Nuclear Deterrence Under The Shadow of Non-State Actors: A Case Study of South Asia

By
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Submitted in Partial Fulfillment of the Requirements of the Degree Doctor of Philosophy

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School of Politics and International Relations (SPIR)
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Islamabad, Pakistan
Dedication

This Dissertation is dedicated
to those who pray

O God bless the whole universe, bless the whole humanity
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I bear the responsibility for all the shortcomings, mistakes and flaws in this study.
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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>MNCs</td>
<td>Multi-national corporations</td>
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<tr>
<td>IND</td>
<td>Improvised nuclear device</td>
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<td>RED</td>
<td>Radiological emission device</td>
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<tr>
<td>RDD</td>
<td>Radiological dispersion device</td>
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<tr>
<td>IAEA</td>
<td>The International Atomic Energy Agency</td>
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<td>NSS</td>
<td>Nuclear Security Summit</td>
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<td>PNE</td>
<td>Peaceful Nuclear Explosion</td>
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<tr>
<td>NPT</td>
<td>Nuclear Nonproliferation Treaty</td>
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<tr>
<td>CTBT</td>
<td>Comprehensive Test Ban Treaty</td>
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<tr>
<td>NGOs</td>
<td>Non-governmental organizations</td>
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<tr>
<td>SIPRI</td>
<td>Stockholm International Peace Research Institute</td>
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<tr>
<td>NSAB</td>
<td>National Security Advisory Board</td>
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<tr>
<td>NFU</td>
<td>No-first use</td>
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<td>FMCT</td>
<td>Fissile Material Cut-off Treaty</td>
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<td>SSBN</td>
<td>Nuclear-powered ballistic missile submarine</td>
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<td>LOC</td>
<td>Line of Control</td>
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<tr>
<td>BMD</td>
<td>Ballistic Missile Defense System</td>
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<tr>
<td>ABM</td>
<td>Anti-Ballistic Missile Treaty</td>
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<tr>
<td>MIRV</td>
<td>Multiple independently targetable re-entry vehicles</td>
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<td>ISPR</td>
<td>Inter Services Public Relations</td>
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<tr>
<td>NSFC</td>
<td>Naval Strategic Force Command</td>
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<tr>
<td>SLCM</td>
<td>Submarine Launched Cruise Missile</td>
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<tr>
<td>GLCM</td>
<td>Ground Launched Cruise Missile</td>
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<tr>
<td>NCCS</td>
<td>Nuclear command and control system</td>
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<td>NCA</td>
<td>National Command Authority</td>
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<tr>
<td>SPD</td>
<td>Strategic Plans Division</td>
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<tr>
<td>SFC</td>
<td>Strategic Force Command</td>
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<tr>
<td>WMDs</td>
<td>Weapons of mass destruction</td>
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<tr>
<td>ULFA</td>
<td>United Liberation Front of Asom</td>
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<tr>
<td>NSCN-IM</td>
<td>National Socialist Council of Nagalim-Isak-Muivah</td>
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<tr>
<td>NDFB</td>
<td>National Democratic Front of Bodoland</td>
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<tr>
<td>PLA</td>
<td>People’s Liberation Army</td>
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HEU  Highly enriched uranium
NNSA  National Nuclear Security Administration
SNM  Special nuclear material
TTP  Tehrik-e-Taliban Pakistan
PAF  Pakistan Air Force
GHQ  General Headquarters
NWS  Nuclear weapons states
PRP  Personnel Reliability Program
SFC  Strategic Force Command
C4I2SR  Computerized Command, Control, Communications, Information, Intelligence and Surveillance Directorate
PALs  Permissive Action Links
CSI  Container Security Initiative
CBP  Customs and Border Protection Agency
PSI  Proliferation Security Initiative
GICNT  The Global Initiative to Combat Nuclear Terrorism
NSS  Nuclear Security Summit
ITDB  Incident and Trafficking Database
PCENS  Pakistan Centre of Excellence on Nuclear Security
ISI  Inter-Services Intelligence directorate
BLA  Baluch Liberation Army
CPEC  China-Pakistan Economic Corridor
RAW  Research and Analysis Wing
JuA  Jamaat-ul-Ahrar
LeT  Lashkar-e-Taiba
BJP  Bharatiya Janata Party
CBMs  Confidence Building Measures
DGMOs  Directors General of Military Operations
AGPL  Actual Ground Position Line
NATO  North Atlantic Treaty Organization
UNGA  United Nations Generally Assembly
FATA  Federally Administered Tribal Areas
BLA  Baluchistan Liberation Army
GHQ  General Headquarters
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>UP</td>
<td>Uttar Pradesh</td>
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<tr>
<td>IISS</td>
<td>International Institute of Strategic Studies</td>
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<tr>
<td>IPRI</td>
<td>Islamabad Policy Research Institute</td>
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<tr>
<td>JCSC</td>
<td>Joint Chief of Staff Committee</td>
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Abstract

The study attempts to critically examine the current state of nuclear deterrence stability between South Asian arch rivals – India and Pakistan – in the context of non-state actors and their potential to cause nuclear terrorism and nuclear crises in the region. India and Pakistan use selective non-state actors for proxy warfare against each other. Both provide rationale and logic behind such dangerous policies. The study tries to empirically investigate this ‘peculiar’ behavior of both the nuclear states and examines possible repercussions on nuclear deterrence stability in South Asia. While emphasizing the rapidly increasing trajectories of nuclear arsenals in both the states, the study analyses the impact of such trends on nuclear doctrines of India and Pakistan. Furthermore, the dissertation notes how technological and doctrinal changes could endanger nuclear deterrence keeping in view the undermining role of non-state actors in the region. The main focus of the study is to evaluate the “sky is falling” argument by discussing possible scenarios of nuclear escalation between both the nuclear states.
Introduction of the Study

Introduction

India and Pakistan are nuclear-armed states. India was the first to go nuclear with status-driven motivations while Pakistan followed suit with a security-driven outlook. As a smaller country, insecurity has always haunted Pakistan since independence as a nation-state. It has fragile nationalism, traumatic experiences of wars, suffered a major military defeat with amputation of its eastern wing, a weakening economy, internal fractures, infighting and presently insecurity due to war on terrorism. India, much bigger in size and population, suffers from its own insecurities as a hegemonic power in South Asia. Now wooed by the US and other countries due to size, economy, military power and cultural diversity, including democracy, it poses an existential threat to Pakistani nationhood and state. This has become pronounced with Trump Administration’s coddling and now promoting India as a hedge against China and overseeing Pakistan’s nuclear/other activities from Afghanistan.

Beset by militancy and terrorism, a feeble economy, strategic isolation and fraying ties with immediate neighbors (except China) Pakistan feels semi-isolated and under international pressure. Cross-border firing by India continues unabated and faced with internal fragility and strife Pakistan faces a powerful militant India. It routinely makes protests and re-words declarations of ‘befitting response’ at a proper timing. No doubt nuclear weapons have imparted some credible deterrence up-till now but with time ‘stability and instability’ paradox has set in. Under the nuclear umbrella both countries tried to further their geopolitical interests through use of proxies as well as non-state actors. India via Research and Analysis Wing (RAW) and Afghanistan or some disgruntled Baluch and Tehrik-e-Taliban Pakistan (TTP) elements and US have amped this game. Pakistan, on its part, is banking on religious militant/political groups as force-multipliers against stronger India. That these religious outfits once groomed and promoted by Pakistani government in 1980s are now posing a threat to the state itself. The repeated mismanagement of such religious groups and caving in to their demands have eroded the state authority and raised questions about the military’s credentials.

The snapshot of nuclear developments between India and Pakistan reveals that there are competing perspectives on nuclear deterrence – many nuclear experts maintain that nuclear
deterrence in South Asia has the same logic as during the Cold War. Nevertheless, South
Asian nuclear deterrence equation has very different dynamics from that of US-USSR Cold
War template. Many scholars apply nuclear deterrence theory to examine South Asian
nuclear rivalry between India and Pakistan. The on-going nuclear arms race between the
perceived/real archrivals adds ample ammunition for the critical analysis of the bilateral
nuclear equation.

This dissertation seeks to examine the fragility of nuclear deterrence stability in South Asia
keeping in view the undermining role of non-state actors. One category of nuclear theorists
tends to argue that nuclear adversaries would not embroil in a clash with each other because
of fear of escalation to conventional war, which might result into a nuclear exchange. The
other category tends to believe that because of several factors such as miscalculation or
misperception, doctrinal and technological changes, there could be severe real risks for
nuclear deterrence stability. Prior to overt nuclearization of South Asia, the discourse on
nuclear deterrence between India and Pakistan was primarily based on theoretical grounds.
However, in the post overt nuclearization era, both the belligerent foes involved in one low-
intensity conflict and a number of crises that challenge fundamental assumptions of first
category of nuclear theorists.

The main bone of contention between both the states is the chronic Kashmir dispute that has
been right from the partition of Sub-continent in August 1947. Both have diametrically
opposite positions on this issue, which has been sustaining skepticism, mistrust and enduring
rivalry over the years. Though, India and Pakistan have tried many times to normalize the
bilateral relationship but such efforts largely sabotaged by so-called spoilers from both sides.
These bitter realities shaped strategic perceptions of both the nations. Beneath these
‗peculiar‘ strategic perceptions, Pakistan engaged in exploiting the benefits of sub-
conventional warfare through non-state actors under the nuclear overhang. To counter this,
India has explored new military doctrine, which is believed to provide space for effective
retaliation below the nuclear threshold. In consequence, Pakistan has developed tactical
nuclear weapons to ensure ‘full spectrum nuclear deterrence’. To make bilateral nuclear
template more complex, India is working on ballistic missile defense system (BMDs) and
sea-based nuclear deterrent capabilities. To reply these nuclear advancements by India,
Pakistan has also discovered avenues to achieve naval nuclear deterrence. These growing
nuclear trajectories have already signaled an array of risks.
It is true that non-state actors caused numerous nuclear crises between both the states in the post 1998 era. The risks of escalation these crises carried prompted international community, especially the US, to intervene and mediate. Though, conventional and nuclear doctrines of both the states are yet to be tested but both have shown sufficient resolve to respond to even a small territorial transgression with aggressive retaliation. India has firmly communicated to Pakistan that it will no longer show restraint that it did during Twin Peaks Crisis of 2001-2002, Mumbai 2008 and Pathankot 2016 crises. Uri incident of 2016 which spurred by Kashmiri freedom fighter attack on Uri military camp in Indian held Kashmir reportedly proved to be the limit of Indian restraint. India claimed that it successfully carried surgical strikes against alleged ‘terrorist launching pads’ at the Pakistani side of the Line of Control (LOC). However, Pakistan out rightly rejected such claims and expressed firm resolve that if such aggression is committed by India, it would invite a befitting response from Pakistan. It is in this context, if a crisis occurs between both the states due to a major terrorist attack by non-state actors believed to be tolerated or backed by either state, what would be strategic situation in the region. Obviously, both the states would aim at maintaining the credibility of its nuclear deterrence. For that to happen, nuclear doctrines would be employed to deter any impending aggression. It might be possible that both would be able to repel any international pressure or mediation to demonstrate resolve. Such a scenario could bring both the states at the verge of ‘nuclear Armageddon’.

**Research Questions**

This study attempts to address the following core question:

- How non-state militant proxy strategies affect the nuclear deterrence stability in South Asia?

This core question leads to further researchable questions, which include:

- Why there is probability that non-state actors could cause nuclear terrorism in South Asia, which may severely undermine nuclear deterrence stability between India and Pakistan?
- Why there is probability that non-state actors could drag India and Pakistan into a major war, which may escalate to the complete failure of nuclear deterrence between the two states?
Purpose/Scope of the Study
Since the overt nuclearization of India and Pakistan in 1998, thrice the non-state actors seriously endangered the South Asian strategic environment. Though, both New Delhi and Islamabad expressed resolve that they do not permit non-state actors to derail the situation in the subcontinent, yet the alarming puzzle persists that religiously radicalized groups could destabilize the nuclear deterrence stability between belligerent neighbors. The primary objective of this study is to identify and critically examine the ‘exact role’ of non-state actors in destabilizing the deterrence stability between India and Pakistan. Indeed, the factors such as arms race, chronic dispute, mistrust, divergent external outlook, etc. create an enabling environment for the non-state actors to operate and pursue their agenda with impunity within the region and drag India and Pakistan in a conflict, which could escalate into a total war entailing nuclear strike exchanges. The continuity of these anti-nuclear deterrence stability factors is also examined to understand the real potential of non-state actors to influence the nuclear deterrence between India and Pakistan.

Literature Review
The researchers find a plethora of literature on the important subject of nuclear deterrence, both in theoretical as well as practical perspectives, especially in the context of Cold War nuclear equation between both the super powers. However, after the overt nuclearization in South Asia in 1998, many scholars of strategic studies have extensively contributed literature to build up an increasingly intriguing South Asian nuclear discourse. A large number of books, monographs, articles, research reports and blog entries have been written to divulge upon South Asian nuclear dynamics. Interestingly, while analyzing nuclear deterrence between India and Pakistan, most of strategic experts have applied Cold War nuclear deterrence model to solve the puzzle. Nevertheless, few nuclear analysts examine South Asian strategic template through the lens of Cold War balance of power theory. Yet, few others argue that Cold War nuclear deterrence equation cannot be taken as a perfect model for South Asian nuclear discourse. The bulk of the literature outlines that the logic of the nuclear deterrence between India and Pakistan is the same as it was during the Cold War; however, the dynamics are largely different. For instance, during the Cold War non-state actors were not influencing the strategies of Washington and Moscow.

A necessary precondition for the development of a suitable explanatory model is a theoretical and conceptual approach that allows understanding the state behavior in domestic, regional as
well as international contexts. Over the years, the concepts of non-state actors, nuclear safety and security, and nuclear terrorism have been used to explain many issues in international politics particularly related to nuclear field. The subject of this study is relatively new and expansively sensitive, that’s why, primary documents are very rare; however, few authors have discussed this subject but not at length, so the space remains for further research and study. For conceptual and theoretical understanding, there are number of well-researched and widely subscribed books and research articles that provide a detailed discussion of various aspects of nuclear deterrence theory.

Bernard Brodie (1910-1978), a historian by training, has been rightly considered an academic who contributed immensely to Western and American strategic thought centered around nuclear weapons in the post WWII era. He was the most explicatory original and thoughtful American civilian strategist. He authored many insightful and innovative books such as Strategy in the Missile Age (New Jersey: Princeton, 1959), The Absolute Weapon (New York: Harcourt Brace, 1946) and War and Politics (New York: MacMillan Publishing co. Inc., 1973). The Absolute Weapons is a symposium – Yale Institute of International Studies members contributed different chapters. In his chapter, “War in the Atomic Age”, Brodie seems to be very much convinced on the point that technological change can bring paradigm shift in the making of strategy, for that matter; according to him, the nuclear weapons has changed the strategy of warfare. He argued in his work that nuclear weapons have countered the Clausewitzian precept “war is the continuation of policy by other means.” Though The Absolute Weapons was published in 1946, but Brodie very prudently in his chapter predicted that USSR would soon catch up the US by developing its own nuclear weapons. Based on this farsightedness, he succinctly underlines that “thus for the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have no other useful purpose.”

Brodie in his works emphasized that the survival of retaliatory nuclear forces is imperative for deterrence stability between the belligerent nuclear capable states. As long as each side in a nuclear rivalry has a reason to fear the huge destruction of its people and territory by other side the numerical superiority with regards to nuclear devices and delivery vehicles might count for little or nothing. Undoubtedly, Brodie’s work laid the foundation of nuclear deterrence theory; nevertheless, he appears to be too much optimistic about the positive impact of nuclear weapons on strategy and tactics and dismissive on Clausewitzian school of
thought. Moreover, he did not anticipate the role of non-state actors in destabilizing the nuclearized strategic environment.

Admittedly, Lawrence Freedman added a large amount of concepts to nuclear deterrence theory through his valuable writings. In his voluminous phenomenal book *Evolution of Nuclear Strategy* (London: MacMillan for International Institute of Strategic Studies, 1981) provides a very compelling discourse on Cold War nuclear arms race between both the super powers and its implications on nuclear strategy. This illuminating book very precisely covers the impact of technological innovations in the realm of nuclear weapons and their impact on nuclear strategy. It provides a complete picture of evolution of nuclear strategy – how different contours and connotations evolved out of nuclear rivalry between former USSR and US. His presentation of the concepts ‘massive retaliation’, ‘game theory’, ‘first and second strikes’, ‘counter-force and counter-value’ is sharply focused – yet at the same time subtle in addressing the South Asian current volatile situation.

A careful and profound analysis of the book reveals that Freedman is a nuclear optimist – though he believes human capacity is only for short-run to save the world from nuclear annihilation. For the longer-run, he has a sort of pessimistic position as he puts forward that “an international order that rests upon a stability created by nuclear weapons will be the most terrible legacy with which each succeeding generation will endow the next. To believe that this can go on indefinitely without major disaster requires an optimism unjustified by any historical or political perspective.” In *Deterrence* (Cambridge: Polity Press, 2004) Freedman offers a conceptual discourse on deterrence and most challenging issues in the military strategy and practical politics. The primary and basic strategic concept that is concisely debated in these books is nuclear deterrence. But, he has not analyzed the detrimental role of non-state actors in the context of nuclear rivalry between two states.

reveal that South Asian nuclear deterrence is characterized with intense rivalry between India and Pakistan enshrined in many long-standing disputes, Kashmir being the most simmering issue, and a very bitter historical legacy. The South Asian nuclear deterrence has been the focal point of debate across the world from at least last three decades. Interestingly, many Western nuclear scholars presume South Asia a nuclear flash point. Importantly, not many books have been authored by Pakistani scholars on nuclear deterrence between India and Pakistan. Nonetheless, there are a few excellent books worth to review for this study.

Zafar Iqbal Cheema, his book titled *Indian Nuclear Deterrence: Its Evolution, Development and Implications for South Asian Security* (Karachi: Oxford University Press, 2010) and a number of book chapters and research article debated dynamics of nuclear weapons proliferation in the region. A great deal of Cheema’s research focuses on to find out different drivers and motives behind South Asian nuclearization. He eloquently applies different shades of nuclear strategy to examine strategic developments between India and Pakistan. Most of his work explains what factors and actors led to Pakistan’s decision to manufacture nuclear weapons. His book illustrates South Asian nuclear history with available evidence that suggests that “since independence, both countries have tried their best to maintain military forces beyond what their levels of economic development would permit, by inducting most modern conventional weapon systems supplemented by the acquisition of nuclear weapons and ballistic missiles”. He argues that Indian nuclear ambitions are traced back in 1950s that prove that war with China was not the real factor for Indian decision to develop nuclear capability. Fall of Dhaka and India’s so-called Peaceful Nuclear Explosion 1974 were water shed events leading Pakistan to launch its nuclear weapons – ZA Bhutto being the political father of the bomb. Cheema also come up with a comprehensive debate between nuclear optimists and nuclear pessimists. Though, his book is a great contribution to underpin South Asian nuclear discourse, but it certainly looks South Asian strategic dynamics through an academic perspective only and largely lacks focus on non-state actors’ sabotaging role with respect to India-Pakistan nuclear relationship.

Another Pakistani writer Zafar Nawaz Jaspal in his article titled “Paradox of Deterrence: India-Pakistan Relations”, *Strategic Studies* Vol: XXIX (Winter 2009) argued that deterrence has emerged as a dominant concept of nuclear strategy since the beginning of nuclear age. According to him, India and Pakistan share the extremely developed theory of deterrence from Cold War era. However, South Asian nuclear deterrence enclave may be clouded with
arms race between India and Pakistan. Jaspal seems to reach the conclusion that nuclear weapons sustain the status quo and prevent war between India and Pakistan. In this way, he becomes a progressive nuclear optimist. A cautious analysis of his work indicates that he is in favor of arms control and disarmament initiatives between both the nuclear antagonists, but alluded that India is chiefly responsible for volatile, instable and shaky strategic stability in South Asia. In the context of nuclear risk reduction, he identified various means and ways in his book “Nuclear Risk Reduction Measures and Restrain Regime in South Asia (New Delhi: Manohar, & Colombo: Regional Center for Strategic Studies, 2004).

