Nye's conceptualization of hard and soft power expands this notion to include intangible assets such as culture, diplomacy, and legitimacy [16]. However, contemporary international dynamics suggest the emergence of a new category: technological power, where access to AI systems and data infrastructures directly influences global influence.

4.2 AI as a Power Multiplier

AI enhances state power by increasing efficiency, precision, and speed across strategic domains. It supports rapid intelligence processing, predictive analytics, and optimised decision-making capabilities that can shift power balances even without proportional growth in conventional military assets [4].

In defence, AI enables multi-domain command integration, autonomous surveillance, and rapid response mechanisms. In information operations, AI can generate large volumes of targeted messaging, influencing political narratives and social cohesion [4], [13]. These effects demonstrate that AI is not merely an additional asset but a transformative multiplier of both hard and soft power.

5 Operational Impact of AI in Defence Strategy

5.1 Autonomous Weapons and Battlefield Automation

AI-driven autonomous weapons constitute one of the most disruptive military innovations of the 21st century. Beyond traditional unmanned aerial vehicles (UAVs), modern autonomous platforms integrate computer vision, navigation algorithms, and machine-learning models capable of identifying, tracking, and prioritizing targets with minimal human input [7]. These systems increase

the operational tempo, enabling forces to conduct persistent surveillance and precision strikes even in GPS-denied environments.

A significant evolution is the concept of human–machine teaming, where soldiers cooperate with autonomous systems that provide enhanced sensory perception, threat detection, and support in urban or complex operational terrains. AI optimizes swarming tactics, allowing coordinated drone formations to overwhelm enemy air defences or support ground manoeuvres with synchronized attacks [14]. This convergence of autonomy and tactical coordination reflects a new mode of military effectiveness where AI provides quantitative and qualitative superiority.

5.2 Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR)

AI revolutionizes C4ISR by automating data ingestion, predictive modelling, and threat prioritization. Traditional command systems struggle with the overwhelming volume of information produced by modern sensors; AI mitigates this by extracting actionable insights in real time. Deep-learning models can classify targets, anticipate logistical needs, and detect weak signals indicative of cyber infiltration or enemy preparation [4]. AI-enhanced decision-support systems allow commanders to evaluate multiple operational scenarios simultaneously, reducing cognitive load and decision latency.

5.3 The Internet of Battlefield Things (IoBT)

IoBT transforms the battlefield into a dense ecosystem of connected devices—drones, ground sensors, satellites, exoskeletons, and wearable soldier systems. AI algorithms fuse multi-domain data to generate a comprehensive, continuously updated operational picture, allowing commanders to predict enemy movement, allocate resources efficiently, and maintain information dominance [10], [11].

Through edge computing, IoBT nodes analyze data locally, enabling faster decision cycles and operational resilience even under degraded communications. The integration of AI with IoBT supports distributed operations, small-unit autonomy, and remote battlefield management—key principles of modern RMA-based doctrines.

5.4 Cyber and Information Operations

Cyber defence increasingly relies on AI for intrusion detection, anomaly recognition, and predictive threat analysis [4]. Meanwhile, offensive information campaigns use AI-generated content, bots, and algorithmic targeting to destabilize opponents and shape international narratives [13], [14].

5.5 Nuclear Stability and Strategic Risks

Scholars warn that AI-enabled sensing, missile tracking, and automated decision systems may destabilize nuclear deterrence by increasing uncertainty and reducing reaction time for leaders [7]. Thus, AI introduces both operational advantages and systemic strategic risks.

6 Case Study: The War in Ukraine

The war in Ukraine provides the most comprehensive real-world demonstration of AI's impact on modern conflict.

6.1 AI on the Battlefield

The war in Ukraine stands as a milestone in the practical integration of AI into large-scale conflict. Both sides deployed AI-enhanced drones for reconnaissance, strike missions, and artillery correction. Ukraine's use of small, low-cost UAVs equipped with AI-assisted targeting demonstrates how technological agility can compensate for numerical inferiority [17]. AI-based video analytics allow rapid identification of enemy positions, reducing the sensor-to-shooter timeline and enabling precise counter-battery fire.

