## The Role of Drone Technology in The May 2025 India-Pakistan War: Strategic Implications for South Asian Security and International Relations

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## ABSTRACT

*It qualitatively analyzes the key role of drone technology in the May 2025 India-Pakistan War as a strategic, political, and security implication on South Asia and on the international system generally. The first significant inter-state war in the region was also the first to utilize autonomous and semi-autonomous drones as intelligence, surveillance and precision strike platforms to decide the result. The paper will use the ideas of realist and technological determinism and explain how the introduction of unmanned aerial system (UAS) changed the working paradigm and position of deterrence and diplomatic response of the two countries. The information was gathered by using expert interviewing, by taking into account the defense policies, and by analyzing media documents and explained by the thematic factor. The results show that in addition to the fact that the usage of drone warfare increased the boundaries of military asymmetry, it also caused arms rivalry in the region, cyberspace insecurity and revolution of war morality. The delicate balance of deterrence could be broken in South Asia unless non-cooperative arms are employed to control the proliferation of combat drones and it would be difficult to impose international norms of legitimacy in warfare, discovering the paper.*

*Keywords: Drone warfare, India–Pakistan conflict, South Asian security, international relations, technological determinism, deterrence stability, qualitative study.*

## INTRODUCTION

The **May 2025 India–Pakistan War** stands as a watershed moment in South Asian military history, primarily due to the unprecedented use of drone technology as both a tactical and strategic weapon (Rafiq, 2025). Drones, once limited to reconnaissance missions, became decisive tools in precision strikes, border surveillance, and real-time battlefield intelligence. Their deployment not only intensified hostilities but also revealed the transformative potential of artificial intelligence (AI) and autonomous systems in reshaping state power and deterrence behavior (Joshi & Mirza, 2024).

Historically, the India–Pakistan rivalry has been characterized by recurring crises, nuclear brinkmanship, and contested borders such as the Line of Control (LoC). However, the 2025 conflict represented an evolution in warfare, where both nations deployed drone swarms, AI-enabled targeting systems, and satellite-linked command structures (Farooq, 2025). Pakistan relied on indigenously produced Burraq-II drones and Chinese-origin Wing Loong systems, while India utilized Israeli

Heron-TP and US-assisted MQ-9B SeaGuardian drones, symbolizing an emerging technological asymmetry (Kumar & Sengupta, 2025).

The conflict underscored the dual nature of drone technology—as a force multiplier and a destabilizer. While drones enhanced precision and reduced troop casualties, they also blurred lines between combatant and non-combatant, igniting international debates on sovereignty and jus ad bellum (Ahmed, 2024). Against this backdrop, the present study investigates the strategic implications of drone technology in the 2025 conflict, aiming to understand how its use transformed regional security**,** strategic doctrines**,** and international diplomatic alignments**.**

## LITERATURE REVIEW

### Theoretical Framework: Realism and Technological Determinism

This study is grounded in Realist theory, which emphasizes power, security, and survival in an anarchic international system (Morgenthau, 1948; Waltz, 1979). States continuously seek relative gains through military innovation to maintain deterrence. Within this framework, drones represent a technological extension of national power, allowing states to project force while minimizing human and political costs (Singer, 2009).

In parallel, Technological Determinism (Smith, 2021) provides the second theoretical lens, positing that technology itself drives socio-political transformation and strategic change. The integration of drone warfare has reshaped doctrines of deterrence, intelligence, and surveillance, compelling South Asian states to rethink the logic of escalation control and conventional parity (Malik & Hussain, 2023).

### Evolution of Drone Warfare in South Asia

Drone technology entered South Asia in the early 2000s, initially for surveillance and counter-terror operations along the Afghan-Pakistan border (Byman, 2013). The U.S. drone campaign in FATA between 2004–2016 demonstrated the effectiveness of precision targeting but also generated ethical controversies regarding civilian casualties (Aslam, 2017). By the 2020s, indigenous drone programs emerged across South Asia, reflecting a shift from dependence to technological autonomy (Rizvi, 2022).

India's collaboration with Israel and the U.S. enabled the acquisition of advanced armed drones capable of deep-strike missions, while Pakistan's Burraq and Shahpar series marked its entry into the realm of indigenous drone manufacturing (Shah, 2023). These developments transformed the strategic environment, reducing the threshold for escalation and introducing new vulnerabilities**,** such as cyber interference and command-control disruption (Ganguly, 2024).