Brig. ® Feroz Hassan Khan’s book Eating Grass: The Making of Pakistani Bomb (California: Stanford University Press 2012) offers a historical narrative of Pakistan’s nuclear program and nuclear policy. This book coherently underpins chronology of events unfolded in South Asia that shaped Pakistan’s threat perception and responses to geostrategic developments vis-a-vis India. The book is excellent historiography of Pakistan’s nuclear weapons development and put some new insights and information regarding the role of civilians and military in nuclear decision making during different eras. In addition, the author contextualizes Pakistan’s nuclear policy in Part IV of the book ‘Toward an Operational Deterrence.’ He notes that Cold War concept stability-instability paradox provides a shrewd understanding of Kargil conflict. Furthermore, he mentions different crises between India and Pakistan and maintains that nuclear deterrence compelled the adversaries not to go for a full-fledged war. By doing so, he reinforces the arguments of nuclear optimists. However, he also missed to explain the gravest threat posed by non-state actors to nuclear deterrence in South Asia.

Naeem Salik, in his book The Genesis of South Asian Nuclear Deterrence: Pakistan’s Perspective, (Karachi: Oxford University Press, 2009) puts forward a descriptive picture of the evolution of nuclear deterrence between India and Pakistan. However, his work is more of descriptive lacking critical analytical side. An edited book by Zulfiqar Khan titled Nuclear Pakistan: Strategic Dimensions, (Karachi: Oxford University Press, 2011) presents a diverse and cogent perspective on South Asian nuclear paradigm. The leading Pakistani and some foreign nuclear scholars critically scrutinize deterrence related security dilemma of Pakistan with respect to its arch-rival India. The book, in a very articulated way, deals with numerous issues ranging from Pakistan’s posture of credible minimum deterrence and Indian ballistic
missile defense endeavors, nuclear command and control system of Pakistan and the role of
tactical nuclear weapons in Pakistan’s future security plans.

An insightful study with plausible arguments has been carried by Rasul Bakhsh Rais “Conceptualizing Nuclear Deterrence: Pakistan’s Posture” published in India Review (2005). Rasul Bakhsh lays out three fundamental assumptions: “(a) Nuclear weapons are primarily for preventing wars through injecting fears of escalation and the threat of unacceptable damage and not an instrument of fighting or hoping to win wars. (b) The deductive logic of rationality implicit in the deterrence theory is no less valid in South Asia than in any other strategic equation. (c) The presence of nuclear weapons by themselves may not be a sufficient guarantee of averting wars between India and Pakistan if other determinants of their security behavior are not taken care of.” Interestingly, he tries to prove all these assumptions by analyzing South Asian nuclear equation and all its dynamics and dimensions. While doing so, he critically analyzes Pakistan’s strategic perceptions right from the inception of the country, its nuclear doctrine, the role of nuclear deterrence in different India-Pakistan crises, South Asian and American connection.

The Indian nuclear analysts published many books and research articles to bring out Indian perspective on South Asian nuclear deterrence. If one dissects the literature, it reveals that Indian scholars’ perspective gives China precedence over Pakistan. Most of these scholars reckon China as a central factor in Indian strategic calculations. Bharat Karnad, an eminent Indian strategic thinker, in his book India’s Nuclear Policy, (United States of America: Greenwood Publishing Group, 2008) puts forward powerful arguments negating that growing Indian nuclear deterrent capabilities are a source of instability in South Asia. In his view, India’s credible minimum deterrence capabilities make India a moderate, responsible and a counterweight to China. While reviewing Indian nuclear development history, the author very stylistically disregards the importance of Pakistan factor in Indian nuclear calculations. More importantly, Karnad contends that India’s manifold cultural and historical knots with Pakistan leave the chance of an all-out conventional war between the nations near zero and the possibility of a nuclear exchange even more distant. Nevertheless, one may challenge the over-optimism of Karnad on the grounds that expanding Indian nuclear weapons, ballistic missile defense system (BMDs) aspirations, Cold Start strategy are a source of instability in South Asia.
E. Sridharan’s edited book *The India-Pakistan Nuclear Relationship: Theories of Deterrence and International Relations*, (London: Routledge, 2007) discusses at length the research of influential Indian and Pakistani security experts. The contributors of the book intelligently use international relations and deterrence theories to explain nuclear relationship between India and Pakistan. While doing so, they provide useful insights into India-Pakistan security imperatives and nuclear pursuit, minimum deterrent policies, stability-instability paradox, threat of unintended use of nuclear weapons and China factor in South Asian nuclear equation. To delve into the various aspects and dimensions of nuclear stability in South Asia, P. R. Chari, Sonika Gupta and Arpit Rajain’s co-edited book *Nuclear Stability in Southern Asian*, (New Delhi: Manohar Publishers and Distributors, 2003) is an admirable collection of works. Bhumita Chakma comes up with useful indicators of Indian perspective on Pakistan’s nuclear weapons in his work *Pakistan’s Nuclear Weapons*, (London: Routledge, 2009). He notes different phases of Pakistan’s nuclear development, subsequently highlighting Pakistan’s emerging nuclear force posture, force level, missile capabilities, and command and control systems. In the closing chapters of the book, he outlines various challenges to nuclear Pakistan such as nuclear terrorism and nuclear proliferation. Overall, the book is a great package to grapple with Indian perspective on Pakistan’s nuclear developments.

Moreover, Indian authors have produced numerous research articles and papers on South Asia nuclear deterrence, the most relevant from them have been reviewed for this study. Suresh Dhanda presents a contrasting views on South Asian nuclear dispensation in his research paper titled “Nuclear Weapon Programs of India and Pakistan: A Comparative Assessment”, *South Asian Survey*, 17: 2 (2010). Suresh vividly explains how India and Pakistan are spending sums of amounts on their respective nuclear weapons programs – ranging from nuclear warheads and their suitable delivery means. Though, he propounds both the nuclear competitors continuously working on fissile materials, aircrafts, missiles and command and control systems but much of information about these developments is based on speculations – hence unreliable. Rajesh Rajagopalan in an informative research article “The Evolution of Pakistan’s Nuclear Policy”, *South Asian Survey*, 10: 2 (2003) lucidly examines the role of nuclear weapons in Pakistan’s grand strategy – nuclear weapons as a strategic balance against India and as a tool in Pakistan Kashmir strategy.

On the other side, there are scholars who are categorized as nuclear dissident or nuclear pessimist. They have their own perspective on nuclear deterrence which is diametrically
opposite to those who view nuclear weapons cause stability between nuclear armed states. Nuclear pessimists maintain that nuclear deterrence theory is based on inherently flawed psychological assumptions. Possession of nuclear weapons by two rival states can never ensure enduring peace between them. Invariably, there remains possibility of nuclear catastrophe because of several tangible and intangible factors. They portray doomsday scenarios of non-state actors getting a hold on nukes, irrational state behaviors, institutional interests and miscalculations.

Written in a point-counter-point method *The Spread of Nuclear Weapons: A Debate Renewed*, (New York: W.W Norton & Company, 2003) by Kenneth Waltz and Scott D. Sagan is a fascinating endeavor to highlight deterrence optimism and pessimism. Waltz uses rational deterrence theory based on mutual fear instilled by nuclear second strike capabilities between nuclear armed rivals. On the other side, Sagan applies organizational theory to emphasize the negative impact of nuclear weapons on international peace and stability. ‘More may be better’ – ‘more may be worse’ is a debate that looks into Cold War era as well as South Asian nuclear dispensation. This book not only narrates interesting nuclear optimists and nuclear pessimists’ perspective but also adds much ammunition to on-going debate; nevertheless, the work lacks practical examples to prove the assumptions and arguments logically.

Waltz and Sagan’s work is short of providing complete picture of South Asian optimist-pessimist nuclear discourse as they added only one portion in the latest edition of their book. But, Sumit Ganguly and Paul Kapur in a remarkably well written book *India, Pakistan, and the Bomb: Debating Nuclear Stability in South Asia*, (New York: Columbia University Press, 2010) fills this gap. The two deeply informed scholars debate over nuclear deterrence between India and Pakistan in the context of conflict among them. They scholastically investigate the very important question: did the spread of nuclear weapons in South Asia deter war or provoke war? Both with insight, profoundness and wit analyze complex issues and contested history in a nuanced and reasoned manner. While using outcome based approach, Ganguly emphasizes that nuclear weapons have prevented India-Pakistan conflict/disputes from escalating into a full-scale war. On the other hand, Kapur’s counter arguments are based on process based approach explaining the specific pathways that lead to conflict and escalation. He stresses that nuclear weapons have fueled a violent cycle of Pakistani provocation and Indian response – several crises are in point in this regard. So, he
believes that nuclear weapons have been a destabilizing factor in South Asia with international ramifications.

Undeniably, *Confronting the Bomb: Pakistani & Indian Scientists Speak Out*, (Karachi, Oxford University Press, 2013) edited by Pervez Hoodbhoy is an alternative point of view, which challenges the dominant narrative/discourse on nuclear weapons and nuclear technology in South Asia. The book is an anthology of essays contributed by well-established Indian and Pakistani scientists. Most of essays are from the editor’s archive, which questioned the popular nuclear myths pervasive in both India and Pakistan. A careful reading of the book uncovers that Hoodbhoy with his powerful arguments deconstructs the prevailing nuclear discourse. He discounts the possibility of American attack on Pakistani nuclear installations; however, warns very grave internal threat from security officials and nuclear experts sympathizing with the Tehreek-e-Taliban Pakistan (TTP). Hoodbhoy, in an argumentative style, also disputes the perception that had nuclear weapons in possession of Pakistan in 1971; the fall of Dhaka could have been avoided. In the similar vein, he does not buy the myth of nuclear deterrence – since the nuclear explosions, India and Pakistan have not merely gone to war over Kargil but have twice deployed troops on the common borders. While M Ramana and Zia Mian skillfully situate the Indian and Pakistani nuclear programs in an historical perspective marked by ambitious politics, Nobel laureate John Polanyi adds a universal touch to the debate. By and large, the book is a great read to know the perspective of nuclear pessimists.

It is pertinent to mention that several other strategic scholars of international repute have discussed deterrence theory and its utility in the context of Cold War and post-Cold War era. Gorge Perkovich has undertaken extensive work in the form of books and research articles considering South Asian nuclear calculus at length with a convincing approach. Likewise, Michael Krepon, has undertaken incisive work in overwhelming proportions. He raises many concerns and apprehensions in his edited books *The Stability-Instability Paradox: Nuclear Weapons and Brinksmanship in South Asia* (Washington: Henry L. Stimson Centre June 2001) and *Deterrence Stability and Escalation Control in South Asia*, (Washington DC: The Stimson Centre, 2014) about strategic stability between India and Pakistan and believes that trends such as doctrinal factors, technological advancements, rapid growth of fissile materials for bomb making, lack of nuclear risk reduction measures, absence of credible nuclear confidence building measures (CBMs), use of sub-conventional forces by Pakistan to fulfill
its strategic goals, China factor and non-state actors undermine already fragile deterrence stability between the two. Following the overt nuclearization of South Asia, Michael Quinlan from the platform of International Institute of Strategic Studies (IISS) contemplated thought provoking work observing the nuclear dangers in South Asia in comparison with Cold War model. He examines issues of doctrine, command and control challenges to nuclear weapons.

Apart from deterrence theory, the study is based on a few concepts from strategic studies that have cardinal significance in nuclear literature. These concepts include non-state actors, nuclear safety and security and nuclear terrorism. Many studies that have been taken by Indian, Pakistani as well as Western strategic experts to critically observe the state of nuclear deterrence stability in South Asia also explain afore-mentioned concepts in depth. T. V. Paul, Patrick M. Morgan and James J. Wirtz’s edited book Complex Deterrence: Strategy in the Global Age, (Chicago: University of Chicago Press, 2009) is a very comprehensive read to understand the challenges deterrence theory faces after the Cold War. The book illustrates the viability and validity of theory and comes to the conclusion that this theory is still very much applicable to understand the complex dynamics of few important issues of international politics. The book carries an essay “Complexity of Deterrence among New States: The India, Pakistan Case” added by Dinshaw Mistry. The essay looks into nuclear deterrence and related factors such as stability-instability paradox, limited war, Pakistan’s use of militants against India resulting in different crises, conventional asymmetries resulting in India’s compellence strategy and the role of external factors in easing up the tensions between the two.

To further explain and broaden the concept of non-state actors and nuclear terrorism, Mark Fitzpatrick’s innovative book Overcoming Pakistan’s Nuclear Dangers, (London: IISS, 2014) is very helpful. Though, the detailed commentary of Mark suggests the pathways making Pakistan a “normal nuclear weapon state” by imposing conditions to strengthen global non-proliferation regime but a chapter is dedicated to elaborate the concept of non-state actors and nuclear terrorism. He is of the view that Pakistan’s manipulation of non-state actors as sub-conventional forces against Indian interests in the region is a grave threat to deterrence stability between India and Pakistan. The author provides useful indicators of the prospects of nuclear terrorism. Nevertheless, Mark purely presents Western perspective though recognizes Pakistan’s efforts in terms legislative and institutional response to consolidate nuclear safety and security.
A wholly Western perspective is expressly written by Joseph Cirincione, “The Most Dangerous Country on Earth”, Georgetown Journal of International Affairs, (Summer/Fall 2013). He seems to be exaggerating the nuclear dangers emanating from Pakistan but, he claims Pakistan is the most dangerous country in the world. He writes that experts estimate that Pakistan has between 90-110 nuclear weapons and enough fissile material to produce 100 more. It has an unstable government, a fragile economy, strong extremist influences in its military and intelligence structures, and Al Qaeda, as well as half a dozen similar terrorist groups operating inside the country. The confluence of these factors not only increases the potential for a nuclear escalation between Pakistan and its regional rival, India, but perhaps the even more terrifying scenario that a terrorist group will acquire fissile material, or an intact weapon, from Pakistan’s burgeoning stockpiles. Similarly, he also recounts Pakistani nuclear weapons falling into the hands of terrorists with insider help from Pakistan’s security establishment and subsequently using them for their nefarious designs – inflicting apocalyptic repercussions of global scale. The book is recently published with the title of Nuclear Nightmares: Securing the World before It Is Too Late, (New York: Columbia University Press, 2013). Cirincione intelligibly provides a greater understanding of the threats still posed by the 17,000 nuclear weapons in the world, the risk of their use and analyzes the efforts to reduce and eliminate these threats.

Many Western and Indian strategic thinkers utterly believe that Pakistan based militants can replicate Mumbai like carnage – thus can drag India and Pakistan into crisis/conflict like situation. Such a situation can escalate into a full-scale war between the two nuclear armed competitors. They orchestrate different scenarios of nuclear deterrence failure in South Asia. To make things worse for Pakistan, they argue that Pakistan as a modern state is gradually withering away – mired in countless internal security problems. The presence of militant outfits in large numbers coupled with insurgency alarmingly weakens the writ of the state in many areas of the country. So, they take such a situation very conveniently to propagate against Pakistan’s nuclear safety and security. Most of literature dealing with these kinds of issues is biased and present one side of the picture neglecting Pakistan’s impeccable and unblemished record of managing its nuclear program – both in civilian and military domains.

Stephen P. Cohen and Rohan S. Sandhu in an article “Rising India’s Pakistan Problem”, published in *International Studies* 47(2–4), (2010) while reviewing different scenarios for the future of Pakistan and possible Indian responses proposes that India must adopt ‘carrot and stick policy’ in case Mumbai episode is repeated by militants having roots in Pakistan. IDSA Occasional Paper No.12 written by Christopher Clary titled “Thinking about Pakistan’s Nuclear Security in Peacetime, Crisis and War” is highly provocative study in which he quotes Bruce Riedel “It (Pakistan) has more terrorists per square mile than any place else on earth, and it has a nuclear weapons program that is growing faster than anyplace else on earth.” In subsequent portions of the research paper he accepts and appreciates that Pakistan has taken significant efforts to secure its nuclear arsenal from insider and outsider threats. In this way, he tries to come up with balanced analysis and concludes that Jihadis’ takeover of state of Pakistan is very small.

It’s worth indicating in review of literature that Indian nuclear commentators tend to exacerbate and exaggerate Pakistan’s tumultuous security situation by linking it with nuclear weapons. Reshmi Kazi’s monograph is a reflection of such a myopic approach. She, in her monograph *Nuclear Terrorism: The New Terror of the 21st Century*, (New Delhi: IDSA Monograph Series 2013), considers Pakistan as the epicenter of terror groups that make the possibility of nuclear terrorism likely in the region. She claims that the insider threat from Pakistani security establishment multiplies the threat of nuclear terrorism.
It is a fact that Pakistani perspective is clearly less visible in terms of nuclear safety and security and nuclear terrorism related issues from the literature. This is the biggest reason that Western perspective gets precedence, and is well-received across the world. Only few thoroughly organized scholars of strategic studies have conducted research in this sensitive field of enormous value. These include Zafar Nawaz Jaspal and Brig ® Naeem Salik. In all encompassing, Pakistani perspective is an objective and fair attempt to counter the propaganda against Pakistani nukes. Zafar Nawaz Jaspal, in an article “Nuclear/Radiological Terrorism: Myth or Reality?” Journal of Political Studies, Vol. 19, issue - 1, (2012) theoretically investigates the possibility of nuclear/radiological terrorism. He underscores that “The careful study of nuclear material acquisition and steps involved in manufacturing and exploding nuclear/radiological device manifests that nuclear terrorism is a cumbersome task. However, he categorically says that factually the world does not have precedent of nuclear terrorism but its possibility is present. Brig ® Salik looks into safety and security of nuclear weapons at theoretically level and succinctly explains how Pakistan has done a marvelous job in this regard. In another article “Nuclear Terrorism: Assessing the Danger”, Strategic Analysis, Vol. 38, No. 2, (2014) he makes a realistic assessment of the danger of nuclear terrorism. He observes that it is highly unlikely that terrorists will get hold on nuclear materials or on a complete device. And even if they get, it is out of their expertise to overcome scientific and mechanical challenges to use it for their heinous objectives.

The author of this research, while reviewing the literature, has not come across any consolidated and comprehensive study that objectively envisions the links between nuclear deterrence and non-state actors both at theoretical level as well as in the South Asian context. This gap in the literature instigates and provides further space for research. Thus, a comprehensive study is needed to address those missing linkages between nuclear deterrence and non-state actors.

**Hypothesis of the Study**

The continuity of inter-state and intra-state conflicts in India and Pakistan provide a space for the existence of non-state actors in South Asia. Both New Delhi and Islamabad use them in the low-intensity conflicts to bleed each other. This trend is alarming for the nuclear deterrence stability in the region.
Methodology of the Study
The dissertation uses qualitative research method along with descriptive and explanatory research strategies/techniques to investigate the hypothesis. To add weight to the arguments logically and empirically, the explanatory research strategy is used extensively. As the topic of research is extremely sensitive that’s why the primary sources are very scarce. This compels the author to rely upon secondary sources more such as books, edited books, journal articles, newspapers, research reports and a handful videos. At the same time, to add value to the study interviews with the nuclear experts from United States, Europe, India, Pakistan, etc. would also be done. For interviews emails, telephone and in-person ways would be used.

Limits of the Research
This dissertation focuses on the linkages between non-state actors, sub-conventional warfare and nuclear deterrence stability between India and Pakistan from academic perspective. This study is not about the effects of nuclear war in South Asia, nor it will focus on nuclear weapons capabilities of India and Pakistan. Nor does it cover all the non-state actor militant organizations of the region. It focuses only on most important non-state militant organizations, which are allegedly used for sub-conventional warfare in the region.

Organization of the Research
This study is comprised of Introduction, 06 chapters and conclusion.

Chapter-1: This chapter contains discussion about the theoretical and conceptual framework of the research. The primary focus is on the theory of nuclear deterrence. It is explained by referring classic research work by renowned scholars. Furthermore, the chapter entails the current debate in the realm of nuclear deterrence theory. Then this chapter develops a model by discussing the concepts of non-state actors and non-state proxy strategy. At the end, the concepts of nuclear terrorism and nuclear security are elaborated.

