

## RECALIBRATING DETERRENCE: A COMPARATIVE ANALYSIS OF NUCLEAR DOCTRINES AND STRATEGIC STABILITY IN SOUTH ASIA'S EMERGING STRATEGIC TRIANGLE (2015–2025)

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### Abstract

This study offers a thorough comparison of the changing nuclear doctrines and deterrence tactics of *China, India, and Pakistan* from 2015 to 2025, a decade characterized by *doctrinal recalibration*, increasing *technological sophistication*, and an increase in the frequency of *conventional and sub-conventional conflicts*. These three nuclear-armed nations constitute a

*strategic triangle* whose internal imbalances and unsolved conflicts jeopardize regional and international security as they operate in an increasingly disputed geopolitical environment.

The doctrinal changes are critically examined, including *China's nuclear expansion coupled with ambiguity in no-first-use enforcement*, *India's shift in posture from credible minimum deterrence toward more assertive signaling*, and *Pakistan's full spectrum deterrence incorporating tactical nuclear weapons (TNWs)*. These changes are part of a larger context of strategic instability that has been made worse by breakthroughs in cyber capabilities, MIRVs, hypersonic weapons, and ISR (Intelligence, Surveillance, Reconnaissance).

The delicate line between conventional retribution and possible nuclear signaling is highlighted by recent events, including the Galwan Valley standoff (2020), the Pulwama-Balakot escalation (2019), and most significantly, the 2024 Pahalgam attack and its cross-border ramifications. The Pahalgam event, which rekindled acrimonious discourse and military vigilance between India and Pakistan, serves as an example of the increasing unpredictable nature of conflict escalation in a setting lacking effective crisis management procedures.

This paper presents the case that South Asia is heading toward a deterrence environment characterized by greater volatility and reduced predictability by utilizing a mixed-method approach that combines doctrinal analysis, strategic stability theory, and empirical case studies. In order to avoid unintentional escalation, it ends with policy recommendations centered on reviving arms control

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and International Relations,  
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Technology, Lahore*discussions, institutionalizing crisis communication, and creating a trilateral framework for fostering confidence.*

## INTRODUCTION

Over the past ten years, changing power balances, military modernization, and doctrinal innovation have all contributed to a dramatic transformation of the South Asian strategic landscape. China, India, and Pakistan are the three nuclear-armed nations in the area; each has its own nuclear postures, strategic cultures, and security perceptions. Although deterrence theory holds that having nuclear weapons in common promotes strategic stability, South Asia's geopolitical instability, asymmetric threats, and lack of formalized arms control mechanisms have made it harder to apply this reasoning.

South Asia has vacillated between nuclear prudence and brinkmanship ever since India and Pakistan were formally recognized as nuclear powers in 1998. This already precarious equilibrium has been made more difficult by China's increasing aggressiveness and quick upgrading of its nuclear triad. A pattern of increasingly aggressive doctrinal posturing, developments in dual-capable delivery systems, and a string of crises that push the boundaries of deterrence have been observed in the region between 2015 and 2025. These include the 2019 military exchange between Pulwama and Balakot, the 2020 Indian-Chinese stalemate in the Galwan Valley, and, most recently, the 2024 Pahalgam attack, which put India and Pakistan once again on the verge of violence.

The declining crisis management situation between India and Pakistan is exemplified by the Pahalgam event in particular. Retaliatory language and military posture swiftly rose after a deadly ambush on Indian security troops in the Kashmir area, which New Delhi blamed on militants headquartered in Pakistan. Even while the issue was ultimately defused diplomatically, it once again demonstrated how brittle deterrence is,

particularly when nuclear doctrines collide with unconventional conflict.

## PROBLEM STATEMENT:

This study's main focus is on the growing instability of South Asian nuclear deterrence, which is caused by changes in nuclear doctrines, technological advancements, and a deficiency of crisis management frameworks among the participating nations. The changing relationships between China, India, and Pakistan cannot be adequately explained by traditional ideas of stability, which are based on deterrence theory from the Cold War. In addition to casting doubt on the viability of bilateral deterrence ties, these developments have complicated and unpredictably reshaped Asia's strategic triangle.

Questions of doctrinal consistency and intent are raised by India's changing doctrine, which is characterized by vague declarations regarding the future of its No First Use (NFU) policy. The deployment of tactical nuclear weapons (TNWs) as part of Pakistan's ongoing dependence on Full Spectrum Deterrence lowers the threshold for nuclear use and creates operational instability. In the meantime, instability in South and East Asia is exacerbated by China's ambiguous policy, growing arsenal, and growing integration of conventional and nuclear weapons.

## RESEARCH OBJECTIVES:

This study aims to investigate and evaluate how South Asian nuclear doctrines and deterrent tactics have changed between 2015 and 2025, with a particular emphasis on:

- A comparative analysis of China's, India's, and Pakistan's nuclear policies in light of strategic

stability.

- Analysis of conflict escalation trends and crisis behavior impacted by doctrinal changes and technology breakthroughs.
- Assessment of the strategic triangle's deterrence dynamics and their effects on regional and international security.
- Policy suggestions for enhancing regional strategic stability and lowering escalation risks.

#### RESEARCH QUESTIONS:

The following research questions serve as the study's compass in order to achieve the aforementioned goals:

- How have China's, India's, and Pakistan's nuclear policies changed from 2015 to 2025?
- What effects have these doctrinal shifts had on South Asia's strategic stability and deterrence dynamics?
- How have crises like the Pahalgam incident, Galwan, and Pulwama-Balakot affected the legitimacy and adaptability of nuclear postures?
- How does nuclear deterrence in the trilateral environment change as a result of new technologies like MIRVs, hypersonics, ISR, and cyber capabilities?
- What systems can be put in place to improve crisis management and stop unintentional nuclear escalation in South Asia?

