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AI-Enabled Warfare and the Transformation of India's Defence Policy (2016-2025)

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Abstract: ***This article examines the role of artificial intelligence in reshaping India's defence policy between 2016 and 2025. It argues that AI-enabled systems have significantly altered the informational and operational architecture within which India formulates strategic decisions while remaining mediated by institutional structures and normative safeguards. Drawing upon structural realism, military innovation theory, and bureaucratic politics, the study demonstrates that AI adoption reflects balancing behavior in response to China's rapid modernization and evolving regional competition. Through qualitative analysis of post-2016 crises, including the surgical strikes, the Balakot airstrike, and the Ladakh standoff, the article concludes that India's defence transformation represents technologically mediated evolution rather than doctrinal rupture. Artificial intelligence enhances intelligence integration, logistical sustainability, and decision support, yet strategic judgment remains fundamentally political.***

Keywords: Artificial Intelligence; India's Defence Policy; Military Innovation; Nuclear Deterrence; Crisis Stability; China–India Strategic Competition

I. INTRODUCTION

The integration of artificial intelligence into military systems represents one of the most consequential developments in contemporary strategic affairs. Unlike earlier military revolutions that focused on mechanization, industrial scale firepower, or nuclear deterrence, artificial intelligence primarily transforms the informational domain of warfare. It enhances pattern recognition, accelerates data processing, improves predictive analytics, and compresses operational decision cycles. These changes alter not only battlefield efficiency but also the strategic environment within which states interpret signals and manage escalation. As Scharre (2018) observes, AI increasingly shapes how militaries observe, orient, decide, and act, thereby modifying the temporal structure of conflict itself.

In the Indo Pacific region, technological competition has become inseparable from strategic rivalry. China's doctrine of intelligentized warfare reflects systemic integration of artificial intelligence into command networks, surveillance platforms, autonomous systems, and logistical management (Kania, 2019). Official Chinese defence policy documents emphasize information dominance and digital coordination as central pillars of future warfighting (State Council of the People's Republic of China, 2019). The United States similarly frames artificial intelligence as foundational to long-term military competitiveness (Allen & Chan, 2017). Within this evolving environment, India has accelerated digital modernization in ways that coincide with observable shifts in defence posture.

The period between 2016 and 2025 marks a discernible inflection point. The surgical strikes of 2016, the Balakot airstrike in 2019, and the extended standoff with China in Ladakh beginning in 2020 collectively illustrate recalibrated assertiveness. This recalibration occurred alongside institutional reforms, procurement adjustments, and growing emphasis on intelligence integration. The key analytical question is whether artificial intelligence has fundamentally transformed India's defence policy or whether it has merely enhanced existing strategic principles.

This article argues that artificial intelligence has reshaped the informational and operational architecture within which India conducts deterrence and crisis management, but its impact remains mediated by institutional constraints and normative commitments. AI functions as a force multiplier embedded within systemic rivalry rather than as an autonomous revolutionary force. Strategic judgment remains political, yet the informational conditions of that judgment have evolved.

II. THEORETICAL FRAMEWORK

Understanding the impact of artificial intelligence on India's defence transformation requires theoretical clarity beyond descriptive modernization. Emerging military technologies do not independently determine strategic outcomes. Their influence is filtered through systemic pressures, institutional adaptation, and organizational politics.

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This article therefore integrates structural realism, military innovation theory, and bureaucratic politics to construct a layered analytical framework capable of explaining both adoption and limitation.

Structural realism provides the systemic foundation. Waltz (1979) argues that the international system is characterized by anarchy, meaning the absence of a central authority capable of enforcing order. In such an environment, states prioritize survival and respond to shifts in relative power. Technological innovation becomes strategically significant when it alters capability distribution. Artificial intelligence, particularly when integrated into surveillance and command networks, modifies the informational dimension of power. China's rapid development of intelligentized warfare capabilities shifts the regional balance not necessarily through immediate kinetic superiority, but through information dominance and decision speed (Kania, 2019). From a realist perspective, India's acceleration of AI-enabled capabilities represents balancing behavior. The adoption of digital surveillance, predictive logistics, and data-fusion systems reflects an attempt to prevent relative decline in a competitive regional system.