Chapter-2: This chapter intends to develop a conceptual base of nuclear deterrence in South Asia. While doing so, it examines both Indian and Pakistani perspectives on their respective national security policies, particularly nuclear policies. Moreover, this chapter analyses the impact of strategic perceptions of both the states on their nuclear outlook. At the end, it outlines the evolution of nuclear postures, nuclear doctrines and likely future nuclear trajectories in South Asia.
Chapter-3: This chapter aims at explaining and analyzing different perspectives dealing with challenges to deterrence stability in South Asia. To present a holistic picture related to these issues, the chapter takes into consideration Western, Indian and Pakistani perspectives.

Chapter-4: This chapter examines the phenomenon of non-state actors with a special focus on India, Pakistan and Afghanistan. At the same time, it critically assesses the possibility of nuclear terrorism in South Asia by non-state actors. It also holistically analyses various international concerns about Pakistan’s nuclear weapons safety and security and latter’s responses to such concerns. At the end, it debates that the possibility of nuclear terrorism is a factor of nuclear deterrence instability between India and Pakistan.

Chapter-5: This chapter attempts to objectively examine and critically analyse non-state actors and their potential impact on nuclear deterrence stability in South Asia. First, the phenomenon of sub-conventional warfare and the role of non-state actors would be discussed, especially in the context of Indian accusations regarding Pakistan’s involvement in Kashmir militancy. Similarly, it would be essentially important to note alleged Indian role in fueling Tehrik-e-Taliban militancy and Baluch insurgency directly or indirectly. At the end, the nuclear escalation control would be debated keeping in view the US role in historical, current and futuristic perspectives.

Chapter-6: In this context, this chapter critically examines the prospects of non-state actors causing another nuclear crisis in South Asia and how such crisis could undermine nuclear stability between India and Pakistan. Different perspectives that include Western, Indian and Pakistani would be examined through an analytical framework.

Finally, the findings and conclusions of the study will be underpinned.
CHAPTER-1

Theoretical and Conceptual Framework

Introduction

A necessary precondition for the development of a suitable explanatory and interpretative model is a theoretical and conceptual approach that allows understanding the behavior of different entities/actors such as states, non-state actors, terrorists etc. in domestic, regional as well as international contexts. For this study, the theoretical and conceptual framework is based on nuclear deterrence theory and non-state militant proxy strategy model. Apart from this, few concepts such as non-state actors, nuclear terrorism and nuclear security will also be helpful in framing the important portion of the study. In this regard, the study examines how non-state actors’ impact on nuclear deterrence in South Asia. The international politics is based on continuous struggle for power among different states; deterrence is an essentially inherent part of it particularly in the realist school of thought. According to a realist paradigm, the international political system is anarchic in nature that works on the principle of ‘self-help’. It is this harsh reality that pushes states to have strong deterrent capabilities. In this way, realists believe, balance of power is achieved— that brings peace and stability in the world.¹

Although the practice of deterrence is an old phenomenon, yet the theory of nuclear deterrence is an outcome of Cold War strategic rivalry between the US and USSR. The Cold War nuclear deterrence model explicitly reflects that nuclear arms race and different crises between both the super powers ensued in the fragility and weakening of strategic stability. Interestingly, at that time factors/dynamics such as non-state actors and their use as militant proxy strategy by states, nuclear safety and security and nuclear terrorism were almost nonexistent to impact on deterrence equation between both nuclear rivals. However, these concepts are increasingly used to understand strategic/security dynamics of different regions and their ramifications for international political system especially in the post 9/11 era. Many developing countries are under the grip of insurgencies, civil wars and major chaos because of various reasons. These conflict-ridden countries are believed to be a threat to international peace and security one way or another. The South Asian region is the most affected region of

¹ Kenneth N. Waltz, Adelphi Papers, No. 171, P. 4. Available at http://www.tandfonline.com/toc/tadl19/21/171
the world in the aftermath of 9/11, it is witnessing the scourge of non-state actors and transnational terrorism at a massive scale. Conversely, the whole international community is wary about the impact of these developments on nuclear deterrence between India and Pakistan.

The primary focus of this chapter is on the theory of nuclear deterrence. It is explained by referring classic research work by renowned scholars. Furthermore, the chapter entails the current debate in the realm of nuclear deterrence theory. Then this chapter develops a model by discussing the concepts of non-state actors and non-state proxy strategy. At the end, the concepts of nuclear terrorism and nuclear security are elaborated.

**Theory of Nuclear Deterrence**

According to online Oxford Dictionary the word *deter* originated in mid 16th century from Latin word *detrerere* that means ‘frighten’. Further, in literal context the word *deter* means “discourage (someone) from doing something by instilling doubt or fear of the consequences.” In political context, the term deterrence means “the policy of developing a lot of military power so that other countries will not attack your country” and in military perspective “military strategy whereby one power uses the threat of reprisal to preclude an attack from an adversary.”

An arduous analysis of the concept of deterrence reveals that this idea has been present right from the inception of human history; however, the usage of the term is relatively new. Patrick M. Morgan highlights this fact and explains “deterrence is an old practice. For instance, classic balance of power systems were based on deterrence, applied by actors not just to prevent wars but via wars.” The deterrence is based on the element of threat that targets the psychology of the opponent. According to James Lo “deterrence is fundamentally based on an expressed threat that exacts a cost greater than the potential benefits of an adversary’s unwanted action, leading an adversary to avoid that unwanted action.”

Right from the dawn of history, the first and foremost goal of mankind has been to promote and ensure security – a

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cardinal principle of political realism. Empirical evidence, in overwhelming proportions, reveals that force or threat of use of force has been the main instrument to achieve the objective of security. So, the idea of threat is substantially important in human life at all levels – individual, societal, state and international. Nevertheless, the traditional deterrence often did not work – at times it provoked wars instead preventing them. It was complicated matter to build the credibility of the threat.  

Andre Beaufre, a renowned French strategic thinker of the Cold War era, notes that pre-nuclear era strategy was primarily based upon on a positive capability – the capability to win. Moreover, the strategy was not only directed to impose one’s will upon the rival but to do so at relatively little cost to oneself as well.  

The advent of nuclear weapons with reliable delivery means has caused a sea-change in the concept of deterrence from that of the past. Arguably, the nuclear weapons have made a war an infeasible and unrealistic strategy – especially with regards to cost-benefit calculus of the states. Hence, if two nuclear armed rival states use nuclear weapons in any kind of eventuality, both have to pay heavy costs because practically there is no reliable defense against nuclear weapons. Keeping in view the immensely destructive and cataclysmic nature of nuclear weapons, most of the strategic analysts are unanimous on the point that these costs are invariably unbearable for the modern nation-states. Robert Jervis aptly comments about this fact that the “states would be dissuaded from going to war, not by the belief that they could not defeat the other’s side but by the knowledge that they would be destroyed in the process.” These are the reasons that compel the nuclear capable states to pursue their vested political interests through indirect strategy which is nuclear deterrence – instead of military expeditions. While propounding deterrence theory, Beaufre succinctly notes that:

“Deterrence is in the first place expected to preserve the peace and maintain the territorial status quo; but it is also expected to stop this or that action by the enemy, to limit the extent and intensity of conflict, and even in some cases to paralyze all enemy resistance to some action it is proposed to take.”

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7 Andre Beaufre, Deterrence and Strategy (London: Faber and Faber, 1965), 23. Another detailed discussion about the term ‘deterrence’ can also be found in Albert Legault and George Lindsey, The Dynamics of Nuclear Balance (London: Cornell University Press, 1974).
Encyclopedia of International Military and Defense explains that “deterrence is a political principal that avails itself of military and other means to persuade an adversary deciding between war and peace to opt for peace, and to dissuade him from war.”\textsuperscript{10} “Deterrence works by persuading an adversary that the costs of his aggression will exceed any probable gains. Thus, deterrence is politically meaningful, militarily reasonable, and morally justified.”\textsuperscript{11} Beaufre underpins that “the objective of deterrence is to prevent an enemy power taking the decision to use armed force.”\textsuperscript{12} The result, which it is desired to achieve, is therefore a psychological one and it is sought by means of an effective threat.\textsuperscript{13} Phil Williams underscores that deterrence is not a new concept in its entirety since it has been the part and parcel of all legal systems throughout the historic periods. For instance, a killer/murderer is deterred by making such crime liable to be punished severely.\textsuperscript{14} Furthermore, he notes “deterrence means preventing an adversary from taking an undesirable action. This is achieved by imposing the threat of unbearable costs should he embark upon such a course, and is also known as deterrence by punishment.”\textsuperscript{15}

Bernard Brodie, a historian by training, has been rightly considered an academic who contributed immensely to Western and American strategic thought centered around nuclear weapons in the post WWII era. He was the most explicatory original and thoughtful American civilian strategist. He seems to be very much convinced on the point that technological change can bring paradigm shift in the making of strategy, for that matter; according to him, the nuclear weapons have changed the strategy of warfare. He argues that the nuclear weapons have countered the Clausewitzian precept ‘war is the continuation of policy by other means’. In his words: “thus for the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have no other useful purpose.”\textsuperscript{16} Moreover, he emphasized that the survival of retaliatory nuclear forces is imperative for nuclear deterrence stability between the belligerent nuclear capable states. As long as the each side in a nuclear rivalry has a reason to fear the huge destruction of its people and territory by other side the numerical superiority with regards to

\textsuperscript{11} Ibid.
\textsuperscript{12} Andre Beaufre, \textit{Deterrence and Strategy}, P. 24.
\textsuperscript{13} Ibid, PP. 24-25.
\textsuperscript{15} Ibid.
nuclear devices and delivery vehicles might count for little or nothing.\textsuperscript{17} Undoubtedly, Brodie’s work laid the foundation of nuclear deterrence theory. Patrick Morgan, while commenting on the origins of Cold War nuclear deterrence model, outlines that forestalling attacks has become the main focus of deterrence in international politics, though, technically it is used in far more ways than this by the states. “Thus a more elaborate definition would be that in a deterrence situation one party is thinking of attacking, the other knows it and is issuing threats of a punitive response, and the first is deciding what to do while keeping these threats in mind.”\textsuperscript{18}

The literature that deals with the evolution of nuclear deterrence theory coherently discusses that there are few prerequisites to make this theory credible and effective. In the initial period of evolution, the deterrence theory, somehow or the other, was prescriptive with less focus on what factors are linked empirically with the success or failure of deterrence. Admittedly, the main focus has been what the requirements of a credible nuclear deterrence policy are. The deterrence theory is based on several key assumptions, each carrying substantive importance, including credibility of threats; concepts of stability and rationality; sizeable capability and effective communication of threat.\textsuperscript{19} In this regard, Morgan eloquently answers that it is to persuade your adversary:

- That you have an effective and efficient military capability.
- That it could impose and inflict unacceptable costs on adversary.
- That you would use it if attacked by your adversary.\textsuperscript{20}

How does one preserve enough of one’s retaliatory force against surprise attack of the enemy so that the opponent, in anticipation thereof, is deterred? This is not only the matter of nuclear capabilities in objective sense but also it needs subjective support that has a political dimension.\textsuperscript{21} Brodie points out that “…to prepare against all possible crises in the future, it is desirable to minimize that proportion of our retaliatory forces which the opponent can have high confidence of destroying by a surprise blow and help keep alive in his mind full awareness of the penalties for miscalculation.”\textsuperscript{22} So, it can be deduced from the

\textsuperscript{17} Ibid, PP. 80-83.
\textsuperscript{18} Patrick M. Morgan, \textit{Deterrence Now} (Cambridge: Cambridge University Press, 2003), P. 2.
\textsuperscript{19} Phil Williams, "Deterrence", PP. 67-87.
\textsuperscript{20} Patrick M. Morgan, \textit{Deterrence Now}, P. 4.
\textsuperscript{22} Ibid.
aforementioned details that nuclear deterrence is based on the element of threat and calculations that shape perceptions of the opponents.

While discussing nuclear deterrence theory it is important to distinguish it from deterrence strategy. “Deterrence strategy refers to the specific military posture, threats and ways to communicating them that a state adopts to deter, while the theory concerns the underlying principles on which any strategy is to rest.”23 It is false notion that there are many theories of deterrence; in actuality these are not theories but mostly theoretical fragments. So, there could be different deterrence strategies, not deterrence theories.24

**Nuclear Deterrence Stability**

The nuclear deterrence stability refers to a strategic environment in which the belligerent states deliberately refrain from using war as a mean to pursue their political objectives. The preceding discussion reveals that nuclear deterrence stability occurs in a strategic environment where the following factors exist.

- Presence of severe conflict between two states.
- The assumption that nuclear-armed belligerent states adopt and adhere to rationality in their respective nuclear decision making processes.
- Both states perceive retaliatory unacceptable threat from each other.
- Both perceive that nuclear war is not a practical option because of unacceptable damage.
- Both perceive that the threat is credible.
- Both believe in nuclear deterrence stability is in their advantage.

It is widely maintained by many strategic thinkers that nuclear deterrence stability is the most important constituent of nuclear deterrence theory. The Oxford English dictionary defines stability as permanence of arrangement, power of resisting change of structure and immunity from destruction or essential change. In a detailed article, Darryl Howlett writes that “deterrence theory defines stability simply: the actors, at the state-to-state or alliance-to-alliance levels, have common interests in avoiding war in the nuclear age.”25 So, the concept of nuclear deterrence stability entails a plausible estimation of the risk of an outbreak of

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24 Ibid.
25 Darryl Howlett, “New Concepts of Deterrence”. Available at kms2.isn.ethz.ch/serviceengine/Files/ESDP/...a63d.../05_Howlett.pdf
nuclear war by rival parties in view of their respective strategic potential. The main characteristic of stability is the existence of a certain potential barrier that stops a nuclear war. “The term “equilibrium” more likely reflects quantitative parameters of the existing nuclear super system, while the concept of stability characterizes its quality.”

Thomas Schelling and Morton Halprin define nuclear deterrence stability in the following words:

“A balance of deterrence – a situation in which the incentives on both sides to initiate a war are outweighed by the disincentives – is stable when it is reasonably secure against shocks, alarms and perturbations. That is, it is stable when political events, internal or external to the countries involved, technological change, accidents, false alarms, misunderstandings, crises, limited wars, or changes in the intelligence available to both sides are unlikely to disturb the incentives sufficiently to make deterrence fail.”

Arguably, states involved in nuclear arms race experience different changes in terms of politics, economy and military under domestic, regional and international political events. First, they try to mold and shape internal and external environment in accordance to their perceived vested interests and if that is not possible, they have to adjust their policies to international politics. However, all these developments are viewed essentially inherent to international life of a state and should not be taken as incentives to start a war with the nuclear opponent.

In the post-Cold War era, nuclear deterrence theorists have extensively analyzed the role, conduct and utility of nuclear deterrence in the entirely changed international political system. Generally, it is argued that the primacy that has been accorded to nuclear weapons for all-important national security imperatives by US and former USSR has been downgraded with the new realities of the world. Yet, supremacy of nuclear deterrence as the corner stone of defense policies of US and Russia is still very much conspicuous even after the end of Cold War. During the whole Cold War era the biggest challenge nuclear deterrence has been facing the threat of nuclear surprise attack by either of two super powers against each other. To the utter dismay of nuclear deterrent pessimists that did not happen – even the Cuban missile crisis ended peacefully.

Undeniably the evidence, in vast amounts, suggests that Cold War nuclear deterrence remained very stable, but in the post-Cold War, especially in the aftermath of 9/11, it is argued that nuclear deterrence has been facing many new and diverse challenges. Morgan concisely mentions this aspect that “during the Cold War the focus was on preventing major military attacks. Other possibilities such as spying or sabotage or threats from subversive groups were not tackled under the heading of deterrence.”

It is a fact that during the Cold War strategic environment the threat of non-state actors, who currently strive for getting nuclear/radiological weapons for their heinous objectives, was nearly nonexistent. Terrorist organizations were not operating at large scales – transnational terrorist outfits were yet to emerge on the international political arena. The 9/11 events have proved catalyst in bringing non-state actors and concerns such as nuclear security and nuclear terrorism in lime-light by generating an international debate that how to keep nuclear weapons safe from the hands of non-state actors. T.V Paul aptly explains that:

“The deterrence relationship between nuclear powers and terrorist groups… is another issue that has entered the discussion on deterrence theory, adding one more layer of complexity to the deterrence framework. It is generally assumed that cataclysmic terrorist groups such as al-Qaeda may not be deterrollable using a threat of retaliation that may be unacceptable to state actors.”

The primary objective of this study is to investigate the impact of non-state actors on nuclear deterrence in the post 9/11 era. Hence, it is essentially important to delve into the concept of non-state actors and how/why they are used to contemplate non-state militant proxy strategy by states to achieve their foreign policy goals. Along with that, concept of nuclear terrorism and nuclear security are required to clarify as they have policy linkages with non-state proxy strategy.

The Concept of Non-State Actors

Right from the dawn of history, human beings have been facing threats of wide and various kinds – academically these are categorized as traditional and non-traditional security threats. The former means threats emanating from external military aggression while the latter defines non-military threats such as food shortage, environmental hazards, human rights and

29 Patrick M. Morgan, “The State of Deterrence in International Politics Today”;
violent non-state actors etc. The threat of non-state actors is relatively new phenomenon at international political landscape having roots in separatist organizations, various terrorist outfits, transnational terrorist syndicates, and rebel groups. Perhaps, threat of non-state actors is not so new, however, the level and magnitude of threat is certainly of a new proportion.

The concept of non-state actors is very complex and nuanced because international organizations, non-governmental organizations (NGOs) and many multi-national corporations (MNCs) are also labeled as non-state actors in international politics. Oxford online dictionary defines the term non-state actors as “an individual or organization that has significant political influence but is not allied to any particular country or state.”31 So, the examples of non-governmental organizations (NGOs), multi-national corporations (MNCs) and international organizations are normally not carrying any threatening connotation especially with regards to security of states as they fall under international law one way or another. Therefore, this dissertation will not focus on benign non-state actors. Rather it focuses on the violent non-state actors who are not recognized by any international or national laws and hence largely illegal organizations – though politically motivated but fighting against sovereign governments. These organizations or groups can engage in non-internal and purely internal conflicts, or be involved in an international conflict such as that which international terrorist organizations have been known to be involved in, in recent years.

The literature reveals that non-state actors usually pursue their illegitimate goals through unjustifiable illegal actions – that often result in destabilizing a country, a region as well as in some cases the whole world. It means they are not only a threat to the territory from which they operate but also to other states. The empirical evidence suggests that the non-state actors those threaten a state’s security or outrightly attack on it using different strategies/tactics/operations are usually irregular combatants. In most of cases, these groups are labeled as terrorist groups, rebel groups, separatist groups, pirates groups or in some cases even classify themselves as freedom fighters. Furthermore, these groups can be of different forms depending on formation, structure, ideology, leadership, motives, actions etc. Most of the non-state actors may be classified into the one of the five following groups:

• “Regularly constituted groups of combatants with military command structure and political structure.
• Non-regularly constituted groups of combatants with or without command structure and with or without a political hierarchical structure.
• Spontaneously gathered groups who engage in combat or who engage in sporadic acts of collective violence with or without a command structure and with or without political leadership.
• Mercenaries acting as an autonomous group or as part of other groups of combatants; and
• Expatriate volunteers who engage for a period of time in combat or in support of combat operations, either as separate units or as part of duly constituted or ad hoc units.”

One of the most astounding aspects of non-state actors is their wide and diverse variety – clearly underlines that one should not classify them under one rubric. Though, they may have certain characteristics in common yet there are important differences in terms of motivation, purpose, power structure etc. Phil Williams while analyzing violent non-state actors and their impact on national and international security draws attention to six types to differentiate them from one another. First, he elucidates warlords that these are charismatic individuals who exercise control over certain territory by way of their military power. “They sometimes co-exist with a state but typically try to ensure that the writ of the state does not extend to the territory under their control—even if this requires the use of force.” Secondly, William opined that militias are very much similar to warlords with the difference of that these can operate without the charismatic leadership. Thirdly, there are paramilitary forces – armed formations outside regular military and police commands. He clarifies that “the difficulty with paramilitary forces, however, is that once created, they often prove difficult to control.”

It is noteworthy that in some cases paramilitary forces do not necessarily fall under non-state actors. If a group has the function and organization similar to those of a professional military force and is recognized as having the same status, then that paramilitary force would not be a non-state actor. They may be responsible for a certain degree of security in certain countries or otherwise. The fourth type includes insurgencies – they are becoming very common

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34 Ibid. P. 12.
particularly in developing world. It has been described as “an organized movement aimed at
the overthrow of a constituted government through the use of subversion and armed conflict.”
The aim may be of only seizing power or creating a separate state. Finally, there are terrorist
organizations who are viewed the most lethal type of non-state actors in the current
international strategic environment. Usually, terrorist organizations employ indiscriminate
violence against civilians which is central to their strategy to achieve political ends. At the
same time, terrorist organizations differ enormously in terms of origins and objectives.