#### SIGNIFICANCE OF THE STUDY?

This work adds to the scholarly and policy discussions on strategic stability, South Asian regional security, and nuclear deterrence theory. There is little research on the triangle aspect of nuclear deterrence in South Asia, despite the fact that many studies have looked at bilateral dynamics, such as those between India and China or Pakistan. By providing a comparative and integrative framework for examining the ways in which doctrinal evolution, crisis behavior, and strategic ambiguity impact nuclear stability, this study closes that gap. Furthermore, the study comes at a particularly good moment. There has been a clear transition from strategic restraint to proactive deterrence and doctrinal assertiveness between 2015 and 2025. The necessity of readjusting theoretical and

policy frameworks is highlighted by the way that nuclear doctrines and unconventional warfare overlap, as demonstrated by incidents such as the Pahalgam attack. By tackling these important problems, the study hopes to offer practical advice to academics, military strategists, and policymakers. It also hopes to help shape arms control talks, crisis communication plans, and confidence-building initiatives in one of the most unstable nuclear-armed regions on earth.

#### LITERATURE REVIEW:

##### THE APPLICATION OF CLASSICAL DETERRENCE THEORY IN SOUTH ASIA

Based on the Cold War rivalry between the US and the USSR, traditional deterrence theory is predicated on mutual vulnerability, second-strike capabilities, and rational actor models. Deterrence is stable when all sides believe that the risks of nuclear conflict are too high, according to academics like Glenn Snyder and Thomas Schelling. However, because of territorial conflicts, non-state actors, and asymmetric conventional forces, the security environment in South Asia makes this concept more difficult to understand. The relevance of Cold War deterrence to South Asia has been questioned by a number of academics, including Sumit Ganguly, Zachary Davis, and Scott Sagan. They contend that the region's distinct geostrategic features and civil-military imbalances make classical approaches less effective. Sagan's "proliferation pessimism," for example, alerts people to the dangers of decentralized decision-making, unstable crisis behavior, and command-and-control flaws.

#### INDIA'S NUCLEAR POLICY:

Transitions and Strategic Uncertainties formally stated in 2003, India's nuclear strategy places a strong emphasis on massive retaliation, credible minimum deterrence, and No First Use (NFU). India's long-term commitment to NFU has been called into question, nevertheless, by recent statements made by high-ranking Indian officials, such as those made by Defence Minister Rajnath Singh in 2019. According to academics like Vipin Narang and Rajesh Basrur, India is shifting toward a more adaptable deterrent posture in reaction to Pakistan's employment of

TNWs, possibly implementing preventive measures or counterforce targeting. Change creates strategic uncertainty, which raises the possibility of misunderstandings and poor decision-making in times of crisis but may have short-term deterrent effects. Additionally, India's long-term move toward force mobility and survivability is reflected in its investments in nuclear-powered submarines, hypersonic glide vehicles, and ballistic missile defense (BMD).

### THE TNW DILEMMA AND PAKISTAN'S FULL SPECTRUM DETERRENCE

In reaction to India's Cold Start Doctrine, Pakistan changed its nuclear posture from minimum credible deterrence to full spectrum deterrence (FSD). FSD presents the idea of tactical nuclear weapons (TNWs), which are intended to decrease the nuclear threshold and prevent conventional intrusions. According to academics like Feroz Khan, Zahid Ali, and Maria Sultan, TNWs improve deterrence by bridging the gap between strategic and conventional reactions. Others, such as Christopher Clary and Happymon Jacob, draw attention to the risks of early delegation, command-and-control instability, and unintentional escalation brought on by advance deployment. The 2019 Pulwama-Balakot crisis cast doubt on Pakistan's FSD's alleged efficacy by demonstrating India's willingness to carry out airstrikes and surgical strikes while operating under nuclear cover. Similar concerns were highlighted by the Pahalgam incident in 2024 that low-threshold conflict could lead to harmful retaliatory tendencies.

### CHINA'S GROWING STRATEGIC AMBIGUITY AND DOCTRINE

In the past, China's nuclear policy has prioritized assured retribution, minimum deterrence, and No First Use. Recent events, however, suggest a possible shift toward launch-on-warning, doctrinal expansion, and the development of MIRVed ICBMs, hypersonics, and drones with nuclear capabilities. China's heightened focus on nuclear modernization, dual-use delivery systems, and strategic ambiguity, according to analysts like M. Taylor Fravel, Jeffrey Lewis, and Hans Kristensen, is a reaction to perceived threats from Indian and American missile defense

systems. Despite their ambiguity, its defense white papers for 2022 and 2023 point to a shift away from minimal deterrence and toward enhanced deterrence.

### TRILATERAL DETERRENCE AND INSTABILITY IN THE STRATEGIC TRIANGLE

Instead of forming a series of bilateral deterrence dyads, the trilateral interaction between China, India, and Pakistan creates a strategic triangle. According to academics like Ashley J. Tellis and Tanvi Madan, this triangle exacerbates instability by creating perceptual asymmetries, cross-domain deterrence difficulties, and the potential for concurrent crises along several boundaries.

Instability is exacerbated by the absence of crisis communication protocols and hotlines, the growing opacity of doctrines and force deployments, and the absence of formalized trilateral weapons control. Events such as Pahalgam (2024) and Galwan (2020) demonstrate how strategic signals and kinetic military reactions can intensify under a nuclear umbrella without obvious boundaries. Furthermore, the predictability necessary for reliable deterrence is further challenged by non-state actors, proxy groups, and cyber weaknesses. Whether the existence of nuclear weapons naturally stabilizes the area or fosters a fictitious sense of security that permits reckless behavior at lower rungs of the escalation ladder is still up for debate in the literature.