### Drone Warfare and Deterrence Stability

Drones alter the calculus of deterrence by increasing the feasibility of limited conflict under the nuclear threshold (Sagan, 2022). The ability to carry out cross-border strikes without risking pilot capture enables states to pursue aggressive policies while claiming plausible deniability (Rafiq, 2025). Scholars argue that this "*use without attribution***"** dimension may erode traditional deterrence models built on mutual visibility and accountability (Freedman, 2021).

In South Asia, where deterrence stability is already precarious, the proliferation of drones contributes to strategic opacity—a condition where the line between surveillance, defense, and offense is blurred (Malik, 2023). The 2025 war exemplified this phenomenon, as both India and Pakistan employed drones not only for kinetic strikes but also for information warfare, using drone footage for propaganda and psychological impact (Khurshid & Mehta, 2025).

### *International Implications and Normative Challenges*

Drone warfare challenges international humanitarian law (IHL) and the norms of sovereignty (Finnemore & Sikkink, 1998). The United Nations and major powers expressed concern during the 2025 conflict over cross-border drone strikes violating territorial integrity (UNSC, 2025). Moreover, the integration of AI-based decision-making raised questions about accountability in autonomous lethal systems (Cummings, 2024).

Global actors such as China, Russia, and the U.S. viewed the South Asian conflict as a testing ground for future drone diplomacy—the strategic export and control of unmanned systems to allies as a form of influence (Wheeler, 2024). This aligns with global trends of "*drone multipolarity*," where technological diffusion shapes the balance of power across regions (Horowitz, 2022).

## METHODOLOGY

The research design was a qualitative research design since it was considered the best in researching some complex phenomena in politics and strategies that could not be holistically measured (Creswell and Poth, 2024). This question led to additional understanding of the different sense and meaning attributed to the drone warfare by the actors directly or indirectly involved in the 2025 India-Pakistan conflict. The project research question to be answered was as follows: What the various stakeholders including military analysts, diplomats and experts in the security of the South Asian region think is the strategic implication of the use of drones and how it applies in the broader context of South Asian security and international relations.

Participants were selected through a purposive method whereby the respondents that were chosen include those that possess the pertinent knowledge or personal experience as concerns the 2025 conflict. In 2025, June through August, twelve interviewees were interviewed. Samples included four retired military officers, five policy analysts and three defense reporters. The sample was a mix of representatives of different national backgrounds (including Pakistan, India, China and the United Kingdom) in order to balance and diversify the analytical sample and to include more national backgrounds. This heterogeneity added value to the data, with a diverse geopolitical elite and institutional experience, thereby providing a unitary view of the regional and global dimension of drone warfare.

The method of data collection was semi-structured interviews and document analysis. Hopefully, the interviews would assist the participants to think more and critique by examining the four dimensions or the way deployment of drones in the May 2025 conflict would have worked, what role drone warfare played in the rise and deterrence, how these actions would have impacted the South Asian region regional and international reactions to the conduct and how such developments would have spilled into the security and diplomacy of the South Asian region. All interviews were conducted face-to-face or via secure digital communications software and lasted 45 minutes or longer. Other resources, such as defense white papers, satellite reports, policy briefs, and publications by international organizations, such as the United Nations Security Council (UNSC, 2025) and the Stockholm International Peace Research Institute (SIPRI, 2025) were also reviewed to inform the data in the interview.

Thematic analysis was used to analyze data, according to the six stages of the familiarization, coding, theme identification, review, definition, and reporting framework of Braun and Clarke (2022). The data were used to generate codes inductively, which were then narrowed in a subsequent process of comparing across sources. This strategy helped to identify trends and themes that were indicative of the tactical uses of drone technology and its strategic, policy-oriented consequences. Thematic interpretations were checked with four members to confirm the accuracy and credibility of their interpretations, and hence the authenticity and reliability of the analysis.

The research was conducted following ethical considerations. All participants were made aware of the objectives of the study, the voluntary nature of participation and the confidentiality of their responses before informed consent was provided. There was no military information, classified or sensitive, sought or noted. The [University Institutional Review Board, 2025] approved the study as ethical and anonymized all data to ensure that participants remain anonymous. The digital records and transcripts were encrypted and stored in encrypted files, and data was managed following the institutional research ethics and data protection guidelines.

## FINDINGS

With the qualitative data, the analysis identified four prominent themes that describe how drone technology has affected the course and the outcome of the May 2025 India-Pakistan War. These themes include force equalizer drone warfare, escalation and strategic ambiguity control, autonomous risk and cyber vulnerability, diplomatic consequences and global norm change. All these subjects are emphasized and addressed below.