A working paper published by The Geneva Centre for the Democratic Control of Armed
Forces (DCAF) also looks into the phenomenon of non-state actors. Though paper is not so
exhaustive in terms of detailed discussion about non-state actors, nevertheless, it provides
some useful insights regarding various characteristics, types and consequences of non-state
actors. The private security guards sometimes become very powerful, hence undermining
state authority and accountability. Then there are crime groups who are considered to be
non-state actors but they cannot challenge the authority of state power openly. In some cases
if the violence becomes acute and prevalent and people feel extreme insecurity then they may
raise militias for their survival. However, militias are also raised for insurgencies and/or to
fulfill revolutionary goals, and wage proxy wars by states.

The above discussion vociferously reveals that the concept of non-state actors does not fit
into conventional paradigms of international relations based on a state centric world view. As
the non-state actors are becoming increasingly important actors in armed conflicts in the
different regions of the world, so the need is also increasing to understand them holistically.

**Non-State Proxy Strategy Model**

Sometimes, non-state actors are conveniently used by different states as their proxies to fulfill
their foreign policy goals. Non-state proxies can offer sponsor states significant benefits,
especially if the sponsor is weak relative to its main adversary. Most often, for weaker states
fielding proxies is cheaper as compared to fielding a conventional army. Non-state actors
operating, as proxies, do not need sophisticated training or equipment. By sending non-state
actors into battlefield areas, the states avoid risking lives of their own soldiers from stronger

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35 Ibid. PP. 13-16.
37 Ibid. PP. 16-18
adversary. Moreover, such proxies have a number of operational advantages; using militant proxies enables weaker states to increase the difficulty of military responses that are open to stronger opponent. The stronger opponent has two main avenues that include denial and punishment to respond when facing weaker challenger. The denial seeks to defeat the weak adversary’s operations essentially battlefield and punishment seeks to inflict harm at the time and place not necessarily connected to the initial confrontation. However, both of these strong state options holds significant risks for the weak challenger.\textsuperscript{38}

Table 1: Operational Advantages of a Militant Proxy Strategy

<table>
<thead>
<tr>
<th>Strong State Uses Denial</th>
<th>Strong State Uses Punishment</th>
</tr>
</thead>
</table>
| **Risks for weak challenger** | Battlefield loss  
Conflict escalation  
Political costs | Harm to homeland  
Harm to other high-value targets  
Political costs |
| **Strong state defensive tasks** | Prevent entry  
Find militant and prevent attack  
Defeat ongoing attack | Harm militants  
Harm sponsor state  
Harm other high value targets |
| **Advantages to use of militants** | Difficult to prevent entry  
Hard to find before attack  
Attack occur without warning  
Militants highly motivated  
Political challenges | Uncertainty as to identity of militants and sponsor  
Identity needed for effective and politically feasible punishment |


**Figure 1: Bargaining Benefits of Militant Proxy Strategy**

Upside of principle-agent problem

- Sponsor does not totally control militants

- Bringing them to heal is difficult

- Sponsor can demand premium for controlling militants

**Bargaining benefits of militant proxy strategy**


**Figure 2: Non-State Proxy Strategy Paradox**

State Weakness

- Makes Nonstate Proxy useful

- Makes Nonstate Proxy dangerous

It is important to note that paradox of non-state militant strategy does not offer unmitigated benefits to sponsor state. As a matter of fact, such a strategy has enormous downsides as well. It may happen that the weakness of sponsor state makes it too difficult to control the militants. And in this case strong adversary may actually be unwilling to bargain with them because they would not call off proxies even if they want to. In addition, militant proxy forces could take actions that directly harm a weak sponsor state, for example, the proxies could adopt agenda more ambitious than those of sponsor leading them to provoke sponsor – stronger adversary without sponsor state approval. The sponsor should tempt to reestablish control over the proxies, the proxies could turn directly against it. Apart from these control problems, a proxy strategy can force the sponsor state to make painful resource tradeoffs. These could be:

- Investments in militants divert scarce resources from other goals
- Successful militant strategy increases the competitiveness of strategic environment (sponsor has to divert more resources to military)
- Domestic development suffers

**Figure 3: Tradeoff Problems of Militant Proxy Strategy**

The phenomenon of terrorism is not new to international politics, however, it has become more complex and relevant to relations among states in the backdrop of devastating 9/11 terrorist events. The non-state actors are active in wide and various forms throughout the world carrying out heinous terrorist operations leaving unprecedented repercussions on foreign and domestic policies of the states. Besides impacting international politics, they are putting down unforgettable imprints on psychology, culture, history, philosophy and above all military strategy of different states. Unfortunately, there is no common and widely accepted definition of terrorism. Those who justify violence for their perceived legitimate ends interpret terrorism differently from those who are affected by that very violence.

Nevertheless, it is pertinent to define terrorism for this study. Below is a list of definitions of terrorism by some of the most distinguished scholars and institutions on the matter:

• Walter Laqueur: “Terrorism is the use or the threat of the use of violence, a method of combat, or a strategy to achieve certain targets… [I]t aims to induce a state of fear in the victim, that is ruthless and does not conform with humanitarian rules… [P]ublicity is an essential factor in the terrorist strategy.”

• Bruce Hoffman: “Terrorism is ineluctably political in aims and motives, violent—or, equally important, threatens violence, designed to have far-reaching psychological repercussions beyond the immediate victim or target, conducted by an organization with an identifiable chain of command or conspiratorial cell structure (whose members wear no uniform or identifying insignia), and perpetrated by a sub-national group or non-state entity.”

• U.S. Department of Defense: “The calculated use of violence or the threat of violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological.”

Nuclear history tells that the threat of nuclear terrorism is as old as the nuclear weapons. Perhaps, it is rightly perceived that if the terrorists are succeeded to get hold on world’s most lethal weapons, they can create catastrophic and apocalyptic consequences for the entire world. However, many scholars, analysts, experts and officials also claim that most of the times nuclear terrorism is only hyperbole and it is next to impossible that terrorists will be able to detonate an improvised nuclear device (IND). At the same time, they also admit that radiological terrorism in the form of radiological emission device (RED) and radiological dispersion device (RDD) – the so-called dirty bomb – cannot be ruled out. Before explaining the concept of nuclear terrorism in its entirety it is important to look at few definitions:

According to the 2005 International Convention on the Suppression of Acts of Nuclear Terrorism defines nuclear terrorism as “the use or threat to use nuclear material, nuclear fuel,
radioactive products or waste, or any other radioactive substances with toxic, explosive, or other dangerous properties." The convention further states that:

“The definition includes the use or threat to use any nuclear installations, nuclear explosive, or radiation devices in order to kill or injure persons, damage property, or the environment, or to compel persons, States, or international organizations to do or to refrain from doing any act. The unauthorized receipt through fraud, theft, or forcible seizure of any nuclear material, radioactive substances, nuclear installations, or nuclear explosive devices belonging to a State Party, or demands by the threat or use of force or by other forms of intimidation for the transfer of such material would also be regarded as acts of nuclear terrorism.”

Interestingly, the nuclear alarmists most notably Graham Allison in his work presents an alarming yet debatable overview of the concept of nuclear terrorism. While discussing the likely chances of nuclear terrorism he asserts that why non-state actors should stick to having axe when bulldozer is available within its reach. He claims “no one who has studied the facts doubts that another catastrophic terrorist attack is coming.”

Similarly, Charles D. Ferguson and William C. Potter are of the view that probability of nuclear terrorism is growing. They comprehensively illustrate that terrorists have four essential ways through which they can exploit military and civilian nuclear installations across the globe to execute their reprehensible designs. Those mechanisms are:

- “The theft and detonation of an intact nuclear weapon.
- The theft and purchase of nuclear material leading to the fabrication and detonation of a crude nuclear weapon – an improvised nuclear device (IND).
- Attacks against and sabotage of nuclear facilities, in particular nuclear power plants, causing the release of large amounts of radioactivity.

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44 Ibid.
45 The term “nuclear alarmists” is used for those scholars, analysts, experts and officials who usually claim that the threat of nuclear terrorism is very much possibility. They portray apocalyptic and cataclysmic scenarios of nuclear terrorism. They believe that second nuclear age quite different from that of Cold War and involve most dangerous rivalries and the presence of transnational terrorist organizations pose a real threat of nuclear terrorism. For more about nuclear alarmist see Charles D. Ferguson and William C. Potter, The Four Faces of Nuclear Terrorism (Monterey, CA: Center for Nonproliferation Studies, 2004), John Mueller, “The Atomic Terrorist: Assessing the Likelihood”, Ohio State University, (January 2008) and Graham Allison, Nuclear Terrorism: The Ultimate Preventable Catastrophe, (New York: Times Books, 2004)
The unauthorized use of radioactive materials contributing to the fabrication and detonation of a radiological dispersion device (RDD) – a dirty bomb – or radiation emission device (RDE).\textsuperscript{48}

On the other end of nuclear terrorism spectrum, there are those who are skeptical about the likely occurrence of nuclear terrorism in the world, however, they claim real probability of this menace exits. Matthew Bun propounds that the danger of nuclear terrorism should not be exaggerated keeping in view the utmost difficulty faced by terrorists to acquire, construct and detonate a nuclear device.\textsuperscript{49} Then there are nuclear terrorism pragmatists who claim that threat is present but at the same time there is a remote possibility of its materialization. Gary Milhollin vividly explains that terrorists aiming at nuclear weapons would either have to manufacture them altogether or procure them on the black market – both are highly difficult tasks to accomplish. He pointed out that:

“Building a nuclear bomb from scratch would require making bomb grade fuel. However, manufacturing such radioactive material would require a tremendous amount of equipment, which would be nearly impossible to purchase and conceal. Buying fuel would entail the same problems as trying to buy ready to use nuclear weapons: Most nations are unlikely to sell such items to terrorist groups. Even if terrorists were able to procure enough radioactive material to build conventional bombs that would disperse radiation when exploded, any such bomb radioactive enough to cause widespread harm would be too dangerous for terrorists to handle.”\textsuperscript{50}

Naeem Salik also echoes pragmatic views on nuclear terrorism in his work. He provides a realistic assessment of the danger of nuclear terrorism and asserts that no major attacks involving the use of nuclear and radiological devices have taken place. He quotes Stephen Younger:

“It would be wrong to assume that nuclear weapons are now easy to make … I am constantly amazed when self-declared ‘nuclear weapons experts’, many of whom have never seen a real nuclear weapon, hold forth on how easy it is to make a functioning nuclear explosive … While it is true that one can obtain the general idea behind a rudimentary nuclear explosive

\textsuperscript{48} Ibid. P. 3.
from articles on the internet, none of these sources has enough detail to enable the confident assembly of a real nuclear explosive.”\textsuperscript{51}

**The Concept of Nuclear Security**

Undeniably, the concept of nuclear security evolved to counter the dangers of nuclear terrorism – sabotage, theft, and subversion. The preceding discussion alarms about the probability of terrorists might try to get hands on a nuclear device either by stealing, building or acquiring. They might also attempt to steal or acquire radioactive materials with the goal to manufacture radiological dispersal device (RDD). They could also aim at radioactive contamination by sabotaging nuclear power plants, research reactors, storage facilities etc. Under this threat perception of nuclear terrorism by international community, states with nuclear wherewithal and infrastructure are motivated to mount up their nuclear security apparatus/mechanism. The International Atomic Energy Agency (IAEA) defines that “nuclear security is the prevention and detection of, and response to, theft, sabotage, unauthorized access, illegal transfer or other malicious acts involving nuclear material, other radioactive substances or their associated facilities.”\textsuperscript{52}

The IAEA definition is all-inclusive – clearly indicates that nuclear security includes all the measures taken for the protection of nuclear as well as radiological material and nuclear facilities from the threats imposed by human, such as stealing of this material and attempts to destroy or inflict harm on nuclear reactors or reprocessing plants. It also unambiguously prohibits the transfer of any nuclear substance outside the rules and regulations of international non-proliferation regime and unauthorized access by any entity or actor. Arguably, this is attempting to prevent illegal trade of nuclear materials and instruments being reached in the illegal hands and terrorists.

It is important to note that the international community and states with nuclear technologies are in fact more careful and conscious about nuclear security as ever before. Being cognizant of the fact that the transnational terrorist organizations have nuclear terrorism ambitions the role of national laws and regulations, international agreements, instruments and institutions;

ad hoc and voluntary cooperative measures to ensure nuclear security are getting prominence from recent times.

The International Atomic Energy Agency (IAEA) fact sheet explains how to combat nuclear terrorism in the following words:

- “Physical protection of all nuclear materials, radioactive materials and facilities and transport systems based on national threat assessment;
- Regulatory control of nuclear and radioactive material;
- Detection and interdiction of illicit trafficking in nuclear and radioactive materials;
- Coordination of nuclear safety, security and safeguards systems for maximum benefits; and
- Preparedness to respond to emergencies.”

In an edited book, Ramesh Thakur and Gareth Evans define that “nuclear security measures designed to address the risks associated with theft and trafficking in nuclear and radiological materials (including for the benefit of would-be proliferators), sabotage of nuclear facilities, and the danger of terrorists acquiring and using a nuclear weapon.” Furthermore, they observe that though there are some notable advances in global nuclear security – yet it remains inadequate. As a matter of fact, a major nuclear security incident would have very profound and far-reaching implications, credible and effective nuclear security must be a global concern. But most countries regard nuclear security as primarily a national concern, devoting insufficient attention to the development, promotion and application of international standards.

The international efforts to meet the challenges of nuclear security consist of agreements, regulations, resolutions and guidelines. It is widely believed that Nuclear Security Summit (NSS) that began in 2010 is a giant step in the right direction. Admittedly, however, nuclear security still remains behind the other nuclear regimes for safety, safeguards and arms control.

54 Ramesh Thakur and Gareth Evans (eds.), Nuclear Weapons: The State of Play, (Canberra: Centre for Nuclear Non-Proliferation and Disarmament, 2013), P.141.
55 Ibid.
Conclusion
Theory of nuclear deterrence evolved during the Cold War era. It is tested in the second nuclear age with new strategic realities. The underlying premise of nuclear deterrence stability rests on the assumption that two nuclear weapons capable rival states do not go for full-scale war under the fear of mutual assured destruction. Rather, both focus on preventing major military confrontation. This is why nuclear deterrence during the first nuclear age (Cold War) largely remained stable. It is a fact that during that era the threat of non-state actors, who currently strive for getting nuclear/radiological weapons for their heinous objectives, was nearly nonexistent. Terrorist organizations were not operating at large scales – transnational terrorist outfits were yet to emerge on the international political arena. The 9/11 events have proved catalyst in bringing non-state actors and concerns such as nuclear security and nuclear terrorism in lime-light by generating an international debate that how to keep nuclear weapons safe from the hands of non-state actors.

Moreover, nuclear deterrence stability has been further complicated by the use of non-state actors as means to employ non-state proxy strategy to wage sub-conventional warfare. So, this chapter provides a useful theoretical and conceptual framework to study nuclear deterrence stability in the second nuclear age. The nuclear deterrence theory would be tested through a model of non-state militant proxy strategy. This model would be applied to nuclear deterrence between India and Pakistan. So in following chapters, it would be essentially important to understand the conceptual construct of India-Pakistan nuclear deterrence.
CHAPTER-2

India-Pakistan Nuclear Deterrence: A Conceptual Construct

Introduction
The South Asian strategic environment is complex and volatile, which obstructs the economic prosperity of the region. The strategic competition between India and Pakistan and the decades long simmering enmity between them severely undermines the regional strategic environment. With the heavy baggage of souring relations, both India and Pakistan are one of those countries who spend huge GDP on their defense sectors respectively – making them increasingly militarized neighbors. Regrettably, both the states have/had acrimonious relations since their independence from the British imperialism in August 1947. With the passage of time, unresolved bilateral disputes, mistrust, skepticism and ensuing competition of arms race have further widened the cleavage of animosity. This bitterness in relations has resulted in three bloody wars, and a number of skirmishes alongside the Line of Control (LOC).

Admittedly, India-Pakistan confrontation template is exclusively different from that of US-USSR rivalry during Cold War but in nuclear context one can draw some similarities in the sense that both India and Pakistan developed nuclear weapons. Moreover, both the states are involved in a continued nuclear arms race to multiply and diversify their respective nuclear arsenals. Though, both are geographically contiguous with so many cultural, historical, language and racial similarities, yet they remain unable to resolve decades old complex bilateral disputes through a meaningful dialogue. In addition to that both view their national security interests through different lens – resulting in profoundly varied threat perception. According to Indian perspective, their nuclear deterrent posture is aimed at China; primarily it is to counter Chinese threat though in recent years it has become evident that Indian policy

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56 For details regarding India and Pakistan defense budgets see Shane Mason, “Military Budgets in India and Pakistan: Trajectories, Priorities and Risks”, Stimson Center, (2016).
57 The term Line of Control (LOC) known as Asia’s Berlin wall, refers to the military control line between the Indian and Pakistani-controlled parts of the former princely state of Jammu and Kashmir—a line which, to this day, does not constitute a legally recognized international boundary but is the de facto border. Originally known as the “Cease-fire Line”, it was re-designated as the “Line of Control” following the Simla Agreement, which was signed on 3 July 1972.
makers cannot ignore threats emanating from Pakistan’s national security policies. Pakistan, On the other hand, perceives India as the primary conventional and nuclear threat. Arguably, Pakistan’s security policies, right from its inception, have been India-centric.

This chapter intends to develop a conceptual base of nuclear deterrence in South Asia. While doing so, it examines both Indian and Pakistani perspectives on their respective national security policies, particularly nuclear policies. Moreover, this chapter analyses the impact of strategic perceptions of both the states on their nuclear outlook. At the end, it outlines the evolution of nuclear postures, nuclear doctrines and likely future nuclear trajectories in South Asia.

**Pakistan’s Strategic Perceptions**

Although there are quite varied perspectives on Pakistan and India’s motivations to build nuclear weapons but almost there is agreement among nuclear scholars that deep-seated security concerns have been key drivers for nuclearization in South Asia. Historically, both India and Pakistan have remained locked in a perpetual conflict poisoned by territorial disputes. Right after the departure of British rule in Sub-continent, Pakistan perceived that India has not accepted the creation of Pakistan as a separate country and wanted to weaken it. Such kind of fears predominantly emerged from the assumptions that India aspires to be a hegemonic power in South Asia. The dispute of Kashmir has continued to play a major detrimental role ruining the relationship between both the countries. Naeem Salik considers that Kashmir issue played a key role in converting Pakistan into a national security state. He articulates that:

“The emergence of the Kashmir problem soon after the independence, which still remains unresolved, despite half a century of confrontation with a much larger neighbor, has meant that the preservation of national security and integrity has been its predominant concern throughout its history. This has turned Pakistan, like Israel, into a national security state.”