Although previous research offers a comprehensive examination of deterrence interactions between India and Pakistan as well as between India and China, there is still a notable lack of trilateral comparative studies that take into consideration concurrent doctrinal developments in all three countries. Furthermore: There is little research on how new technologies like space-based targeting, satellite ISR, and artificial intelligence influence doctrinal thinking. Few studies look at how recent crises (like Pahalgam 2024) affect military planning and policy recalibration across all three states. War-gaming exercises or regional crisis simulation models that can forecast the escalation pathways in a triangle conflict scenario are not given enough attention.

**THEORETICAL FRAMEWORK:**

This study's theoretical framework is based on crisis escalation models, nuclear deterrence theory, and strategic stability theory. The ideological practices and strategic exchanges of China, India, and Pakistan from 2015 to 2025 are examined using these frameworks. The paper also includes aspects of triangular deterrence logic, a relatively unexplored area in South Asian strategic studies, given the trilateral structure of the security environment.

**STABILITY IN STRATEGY**

When no state is motivated to launch a first nuclear strike because its opponents have credible second-strike capabilities, this is referred to as strategic stability. It consists of two interconnected parts:

**Crisis Stability:** The guarantee that no side will feel pressured to use nuclear weapons in order to gain an advantage or lose its deterrent.

- **Arms Race Stability:** A situation in which there is no pressure on any of the parties to quickly improve or change their nuclear posture or capabilities in a way that would upset the equilibrium.

- A number of issues threaten the stability of both the weapons race and the situation in South Asia:

- Conventional skills that are asymmetrical
- Insufficiently safe second-strike forces
- rivalry in technology (e.g., BMDs, MIRVs)

- Nuclear policy ambiguity

Because of their limited communication protocols and short escalation ladders, India-Pakistan relations show indications of low crisis stability. Despite their longer history of restraint, India and China are now in a more volatile era, particularly in light of the 2020 Galwan conflict, which demonstrated a decoupling of conventional military action and nuclear deterrent.

**THEORY OF DETERRENCE**

According to deterrence theory, states will not start a conflict if the perceived benefits are less than the projected costs, particularly when it comes to nuclear. Deterrence in nuclear strategy is typically classified as:

- Deterrence by Punishment (such as India's declared strategy of "massive retaliation")

- Deterrence by denial (such as protected silos or missile defense systems)

The environment of South Asia, however, makes this dichotomy more difficult. The distinction between strategic and tactical deterrence is blurred by Pakistan's full spectrum deterrence, which reduces the credibility of both punishment and denial at the same time. Similarly, India's changing counterforce discourse departs from traditional deterrence reasoning and advocates preemption rather than retaliation.

Irrational actors, unintentional escalation, and non-state involvement—factors that are extremely pertinent in the South Asian context—are all incorporated into this study's classical deterrence theory (Schelling, Waltz) and post-classical revisions (Sagan, Narang). Doctrinal Signaling and Credibility Doctrinal credibility, or the extent to which a state's enemies accept its stated policies and capabilities, is a fundamental component of effective deterrence. In South Asia: Unofficial declarations and theological silence in recent years have contributed to the growing perception of India's NFU policy as being unclear. Although Pakistan's declaratory strategy is still aggressive, several academics doubt its practical credibility, particularly with regard to the deployment of tactical nuclear weapons. Despite being formally NFU and focused on minimal deterrence, China's posture is gradually becoming more ambiguous as a result of its expanding armament and infrastructure development.

In both times of peace and crisis, strategic signaling—such as missile launches, mobilizations, and public declarations—is essential for shaping public opinion. But without official nuclear talks or regimes that foster confidence,

**MODELS OF ESCALATION AND CRISIS MANAGEMENT**

Escalation theory, namely Herman Kahn's escalation ladder, is used to evaluate how nuclear-related situations like Pahalgam (2024) and Pulwama-Balakot (2019) unfold. These models aid in the analysis of:

- the points at which conventional signaling gives way to nuclear signaling.

- the ways in which political signals, military surprise, and time constraints influence reactions.
- the impact of outside parties (such as the United States mediating a dispute or China's covert assistance to Pakistan).

"Inadvertent escalation"—when conventional actions inadvertently increase nuclear risk due to close proximity, weak command-and-control, or fog of war—is another point of emphasis for contemporary academics like James Acton and Bruce Riedel. Conventional clashes and retaliatory rhetoric developed dangerously before being politically tamed, as demonstrated by the Pahalgam episode.

### TRIANGULAR DETERRENCE:

In contrast to the bipolar deterrence model of the Cold War, the nuclear environment in South Asia consists of a strategic triangle with lopsided ties and clear antagonistic pairings:

- India-Pakistan (direct deterrence, hostile)
- China-India rivalry (boundary-focused)
- China-Pakistan (asymmetrical, quasi-allied)

This research integrates new triangle deterrence theories, especially those of Brad Roberts and Michael Krepon, who examine how Behaviors in one dyad are influenced by strategic postures in the other. As states try to simultaneously dissuade two adversaries with disparate philosophies, striking a balance becomes increasingly challenging. Instability is made worse by technological spillover, such as when India's missile defense against China undermines deterrence against Pakistan.