However, realism alone cannot explain variation in technological absorption. If systemic pressure were sufficient, all states facing similar threats would adopt and integrate AI at comparable speeds. Empirical variation suggests that domestic institutional structure matters. Military innovation theory addresses this limitation by emphasizing organizational adaptation. Horowitz (2010) demonstrates that diffusion of complex military technologies depends upon factors such as bureaucratic flexibility, training capacity, and doctrinal reform. Technologies that reshape decision-making processes require not only hardware acquisition but institutional transformation. Posen (1984) and Rosen (1991) similarly argue that successful innovation requires internal doctrinal change and leadership willingness to revise entrenched operational concepts. In the Indian case, the creation of the Chief of Defence Staff and movement toward theatre command structures reflect attempts to enhance jointness and interoperability. Artificial intelligence integration intersects with these reforms. Without unified command architecture and interoperable data systems, AI-enabled capabilities cannot reach full potential.

Military innovation theory also emphasizes the importance of human capital. Advanced machine learning systems require trained personnel capable of interpreting algorithmic outputs and managing digital networks. Organizational absorption therefore extends beyond procurement to education and institutional learning. If personnel remain anchored in conventional paradigms, technological advantage may be underutilized. Thus, AI integration must be evaluated in terms of doctrinal adaptation and training reform, not merely acquisition statistics.

Bureaucratic politics theory introduces an additional explanatory layer. Allison (1971) argues that policy outcomes reflect negotiation among institutional actors rather than coherent rational design. Ministries, armed services, research agencies, and political leadership possess distinct interests and organizational routines. In India, defence modernization unfolds within a framework of strong civilian oversight and procedural procurement rules. Avant (1994) observes that democratic institutions often slow military innovation but enhance accountability and legitimacy. Artificial intelligence integration within India therefore reflects negotiation between strategic urgency and institutional caution. Budgetary allocation, regulatory reform, and inter-service coordination shape the pace of adoption.

This bureaucratic dimension is particularly relevant for AI technologies, which differ from traditional platforms. Fighter aircraft and naval vessels follow long acquisition cycles. Artificial intelligence systems require iterative development, continuous software updates, and integration with private sector innovation. Procurement frameworks designed for large capital platforms may struggle to accommodate rapid digital experimentation. Bureaucratic politics theory therefore helps explain incremental adaptation rather than revolutionary transformation.

The framework also intersects with deterrence theory. Classical nuclear deterrence rests upon credible second-strike capability and rational decision-making (Waltz, 1979; Morgan, 2003). The stability–instability paradox described by Sagan and Waltz (2013) suggests that nuclear weapons deter major war while permitting limited conflict. Artificial intelligence interacts with this dynamic by altering informational confidence and decision timelines. Enhanced surveillance may strengthen deterrence by denial, yet acceleration may compress deliberation. Payne (2021) warns that automation in nuclearized environments can heighten escalation risk if misinterpretation occurs. Thus, AI does not operate outside deterrence logic. It modifies the informational environment within which deterrence functions.

Integrating these theoretical perspectives produces a layered model of transformation. At the systemic level, China's modernization generates balancing incentives for India. At the institutional level, military innovation theory explains how organizational reform shapes technological absorption. At the bureaucratic level, negotiation among political and military actors mediates adoption speed. At the strategic level, deterrence theory clarifies how AI affects crisis stability. This multi-layered approach avoids technological determinism while acknowledging that digital integration alters the conditions of strategic interaction.

Artificial intelligence, in this framework, is conceptualized as an intervening variable rather than an independent revolutionary force. Its impact depends on systemic rivalry, institutional flexibility, and political oversight. Where structural pressure aligns with organizational reform, transformation deepens. Where bureaucratic inertia persists, adaptation remains partial. Where normative governance preserves human control, stability is maintained despite acceleration.

By grounding the analysis in this integrated theoretical structure, the article avoids simplistic narratives of technological inevitability. Artificial intelligence shapes India's defence policy not as an autonomous disruptor, but as a capability embedded within institutional and strategic contexts. The following sections apply this framework to empirical developments between 2016 and 2025.

III. STRATEGIC RECALIBRATION AFTER 2016

Prior to 2016, India's defence posture was characterized by strategic restraint anchored in credible minimum deterrence. Following nuclearization in 1998, India articulated a doctrine centered on survivable retaliation rather than offensive dominance (Narang, 2014). Crisis responses after the 2001 Parliament attack and the 2008 Mumbai attacks reflected caution in escalation management. Although modernization efforts continued, digital integration remained incremental and constrained by procurement delays and institutional fragmentation (Tellis, 2016).