The acrimony, hostility, volatility and mistrust have resulted in many bloody wars and numerous crises. Rasul Bkhsh Rais observes the repercussions of entrenched animosity that “Pakistan’s defense and foreign policies have been India-centered from the beginning; for

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over half a century Pakistan’s security dilemma has centered on how to balance, counter, and if necessary, fight the Indian threat”. 59 Mark Fitzpatrick in his book writes that:

“As minister of mineral resources from 1958 to 1962, Zulfiqar Ali Bhutto was a strong supporter of the civilian programme, but he soon came to advocate that Pakistan should also harness nuclear technology for military purposes. Fear of domination by India, distrust of the US alliance and concern that growing international interest in a treaty to ban the spread of nuclear weapons would close the door on Pakistan’s options were among his motivations.”60

Arguably, Pakistan’s defeat in 1971 war and the role of India in East Pakistan’s (now Bangladesh) dismemberment are believed to be watershed events in the history of Pakistan that enlarged Indian threat to Pakistan’s national security. Feroz Hassan Khan argues that “at the core of the nuclear weapons acquisition narrative rests national humiliation – the phrase “never again” is repeated over and over in nuclear histories.”61 Later on, India’s so-called peaceful nuclear test in May 1974 proved catalyst for Pakistani nuclear weapons program and only after one month of this test, Pakistan’s decision makers confirmed to build nuclear weapons. Mark Fitzpatrick mentions that “India’s first nuclear test in May 1974 gave urgency to the project and the next month a cabinet meeting confirmed a decision to build nuclear weapons, transforming what until then had been seen as a hedging option.”62 Feroz Hassan Khan expounds that:

“Pakistan’s threat matrix dramatically changed, however, after Pakistan’s catastrophic military defeat in 1971 and India’s nuclear weapon test in 1974. Pakistan’s national threat perception became dominated by the twin threat of India’s conventional force superiority and nuclear weapons capability. The acquisition of nuclear weapons hence became Pakistan’s highest national security objective, with unanimity across all parts of the political spectrum. This was augmented by the strong perception that outside powers could not be relied upon in moments of crisis and war.”63

Interestingly, Pakistan’s nuclear weapons acquisition has been viewed by its policy makers a cost-effective response to India’s ever increasing conventional military capabilities. For Pakistan, its nuclear capabilities have been playing a cardinal role in strengthening Pakistan’s

62 Mark Fitzpatrick, Overcoming Pakistan’s Nuclear Dangers, P.16.
stance on Kashmir. Pakistan has been very assertive and possibly sometimes very aggressive to pursue its interests with respect to Kashmir issue because it is believed that India will not go for all-out conventional war for punitive measures. Stephen P. Cohen argued back in 1984 that “the belief that a Pakistani nuclear capability would paralyze not only the Indian nuclear decision, but also Indian conventional forces, and a bold Pakistani strike to liberate Kashmir might go unchallenged if Indian leadership was indecisive was a significant factor in Pakistan’s nuclear weapons pursuit.”

As mentioned earlier nuclear weapons are seen single most cost-effective tool in Pakistan’s security template. At the same time, one finds various perspectives on how they promote Pakistan’s national security. Two views are essentially important to discuss here. “One suggests that Pakistan’s nuclear weapons can deter, or should deterrence fail, defend against India’s perceived conventional military superiority. The other view suggests that the primary purpose of nuclear weapons is to deter India’s nuclear weapons.” The first rationale of nuclear weapons remained dominated in Pakistan’s strategic thinking until early 1990s. Afterwards, countering the Indian nuclear capabilities joined the earlier rationale. Another important point is that Pakistan’s strategic planners also wanted to respond Indian technical advances and demonstrations especially in the nuclear weapons field. This was proved in late 1995 when reports emerged that India was planning to conduct a nuclear test. While reacting to such reports Pakistani government officials made it categorically clear that they will respond to such tests accordingly. Later on, in 1998 it was proved as Pakistan contemplated the policy of ‘tit for tat’ and conducted several nuclear tests.

**India’s Strategic Perceptions**

India’s strategic perceptions has been a subject of controversy and debate among security analysts. According to perspective propounded by Indian defense experts and policy circle, China is the main factor in shaping Indian strategic thinking and strategic policies in the

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67 Ibid.
68 Ibid. P.234.
They consider China as the major threat to Indian national security which needs to be countered through various means – mainly augmenting military capabilities. Many independent analysts from outside India assert that India is over playing Chinese threat and some believe India is paranoid when it interprets China factor in its grand strategy and foreign policy. Though, India has been continuously hyping and propagating China threat in its nuclear weapons acquisition policy but it also perceives Pakistan as an arch rival in the region. Many strategic scholars believe that China-Pakistan strategic alliance is also a great source of worry for India especially Chinese military assistance to Pakistan.

A careful analysis of the history highlights that India and China have territorial disputes right from their inception. Conversely, hostility between both the states resulted in 1962 Sino-Indian war in which India had to face an embarrassing defeat. This humiliating setback of India in war proved that China has an edge over India in military capabilities. Consequently, India started search for new avenues to counter China threat. To make things worse for India, China detonated nuclear device in 1964. The nuclear weapons capable China seemingly had a befitting adverse impact on Indian security perceptions and added new complexities to security dilemma in the region. Homi Bhava, who is believed to be the main scientist in Indian nuclear program from the very beginning, was very upset on 1962 disaster and China becoming a nuclear weapon state in 1964. Frustrated, Bhabha spoke up publicly for the first time on January 27, 1964 on the military necessity and, more significantly, the economic logic of nuclear weapons at the 12th Pugwash Conference. He said that:

“While nuclear weapons provide absolute deterrence even against another having a many times greater destructive power under its control . . . Conventional weapons, he said, can at best enable a country to acquire a position of relative deterrence. More pointedly, China, he declared, must always present a threat to its smaller neighbors, a threat they can meet either by collective security or by recourse to nuclear weapons to redress the imbalance in size.”

Additionally, Homi Bhabha perceived that a nuclear test by India would match the Chinese accomplishments, resisting the latter any kind of political and military space in the Third World. It would also lift the spirit and morale of India nation. So, these new developments provided Indian nuclear scientific community enough grounds to plausibly convince the

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71 Ibid. P. 50.
political elite for a nuclear test. At last, India went for its first nuclear test in 1974 and dubbed it a ‘Peaceful Nuclear Explosion’ (PNE), though the international community was fully aware that the test has military dimensions. It was evident from subsequent developments whereby India was punished with international sanctions and a nuclear embargo by the West with the US at the forefront. Zafar Iqbal Cheema argues that “it is obvious that Indira Gandhi considered the acquisition of nuclear weapons a symbol of great power status and believed that arbitrary limits were being imposed by the nuclear weapon states. India’s interest in the PNEs seemed to be motivated by its dual-use potential.”

The realists’ explanations for nuclearization of India are based on security threats emanating from both international and regional players. These explanations underline argument that a combination of security factors in the late 1990s resulted in incentives/motivations for India to use its nuclear option. Global nonproliferation developments that include indefinite extension of Nuclear Nonproliferation Treaty (NPT) in 1995, the prospects of the Comprehensive Test Ban Treaty (CTBT) after it was concluded and opened for signatures. The Indian strategic community was perceiving that enforcement of Comprehensive Test Ban Treaty (CTBT) would close the doors for nuclear tests forever. Moreover, an increasingly powerful China assisting it’s ‘all weather friend’ Pakistan in military field to elevate its defense capabilities. All these factors compelled India to go for overt nuclear option in 1998. The constructivists’ explanations argue that India’s search to become global power and concurrent quest for prestige in international politics molded Indian foreign policy to go for nuclear weapons test. Many others argue that the domestic political considerations were mainly responsible for May 1998 tests whereby political and bureaucratic actors influenced Indian decision for nuclear tests.

India – once was an ardent supporter and proponent of Nuclear Nonproliferation Treaty (NPT), arms control and disarmament and nuclear nonproliferation – became an active nuclear weapons power after these nuclear tests. It looks that most of Indian strategic experts and politico-military elite reckon Indian nuclear weapons capability as a source of international strategic power, prestige and influence. More so, they believe the novel military

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72 Zafar Iqbal Cheema, Development of Indian Nuclear Deterrent, (Karachi: Oxford University Press, 2009), P. 124.
74 Ibid. P.141.
capability will back Indian quest to become the permanent member of United Nations Security Council (UNSC) in the near future. Zafar Iqbal Cheema pertinently explains this aspect in the following words:

“The Indian armed forces are the fourth largest in the world with a blue water navy which indicates India’s strategic and military objectives much beyond the Indian Ocean. India is now a global strategic partner of the United States, but really against whom, neither the Indian decision—makers nor the Americans seem to know much. At times, it is China, at times Pakistan, and at times, it is nobody. The one lesson India has learnt from the United States is that if you do not have any enemy, you badly need one to justify your huge military establishment.”

Pakistan’s Nuclear Doctrine

A doctrine is the prerequisite on which organizational and force structures are built. It outlines the criteria for force structure, and nature, type and numbers of weapons and associated delivery systems that would be required to apply the doctrine. Scott D. Sagan refers military doctrine as “the underlying principles and specific guidance provided to military officers who produce the operational plans for the use of military forces.” Furthermore, he underscores that nuclear doctrines can differ on many various critical dimensions. Does the government have first use policy or no-first use policy? In which circumstances the government will use its nuclear weapons against the enemy? Does the government plan to initiate nuclear war in a crisis or conventional war? What kind of policy does a government have in terms of launching preventive or preemptive strikes? Does the government have limited nuclear war options? What kind of targets (counter-force, counter-value) are selected for nuclear strikes? Generally, military doctrines including nuclear doctrine carry both external and internal dimensions. Externally, nuclear doctrine aims at deterring an opponent state undertaking an undesired course of action through imposing threats of unbearable costs. This is what nuclear deterrence is all about. Internally, the nuclear doctrine realizes the masses that the state provides them security against external threats.

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75 Zafar Iqbal Cheema, *Development of Indian Nuclear Deterrent*, PP. 138-139.
78 Alexei Arbatov and others, “Contemporary Nuclear Doctrines”, Institute of World Economy and International Relations, Russian Academy of Sciences. PP. 4-6. Available at
The literature survey reveals that Pakistan’s nuclear doctrine is erected on its strategic calculus which apparently looks very simple – deterring an enemy who is many times stronger in terms of conventional military capabilities. At the same time, Pakistan’s security managers aim at maintaining a rough parity in terms of nuclear weapons capabilities with India. Pakistan’s nuclear establishment claims to seek peace and stability through ‘credible minimum deterrence’. It is true that South Asian rivals have the leverage to have insights from Cold War nuclear deterrent model whereby North Atlantic Treaty Organization (NATO) and Warsaw Pact developed various nuclear strategies to achieve their respective foreign policy goals. There is a plethora of literature on US-USSR nuclear weapons competition. Nevertheless, the decision makers in India and Pakistan are fully conscious of the fact that every contour of Cold War nuclear strategy is not applicable on South Asian nuclear equation. Largely, it is because the South Asian nuclear deterrence dynamics are quite different from Cold War nuclear deterrent model. However, the logic of nuclear deterrence is the same in both the models. Geographic proximity, troubled history, deep skepticism, border disputes, territorial issues make South Asian nuclear template very complex to understand and analyse.

It is a bitter reality that prior to overt nuclearization of 1998, thinking on issues associated with nuclear doctrine, nuclear command and control system and nuclear safety and security were broadly non-existent in Pakistan. Overt nuclearization opened the avenues of official and non-official discourse on nuclear weapons, resultantly a serious effort was made to develop and establish nuclear doctrine and nuclear command and control system. Quite interestingly, Pakistan was ahead of India in formulating a command and control system and pointing out fundamentals of its nuclear policy. On nuclear doctrine, Pakistan adopted the policy of ambiguity under the credence that it will better serve its national security goals. But, implicitly Pakistan chalked-out a well thought-out nuclear doctrine even before India. Naeem Salik points out this reality in the following words:

“Contrary to the popular belief that Pakistan does not have a nuclear doctrine, in fact it had its doctrine ready well before the Indians had pronounced their draft nuclear doctrine in August 1999. For a variety of reasons, Pakistan has chosen not to publicly pronounce its doctrine.


One possible explanation is that Pakistan believes that ambiguity adds to the value of deterrence.\(^\text{80}\)

Although, officially Pakistan has not announced its nuclear doctrine, yet broader contours/tenets of its nuclear employment strategy are well known from time to time government and military officials’ statements. Michael Krepon underlines four basic principles that, according to him, guide Pakistan’s nuclear doctrine vis-à-vis India:

“First, they assert that Pakistan’s nuclear deterrent is India-specific. Second, Pakistan has embraced a doctrine of credible, minimum deterrence…. Third, the requirements for credible, minimal deterrence are not fixed; instead, they are determined by a dynamic threat environment. And fourth, given India’s conventional military advantages, Pakistan reserves the option to use nuclear weapons first in extremis.”\(^\text{81}\)

On the occasion of May 1998 nuclear tests by Pakistan, Prime Minister Nawaz Sharif announced that it is India who has tried to alter the South Asian strategic canvas. He argued that Pakistan has been compelled to go for ‘tit for tat’ response, however, Pakistan’s nuclear arsenal would be used only for deterrent purposes. Furthermore, he said that “the nuclear tests have demonstrated Pakistan’s ability to deter aggression.”\(^\text{82}\) The South Asia nuclear discourse unequivocally explains that Pakistan does not have ‘no first-use policy’. A statement is attributed to Lt. General Khalid Khidwai that he gave during an interview to Italian Landau Network researchers:

“Pakistan’s nuclear weapons are aimed solely at India. In case that deterrence fails, they will be used if: 1) India attacks Pakistan and conquers a large part of its territory (space threshold). 2) India destroys a large part either of its land or air forces (military threshold). 3) India proceeds to the economic strangling of Pakistan (economic threshold). 4) India pushes Pakistan into political destabilization or creates a large-scale internal subversion in Pakistan (domestic destabilization threshold).”\(^\text{83}\)

It holds true that states learn from crises and conflicts. Though, Pakistan’s struggle to form a robust nuclear command and control system, an effective nuclear force posture, strategic organization, and nuclear use doctrine were largely complicated at the start of overt


nuclearization but three events facilitated Pakistan a tangible progress in this regard. Peter R. Lavoy explains these three crises:

“(1) the forced reorientation of Pakistan’s foreign and defense policies after the 11 September 2001 terrorist attacks against the United States and the subsequent U.S.-led war on terrorism; (2) the 2001-2002 military standoff that nearly produced a major war with India; and (3) the revelations in early 2003 of the A. Q. Khan network’s illicit transfers of nuclear weapons technology and materials to Iran, Libya, and North Korea. Because of the sweeping changes Pakistan has made in its nuclear programs, strategic organizations, and force posture in the wake of these traumatic events, Pakistani security planners now have a much more effective—and normal—nuclear deterrence posture.”

It can be construed from what the nuclear planners, security analysts and academic scholars say about Pakistan’s nuclear doctrine that Pakistan maintains a nuclear ‘first use’ option. Feroz Hassan Khan assesses that Pakistan trails the North Atlantic Treaty Organization (NATO) and the USA which has ‘first use’ option. He argues that Pakistan cannot overturn the ‘first use’ option because of huge asymmetries in terms of conventional weapons with India. Zafar Khan is of the view that “the FU option entails uncertainty and ambiguity. It is not certain when, where, and how nuclear weapons would be used.” Pakistan’s nuclear planners believe that nuclear weapons would be used as a ‘last resort’ in the case Pakistan’s territorial integrity and sovereignty are threatened by the enemy. In this regard, 2001-2002 eye-ball to eye-ball India-Pakistan military stand-off provides incisive insights. During the peak of crisis Pakistan’s President Pervez Musharraf stated that:

“Nuclear weapons are the last resort. I am optimistic and confident that we can defend ourselves with conventional means, even though the Indians are buying up the most modern weapons in a megalomaniac frenzy ... if Pakistan is threatened with extinction, then the pressure of our countrymen would be so big that this option, too, would be considered.”

As noted earlier that a doctrine illustrates nuclear use at two levels: the policy and operational level. The latter requires to explain how nuclear weapons would be used, deployment patterns, targets (counter-force, counter-value), numbers of weapons, types etc. To be precise, this part of nuclear doctrine comes under nuclear force posture. Both India and Pakistan have

86 Ibid. P. 153.
not declared the numerical strength of their nuclear weapons. Also, they have not hinted how much stocks of fissile materials they maintain. So, the strategic commentators heavily rely on speculations ascertained through nuclear facilities in the two countries.\(^88\) It is widely believed that Pakistan continues to enlarge its nuclear arsenal coupled with growing production of fissile materials. Pakistan has several delivery systems with few in development phase. Along with that, it has four operational plutonium production reactors and few uranium enrichment facilities. This enables Pakistan to increase its nuclear stockpiles. However, it is noticed by defense experts that Pakistan’s nuclear development strategy principally depends on two major factors. These are “how many nuclear-capable launchers Pakistan plans to deploy, and how much the Indian nuclear arsenal grows.”\(^89\) Naeem Salik asserts that “leaving aside all the above-mentioned problems with methods for estimating nuclear arsenal sizes, data available from some of the more credible and widely quoted sources suggest that characterizing Pakistan’s nuclear force as the fastest growing arsenal in the world is totally unjustified.”\(^90\)

Hans M. Kristensen and Robert S. Norris have the similar conclusions when they write:

> “Speculations that Pakistan may become the world’s third largest nuclear weapon state with a stockpile of some 350 warheads a decade from now are, we believe, exaggerated because that would require a buildup two to three times faster than growth over the past two decades. Pakistan simply does not have the industrial capacity to develop, produce, and deploy that many additional nuclear weapon systems in a decade.”\(^91\)

Over the years, Pakistan has diversified its delivery systems which include nuclear capable aircrafts, ballistic missiles and cruise missiles. It is important to mention that Pakistan carried tests of a short range missile called the Nasr (Hatf-IX) in 2011. Though, official statements from Pakistan does not indicate that the Nasr is tactical nuclear weapon, however, it is widely dubbed as a tactical nuclear weapon. The official press release by Pakistani military’s media wing Inter-Services Public Relations (ISPR) announced that the 60 kilometers range missile was capable of carrying “nuclear warheads of appropriate yield.”\(^92\) The impact of technological, doctrinal and other factors on South Asian nuclear matrix will be assessed in the next chapters of this dissertation. However, it is pertinent to allude that Pakistan strongly believes that the


\(^{91}\) Hans M. Kristensen and Robert S. Norris, “Pakistani Nuclear Forces, 2015”, P. 60.

introduction of tactical weapons is the best possible way to counter Indian Cold Start strategy which is considered very aggressive in nature by Pakistani policy circles and scholars. Lieutenant General (retired) Khalid Kidwai, speaking at the Carnegie International Nuclear Policy Conference in 2015, strongly criticized the narrow focus of the debate, stating that:

“I strongly believe that by introducing the variety of tactical nuclear weapons in Pakistan’s inventory, and in the strategic stability debate, we have blocked the avenues for serious military operations by the other side. That the debate has been hi-jacked towards the lesser issues of command and control, and the possibility of their falling into wrong hands is unfortunate, because it has distracted and diverted attention from the real purpose of the TNWs, that of reinforcing deterrence, preventing war in South Asia, ensuring peace, thereby creating an enabling environment for politics and politicians to reassert and lead the way towards conflict resolution, and give South Asia and its people a chance.”

Bulletin of Atomic Scientists and Stockholm International Peace Research Institute (SIPRI) are viewed as very authentic sources regarding information on Pakistan and Indian nuclear arsenals.