### AN INTEGRATED FRAMEWORK FOR ANALYSIS

This study uses an integrated framework to evaluate nuclear stability in South Asia, taking into account the theoretical pillars mentioned above. It looks at:

**Doctrinal evolution:** The ways in which declared and implemented policies have evolved.

### Drivers of technology:

The effects of new weaponry and modernization.

**Crisis behavior:** The role of signals and how states act under duress.

The way the three nuclear actors influence one another's decisions is known as strategic interaction. This approach enables a dynamic and comparative examination of nuclear stability in an area where strategic choices are becoming more interrelated and where there is a decreasing margin for error.

### METHODOLOGY:

The research strategy, methodology, and analytical tools used to examine the development of nuclear doctrines and strategic stability among China, India, and Pakistan between 2015 and 2025 are described in this section. Because doctrinal interpretation is qualitative, the study uses a comparative case study methodology that is backed by strategic theory, crisis mapping, and doctrinal analysis.

### RESEARCH DESIGN:

The three South Asian nuclear powers' ideological development and strategic contacts are the main topics of this qualitative, comparative, and analytical study. This design's justification stems from the fact that nuclear doctrine is intricate, individualized, and frequently ambiguous, making it impossible to measure using traditional empirical methods.

The study's analysis of China, India, and Pakistan as separate but connected case studies reveals: The distinct theological paths of every state, India-Pakistan and India-China's bilateral deterrence mechanisms, and the newly developed triangle deterrence model that links the three.

### RESEARCH METHODS:

#### COMPARATIVE CASE STUDY APPROACH

Using this technique, one may compare: official declarations, defense white papers, and strategic guides are examples of doctrinal documents. Developments in the military (strategic signaling, delivery platforms, and force posture), and Response patterns, escalation ladders, and de-escalation techniques are examples of crisis behavior.

The nuclear policies of each nation are examined separately, and comparative cross-analysis is employed to determine: Doctrine convergence or divergence

Strategic risks that are asymmetric or shared  
Credibility of doctrine and how opponents view it

### PROCESS TRACING:

Process tracing is used to analyze significant strategic events in order to comprehend the causal relationship between doctrinal changes and strategic behavior:

1. The 2019 Pulwama–Balakot crisis
2. The conflict in the Galwan Valley (2020)
3. The Indo-Pakistani military alert and the Pahalgam incident (2024)

Process tracing enables the study to evaluate how theory translates into operational decision-making by tracking the events, reactions from the public and private sectors, and nuclear signaling patterns.

### CONTENT ANALYSIS:

An examination of the qualitative content of:

- Official policy publications (such as China's defense white papers, Pakistan's ISPR briefings, and India's draft nuclear doctrine)
- Public declarations by military and political figures
- Think-tank papers and publications from the strategic community

This approach makes it possible to evaluate rhetorical patterns, unclear wording, and implied doctrinal revisions that might not be apparent in official documents.

### SOURCES OF DATA:

Both primary and secondary sources are used in the study, including:

#### PRIMARY SOURCES

- Publications from the government (such as China's National Defense White Papers, Pakistan's Strategic Plans Division briefings, and India's Ministry of Defense Annual Reports)
- Remarks from military commanders, ministries, and defense authorities
- transcripts of parliamentary sessions and official press conferences
- Announcements of missile and weapon tests (from PLA Rocket Force, DRDO, ISPR, etc.)

### SECONDARY SOURCES

#### SCHOLARLY PUBLICATIONS:

Strategic Studies Quarterly, Asian Security, International Security, and Journal of Strategic Studies

#### PUBLICATIONS FROM THINK TANKS:

- Carnegie Endowment, SIPRI, IDSA, CISS Islamabad, RAND, and Stimson Center
- Working papers and policy briefs written by specialists (such as Happymon Jacob, M. Taylor Favel, Feroz Khan, and Vipin Narang)
- Strategic events covered by the media, such as The Diplomat, Global Times, Dawn, and The Hindu

#### CASE SELECTION RATIONALE:

Three case studies are chosen because of their timing and strategic importance:

**Pulwama-Balakot (2019):** An obvious example of India's post-surgical strike stance and escalation under the nuclear umbrella.

The **2020 Galwan Valley Clash** was a military conflict between China and India that called into Question strategic signaling and conventional deterrence without any nuclear undertones.

The **Pahalgam Incident (2024)** is a recent example of how retaliatory rhetoric and cross-border terrorism can undermine deterrence frameworks and exacerbate regional instability.

#### These examples stand for:

Various bilateral conflicts (India-China, India-Pakistan) Different escalation levels (sub-conventional and conventional) Various practical doctrinal interpretations

#### SIGNIFICANCE OF THE STUDY:

##### DOCTRINAL OPACITY:

Official nuclear postures from China and Pakistan are not always clear-cut, necessitating the use of secondary interpretations and indirect signals.

**DATA ACCESS:**

Some classified information about crisis decision-making or command-and-control systems is not publicly available.

**ATTRIBUTION AMBIGUITY:**

Because non-state actors are involved in incidents like the Pahalgam attack, it might be challenging to completely assign state culpability or intent.

**INTERPRETIVE BIAS:**

During times of crisis, rhetorical inflation or domestic political goals may have an impact on strategic narratives. The study employs cross-verification of official and independent assessments as well as triangulation of data sources to lessen these constraints.

**ETHICAL CONSIDERATION:**

All of the material used in this research comes from openly accessible, unclassified sources. Sensitive or potentially dangerous data that can jeopardize national security or falsify state objectives is not used in this study. The study makes a clear distinction between official positions and scholarly interpretations where needed.