The Uri attack in 2016 marked a turning point. India's publicly acknowledged surgical strikes across the Line of Control demonstrated willingness to employ limited force while maintaining escalation control. The Balakot airstrike in 2019 reinforced this calibrated assertiveness. Tellis (2020) interprets these operations as controlled signaling designed to strengthen deterrence credibility without provoking full-scale war. These developments coincided with intensifying competition with China, particularly during the Doklam standoff in 2017 and the Ladakh crisis beginning in 2020.

China's doctrinal emphasis on intelligentized warfare amplified structural pressure. Integrated surveillance networks, rapid logistical coordination, and AI-supported command systems enhanced China's operational agility (Kania & Costello, 2018). From a realist perspective, such developments created balancing incentives for India. Yet India's adaptation reflected institutional and normative characteristics distinct from China's centralized model.

IV. AI-ENABLED OPERATIONAL TRANSFORMATION

Artificial intelligence has most visibly influenced India's intelligence, surveillance, and reconnaissance capabilities. Machine learning systems enhance analysis of satellite imagery and drone reconnaissance, improving detection of anomalous movement along contested borders. In mountainous terrain such as Ladakh, where environmental conditions complicate monitoring, AI-supported data processing increases situational awareness. Morgan (2003) emphasizes that credible deterrence depends upon accurate perception of adversary intentions. Enhanced ISR strengthens informational confidence and reduces uncertainty.

Predictive analytics further extend AI's operational impact. High-altitude deployments require sustained logistical support and equipment reliability. AI-enabled predictive maintenance models analyze performance data to anticipate mechanical failure, thereby improving readiness and sustainability. Horowitz (2010) notes that cumulative incremental improvements often generate significant strategic advantage. In India's case, predictive logistics enhances endurance during prolonged standoffs.

Decision-support systems also represent meaningful transformation. Modern military operations generate immense data streams from sensors, communications intercepts, and open sources. AI platforms synthesize these inputs into structured assessments that assist commanders. Importantly, India maintains meaningful human control over lethal decisions (Ministry of External Affairs, 2021). AI functions as advisory architecture rather than autonomous authority. This institutional safeguard aligns with normative concerns raised by Sharkey (2010) and the International Committee of the Red Cross (2019) regarding accountability and humanitarian compliance.

V. CRISIS STABILITY AND THE INDIA–PAKISTAN DYAD

The implications of artificial intelligence for crisis stability are particularly significant in the India–Pakistan dyad, where nuclear deterrence shapes strategic interaction. Since both states declared nuclear capability in 1998, their rivalry has operated within the framework commonly described as the stability–instability paradox. Nuclear weapons reduce incentives for full-scale war while permitting limited conflict below the nuclear threshold (Sagan & Waltz, 2013). This paradox has been visible in repeated crises, including Kargil in 1999, the 2001–2002 standoff, the aftermath of the 2008 Mumbai attacks, and more recently the Uri and Balakot episodes.

Artificial intelligence intersects with this dynamic by altering informational clarity and decision timelines. Enhanced ISR reduces uncertainty regarding adversary deployments, potentially strengthening deterrence by denial. If military planners possess more accurate data regarding troop movements or launch preparations, the risk of surprise diminishes. Morgan (2003) argues that effective deterrence requires not only capability but credible perception of that capability. AI-supported surveillance reinforces this informational foundation.

At the same time, informational acceleration introduces complexity. Johnson (2019) suggests that rapid decision cycles may produce competitive pressure to act before adversaries gain advantage. In nuclearized environments, compressed timelines can heighten anxiety. Payne (2021) warns that automated decision-support systems may narrow deliberative space if political leaders perceive urgency based on algorithmic assessments. In South Asia, where communication channels remain limited and trust deficits persist, decision compression carries risk.

The 2019 Balakot crisis offers insight into this tension. India conducted an airstrike on a target within Pakistani territory in response to the Pulwama attack. Pakistan retaliated with its own aerial operations, resulting in aerial engagement and the capture of an Indian pilot. Despite elevated tensions, escalation did not spiral into full-scale war. Improved intelligence integration likely supported calibrated targeting and post-strike assessment, reducing uncertainty regarding operational outcomes. Enhanced informational clarity may have contributed to crisis management by preventing exaggerated threat perception.