Table 2: Pakistani Nuclear Forces

<table>
<thead>
<tr>
<th>TYPE</th>
<th>NATO DESIGNATION</th>
<th>NUMBER OF LAUNCHERS</th>
<th>YEAR DEPLOYED</th>
<th>RANGE (KILOMETERS)</th>
<th>WARTHED VX YIELD (Kilotons)</th>
<th>NUMBER OF WARHEADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-16A/B</td>
<td>–24</td>
<td>1998</td>
<td>1,600</td>
<td>1 x bomb</td>
<td>–24</td>
<td></td>
</tr>
<tr>
<td>Mirage II/IV</td>
<td>–12</td>
<td>1998</td>
<td>2,100</td>
<td>1 x bomb or Radad</td>
<td>–12</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>–36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land-based ballistic missiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abadi (Hatt-2)</td>
<td>few</td>
<td>(2015)</td>
<td>180</td>
<td>1 x 12H</td>
<td>few</td>
<td></td>
</tr>
<tr>
<td>Ghaznavi (Hatt-3)</td>
<td>–16</td>
<td>2004</td>
<td>290</td>
<td>1 x 12H</td>
<td>–16</td>
<td></td>
</tr>
<tr>
<td>Shahzad-1 (Hatt-4)</td>
<td>–16</td>
<td>2003</td>
<td>750</td>
<td>1 x 12H</td>
<td>–16</td>
<td></td>
</tr>
<tr>
<td>Shahwari-1A (Hatt-6)</td>
<td>--</td>
<td>(2017)</td>
<td>900</td>
<td>1 x 12H</td>
<td>N.A</td>
<td></td>
</tr>
<tr>
<td>Shaheen-2 (Hatt-6)</td>
<td>–8</td>
<td>2014</td>
<td>1,500</td>
<td>1 x 12H</td>
<td>–8</td>
<td></td>
</tr>
<tr>
<td>Shaheen-3 (Hatt-7)</td>
<td>--</td>
<td>(2016)</td>
<td>2,750</td>
<td>1 x 12H</td>
<td>N.A</td>
<td></td>
</tr>
<tr>
<td>Ghauri (Hatt-5)</td>
<td>–40</td>
<td>2003</td>
<td>1,250</td>
<td>1 x 12H</td>
<td>–40</td>
<td></td>
</tr>
<tr>
<td>NASr (Hatt-9)</td>
<td>–6</td>
<td>2013</td>
<td>80</td>
<td>4 x 12H</td>
<td>–6</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>–86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cruise missiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babur (Hatt-7)</td>
<td>–8</td>
<td>(2014)</td>
<td>350</td>
<td>3 x 12H</td>
<td>–8</td>
<td></td>
</tr>
<tr>
<td>Ra'ad (Hatt-8)</td>
<td>--</td>
<td>(2017)</td>
<td>350</td>
<td>1 x 12H</td>
<td>N.A</td>
<td></td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>–8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>–94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>–130</td>
</tr>
</tbody>
</table>

Table 1. Pakistani nuclear forces, 2015


India’s Nuclear Doctrine

Though Indian national security advisor made public its first daft nuclear doctrine in August 1999, but it never got the approval of the government thus it remains an unofficial doctrine. One may argue that perhaps these were the recommendations to come up with an operationalized nuclear doctrine. Interestingly, many capabilities which were mentioned in the draft doctrine are yet to be achieved. This draft nuclear doctrine was the work of National Security Advisory Board (NSAB) which was comprised over India’s leading academics, bureaucrats, diplomats predominantly based in the New Delhi’s power corridor.95 Basically, under the arms control step, India proposed no-first use (NFU) pledge back in 1994 that afterwards has been reiterated by Indian political leadership on many occasions. Right after the overt nuclearization, Indian Prime Minister Atal Behari Vajpayee stated in the parliament that India “does not intend to use these weapons for aggression or for mounting threats against any country; these are weapons of self-defense, to ensure that India is not subjected to nuclear threats or coercion.”96 Again, few days later he declared in the Indian parliament that India would follow a policy of “minimum deterrence” and “will not be the first to use nuclear weapons.”97

The salient points of draft India nuclear doctrine are reproduced here:

- “India shall pursue a doctrine of credible minimum deterrence. In this policy of ‘retaliation only’, the survivability of our arsenal is critical. This is a dynamic concept related to our strategic environment, technical imperatives and the needs of national security. The actual size, components, deployment and employment of nuclear forces will be decided in the light of these factors. India’s peacetime posture aims at convincing any potential aggressor that:
  - Any threat of use of nuclear weapons against India shall invoke measures to counter the threat;

95 Mohammed B. Alam, “India’s Nuclear Doctrine: Context and Constraints” Heidelberg Papers in South Asian and Comparative Politics, South Asia Institute Department of Political Science University of Heidelberg. Available at http://archiv.ub.uni-heidelberg.de/volltextserver/4122/1/hpsacp11.pdf


97 Ibid.
• And any nuclear attack on India and its forces shall result in punitive retaliation with nuclear weapons to inflict damage unacceptable to the aggressor.

• The fundamental purpose of Indian nuclear weapons is to deter the use and threat of use of nuclear weapons by any state or entity against India and its forces. India will not be the first to initiate a nuclear strike but will respond with punitive retaliation should deterrence fail.

• India will not resort to the use or threat of use of nuclear weapons against states which do not possess nuclear weapons, or are not aligned with nuclear weapons powers.”

Though, Indian draft nuclear doctrine was revealed in 1999, but it took few more years to declare official/operationalized nuclear doctrine. Another point is important to mention here that the Indian nuclear doctrine has undergone some noticeable changes since it was first time announce. In January 2003, New Delhi published a brief official nuclear doctrine. The 4 January 2003 official statement said the following:

• “Building and maintaining a credible minimum deterrent.
• A posture of No First Use: nuclear weapons will only be used in retaliation against a nuclear attack on Indian territory or on Indian forces anywhere.
• Nuclear retaliation to a first strike will be massive and designed to inflict unacceptable damage.
• The civilian political leadership through the Nuclear Command Authority can only authorize nuclear retaliatory attacks.
• Non-use of nuclear weapons against non-nuclear weapon states.
• However, in the event of a major attack against India, or Indian forces anywhere, by biological or chemical weapons, India will retain the option of retaliating with nuclear weapons.
• A continuance of strict controls on export of nuclear and missile related materials and technologies, participation in the Fissile Material Cut-off Treaty (FMCT) negotiations, and continued observance of the moratorium on nuclear tests.
• Continued commitment to the goal of a nuclear weapon free world, through global, verifiable and nondiscriminatory nuclear disarmament.”

Besides above mentioned points, the doctrine also encompasses the establishment of a Nuclear Command Authority. It includes Political Council and an Executive Council. The Prime Minister is the head of Political Council. A careful look of this doctrine unambiguously divulges that the only Prime Minister can authorize the use of nuclear weapons.\(^\text{100}\)

If one dissects this doctrine, perhaps, it would be right to argue that there are serious dichotomies in Indian stated policy of no-first use (NFU). The operationalized nuclear doctrine substantively undermines no-first use (NFU). In this context, few points can be elaborated. Firstly, the doctrine claims that India retains the right to nuclear retaliation if India was attacked with biological or chemical warheads. This consideration of responding a chemical weapons attack with nuclear weapons is a kind of depart from no-first use (NFU) policy. Secondly, another clause of operationalized nuclear doctrine necessitates nuclear “retaliation against a nuclear attack on Indian territory or on Indian forces anywhere.” It is easier to determine what constitutes nuclear attack on Indian territory but to define a nuclear attack on Indian forces anywhere in the world appears to be problematic. Suppose, Indian forces are stationed somewhere else in the world and that country/territory is attacked by nuclear weapons. In such a case, how India would respond because it would not be a direct nuclear attack on Indian forces.

Operational side of the Indian nuclear strategy propels India to continuously search for technological innovation to augment delivery systems and build nuclear capabilities in commensurate to January 2003 official nuclear doctrine. “The most notable aspect of the nuclear weapons capabilities has been their rather slow development.”\(^\text{101}\) Like Pakistan, India also maintains a complete secrecy in terms of numerical strength of nuclear devices. So, India’s nuclear capabilities are not known with any certainty. According to reputed strategic experts, India has a sizable number of nuclear warheads along with a significant amount of fissile materials.

\(^{100}\) Ibid.
Stockholm International Peace Research Institute (SIPRI) Yearbook 2015 estimations of the Indian nuclear arsenal claims that India has 90 to 110 warheads. According to an
The Nuclear Threat Initiative (NTI) report:

“The ranges of such estimates are generally dependent on analyses of India's stockpile of weapons-grade plutonium, estimated at 0.54 ± 0.18 tons. Although India has also stockpiled roughly 2.4 ± 0.9 tons of highly enriched uranium (HEU), some of this material is mostly intended for use in nuclear submarines and research reactors.”

According to a report published in Bulletin of Atomic Scientists written by Hans M. Kristensen and Robert S. Norris in 2015 “India is estimated to have produced approximately 540 kilograms of weapon grade plutonium, enough for 135 to 180 nuclear warheads, though not all of that material is being used. The authors estimate that India has produced between 110 and 120 nuclear warheads.”

The operational nuclear strike force comprises over fighter bombers, which are believed to be the main strength of Indian nuclear capabilities, accompanied by credible land based ballistic and cruise missile systems. As argued in the nuclear literature that the best way to achieve assured second strike capability is to build nuclear triad. India has done quite a remarkable job in this direction as well. For the last few decades, India has been developing naval nuclear capabilities. It is developing two naval nuclear weapons, one is a nuclear powered ballistic missile submarine (SSBN) and the other is a ship-launched ballistic missile. “India’s first SSBN, the Arihant, finally sailed on sea trials in 2014.”

About Indian nuclear force structure Gurmeet Kanwal writes that:

“India’s nuclear force structure is based on a triad: Prithvi short-range ballistic missiles and various versions of the Agni intermediate-range ballistic missile manned by the missile groups of the Indian Army; nuclear glide bombs carried on aircraft of the Indian Air Force (IAF); and, eventually, submarine-launched ballistic missiles (SLBMs) deployed on ballistic missile submarines (SSBNs) with the Indian Navy. INS Arihant, the first indigenously designed SSBN, is undergoing sea trials as of 2016 and a second SSBN is reported to be under construction.”

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103 “Nuclear” NTI. Available at http://www.nti.org/learn/countries/india/nuclear/
105 Ibid. P. 81.
Judicious review of literature on nuclear weapons trends in international politics shows that the Cold War has witnessed the speediest nuclear arms race when both the former superpowers stockpiled hundreds and thousands of nuclear devices and their associated delivery systems enough to destroy the whole globe many times over. The collapse of Soviet Union, however, proved to bring a visible thaw in that race. Though, a lot needs to be done in the realm of arms control and disarmament, but both US and Russia have made some conspicuous actions to reduce the number of their respective nuclear arsenals. At the same time, it is evident that they have drastically failed to do what they promised under Nuclear
Nonproliferation Treaty (NPT) ‘grand bargain’\textsuperscript{107}. They are yet to fulfill the requirements of Nuclear Nonproliferation Treaty (NPT) article VI\textsuperscript{108}. Also, it should be noted that both ideological rivals are enhancing the quality of their arsenal – making the nuclear devices more compact, sophisticated and lethal. Among nine nuclear weapons states – five \textit{de-jure} and four \textit{de-facto} – China, India, Pakistan, Israel and North Korea are believed to adding to their nuclear stockpiles. According to Stockholm International Peace Research Institute (SIPRI) fact sheet: “at the start of 2016 nine states – the United States, Russia, the United Kingdom, France, China, India, Pakistan, Israel and the Democratic People’s Republic of Korea (DPRK, North Korea) – possessed approximately 15,395 nuclear weapons.”\textsuperscript{109}

\textbf{Figure 4:} Estimated Global Nuclear Warheads Inventories

\textsuperscript{107} NPT ‘grand bargain’ refers to an understanding between P5 states and the non-nuclear weapons (NNWs) under which P5 agreed to initiate talks in good faith to eliminate their arsenals and achieve complete disarmament. Reciprocating this, the NNWs agreed in NPT (article II) that they will not acquire nuclear weapons.

\textsuperscript{108} “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.”

\textsuperscript{109} “SIPRI Fact Sheet”, (June 2016). Available at \url{https://www.sipri.org/sites/default/files/FS%20201606%20WNF_Embargo_Final%20A.pdf}
Ground realities reveal that South Asia has been experiencing an increased tension between India and Pakistan. The impact of religious extremism is very much visible in the region. To add to this increasingly precarious strategic environment, both the states are entangled in virtual arms race with the tendency for frequent intricate crises. Both even fought a low-intensity conflict in the post overt nuclear era. Scholarly analyses on India-Pakistan nuclear trajectories stress that South Asia is embroiled in a very dangerous nuclear arms race that may result into catastrophe. At the same time, the literature on the subject also carries some parsimonious perspectives which portray ‘doomsday scenarios’. Nevertheless, generally it is argued that capabilities have outpaced the doctrinal aspects of nuclear strategy. Christopher Clary and Vipin Narang outline that:

“Capabilities have outpaced doctrine in South Asia since the 1998 nuclear tests. There has been considerable thinking about military means and considerable thinking about political ends, but much less thought as to how means are linked to ends. Doctrine and advancing military capabilities are raising the possibility of catastrophic failure of escalation control in the event of a future conflict.”

The following figure explains military expenditures by both the states over the years. However, military expenditures do not alone warrant a sensible assessment of India-Pakistan nuclear trajectories. There are several other factors that need to be taken into account.

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India-Pakistan nuclear trajectory presents a challenge in a way that technological maturation has resulted in a gigantic problem to manage the nuclear competition by both the states. Though, both sides take a lot of pride in nuclear weapons, yet it is evidenced by lack of foresight in doctrinal field that both are oblivious to strategic consequences of this race. Feroz
Hassan Khan rightly explains that “both states are acquiring new capabilities without involving much strategic forethought into their decision making. Technological competition, therefore, overwhelms prudence in regards to stability on the subcontinent and can instigate an arms race spiral that will be difficult to terminate.”111 In this context, there are few major technological innovations with their potential to destabilize South Asian nuclear trajectory are being pursued by the nuclear rivals. They are:

1) Ballistic Missile Defense (BMD)
2) Multiple Independent Reentry Vehicles (MIRVs)
3) Sea-based Deterrents,
4) Battlefield Nuclear Weapons (BNWs), and
5) Cruise Missiles

The impact of these new technological innovations on nuclear deterrence between both the states would be evaluated and analyzed in next chapters.

Conclusion

The genesis of nuclear deterrence in South Asia is rooted in the strategic perceptions of India and Pakistan. These strategic perceptions have been developing right from the partition of Sub-continent essentially because of divergent interests. Undoubtedly, the intricate issue of Kashmir caused enduring rivalry between both the states. This rivalry has resulted in few bloody wars and numerous dangerous crises. The two neighbors are geographically contiguous with so many cultural, historical, language and racial similarities. Nevertheless, they remain unable to resolve years old complex bilateral disputes through a meaningful dialogue. In addition to that both view their national security interests through different lens – resulting in profoundly varied threat perceptions. Under this ‘peculiar’ threat perceptions both went for overt nuclearization in May 1998. Admittedly, India-Pakistan confrontation template is entirely different from that of US-USSR rivalry during Cold War but in nuclear context one can draw some similarities in the sense that both India and Pakistan developed nuclear weapons. Moreover, both the states are involved in a continued nuclear arms race to multiply and diversify their respective nuclear arsenals. According to Indian perspective, their deterrent posture is aimed at China; primarily it is to counter Chinese threat though in recent years it has become evident that Indian policy makers cannot ignore threats emanating

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from Pakistan’s national security policies. Pakistan, On the other hand, perceives India as the primary conventional and nuclear threat. Arguably, Pakistan’s security policies, right from its inception, have been India-centric. Pakistan believes that its nuclear deterrent capabilities are cost-effective way to bridge huge conventional asymmetries with India. While both are involved in ensuing nuclear arms race but such trends are inherently dangerous for nuclear deterrence stability in South Asia. So, the next chapter would discuss how this arms race is posing very severe challenges to nuclear deterrence between both the states.
CHAPTER-3

Challenges to India-Pakistan Nuclear Deterrence Stability

Introduction
South Asia is a crisis prone region given the fact that both India and Pakistan have long-standing conflict. Many times in the history of bilateral relationship, crises escalated into full-scale wars resulting in furthering the damaging ties between both the states. This bloody conflict has seen transition from covert nuclear era to overt nuclear era – that caused changes in its dynamics but not in its nature (discussed in detail in earlier chapter). The frequent episodes of crises in both eras have left many questions on the efficacy and credibility of nuclear deterrence in South Asia. So, the crises such as Brasstacks 1986-87, Spring 1990, Kargil 1999, Twin Peaks 2001-2002, Mumbai 2008, Pathankot 2015 and Uri 2016 have been increasingly taken up as case studies by nuclear experts, scholars, officials and analysts to investigate/examine India-Pakistan strategic stability.

Additionally, the India-Pakistan nuclear dyad is facing stern and complex political challenges emanating from divergent political perceptions at regional and international levels. The presence of hard-core extremist political elements at both sides are seen invariably sabotaging and blocking any political effort for rapprochement. The history reflects that decision making at both sides is often over-shadowed or perhaps hijacked by strategic zealots. Moreover, these strategically motivated political actors work as a pressure groups and involve in hate-mongering and nefarious propaganda against each other. Importantly, even in the 21st century major political parties, especially BJP, are using Pakistan-bashing as an election tool to win the sympathies of public – thus undermining people to people contacts in South Asia. This political behavior, if carefully analyzed, has far reaching negative impact on nuclear deterrence stability between the two states. Practically speaking, political challenges have proved one of the main impediments to stabilize this bilateral nuclear template.

Apparently, the South Asian nuclear conflict looks far from its resolution as the critical strategic challenges continue to add fuel to the fire. The unresolved decades long territorial disputes, water issues, lethal conventional and nuclear arms race, Indian endeavors to become
a great power and its pursuance of hegemonic designs at regional level, massive Indian military modernization, the alleged use of sub-conventional warfare by Pakistan against India in Kashmir are the persistent issues at strategic level. which have the potential to further destabilize the already delicate nuclear enclave between both the states. At the same time, nuclear arms race appears to be unstoppable. The doctrinal aspects have added a supplementary factor in jeopardizing nuclear equation. India’s Cold Start doctrine or Proactive Military Operations strategy is seen as threatening by Islamabad. To counter this strategy and to further strengthen ‘credible minimum deterrence’ Pakistan has developed tactical nuclear weapons. Pakistan claims that now it has moved to ‘full-spectrum nuclear deterrence’ remaining under the ambit of ‘credible minimum deterrence’. Pakistani nuclear managers assert that this has made Pakistan capable to thwart challenges at all levels of threat spectrum.

Technological maturation by both the states is another factor that poses alarming challenges to deterrence stability in South Asia. Both India and Pakistan are locked into a very dangerous nuclear arms race. As Indian decision makers believe that Pakistan’s efficacy and credibility of nuclear deterrence is heavily based on ‘counter-value’ strategy. Under this perception, India has been pursuing ballistic missile defense system (BMDs). However, such a system is inherently destabilizing in any nuclear equation, the Cold War nuclear model is reflective of this argument. India has also been continuously working to achieve deterrent capabilities based on nuclear triad. For that, it has been developing a nuclear capable submarine fleet. Recently, it commissioned Arihant nuclear submarine. It is also widely believed that the pace of arms race is incommensurate with required nuclear command and control system developments. Both the states have very less experience in terms of establishing command and control system. The lack of sophisticated and highly developed command and control systems is likely to pose very severe challenges especially at the times of crises between both the states. Nuclear security aspect is also a factor that needs to be taken into account. The biggest problem, according to Western perspective, is violent non-state actors to nuclear security.

So, keeping above in view, this chapter aims at explaining and analyzing different perspectives dealing with challenges to nuclear deterrence stability in South Asia. To present a holistic picture related to these issues, the chapter takes into consideration Western, Indian and Pakistani perspectives.
Nuclear Weapons and Conflict in South Asia

Since independence, India and Pakistan have remained locked in a bitter relationship. The frequent crises time to time has only worsened the strategic situation in South Asia. The specter of escalation of crises into war has been present right from 1947. Many wars have occurred between both the nuclear competitors. Even both the states have failed to resolve their chronic dispute Kashmir by resorting to wars of 1947-48, 1965, 1971 and 1999 (Kargil conflict). Christoph Bluth argues that “the defining characteristics of the strategic environment in the subcontinent were Pakistani irredentism over Kashmir and Indian military superiority.”\textsuperscript{112} He further notes that the conflict between both the states is based on national identity, territory and power position in South Asia. Pakistani policy makers categorically rejected the division of Jammu and Kashmir and claimed that India annexed this territory with highhandedness and deception. Pakistan is also perturbed from Indian aspiration to seek a great power status at regional as well as international level. Islamabad believes in a status based on equality in the region.\textsuperscript{113}

Generally, it is assumed that the nuclearization of South Asia has transformed the conflict between India and Pakistan into a stalemate situation and has reduced the probability of its resolution. At theoretical level, Saira Khan writes that “protracted conflict transformation is a function of the absence of war and presence of crisis, which are products of nuclear weapons acquisition by the states in conflict.”\textsuperscript{114} Though there have been several efforts to resolve the conflict but they remained unsuccessful. In this regard, both countries concluded few Confidence Building Measures (CBMs) and showed some bold overtures. For instance, Lahore Declaration 1999 and Agra summit 2001 and 2004 Composite Dialogue initiatives, however, all these efforts had to face a dead end because of deep-rooted mistrust and enduring conflict. And now it looks that both India and Pakistan are comfortable with the situation of no war and no peace. “They sense that wars are unlikely and crises and violence will continue; they are prepared to face low-medium-intensity violence and are unsure about the permanence of any peace process.”\textsuperscript{115}

\textsuperscript{113} Ibid. P. 381.
\textsuperscript{114} Saira Khan, \textit{Nuclear Weapons and Conflict Transformation: The Case of India-Pakistan}, (New York: Routledge, 2010), P. 41.
\textsuperscript{115} Ibid. P. 128.
In simple words, the state of nuclear deterrence in South Asia is very delicate and fragile. Why is it so? The strategic experts have consensus on the point that the key to nuclear deterrence stability is that neither of the two nuclear adversaries, who are engaged in a protracted conflict, should have tendency to change the status quo through military means. Both India and Pakistan are inclined to use military means but both have adopted other ways to fulfill their foreign policy objectives. The use of sub-conventional means by Pakistan in Kashmir and Indian support of separatists in Baluchistan are believed to be detrimental for nuclear deterrence stability between the two. Many Western scholars maintain that the peculiar behavior – often characterized as irrational and aggressive – of both the states can trigger a war which could escalate to nuclear exchange. In this context, many experts argue that the nuclear weapons have injected new dimensions into the strategic culture of both the states. Though, Pakistan is believed to be a territorially revisionist state right from its inception and India mildly revisionist state as it seeks to be a great power status internationally, but addition of nuclear capabilities into their respective military muscles have further accelerated their actions in this direction. So, while most of the Western scholars advocate that nuclear weapons decrease the stability in South Asian region, the Pakistani and Indian nuclear experts in majority argue in favor of stabilizing effects of such weapons on bilateral conflict.