**DISCUSSION:**

### **EVOLUTION OF NUCLEAR DOCTRINE (CHINA, INDIA, AND PAKISTAN: 2015–2025 INDIA'S NUCLEAR POLICY: FROM MODERATION TO AMBIGUITY NFU COMMITMENT AND DOCTRINAL UNDERPINNINGS**

Three fundamental ideas form the basis of India's nuclear doctrine, which was formally accepted in 2003:

- NFU stands for No First Use.
- Minimum Credible Deterrence (CMD)
- MR stands for Massive Retaliation

India's philosophy for more than 10 years advocated strategic restraint in order to prevent nuclear aggression without starting a traditional arms race. But by 2015, Indian strategic analysts were beginning to wonder if NFU and MR could stop China's force

projection along the LAC or Pakistan's unconventional provocations.

### **DEVELOPMENTS IN DOCTRINAL CHANGES (2015–2025)**

This was a time of subtle but important doctrinal evolution: Ambiguity around NFU: In August 2019, Rajnath Singh, India's defense minister, said that although NFU is still the country's current policy, its future would depend on the situation. This was a direct strategic message to China and Pakistan.

**Discussions on Counterforce Targeting:** Academics like former NSA Shivshankar Menon and Vipin Narang alluded to preemptive counterforce tactics, particularly in the event that India possessed reliable information on an impending Pakistani launch. Operationalizing Deterrence: India's move to ready and survivable forces was marked by the introduction of INS Arihant, the country's first SSBN, and the development of canisterized Agni- missiles, which enhanced India's second-strike capacity.

These responses point to a move away from declarative restraint and toward operational readiness and ambiguity in order to manage escalation risks and improve deterrence credibility.

### **STRATEGIC SIGNALING AND TACTICAL FLEXIBILITY IN PAKISTAN'S NUCLEAR DOCTRINE FROM FULL SPECTRUM DETERRENCE TO MINIMUM DETERRENCE**

In reaction to India's Cold Start concept, Pakistan developed its own nuclear doctrine. Full Spectrum Deterrence (FSD) was formally established by the National Command Authority (NCA) announcement in 2013, and it includes: Deterrence of counter value targets using strategic means Utilizing long-range missiles for operational deterrence Using battlefield nuclear weapons (TNWs) for tactical deterrence FSD is intended to close deterrence gaps at all possible conflict levels, including limited conventional and sub-conventional combat.

**ADVANCEMENTS IN TECHNOLOGY (2015–2025) PAKISTAN POSSESSES:**

Short-range NASR (Hatf-IX) missiles were used to thwart conventional Indian assaults. expanded MIRV capabilities for plausible second-strike capability (e.g., Ababeel missile). enhanced command-and-control architecture through decentralized deployment and better communications, but with higher dangers of illegal use.

These changes are intended to keep India's maneuvering area below the nuclear threshold, so discouraging both cross-border attacks and Indian counterforce doctrines.

- Crisis Management and Strategic Conduct
- Pakistan carried out symbolic attacks and scrambled jets during Pulwama-Balakot, supported by nuclear signaling through diplomatic and media channels.
- Islamabad denied involvement in Pahalgam in 2024, but it did put strategic forces on alert and practice missile preparation.

Thus, FSD offers flexibility in deterrence, but at the expense of lowering the nuclear threshold and raising the possibility of unintentional escalation, especially in the face of urgent military pressure.

**MODERNIZATION OF CHINA'S NUCLEAR DOCTRINE WITHOUT TRANSPARENCY**

Strategic Culture and Doctrinal Underpinnings for a long time, China's official nuclear policy has stressed:

- NFU stands for No First Use.
- The bare minimum of credible deterrence
- Ability to survive a second attack but long-term strategic patience, opacity, and a propensity for non-provocative signals are what define

Chinese ideology.

Historically, its nuclear arsenal was small but safe.

**CHANGES AND TRENDS IN MODERNIZATION (2015–2025)**

Over the past ten years, there has been an unparalleled expansion in both doctrine and materiality:

- nuclear triad modernization using Type 096 SSBNs, MIRVed DF-41 missiles, and sophisticated ICBMs.
  - Concerns about first strikes are raised by the integration of dual-capable hypersonic missiles.
  - conjecture about launch-on-warning (LOW) posture, which is encouraged by the expenditure in early warning systems and satellite deployment.
- Scholars like M. Taylor Fravel contend that despite China's continued claims of NFU, there is a great deal of regional uncertainty due to its opacity and silence on posture evolution.

**A STRATEGIC APPROACH TO THE UNITED STATES AND INDIA.**

Although the United States is the primary target of China's nuclear deterrent, India is impacted by its expanding arsenal, especially because of:

- Overlaps of the DF-26 and DF-17 missile ranges with Indian territory
- Exercises of the PLA Rocket Force near the Tibetan Plateau after Galwan (2020)
- ongoing development of nuclear facilities in western China

China's strategic stance toward South Asia is still unclear but becoming more assertive, which supports the idea that its ideology is changing without formal explanation.

**Comparative Analysis: Converging Risks, Diverging Doctrines**

| Variable          | India                         | Pakistan                 | China                   |
|-------------------|-------------------------------|--------------------------|-------------------------|
| Declared Doctrine | NFU, CMD, Massive Retaliation | Full Spectrum Deterrence | NFU, Minimum Deterrence |
| Doctrinal Trend   | Toward ambiguity              | Lowering                 | Toward survivability,   |

|                                      | and counterforce                             | threshold<br>with TNWs                     | ambiguity                                      |
|--------------------------------------|----------------------------------------------|--------------------------------------------|------------------------------------------------|
| <b>Crisis Response</b>               | Assertive retaliation +<br>nuclear restraint | Symbolic airstrikes +<br>nuclear signaling | Conventional calm,<br>strategic infrastructure |
| <b>Second-Strike<br/>Credibility</b> | Increasing with<br>SSBNs and MIRVs           | Questionable at<br>tactical level          | Strong and growing                             |
| <b>Strategic Risk</b>                | Misperception,<br>doctrinal<br>inconsistency | Early delegation,<br>TNW risks             | Doctrinal opacity, LOW<br>speculation          |

The results of this comparative analysis show that India is using a combination of modernization and ambiguity to adjust its stance in order to deal with its two nuclear neighbors. In an effort to counter conventional threats, Pakistan is increasing its tactical adaptability. China is growing opaquely, which makes it more difficult to understand and react to its stance.