However, AI-enabled surveillance also raises counterforce concerns. Acton (2018) argues that improvements in detection and targeting technology can undermine confidence in survivable second-strike capability. Lieber and Press (2017) similarly contend that advancements in precision and surveillance may generate fears of vulnerability. Although India officially maintains credible minimum deterrence, enhanced ISR capabilities could influence Pakistani threat perceptions. Perception matters as much as capability in deterrence dynamics.

Institutional mediation mitigates some of these risks. India's civilian oversight structure ensures that AI-generated assessments remain advisory rather than determinative. Avant (1994) notes that democratic accountability often slows military innovation but enhances stability by preserving deliberative control. India's emphasis on meaningful human control over lethal systems reflects awareness that automation must not displace political judgment. Sagan (2019) emphasizes that organizational discipline and procedural caution are essential for nuclear stability. AI integration within such institutional safeguards may strengthen rather than weaken escalation management.

VI. CHINA'S INTELLIGENTIZED WARFARE AND STRUCTURAL COMPETITION

While Pakistan shapes recurring crisis dynamics, China represents the principal structural driver of India's technological acceleration. China's doctrine of intelligentized warfare integrates artificial intelligence across command hierarchies, logistics networks, cyber operations, and autonomous systems (Kania, 2019). The People's Liberation Army's organizational reforms have strengthened joint theatre commands and centralized decision-making, facilitating rapid integration of digital capabilities.

The Ladakh standoff beginning in 2020 exposed operational implications of this modernization. Rapid troop mobilization, infrastructure development, and sustained deployment highlighted China's logistical coordination capacity. Although detailed operational data remain classified, independent analyses suggest significant digital integration within Chinese command systems (IDSA, 2022). From a structural realist perspective, such modernization alters regional power distribution and generates balancing incentives for India.

Yet the nature of adaptation differs due to institutional structure. China's centralized political system facilitates rapid doctrinal implementation. India's democratic system introduces procedural checks and bureaucratic negotiation. Allison's (1971) bureaucratic politics model suggests that modernization within India will reflect negotiation among civilian leadership, military services, and technological agencies. This difference does not necessarily imply weakness. Rather, it shapes the speed and form of technological absorption.

Horowitz (2018) notes that long-term technological advantage depends on institutional capacity rather than initial acquisition. India's efforts to enhance jointness through the creation of the Chief of Defence Staff and movement toward theatre commands indicate recognition of this requirement. AI integration intersects with these reforms, reinforcing the importance of interoperable data systems and unified planning structures.

Balancing behavior extends beyond domestic reform. Strategic partnerships and technological cooperation with like-minded states form part of India's broader response to regional competition. Structural rivalry therefore operates at both systemic and institutional levels.

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VII. ETHICAL AND LEGAL DIMENSIONS

Artificial intelligence in military systems raises normative questions that intersect directly with strategic stability. Autonomous weapon systems challenge traditional accountability frameworks. Sharkey (2010) argues that delegating lethal decision-making to machines diffuses responsibility across programmers, commanders, and political leaders. The International Committee of the Red Cross (2019) emphasizes that principles of distinction and proportionality under international humanitarian law require meaningful human judgment.

India's official statements at United Nations discussions on lethal autonomous weapon systems emphasize preservation of human control (Ministry of External Affairs, 2021). This normative stance aligns with strategic prudence in a nuclearized environment. Delegating escalation decisions to automated systems would increase risk of unintended conflict. By maintaining human oversight, India reinforces procedural discipline.

Algorithmic reliability also presents concern. AI systems depend on training data that may contain inaccuracies or bias. Errors in classification could produce misidentification of targets or erroneous threat assessment. SIPRI (2022) highlights risks associated with opaque machine learning models in military contexts. Cyber vulnerability further complicates governance, as adversaries may attempt to manipulate data streams or exploit digital systems.

Ethical governance therefore functions as strategic safeguard. In environments where crisis stability depends on restraint, normative commitments reinforce deterrence logic rather than undermine it.

VIII. CONCLUSION

Between 2016 and 2025, India's defence policy has undergone measurable recalibration accompanied by accelerated digital integration. Artificial intelligence has enhanced intelligence fusion, predictive logistics, and decision-support capability. These improvements have strengthened operational confidence and enabled calibrated assertiveness in crisis response.

Yet transformation remains mediated by institutional structure and normative governance. Structural realism explains AI adoption as balancing behavior in response to China's modernization. Military innovation theory demonstrates that organizational adaptation determines strategic impact. Bureaucratic politics reveals how procurement reform and civil–military oversight shape implementation. In the India–Pakistan dyad, AI modifies informational dynamics without overturning the stability–instability paradox.