Crisis Stability/Instability

The stability is defined as “permanence of arrangement, power of resisting change of structure and immunity from destruction or essential change.” In military domain this entails “preserving a situation where no development upsets the prevailing balance in a way that it marks in an active conflict. In nuclear jargon, stability refers to concept of nuclear deterrence or the ability to deter an opponent from taking an offensive for fear of punishment.” Nuclear crisis stability means when nuclear adversaries do not have incentives to contemplate pre-emptive strike in a crisis. In simple words, it requires avoiding escalating the conventional crisis to the nuclear level in order to beat the adversary. It is worth noting that crisis stability is considered high when the incentives to strike first are very

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117 C. Christine Fair, “Pakistan’s Strategic Culture: Implications for How Pakistan Perceives Threats and Counters Them”, NBR Report No.61, (December 2016), P.3.
low for both the parties involved in the conflict. Dean Wilkening notes that the “nuclear crisis instability refers to the pressure both sides may feel during a crisis to launch first strike in hope of producing a more favorable outcome to what seems an inevitable nuclear war.”

There are entirely opposing views amongst nuclear theorists, experts and analysts on the efficacy and credibility of nuclear deterrence preventing a major conflict and forestalling crisis escalation between India and Pakistan. To begin with, there are arguments that advocate that nuclear weapons have made war a mutual suicide, highly costly and catastrophic – thus generating incentives for both the sates to avoid a war. They are called nuclear deterrence optimists. Then there are arguments that advocate that situation in South Asia is far from stable and could lead to inadvertent escalation. They are called nuclear deterrence pessimists. Moreover, both camps apply Cold War stability-instability paradox theory to explain nuclear template in second nuclear age in general and crises in particular. The main assumption of this theory states that probability of direct war between two nuclear weapons states greatly decreases under the fear of mutual assured destruction. However, the probability of crises, minor and indirect conflict increases greatly. Thus, both nuclear adversaries neither start a full-fledge war nor escalate minor conflicts into major conflicts. Glen Snyder gave a comprehensive definition of stability-instability paradox:

“The greater the stability of strategic balance of terror, the lower the stability of the overall balance at its lower levels of violence. The reasoning is that if neither side has a full first strike capability, and both know it, they will be less inhibited about initiating conventional war, and about the limited use of nuclear weapons, than if the strategic balance were unstable. Thus firm stability in the limited use of nuclear balance tends to destabilize the conventional balance and also to activate the lesser nuclear links between the latter and the former.”

The nuclear deterrence optimists take different pre-1998 and post-1998 crises between Pakistan and India to plausibly prove their position. Naturally, this camp mainly comprised over Pakistani and Indian strategic experts. Brasstaks, first India-Pakistan military crisis

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in 1986-87 strengthened Pakistan’s thinking that the nuclear deterrence makes war unlikely between two nuclear adversaries. India mobilized a quarter of a million troops along Sindh border during an extensive military exercise code named ‘Brasstaks’. Views differ sharply about the goal of the exercise, some cataloguing it as an attempt to put pressure on Pakistan to stop help to Sikh infiltrators in Eastern Punjab, while others suggest that India had planned a full-scale war to ripping Pakistani territory. Pakistan prepared its forces resulting in a face to face deployment for the first time during any India-Pakistan crisis. Reports suggest that veiled nuclear threats came from Islamabad during the crisis. Dr. Abdul Qadeer Khan, while pointing to Pakistan’s nuclear capability in an interview with an Indian journalist stated that, “nobody can undo Pakistan. We are here to stay and let it be clear that we shall use the bomb if our existence is threatened.” 124 Interestingly, the statement was published by all leading newspapers through which Pakistan achieved the purpose of communicating the existence of the nuclear capability to India. It is argued that this communication of nuclear threat restricted India from initiating any misadventure.

‘Spring crisis 1990 over Kashmir’ started because Pakistan’s alleged support of insurgency in Indian held Kashmir. The blame game during those years hardened tension between the belligerent neighbors that escalated the hostility between the two belligerents. Subsequently, a crisis brewed as Pakistan conducted ‘Zarb-e-Momin’ major military exercises. India countered these exercises by its so-called defensive deployments. Both the states kept their respective forces on high alert during the crisis. Prior to this crisis, the Indians views on the regional nuclear balance were more restrained in the sense that only few Indian analysts publicly accepted the Pakistani proposition that nuclear weapons capabilities deter war between India and Pakistan. The Kashmir crisis caused a significant change in Indian nuclear thinking.125 The perception had become so persistent by 1990 that the President of Pakistan Ghulam Ishaq Khan told a journalist, that “in the event of war with India, Pakistan would use nuclear weapons at an early stage.” 126 A similar view was put forward more explicitly by Lieutenant General Asad Durrani that “our deterrence is already working…. Our aim is to prevent war, also a conventional one….The effectiveness of our deterrence lies in a known

perceived capability, and in the notion that we might have a desperate propensity to use it.”

So, based on above discussed discourse, the nuclear deterrence optimists argue that nuclear deterrent, though covert, abstained both the states from resorting to full fledge war during these crises.

Expanding further, nuclear deterrence optimists argue that overt nuclearization in South Asia has stabilized the nuclear equation between the two states. In May 1999, just one year after the nuclear tests, two months of tough fighting started when Pakistani soldiers along with so-called Jihadi militants crossed the Line of Control (LOC) and occupied a Kargil mountains. India responded this development furiously and counter attacked. Besides, it launched an aggressive diplomatic campaign to isolate Pakistan by convincing the international community that Pakistan intruded its territory. India was so successful diplomatically that Pakistani Premier had to visit US on 4 July 1999 to explain Pakistani position on the matter. The Premier was unambiguously told by the Clinton administration to withdraw Pakistani forces immediately or be ready for full scale war with India. Clinton pointed out to Nawaz Sharif that the Pakistan Army had mobilized its nuclear tipped missile fleet. Wary by this disclosure which could lead to a catastrophe, Nawaz Sharif decided to urgent retraction – brushing aside all previous so-called pretexts such as that Pakistan’s army had no control over the attackers. There are also reports which divulge that nuclear weapons were kept ready on the Indian side as well. The most credible of these reports claimed that India activated it’s all types of nuclear delivery vehicles and kept them at what is known as “readiness state” – meaning that some nuclear bombs would be ready to be mated with their delivery vehicles at short notice. Indeed, Kargil conflict left many dimensions and aspects of nuclear deterrence stability and instability to be deliberated. Though, it remained a limited war but the question arises whether it erupted because of the failure of nuclear deterrence or the nuclear deterrence restrained it from escalation into large scale war. Some analysts say that Pakistan launched the Kargil war because they feel security under nuclear umbrella. Officials on both sides invoked nuclear weapons either as warnings or threats, reminding the

127 Ibid.
130 M.V.Raman and Zia Mian, “The Nuclear Confrontation in South Asia”.
opponent that neither side could now disregard a new nuclear reality. So, the threat of nuclear exchange forced the both sides not to go for total war and we can say that the nuclear deterrence worked during that crisis.

The fourth crisis resulted in eye-ball-to-eye-ball military stand-off in 2001-2002 between both the nuclear states. The intense crisis erupted in the aftermath of terrorist attack on Indian parliament on December 13, 2001. The ten month long twofold mobilizations, during which the government of India demanded the end of acts of terrorism allegedly supported by Pakistan and the hand-over of leading militants. Both the states deployed huge military personnel along the international border. As in the 1999 crisis, both the states exchanged numerous nuclear threats that were to be employed in case of escalation. The nuclear equation remained at the forefront and nuclear deterrence optimists believe that in the end, the existence of stable nuclear deterrence forced the two sides to withdraw their forces. Likewise, the 2008 Mumbai crisis which was developed in the backdrop of terrorist attacks in Mumbai was too de-escalated peacefully. Though, it was smelled by many that India will go for surgical strikes but that did not happen. The Pathankot and Uri terrorist attacks on Indian military during 2016 incurred heavy losses to security personnel – three and seventeen causalities respectively. There were strong speculations that India might retaliate and launch punishing strikes on Pakistan. India, however, did not cross ‘Pakistani red-lines’. India claimed of successfully launching surgical strikes against alleged ‘launching pads’ of terrorists near Line of Control (LOC) at Pakistani side but such claims immediately rejected by Pakistani military.

From above discussions, we may construe few lessons from these bitter crises regarding state of nuclear deterrence stability in South Asia. Firstly, although crises erupted but because of the fear of nuclear war that could have resulted in mutual destruction, both the states did not

escalate the crises. In case of Kargil episode, the low intensity conflict remained under control. Secondly, the presence of nuclear weapons in South Asia has created a sense of responsibility and extreme caution in ruling elites at both sides of the border. It appears that they are very much aware of the catastrophic consequences of conflict escalation. Thirdly, it seems that both sides have conceded a lot of space for great powers, especially the US intervention to diffuse crises. Fourthly, escalation control during above mentioned crises speak volumes regarding difference between political rhetoric and practical steps. This suggests that both sides consider Cold War nuclear deterrence model very seriously and learn lessons from it.

Notwithstanding, above discussed narrative is one side of the picture. There is another side of the picture which is expounded by nuclear deterrence pessimists. They argue that nuclear deterrence between India and Pakistan is inherently fragile, instable and prone to frequent crises. This line of the argument is often presented by many Western strategic experts and few nuclear analysts from India and Pakistan. This camp proclaims that though the logic of nuclear deterrence between India and Pakistan is the same as was in Cold War, however, the dynamics of nuclear deterrence are entirely different which result in a perilous stability/instability paradox. Evidently, even after the overt nuclearization of South Asia, nuclear deterrence has failed to stop crises entirely from erupting. Kargil conflict has left many assumptions of nuclear deterrent optimists in doldrums. Many nuclear experts realize that nuclear deterrence may fail in result of a large scale conventional war which may trigger a nuclear exchange. Moreover, it is reportedly said that Kargil conflict did not escalate because of US intervention. This means that nuclear deterrence was less of the cause to stop escalation than the US. Sumit Ganguly argues that Kargil conflict buttresses the continuation of stability/instability paradox in South Asia. He underscores that nuclear weapons “create incentives for conventional conflicts in peripheral areas as long as either side does not breach certain shared thresholds.”

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Similarly, Jeffrey Knopf recounts that “fare-ups in South Asia since the Indian and Pakistani nuclear tests of 1998 indicate the continued relevance of Glenn Snyder’s stability/instability paradox.” A close observer of South Asia, Neil Joeck, maintains that:

“India and Pakistan’s nuclear capabilities have not created strategic stability [and] do not reduce or eliminate factors that contributed to past conflicts…Far from creating stability, these basic nuclear capabilities have led to an incomplete sense of where security lies. Nuclear weapons may make decision-makers in New Delhi and Islamabad more cautious, but sources of conflict immune to the nuclear threat remain. Limited nuclear capabilities increase the potential costs of conflict, but do little to reduce the risk of it breaking out.”

The bottom line of the arguments is that South Asian nuclear enclave is a classic example of stability/instability paradox. Why does this paradox exist and very often result in violent crises between the two nuclear rivals? The subsequent discussion will reveal that there are a number of variables/factors that need to be explained to answer this important question.

**Political Challenges**

Though less debated in nuclear equation between India and Pakistan, perennial political challenges present a seemingly difficult task to deal with. Many political and religious parties in both the states play an active, often irrational and hostile, role against each other’s country. Lack of trust is one of the main factors that has influenced the bilateral relationship and is responsible for recurrence of tensions. Both are poles apart when it comes to resolve Kashmir dispute. Pakistan believes that India has been exploiting the issue of terrorism especially in the post 9/11 era. It has been trying to equate genuine freedom struggle by Kashmiris with terrorism. To isolate Pakistan, India deliberately raises the issue of terrorism even at multilateral economic forums which has created many political, economic and diplomatic problems for Pakistan. Since long, it has been touted that people to people contacts between the two will help in improving bilateral political relationship. People to people ties would mount pressure on their respective government leaders to improve bilateral relationship. Unfortunately, cultural exchanges have almost failed to achieve any tangible results. Perhaps it is because of the presence of so-called ‘spoilers’ at both societal level and in power corridors at both sides.

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In the increasingly globalized world, media (print, electronic, social) can play a very positive role in shaping public opinion. Indian media has its inroads into Pakistani public, likewise Pakistani media has huge reception in India. If this media from both sides start sensitizing common people regarding bilateral issues in a way that it convinces them that bilateral amiable relationship will change their destiny. But, to sheer disappointment to the proponents of peace in the region, the media from both sides spews venom against each other’s state, institutions and people.

Strategic Challenges

The South Asian region has been characterized by several strategic challenges emanating from “triangular” military competition – China’s military capabilities effect India and India’s military capabilities effect Pakistan. The continuous acrimony between India and Pakistan has caused a virtual nuclear arms race in the region. There are multiple technological and doctrinal developments by both the states that need a very careful analysis. Firstly, Indian development of Ballistic Missile Defense System (BMD) is believed to be inherently destabilizing for nuclear deterrence stability between India and Pakistan as it is contributing to accelerate nuclear arms race in the region. While discussing the origins and strategic implications of India’s Ballistic Missile Defense System (BMD) one may argue that the US abrogation of the Cold War Anti-Ballistic Missile Treaty (ABM) in June 2002 and subsequent plans to develop Ballistic Missile Defense System (BMD) have had profound implications at international level. Not only India endorsed the US withdrawal from the treaty, but it also signaled its intention to eventually build or acquire its own Ballistic Missile Defense System (BMD) system. India expressed interest in several foreign systems, including the US patriot, the Israeli arrow, and the Russian S-400.

It would be intriguing to guess how, where and why India might deploy this defense system and what specific threat perception would this based on? Though, India has not explained overtly on the purpose or utility of its missile defense system, but there are few reasons that hypothetically explain Indian impetus in this regard. The first conceivable purpose India’s Ballistic Missile Defense System (BMD) may serve is to protect against China’s medium-

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range ballistic missiles which are currently deployed on the Tibet Plateau.\textsuperscript{141} Then, the second potential objective, which has been widely discussed in the public discourse, is that Ballistic Missile Defense System (BMD) is a feasible defense that would practically decrease Indian vulnerabilities against Pakistan’s ballistic missiles capabilities.\textsuperscript{142} The third dimension appears to be Indian perception that this system might defend against a single or highly limited launch by a “rogue actor”. It is pertinent to mention the fourth explanation – which has recently been surfaced – that Indian Ballistic Missile Defense System (BMD) acts as a mobile defense against Pakistan’s Nasr tactical nuclear weapons.\textsuperscript{143} This fourth application of this system not only alters how India defines ballistic missile defense, but also substantially multiplies its deployment possibilities. To this last end, India and Israel have sporadically carried out technical meetings about acquiring the Iron Dome system since 2012,\textsuperscript{144} but it is still vague if India will actually acquire the system. Interest seems to have shifted to the somewhat longer range cousin of the Iron Dome – the David’s Sling system – which can intercept longer range missiles.\textsuperscript{145}

On the other hand, Pakistan views Indian Ballistic Missile Defense System (BMD) as a highly destabilizing force in the region. Pakistan’s strategic planners argue that they do not have to follow the Indian path, as there are other cost-effective options are available to neutralize and counter this system. These include, but are not limited to, the development of cruise missiles and multiple independently targetable re-entry vehicles (MIRVs).\textsuperscript{146} China has a demonstrated capability of multiple independently targetable re-entry vehicles (MIRVs),\textsuperscript{147} which would greatly complicate interception of missiles by India.\textsuperscript{148} While Pakistan does not have an operational multiple independently targetable re-entry vehicle (MIRVs), but it has conducted a first flight test of a missile named as Ababeel. According to January 24, 2017

\begin{itemize}
\item \textsuperscript{142} Raj Chengappa, “The New Guardian”, \textit{India Today}, (December 11, 2006).
\item \textsuperscript{143} As can be seen in PK Chakravorty, “Countering Artillery Shells, Rockets and Missiles” \textit{Indian Defence Review} (08 April, 2013) – a whole gamut of defensive options from close in weapons systems (CIWS) to defense against TNWs are clubbed into one.
\item \textsuperscript{144} Indrani Bagchi and Josy Joseph, “India eyes Israel’s Iron Dome to counter Pak, puppets”, \textit{Times of India}, (Nov 23, 2012). Also see Haviv Rettig Gur, “After initial balk, India reconsidering buying Iron Dome” \textit{Times of Israel}, (July 11, 2013).
\item \textsuperscript{145} Sujan Dutta, “Israel’s Stunner emerges on India’s radar”, \textit{The Telegraph}, (February 7, 2013).
\item \textsuperscript{146} Based on Author’s discussions with a senior Pakistani strategic expert.
\item \textsuperscript{147} Robert Johnson, “China’s New MIRV Ballistic Missile Is a Big Deal”, \textit{Business Insider}, (December 11, 2012).
\item \textsuperscript{148} Arjun Subramanian P., “DF-41: China’s answer to the US BMD efforts”, \textit{IDSA commentary}, (November, 12, 2012).
\end{itemize}
Inter Services Public Relations (ISPR) press release “the missile is capable of delivering multiple warheads, using Multiple Independent Re-entry Vehicle (MIRV) technology.” At the same time, Pakistan has a variety of ballistic missiles and cruise missiles capable of following different trajectories which could create many problems for Indian Ballistic Missile Defense System (BMD). However, a functional capability of this system could give India a false sense of security, and encourage the political leadership to take risks and launch conventional strikes against Pakistan. But, no one knows that those conventional strikes or surgical strikes would not escalate to a full fledge war that may trigger a ‘nuclear Armageddon’ in South Asia.

Secondly, Indian Cold Start doctrine or Proactive Operations strategy is widely understood a great challenge to nuclear deterrence stability in the region. The Cold Start strategy “aims to rapidly launch shallow thrusts inside Pakistani territory to capture and use it for coercing Pakistan”. Indian war planners consider this strategy as a viable response to Pakistan’s alleged proxy war strategy that aims at bleeding India. Walter C. Ladwig argues that “the goal of this limited war doctrine is to establish the capacity to launch a retaliatory conventional strike against Pakistan that would inflict significant harm on the Pakistan Army before the international community could intercede, and at the same time, pursue narrow enough aims to deny Islamabad a justification to escalate the clash to the nuclear level.” Though, at official level India has been denying the existence of such a doctrine/strategy as former Indian Army Chief General V. K. Singh repudiated the presence of the Cold Start doctrine as one of pillars of India’s defense strategy by stating that Indian Army never articulated such a doctrine. But it is interesting to note that the official curtain has been removed with the statement of Indian Army Chief Gen Bipin Rawat. During a widely

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150 A point alluded to from the Indian side as well – see Pravin Sawhney, “India’s Ballistic Missile Defence capability is grossly exaggerated” DNA, (April 4, 2011).
154 “No Cold Start Doctrine, India Tells US,” Indian Express, (September 9, 2010).
circulating interview with *India Today* in January 2017, he acknowledged the presence of the army’s Cold Start doctrine.\(^{155}\)

Essentially, the discourse surrounding the Cold Start doctrine is uncertain to prove that India has the requisite military capability and political resolve to execute such a doctrine. Walter C. Ladwig and Vipin Narang postulate that:

“There is no public evidence that India remotely has the capability to adopt or execute such a doctrine. It is one thing to carry out a raid across the Line of Control with a handful of commandos. It is quite another to undertake a major cross-border incursion by armored formations that seeks to capture Pakistani territory.”\(^{156}\)

Pakistan’s official and unofficial circles consider Cold Start strategy as a critical threat to nuclear deterrence stability in South Asia and views this strategy as an aggressive and offensive. To counter this, Pakistan first tested the Nasr, a short-range, low-yield ballistic missile (tactical nuclear weapon) in 2011. According to the government, the Nasr blunts the Indian conventional advantage – specifically the Cold Start or proactive operations strategy.