#### CRISIS CASE STUDIES:

##### ASSESSING SOUTH ASIAN DETERRENCE

The doctrinal development covered above is applied to current problems that took place between 2019 and 2024 in this chapter. In the changing strategic triangle of South Asia, these events provide empirical evidence of the legitimacy, adaptability, and efficacy of nuclear deterrence. Each case provides important insights into the crisis behavior of the region and exemplifies a distinct conflict vector, such as India-Pakistan, India-China, and cross-border terrorism with nuclear signals.

#### CASE STUDY:

##### THE 2019 PULWAMA-BALAKOT CRISIS BACKGROUND:

More than 40 Indian paramilitary soldiers were murdered in a suicide explosion in Pulwama, Jammu & Kashmir, on February 14, 2019. The terrorist organization Jaish-e-Mohammed (JeM), which is located in Pakistan, claimed responsibility for the attack. India retaliated with airstrikes in Balakot, deep within Pakistani territory, accusing Pakistan of permitting the attack. This marked a dramatic shift from previous restraint.

#### DOCTRINAL CONSEQUENCES

**INDIA:** In accordance with its developing theory of punitive deterrence, India reinterpreted the bar for

traditional retribution by carrying out a cross-border airstrike and making it public. A calculated risk, the use of air power under nuclear shadow demonstrated India's transition from declaratory restraint to effective operational deterrence.

**PAKISTAN:** In response, Pakistan launched airstrikes of its own close to Indian military targets in J&K, caught an Indian pilot, and eventually brought him back. Pakistan did not escalate militarily despite aggressive rhetoric. Nonetheless, the military and political leadership made declarations that demonstrated strategic readiness and nuclear signaling.

#### STRATEGIC OUTCOME:

The crisis marked a watershed because it challenged Pakistan's deterrence strategy and confirmed India's readiness to retaliate with nuclear weapons. Although full-scale confrontation was probably avoided by nuclear weapons, the crisis revealed the perilous gulf between unconventional combat and nuclear reprisal, making deterrence more unstable at lower escalation levels.

#### CASE STUDY THE GALWAN VALLEY STANDOFF (2020). BACKGROUND:

Twenty Indian soldiers and an undetermined number of Chinese soldiers were killed in a violent hand-to-hand battle between Indian and Chinese troops in the Galwan Valley in Ladakh in June 2020. In forty-five years, this was the first deadly confrontation between China and India.

#### IMPLICATIONS FOR DOCTRINE

**CHINA:** Throughout the crisis, Beijing remained strategically opaque. It conducted military

deployments and logistical buildups along the Line of Actual Control (LAC) but refrained from nuclear signaling. Because of its low perceived danger of escalation and nuclear ambiguity, the PLA's posture conveyed confidence in conventional dominance.

**INDIA:** Despite suffering significant losses, India changed its conventional military posture, sent more divisions to the LAC, and accelerated defense purchases while maintaining nuclear caution. Without using nuclear signaling, India's answer unveiled a new ideology of simultaneous dual-front preparedness.

#### STRATEGIC OUTCOME:

Nuclear deterrence does not stop traditional border disputes, as the Galwan crisis showed, especially when state actors think escalation will be kept to a minimum. Although China's modernization raises questions about the future, both sides believe that the India-China nuclear equation is stable, which is shown in their lack of nuclear signaling.

#### CASE STUDY : THE INCIDENT AT PAHALGAM (2024) BACKGROUND:

The 17 Indian soldiers were murdered in a horrific ambush in Pahalgam, J&K, in April 2024. The Indian government quickly pointed the finger at extremists headquartered in Pakistan and threatened "measured

retribution." With both sides conducting missile readiness drills, numerous airspace violations, and deployment along the LoC, the situation intensified.

#### IMPLICATIONS FOR DOCTRINE

**INDIA:** India held extensive military drills and made its missile alert status public, but it did not immediately launch a kinetic attack. In line with its trend away from strict NFU toward deterrent flexibility, these steps demonstrate a movement toward doctrinal signaling by readiness rather than reprisal.

**PAKISTAN:** Citing its Full Spectrum Deterrence doctrine, Pakistan issued severe threats. They put the Strategic Plans Division on high alert. However, Pakistan chose to use limited force movements and media-based signaling instead of escalation, indicating prudence when employing TNW-based deterrence in the face of unclear attribution.

#### STRATEGIC OUTCOME:

The Pahalgam incident brought to light a new trend in South Asia known as "crisis deterrence signaling," in which governments avoid direct reprisal in favor of deterring escalation through rhetoric, preparation, and demonstrations. However, there is still a chance that misjudgments could result from perception asymmetry and information cloud.