Artificial intelligence reshapes the informational architecture of strategy. It accelerates and augments decision-making, but it does not replace political judgment. In nuclear South Asia, deterrence remains fundamentally human. Technology expands options, yet responsibility remains embedded within institutional control.

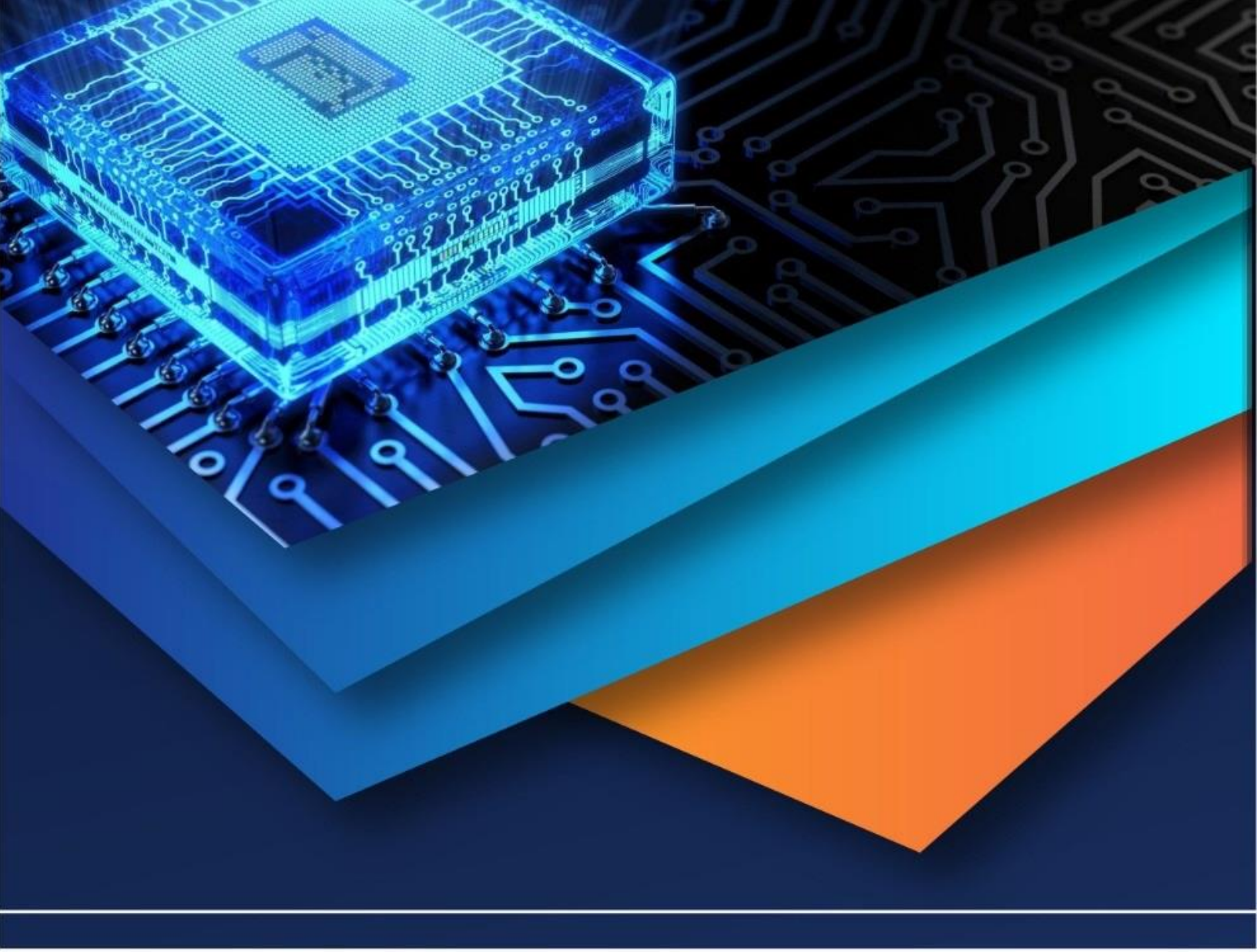
India's defence transformation during this period is therefore best understood as technologically mediated evolution rather than doctrinal rupture. The trajectory of AI-enabled warfare in the region will depend upon continued institutional reform, responsible governance, and careful management of escalation dynamics.

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