### Drone Warfare as a Force Equalizer

It found that drone warfare acted as an important force equalizer during the 5 May 2025 conflict, particularly to Pakistan. An overwhelming majority of the participants believed that unmanned aerial systems (UAS) helped Pakistan to narrow the conventional military divide between the two countries without necessarily investing in the creation of expensive manned aircraft. One retired Pakistani air force officer states that it was the first time around we had seen this type of surveillance and striking capability without the corresponding manned aircraft force of India.

Pakistan drones Burraq-II near-night precision attack on Jammu and Kashmir was frequently cited as evidence of this shift. According to the participants, such drones provided Pakistan with greater flexibility in their operations, enabling them to strike with precision in real-time, and provide a low-cost and efficient means of waging modern warfare (Farooq, 2025). However, Indian participants noted that even though Pakistan could find tactical balance, India could not lag behind in information and data integration by employing an advanced long-range drone like Heron-TP and MQ-9B (Sengupta, 2025).

This was perceived as a turning of the tide of military balance between the two states. The subjects have noted that the fact that drones are able to own high-level military capabilities has enabled it to confront the supremacy of India in the air without necessarily fighting a full-scale war. However, this technology balancing game led to a yet more fierce competition to control the intelligence game and a new form of strategic rivalry in South Asia grounded on information superiority and robotic precision.

### Escalation Control and Strategic Ambiguity

The second broad theme that surfaced during the analysis involved the two-fold role of drone warfare in terms of control over escalation, along with creating strategic ambiguity. The participants kept repeating that drones would allow India and Pakistan to fight without being nuclear. Analysts referred to drones as an instrument of limited warfare, emphasizing that it created a channel of political signaling, coercion, and tactical retaliation without the commitment of unleashing full-scale warfare (Ganguly, 2024).

While this feature was seen as strategically useful, it also generated new complexities and risks. The anonymous and automated nature of drone strikes blurred the boundaries between state-directed and independent operations. One Indian analyst expressed this concern, stating, "*When a drone strikes an ammunition depot, was it state-authorized or a rogue AI sequence? The ambiguity itself becomes a strategic weapon.*"

The findings suggested that such ambiguity could easily lead to miscalculation. Drones provided political leaders with a sense of control and precision, but as Sagan (2022) argues, technological precision can paradoxically lower the barrier to conflict initiation. Participants observed that drone strikes offered a low-risk illusion of power projection that might embolden decision-makers to act aggressively, thereby eroding mutual restraint. Consequently, while drones helped prevent large-scale confrontation, they simultaneously introduced an unpredictable form of automated escalation, where human judgment and accountability were partially replaced by algorithmic decision-making.

**Cyber Vulnerabilities and Autonomous Risks**

Another significant theme that emerged from the study related to the increasing cybersecurity vulnerabilities and autonomous risks associated with drone warfare. Participants repeatedly pointed out that both India and Pakistan's drone systems were exposed to cyber threats during the conflict. Several experts confirmed incidents of GPS spoofing, communication interference, and suspected data manipulation by third-party or non-state actors who exploited battlefield confusion (UNSC, 2025).

The reliance on AI-based target recognition and decision-making mechanisms was identified as a key weakness. One defense journalist explained the danger vividly, saying, "*When your kill chain depends on machine learning, hacking the model is equivalent to turning your weapon against yourself.*"

The parties acknowledged that the two countries have failed to control their drone firing links in urgent missions resulting in mission aborts and undesirable maneuvers.

These observations explain the dual-use paradox of self-sufficing systems: these systems are more accurate, efficient and have a longer life, but they introduce another source of technology failure and cybercrime (Cummings, 2024). The digital warfare infrastructures, according to the experts who participated in the research, had proven vulnerable to the war of 2025. Not only would the overuse of AI put the stability of operations in jeopardy, but it would also result in both ethical and strategic responsibility questions once the machines are allowed to do with the world as they see fit. We heard about technological advantage, which one of us remarked afterward, might permit the wearing of cuffs in a relatively short period on the condition that the software were smarter than the operator."

**Diplomatic Repercussions and Global Norm Shifts**

The final was the international and diplomatic normative implications of the May 2025 war. As the outcome would reveal, the superiority of drones controlled by both sides began a dangerous debate regarding the legality and ethics of autonomous warfare all over the world. The very first time that the questions of Autonomous Weapons and Cross-border Sovereignty were discussed at the formal level were in the context of an inter-state conflict in the United Nations Security Council (UNSC, 2025).