#### Comparative Insights: Doctrinal Practice under Pressure

| Crisis                 | India's Response                            | Pakistan's Response                   | China's Role                    | Deterrence Impact                                        |
|------------------------|---------------------------------------------|---------------------------------------|---------------------------------|----------------------------------------------------------|
| Pulwama-Balakot (2019) | Conventional airstrike under nuclear shadow | Air retaliation + nuclear signaling   | None                            | Escalation below nuclear threshold; deterrence stretched |
| Galwan (2020)          | Military buildup, no nuclear posturing      | Not involved                          | Tactical conventional dominance | Conventional conflict under nuclear backdrop             |
| Pahalgam (2024)        | Strategic signaling, alert status           | Readiness drills + strategic rhetoric | Monitored silently              | Psychological signaling over kinetic escalation          |

#### PATTERNS AND IMPLICATIONS

The operationalization of doctrines is asymmetrical: China favors deterrence by ambiguity and force

projection, Pakistan relies on deterrence signals, and India stresses conventional retribution and readiness.

**CRISIS STABILITY IS DETERIORATING:**

The lack of official crisis communication channels in all three crises raises the possibility of errors in judgment.

**THE GRAY AREA IS SUB-CONVENTIONAL CONFLICT:**

These examples show how, in spite of nuclear deterrence, local conflicts or terrorist strikes can potentially escalate. There is an increase in technological signaling: media disclosures, satellite activity, and missile alerts are all becoming essential components of contemporary deterrent tactics.

**EVALUATION OF STRATEGIC STABILITY AND FUTURE RISKS:**

Significant doctrinal development, nuclear upgrading, and frequent testing of deterrent frameworks among China, India, and Pakistan have all occurred between 2015 and 2025. Based on these developments, this chapter assesses South Asia's overall strategic stability and identifies new threats to the deterrence balance.

**REDEFINING SOUTH ASIAN STRATEGIC STABILITY**

The dynamics of South Asia are no longer adequately captured by conventional notions of strategic stability as they were conceived during the Cold War. Stability is brittle and multifaceted in an area characterized by unbalanced capabilities, non-state entities, unclear doctrines, and ongoing bilateral rivalry. There are three overlapping areas of instability in South Asia today:

- Rapid escalation in the wake of political events, border conflicts, or terrorist acts can cause crisis instability.
- Declarative ambiguity and shifts in nuclear posture are the main causes of doctrinal instability.
- Arms racing in developing technologies, such as MIRVs, hypersonics, BMDs, and artificial intelligence, is the main cause of technological instability.

The fundamental logic of deterrence is weakened by these components' growing interdependence and reinforcement.

**INDIA: BALANCING ASSERTIVENESS AND STRATEGIC RESTRAINT**

India's changing doctrine is a strategic realignment meant to counter China's conventional aggression as well as Pakistan's unconventional threats. Even though India still openly upholds the principle of No First Use, its vagueness regarding preemption and counterforce targeting creates uncertainty, particularly for Pakistan.

**PRINCIPAL ISSUES:**

- loss of doctrinal credibility as a result of conflicting NFU signals.
  - Operational strain and resource dispersion result from a two-front problem.
- There are still gaps in reliable early warning, despite the emphasis on survivable deterrence using sea-based platforms and canisterized missiles. Despite being more proactive, India's approach runs the potential of escalation due to misunderstanding, especially if Pakistan views conventional reprisal as a prelude to counterforce operations.

**PAKISTAN: INSTABILITY AS A DETERRENT AND TACTICAL INNOVATION**

Pakistan can respond at different levels of war thanks to its Full Spectrum Deterrence strategy, which offers tactical flexibility. But this position: increases the possibility of unintentional or accidental use by lowering the nuclear threshold. mostly depends on prompt decision-making under time constraints and early delegation. uses strong political language and repeated testing as a means of deterrence signaling. Although Pakistan sees TNWs as deterrents, operational hazards arise from their inherent volatility, particularly if they are deployed forward. Any mistake made during a crisis (like Pahalgam 2024) could result in a swift and unexpected escalation, notwithstanding the doctrine's assumption of rational escalation management.

## CHINA: SILENT MODERNIZATION AND STRATEGIC PATIENCE

Although China's nuclear policy is still quite unclear, recent events indicate:

- a shift to heightened deterrence from limited deterrence.
- probable shift toward counter-intervention and Launch-on-Warning (LOW) tactics.
- an expanding collection of submarine-

based delivery systems, hypersonic weapons, and MIRVed ICBMs.

The stability of South Asia is impacted by China's integration of conventional and nuclear capabilities and the growth of its nuclear arsenal, even though its strategic posture is not unique to India. China's modernization and ideological opacity make defense planning more difficult for India and run the risk of causing instability on two fronts amid concurrent crises.

## Indicators of Emerging Instability (2025 and Beyond)

| Indicator                          | Implication                                         |
|------------------------------------|-----------------------------------------------------|
| Doctrinal Ambiguity (India, China) | Misinterpretation of nuclear thresholds             |
| TNW Deployment (Pakistan)          | Increased risk of pre-delegation and accidental use |
| MIRVs & Hypersonics (India, China) | Shortened decision windows, escalation incentives   |
| Absence of Arms Control            | No binding constraints or verification mechanisms   |
| Dual-Front Crisis Potential        | Overload of strategic response capabilities         |

## FINDINGS:

**CLASSICAL DETERRENCE THEORY:** A Reexamination in the South Asian Setting One of the main conclusions of this study is that the traditional deterrence theory, which is predicated on the idea of rational actors, distinct red lines, and stable second-strike capabilities, is becoming less and less appropriate for the trilateral nuclear dynamics that exist in South Asia. India and Pakistan are trapped in a deterrence framework where strategic instability is created by non-state actors and unconventional operations. There is a credibility gap between deterrence by tactical flexibility (Pakistan) and deterrence by punishment (India). The deterrence argument is further muddled by the fact that China and India have a deterrent relationship based more on deterrence by denial (via conventional positioning and terrain advantage) than on nuclear posture clarity. Although they are not enemies, China and Pakistan have an indirect influence on one another's strategic thinking since they limit India's options for responding to crises, creating what is known as a "constraining

triangle." This highlights a significant departure from bipolar Cold War models: South Asia's deterrent architecture has to deal with asymmetry of capabilities, interests, and strategic goals, which makes deterrence riskier and less predictable.