6.2 OSINT, Satellite Intelligence and Predictive Analytics

Commercial satellite imagery, fused with AI-powered analytic tools, has provided Ukraine and its partners with unprecedented transparency into Russian troop movements, supply lines, and damage assessment [14], [15]. Machine-learning models analyse infrared signatures, convoy densities, and infrastructure changes, supporting both strategic planning and tactical execution.

Open-source intelligence (OSINT) became a decisive asset. AI collected and analysed vast quantities of social media posts, intercepted communications, and geolocated images, allowing analysts to track troop morale, civilian impact, and even battlefield atrocities in near-real time [15]. This reinforces how AI democratizes intelligence capabilities, empowering even smaller states.

6.3 Cyber Defence and Digital Resilience

Ukraine demonstrated robust cyber resilience, leveraging AI-enabled systems to repel waves of Russian cyberattacks targeting power infrastructure, government ministries, and communication networks [14]. AI-driven intrusion detection prevented several large-scale disruptions, highlighting the strategic value of automated cyber defence under wartime pressure.

6.4 Information Warfare and Digital Diplomacy

AI amplified both Ukrainian and Russian influence campaigns. Russia deployed AI-generated content, deepfake videos, and bot networks to destabilize Western support and sow confusion among Ukrainian civilians [4]. Ukraine countered with targeted digital diplomacy, using AI tools to craft multilingual messaging, debunk disinformation, and mobilize international solidarity [13].

6.5 Strategic Lessons from Ukraine

The Ukraine war demonstrates that:

- AI can compensate for conventional military asymmetries.
- Agile, networked systems outperform massed traditional forces.
- Civil-military technological integration accelerates innovation.
- Information dominance is equally as important as kinetic dominance.

Summarizing, Ukraine illustrates AI's role as a decisive strategic enabler, reinforcing its status as a new element of international power.

7 Risks and Strategic Implications

7.1 Autonomy and Escalation

AI blurs traditional escalation thresholds. Autonomous or semi-autonomous systems can misinterpret signals, respond too quickly for human intervention, or trigger cycle accelerations in contested environments [7]. Automated missile defence, early-warning systems, and AI-supported nuclear command-and-control can pose particular risks, as false positives or algorithmic biases may produce catastrophic consequences.

7.2 Ethical and Legal Considerations

AI challenges existing frameworks of international humanitarian law. The principles of distinction and proportionality become difficult to guarantee when autonomous systems make life-and-death decisions [7], [18]. Furthermore, accountability becomes ambiguous: if an autonomous weapon causes unintended civilian casualties, responsibility may fall between operators, developers, and commanders.

7.3 Data dependence, Manipulation, Vulnerabilities and Technological Inequality

AI systems are susceptible to adversarial attacks—manipulated data inputs designed to deceive machine-learning models. By altering a few pixels of a drone's camera input, an adversary could cause misclassification, mis-targeting, or system failure. Adversarial cyber operations targeting datasets, communication channels, or training models can distort situational awareness and compromise battlefield coordination. States without adequate digital infrastructure, computational power, or high-quality datasets may be unable to exploit AI effectively. This widens the technological divide between major powers and smaller states, potentially creating new forms of dependency and geopolitical stratification [4].

8 Policy Implications

To ensure responsible and strategically advantageous adoption of AI, states can:

- Develop robust ethical frameworks and governance mechanisms.
- Invest in resilient digital infrastructures and skilled human capital.
- Promote transparency and international cooperation to prevent escalatory instability.
- Prioritize civil-military technology collaboration for rapid innovation cycles.
- Strengthen counter-disinformation capabilities across public and private sectors.

9 Conclusion

AI has transitioned from a promising innovation to a foundational element of national power. It enhances military operations, shapes diplomatic interactions, transforms information ecosystems, and redefines the balance of power in the international system. As demonstrated by the war in Ukraine, AI acts as a strategic multiplier, enabling agility, precision, and resilience. However, these benefits are accompanied by profound risks, necessitating responsible governance and international coordination. Understanding AI not merely as a technological tool but as a core dimension of global power is essential for shaping stable and secure strategic environments in the decades to come. This technology can also alter the way that the term national sovereignty is described. Further research is needed as the technological advancement of AI is still in the beginning of its' implementation.

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