Respondents noted that the conflict raised relative concern among Western forces, who urged them to restrain their own selfish interests but avoid direct condemnation to protect their own drone programs (Wheeler, 2024). On the other hand, China took the opportunity to promote a context of responsible autonomy, in which the country emerges as a peace broker and a major exporter of drones to Pakistan (Li and Zhang, 2025). This diplomatic gesture marked the beginning of drone technology as a tool of geopolitical leverage- shifting alliances, commerce, and power dynamics in the region.

Most of the interviewees opined that the 2025 war accelerated international discussions about lethal autonomous weapons (LAWs) and proved the futility of existing arms control regimes. Absence of international rules on drone warfare was seen as a growing threat to strategic stability. One of the policy experts aptly summed up this feeling: "*Drones have become the new nuclear—cheap, effective, and destabilizing.*"

The findings collectively reveal that drone warfare has not only altered the operational character of conflict in South Asia but also transformed the diplomatic and normative discourse surrounding the use of emerging technologies in war. While drones offered temporary advantages in precision and control, they also generated enduring challenges for regional stability and international peace.

**DISCUSSION**

The findings underscore how drone technology has transformed South Asian security from a nuclear-centric deterrence model to a **techno-strategic competition** (Rafiq, 2025). From a Realist perspective, both India and Pakistan's actions reflected rational pursuit of security through technological advantage, reinforcing Morgenthau's principle of power accumulation (Morgenthau, 1948). Yet, under Technological Determinism**,** the diffusion of AI-driven drones appears to have gained agency of its own—dictating strategic choices rather than merely enabling them (Smith, 2021).

The war demonstrated how drone proliferation enables asymmetric balancing, allowing weaker states to offset numerical inferiority through technological innovation (Malik, 2023). This aligns with earlier cases of drone use in Nagorno-Karabakh (2020) and Ukraine (2022)**,** where low-cost drones redefined power projection (Horowitz, 2022). In South Asia, however, the nuclear backdrop amplifies instability: the use of precision drones in disputed territories risks inadvertent escalation.

The ethical and legal implications are equally profound. Drone warfare challenges traditional concepts of sovereignty and proportionality under international humanitarian law (IHL) (Finnemore & Sikkink, 1998). Autonomous strikes blur accountability—who is responsible when an AI algorithm misidentifies a target? The 2025 conflict's AI-triggered misfires in civilian zones illustrate this moral dilemma (UNSC, 2025).

At the diplomatic level**,** the war reshaped alliances and defense partnerships. India's reliance on U.S. and Israeli drone systems reinforced strategic ties within the Quad framework**,** while Pakistan deepened defense integration with China's defense technology corridor (Li & Zhang, 2025). Consequently, drone technology has become a geopolitical currency, influencing alignments far beyond the battlefield.

Finally, the conflict exposed the absence of international governance mechanisms for drone warfare. Unlike nuclear weapons, drones are cheap, transferable, and often operated by hybrid actors. Without international consensus, the **"***democratization of destruction***"** may intensify regional insecurity (Freedman, 2021).

**CONCLUSION**

This drone technology is revolutionary in modern interstate warfare as evidenced in the 2025 India-Pakistan war in May. According to the qualitative study, the results showed that not only was the drone a weapon of intervention but it was also a weapon of exaltation and essentially the sovereignty or morality of war was redefined. Repeat drone warfare, as a leveler to allow Pakistan to place India at its knees, was mentioned by respondents and documentary sources as well as spawning technological competition and ambiguity. The two states could fight the tamed nuclear war beneath the nuclear threshold, with the help of drones, but it also carried the danger of misjudging and inadvertently escalating the conflict as drones are autonomous and deniable.

The researchers concluded that the artificial intelligence and networked autonomy of the drone systems gave rise to fundamental cyber and operational vulnerabilities. India and Pakistan will be exposed to computer manipulation, data bias, inability to predict the behavior of algorithms, and hence vulnerable to AI-enabled warfare. Simultaneously, the post-conflict state of affairs in the framework of international relations accentuated the elevated significance of international regulation and normative control of autonomous weapons. The development of the concept of the drones as a

strategic actor, capabilities and tactics could be traced in the discussion of the international community of the post-conflict of 2025.

All of these arguments combine to argue that regardless of how effective the drone technology is in terms of its efficacy and situational awareness, the mere fact that the technology is spreading so rapidly is presenting a long-term challenge to the strategic stability in the South Asian region. Perhaps, the drones are on the border of the threat and provocation, unless legally restricted by regional GMFs and CBMs, external AI regulation systems, and internationally binding legislation. It is not a matter of technology that is vexing policy makers but a matter of ethics and strategy of whether innovation in warfare is going beyond the limits of moderation, responsibility and peace. And finally, the results show that the slave is the security, not technology.

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