## Ambiguity's Ascent: Strength or Risk?

In terms of nuclear doctrine, all three states have moved toward more ambiguity: India currently demonstrates ideological dualism by openly supporting No First Use (NFU) yet allowing for the potential of preemptive counterforce attacks. In order to preserve ambiguity, Pakistan's Full Spectrum Deterrence purposefully blurs the distinction between tactical and strategic weapons. China's long-standing NFU commitment is undermined by its covert doctrinal drift, which includes rapid arsenal expansion and launch-on-warning conjecture.

Although ambiguity can be helpful in discouraging enemies, it also raises the possibility of making a mistake, particularly in rapidly evolving emergencies. Uncertain thresholds, media-driven rhetoric, and quick mobilization might push regional actors toward

unintentional escalation, as the Pahalgam event (2024) demonstrates.

### Is Strategic Technology Increasing or Undermining Deterrence?

The study identifies a pattern of technological advancement in the triangle, including early warning systems, ballistic missile defense (BMD), MIRVs, dual-purpose platforms, and hypersonic glide vehicles. In addition to modernizing for second-strike survivability, China and India are creating counterforce alternatives that could boost the incentives for first strikes in times of emergency. Because of its early delegation and low survivability, Pakistan's emphasis on short-range missiles and battlefield nuclear weapons creates escalation risks. Shorter decision-making windows brought about by the deployment of AI-enabled ISR and hypersonic delivery systems may result in launch-on-warning postures and increased danger of unintentional escalation. These technologies contradict crisis stability models that depend on thoughtful, measured reactions while also shortening the buffer time for conflict de-escalation, even as they seek to increase deterrence.

### DETERRENCE IN PRACTICE:

#### Deficits in Crisis Management

A review of the crises in Pahalgam (2024), Galwan (2020), and Pulwama–Balakot (2019) identifies a number of concerning patterns:

Deterrence contained escalation once crises happened but did not prevent them. Under the nuclear shadow, India reacted with conventional force, indicating a readiness to rebalance escalation ladders.

Pakistan used nuclear signals extensively but refrained from taking concrete action beyond symbolic reprisal, demonstrating both theological restraint and caution.

China's strategic reticence suggests either a strong belief in conventional dominance or a purposeful lack of clarity in the reasoning for nuclear escalation. Hotlines, third-party mediation, and international crisis coordination were not utilized effectively in any of these crises, highlighting a persistent lack of institutional de-escalation tools.

### Managing Asymmetry and Doctrinal Triangulation

Uneven strategic equations form the triangle deterrence environment:

India must impose a dual deterrent strategy on Pakistan (asymmetrically balanced by TNWs) and China (better conventional and nuclear power).

Despite the lack of a formal partnership, Pakistan relies on Chinese political and technological support in its efforts to counter India's conventional dominance.

India's threat assessment is asymmetrical and self-contained since China, which is mostly focused on the United States, views India as a regional rival rather than a major strategic danger.

The traditional balance-of-power models are undermined by this dynamic. Triangular entanglement, a situation when decisions made for one opponent inadvertently impact the strategic perceptions of the other (for example, India's BMD directed at China may provoke Pakistan), replaces mutual deterrence.

### MOVING TOWARD A MODEL OF STABILITY IN SOUTH ASIA

The results suggest that a context-specific model of strategic stability in South Asia is required, one that takes into consideration:

- Doctrinal diversity (ambiguous deterrence, FSD, and NFU)
- Asymmetry in crises (between state and non-state actors)
- Innovation in technology (MIRVs, dual-capable systems)
- Triangulation in geopolitics (overlapping deterrence logics)

Instead of using linear Cold War comparisons, this model must create frameworks that are flexible, adaptive, and communication-driven, acknowledging:

- Doctrinal recalibration in India
- Pakistan's strategic moves
- China's tacit aggression

The only strategic theory that can effectively address the nuclear risk profile of the region is one that is

focused on South Asia and is based on historical, political, and doctrinal facts.

This study compared China, India, and Pakistan between 2015 and 2025 in order to analyze the strategic stability and doctrinal development of nuclear-armed South Asia. It discovered that: All three nations have changed their nuclear postures, but in different ways: China has expanded silently, Pakistan has adapted tactically, and India has become more ambiguous. Because of the strategic triangle's ideological opacity, capacity imbalance, and lack of institutional interaction, nuclear deterrence is vulnerable in a turbulent context.

Deterrence postures have been put to the test in recent crises, such as Pulwama (2019), Galwan (2020), and Pahalgam (2024), which have shown significant gaps in crisis communication and misaligned threshold perceptions.

The deterrence structure of South Asia is deteriorating but not disintegrating. Future crises could worsen beyond control without strong arms control, reliable communication, and institutional protections—especially if they occur simultaneously on several fronts.

India, Pakistan, and China need to recalibrate deterrence through diplomacy, transparency, and moderation in addition to their arsenals in order to maintain regional peace and prevent catastrophic escalation. While short-term objectives may benefit from strategic uncertainty, long-term stability will necessitate political bravery, cooperative creativity, and strategic clarity.

## CONCLUSION:

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