In a statement on April 19, 2011 Inter Services Public Relations (ISPR) discloses that:

“NASR has been developed to add deterrence value to Pakistan’s Strategic Weapons Development programme at shorter ranges. NASR, with a range of 60 km, carries nuclear warheads of appropriate yield with high accuracy, shoot and scoot attributes. This quick response system addresses the need to deter evolving threats.”\(^{157}\)

If we try to establish the rationale behind NASR, perhaps four beliefs seem to underlie the Pakistani academic and government discourse concerning tactical nuclear weapons usage. One belief is that their mere presence serves as a deterrent and counters India’s conventional superiority. The second belief is that the mere possibility of their mating onto delivery systems compels one’s adversary to avoid targeting these delivery systems allowing them to be used in their potent conventional role. The third is that they force Indian attacking troop formations to disperse, thwarting India’s ability to gain a critical mass. The fourth belief is that should it be necessary; NASR can be deployed against vastly superior conventional forces. While it is accurate to suggest that Pakistan’s nuclear weapons have deterred Indian


\(^{156}\) Ibid.

punitive strikes – this deterrence may have more to do with its possession of strategic weapons than tactical. The future events will determine how far tactical nuclear weapons reinforced and multiplied Pakistan’s deterrent capabilities.

Thirdly, Indian interest and active moves towards developing sea-based deterrent capabilities have created ripples for strategic stability in South Asia. According to many reports, INS Arihant which is believed to be the first indigenously developed nuclear powered submarine is going through its final trial phase. The said nuclear powered submarine is claimed to be capable of launching both cruise and ballistic missiles. It was first tested in 2009. India is actively working on making this submarine capable to launch ballistic missiles while it is submerged in deep waters. If that is achieved, INS Arihant would surely become an asset for India’s second strike capabilities.\textsuperscript{158} To counter Indian sea-based deterrent moves, Pakistan also has carefully accelerated its efforts to ensure its nuclear survivability by establishing Naval Strategic Force Command (NSFC) in 2012. Various reports suggest that to deploy nuclear warheads at sea, Pakistan probably would rely upon surface vessels or diesel powered conventional submarines. In this regard, it has already tested sea variant of Babur cruise missile.\textsuperscript{159} According to Inter Services Public Relations (ISPR) press release on January 9, 2017:

“Pakistan conducted its first successful test fire of Submarine Launched Cruise Missile (SLCM) Babur-3 having a range of 450 kilometers, from an undisclosed location in the Indian Ocean. The missile was fired from an underwater, mobile platform and hit its target with precise accuracy. Babur-3 is a sea-based variant of Ground Launched Cruise Missile (GLCM) Babur-2, which was successfully tested earlier in December, last year.”\textsuperscript{160} The press release further stated that “Babur-3 SLCM in land attack mode, is capable of delivering various types of payloads and will provide Pakistan with a Credible Second Strike Capability, augmenting deterrence.”\textsuperscript{161}


\textsuperscript{159} Ibid.

\textsuperscript{160} “Press Release”, Inter Services Public Relations, no. PR10/2017-/ISPR, January 9, 2017.

\textsuperscript{161} Ibid.
These developments from both sides have raised an important question that what are likely implications of naval nuclearization for already precarious nuclear deterrence between the two states? Largely, even for the time being – discounts China and focuses on the India-Pakistan nuclear dyad, between the two, India is leading the nuclear arms competition to sea. Keeping in view the weird strategic idiosyncrasies of India and Pakistan, a nuclear arms race in any form (land, air, sea) is inherently puzzling and destabilizing for nuclear deterrence stability between the two states. Though, both the states are inching towards sea based deterents under the pretext to ensure a second strike capability – which is stabilizing in the classic sense and may well reduce the risk of a full scale war between the two. But it is hard to employ retrospective notions of US-USSR strategic balance to the South Asian nuclear configuration. It is in this context that naval nuclearization by India and Pakistan could pose several challenges to nuclear deterrence in the region.

- Naval nuclearization could constitute a daunting challenge to minimum deterrent strategies of both India and Pakistan. For instance, the current formulation of INS Arihant warrants it to carry sixteen nuclear tipped missiles. In coming years, India plans to deploy many more nuclear powered submarines, perhaps five to six. Obviously, to arm these forthcoming submarines, India would need numerous nuclear warheads. Presently, according to various assessments, Indian arsenal has around 90 to 110 nuclear warheads. In such a situation, it is axiomatic that India will be developing more nuclear warheads, thus calling into question the “minimum” aspect of its policy of credible minimum deterrence. Pakistan’s nuclear deterrence policy is already under strict criticism as it is widely believed “the country with the fastest growing nuclear arsenal in the world.”

- Then, perhaps it is very difficult to separate the nuclear warheads from their delivery systems at sea which could make the risk of miscalculation, misperception and inadvertent use of nuclear weapons more probable during crisis times between the two.

- Supposedly, if either navy first stations nuclear warheads at sea, perhaps on a conventional warship, it might be possible that the other side could end up

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inadvertently destroying nuclear forces in the process of targeting conventionally armed forces.\textsuperscript{163}

- Furthermore, sea based nuclear weapons’ safety and security would be tremendously challenging keeping in view pervasive militancy in the region. Undeniably, non-state actors seek to have nukes and they could incapacitate the security of sea based nuclear weapons especially in the case of Pakistan. For example, there have been some incidents of militants attacking Pakistani naval forces, the near successful attack on naval dockyard in Karachi with insider help.

- Furthermore, the very existence of nuclear weapons has provided the space for sub-conventional forces to operate freely under the perception that India and Pakistan will not wage a full scale war. Once assured second strike capabilities are fully achieved, both the states may find more space for limited and sub-conventional warfare under the nuclear overhang. Conversely, such a situation may get out of hand and may escalate to nuclear exchange in the region. The punch line of the argument is that without a rigorous effort to integrate sea based nuclear assets more effectively into both nations’ strategic thinking and into a bilateral dialogue, New Delhi and Islamabad may be unable to avoid escalation. Regrettably, South Asia lacks any effective crisis stability mechanism. It’s worth mentioning that there currently exist no confidence building or institutionalized conflict resolution mechanisms in the maritime realm.\textsuperscript{164}

**Nuclear Command and Control Systems**

Essentially, nuclear command and control system (NCCS) is supposed to ensure the safety and security of nuclear weapons. Through this system, nuclear weapons states aspire to curtail any possibility of accidental or unauthorized use of their nuclear arsenal. At the same time, it has technical mechanism and structures to ensure that nuclear warheads would only be used by those government officials who are duly authorize for this purpose.\textsuperscript{165} Shaun Gregory notes that the “robust command and control able to assure high level control of nuclear weapons reduce to acceptable levels the risk of accidental, unauthorized or irrational

\textsuperscript{163} Based on Author’s work, see Muhammad Sadiq, “Troublesome Trajectories for Minimalist Strategy”, *South Asian Voices*. Available at https://southasianvoices.org/troublesome-trajectories/.


use of nuclear weapons, and to assure the survivability of nuclear weapons to the degree necessary to underwrite deterrence.”\textsuperscript{166} Bruce Blair defines a command and control system as “an arrangement of facilities, personnel, procedures and means of information acquisition, processing and dissemination used by a commander in planning, directing, and controlling military operations.”\textsuperscript{167} Peter Fever points out that the “central challenge in developing a fail-safe C2 (command and control) system is an always/never dilemma, leaders want a high assurance that weapons will always work when directed and a similar assurance that they will never be used in the absence of authorized direction.”\textsuperscript{168}

Pakistan was the first to formally establish Nuclear Command Authority\textsuperscript{169} (NCA) in February 2000\textsuperscript{170} followed by India on January 2003 when National Command Authority was founded. Indian National Command Authority has two legs: one is Political Council with Prime Minister as Chair. The second is Executive Council with National Security Advisor as Chair and includes three chiefs of services, heads of intelligence agencies and sectaries of different ministries. The Political Council is responsible for making decisions and while the Executive Council ensures the input and implements the decisions made by the former Council. A single Strategic Force Command under Chairman Chiefs of Staff Committee serves to manage and administer all strategic forces.\textsuperscript{171} It is important to note that nuclear stability and command and control mechanisms have direct relationship. While robust nuclear oversight mechanisms increase nuclear deterrence stability, a volatile security environment poses formidable challenges to command and control system. Such a system should be in harmony with nuclear doctrine.

Many strategic thinkers note that nuclear command and control systems (NCCS) in South Asia are vulnerable to conventional attack. Khalid Banuri outlines during a conference on ‘Strategic Stability in South Asia’ that “Pakistan’s unique challenges, as it faces down a very

\textsuperscript{166} Shaun Gregory, “Rethinking Strategic Stability in South Asia”, SASSU Research Report No. 3 (September 2005), P. 18.
\textsuperscript{167} Bruce Blair, Strategic Command and Control, (Washington: The Brookings institution, 1985), P. 281.
\textsuperscript{168} Quoted in Zafar Iqbal Cheema, “Command and Control Infrastructure: Operational Asymmetries Dichotomies”.
\textsuperscript{169} Nuclear Command Authority (NCA) would be discussed in detail in subsequent chapters.
\textsuperscript{170} Naeem Salik, “Pakistan’s Nuclear Command and Control, Export Control & Policy on BWC”. Available at http://www.brad.ac.uk/acad/sassu/publications/NSalik.pdf
large scale Indian conventional threat.”\textsuperscript{172} However, he maintains that “Pakistan has created [a] fairly good [command and control system] as an interim measure to exercise effective command over its nuclear forces that will not fail during crisis/war.”\textsuperscript{173} Pakistan and Indian nuclear command and control systems (NCCS) are in evolutionary process to become tightly coupled overtime, especially in a time of crisis or war when they are at maximum alert. As pointed out by Paul Bracken:

“Although each side may well believe that it was taking necessary precautionary moves, the other side might see a precaution as a threat. This would in turn click the alert level upward another notch. There is a danger, therefore, that India and Pakistan’s command and control structures could become locked into an unstable, escalating process.”\textsuperscript{174}

Admittedly, during peacetimes there is no probability of command and control systems’ breakdown in South Asia as reports suggest that nuclear warheads are in recessed form which means they are not mated with associated delivery vehicles. Precisely this is the reason that both the states avoid any pre-delegation during peacetimes. However, in crisis times both the states are believed to mobilize their respective nuclear warheads with some sort of pre-delegation for the purpose of quick mating with delivery means besides ensuring survivability through deception, camouflage and concealment. Notably, Pakistan’s official stance is strict centralized command and control of nuclear weapons even during the crisis. Indeed, the mobility of nuclear assets from one location to another makes communication difficult. The dispersal, increased readiness of nukes and pre-delegation could cause inadvertent or accidental use of nuclear weapons.\textsuperscript{175} The chances of deliberate use of nukes are present because of extreme threat perception, fear of damage and misperceptions between both the opponents. “War time mounts pressure on nuclear command and control decision making body. If the decision making body is identical then the adversary may take decapitation strike and it might be possible that the local commander may perceive any field attack as a pre-emptive strike and launch the nuclear weapons. The difficulty of maintaining

\textsuperscript{172} Quoted in Peter R. Lavoy and Christopher Clary, “Strategic Stability in South Asia”, Conference summary June-29-July 1, 2004.
\textsuperscript{173} Ibid.
\textsuperscript{174} Gaurav Rajen, “Nuclear Confidence Measures in South Asia: Managing Nuclear Operations and Avoiding Inadvertent Nuclear War”. Available at \url{http://www.cmc.sandia.gov/links/cmc-papers/CBMs-southasia.pdf}
\textsuperscript{175} Feroz Hasan Khan, “Challenges to Nuclear Stability in South Asia” available at \url{http://www.cns.miis.edu/pubs/npr/vol10/101/101khan.pdf}
communication with the central command during war results in delegation of authority." All aforementioned factors contribute towards the prospects of accidental, inadvertent and intentional use of nuclear weapons.

Conclusion
The overt nuclearization of South Asia has raised the specter of nuclear war between India and Pakistan. The pre-1998 and post-1998 strategic developments have amply manifested that bilateral nuclear deterrence template is far from stable. Given the fact of decades-long mistrust, hostility and frequent military crises in the aftermath of overt nuclearization of India and Pakistan, fueled by long-standing Kashmir dispute, the nuclear pessimists readily find many challenges which endanger nuclear deterrence stability between the two states. Perhaps, such challenges rightly make South Asia a ‘nuclear flashpoint’. Precisely for this reason, many strategic experts use stability-instability paradox as a useful framework to understand India-Pakistan nuclear deterrence calculus. Though, this calculus currently is facing multiple political, strategic and nuclear command and control challenges, but it is the threat of non-state actors which could lead South Asia to a possible disaster. The proponents of doomsday scenarios argue that non-state actors want to get hold on a nuclear device or some radiological material for nuclear terrorism. More challenging is the role that non-state actors can play to drag India and Pakistan to a full-scale war that could lead to nuclear catastrophe in the region. So, it would be pertinent to critically analyse these threats posed by non-state actors in subsequent chapters of the dissertation.

176 Ibid.
CHAPTER-4

Non-State Actors and Nuclear Terrorism in South Asia: Challenges and Responses

Introduction
The threat of non-state actors to nuclear deterrence stability is a relatively new phenomenon at international political landscape. It has roots in separatist organizations, various terrorist outfits, transnational terrorist syndicates, and rebel groups. Though, no state owns them openly but a few cases they are supported by different states politically, militarily, financially and sometimes diplomatically to fulfill their vested interests. In the post 9/11 international security environment, the level and magnitude of this novel threat is certainly of a new proportion. The critical examination of South Asian strategic environment alarms about the increasing destabilizing role of non-state actors in India and Pakistan strategic affairs.

The concept of non-state actors is very complex and nuanced because international organizations, non-governmental organizations (NGOs) and many multi-national corporations (MNCs) are also labeled as non-state actors in international politics. Oxford online dictionary defines the term non-state actors as “an individual or organization that has significant political influence but is not allied to any particular country or state.”

So, the examples of non-governmental organizations (NGOs), multi-national corporations (MNCs) and international organizations are normally not carrying any threatening connotation especially with regards to security of states as they fall under international law one way or another. Therefore, this dissertation will not focus on the benign non-state actors. Rather it focuses on the violent non-state actors who are not recognized by any international or national laws and hence largely illegal organizations – though politically motivated and fighting against sovereign governments. These organizations or groups can engage in non-internal and purely internal conflicts, or be involved in an international conflict such as that which international terrorist organizations have been known to be involved in, in recent years.

177 Oxford online dictionary. Available at http://www.oxforddictionaries.com/definition/english/non-state-actor
The presence of non-state actors in South Asia is a harsh reality. In other words, we can say that there are numerous militant organizations who operate in different South Asian states. It is widely believed that these organizations have strong footprints in India, Pakistan and Afghanistan. Moreover, it is also argued by various scholars that many of these organizations enjoy patronage by the states, for which, these are used as proxies to promote the perceived national interests of those states. India and Pakistan are accused by many that they use these organizations as proxies to fulfill their military designs in the region. However, strategic scholars contend that most often such policies of using proxies have not been thoughtfully deliberated that resulted in multifaceted perils for whole of South Asia.

Non-state actors are not only a great security challenge for the South Asian region but also for international peace and security. The possibility of non-state actors acquiring and using weapons of mass destruction (WMDs) against different targets has been an attractive topic for strategic experts since the dawn of 21st century. In the South Asian context, these non-state actors mainly pose some very serious threats. It is often argued in the Western literature on strategic matters that there is possibility for militants having footprints in Pakistan and Afghanistan to get direct access to nuclear weapons. Many Western analysts opine that a Pakistani nuclear weapons could fall into the hands of militants because of several reasons ranging from major political instability to internal security chaos. However, as a matter of fact while internal security remains volatile in Pakistan, such concerns often wrapped in nefarious and hyperbolic propaganda.

It is in this context, this chapter examines the phenomenon of non-state actors with a special focus on India, Pakistan and Afghanistan. At the same time, it critically assesses the possibility of nuclear terrorism in South Asia by non-state actors. It also holistically analyses various international concerns about Pakistan’s nuclear weapons safety and security and latter’s responses to such concerns. At the end, it debates that the possibility of nuclear terrorism is a factor of nuclear deterrence instability between India and Pakistan.

Non-State Actors in South Asia

South Asia has been experiencing the genesis and spread of multiple terrorist/militant organizations for the last many decades. Over the years, these organizations have proved that they are atrocious in nature and can cause extreme violence to achieve their political objectives. Such violence has very profound ramifications at local, regional and international levels. Composition, structure and operation of these organizations show that many of them are local in nature – which operate within territorial limits of a state. However, many of them are transnational in nature. Moreover, such organizations can be distinguished from one another on the basis of their ideology, structure, function, and socio-political and economic objectives. It is important to note that in the post 9/11 period, there have been mushroom growth in the number of the terrorist/militant organizations in the South Asian region.

If we study the evolution of various militant groups in South Asia, it is amply evident that not only local and regional factors and actors played an important role in their genesis but international players also are equally blamed for their controversial and myopic policies that fueled this menace in the region. The so-called Afghan Jihad is considered the epicenter and fountainhead of militancy in the region. During 1980s, The US fought famous proxy war to defeat communism through several Jihadi organizations – many of them having their roots in Pakistan. It is believed that Pakistan actively supported those organizations. Surinder Kumar Sharma and Anshuman Behera argue that:

“The pre-Al Qaeda and pre-Taliban groups, like HuA, HuM, HM, HuJI, LeT and JeM, were created by state agencies in Pakistan for specific objectives, that is, to launch a protracted proxy war in Kashmir and also to help the Americans in their efforts to drive out the Soviet forces from Afghanistan through guerilla tactics. These groups largely depended on state patronage and funds generously provided by the US and other Western nations, and also West Asian countries like Saudi Arabia.”

Later on, it proved that Pakistan’s policy towards Afghan Jihad radicalized its own society. However, with the demise of former Soviet Union, most of these organizations launched their militant operations/activities in Kashmir, which is a main bone of contention between India and Pakistan.

In case of India, there has been a combination of factors responsible for the rise of various militant groups who are actively involved in insurgency in different regions within the country. “The left-wing extremism fueled by the Communist Party of India –Maoist (Maoists in short) has been regarded by the Indian government as the single largest threat to the internal security of India”.\textsuperscript{180} In the north eastern theatre of India, there are several militant/insurgent groups that mainly include National Socialist Council of Nagalim-Isak-Muivah (NSCN-IM), United Liberation Front of Asom (ULFA), National Democratic Front of Bodoland (NDFB) and People’s Liberation Army (PLA) of Manipur which have taken arms against the state. The Maoists claimed to carry out armed activities in the name of fighting for the interests of the downtrodden against all sorts of exploitation, deprivation and domination.\textsuperscript{181}

Likewise, there are few militant groups also present in Bangladesh and Nepal. But, for the purpose of this study the main focus is on non-state actors who are transnational in nature and primarily operate in Pakistan, Afghanistan and India. Moreover, they directly or indirectly impact on nuclear deterrence stability in the region and are taken highly relevant for nuclear issues. In this context, it would be highly useful to outline matrix of salient non-state actor organizations with their ideology, perceived or real strengths and area of operations.

\textsuperscript{180} Ibid. P. 7.
\textsuperscript{181} Ibid.
Table 4: Matrix of Relevant Non-State Actor Organizations

<table>
<thead>
<tr>
<th>Militant group</th>
<th>Description</th>
<th>Ideology</th>
<th>Strengths</th>
<th>Area of Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al-Qaeda</td>
<td>Established by Usama bin Ladin in 1986 with Arabs who fought in Afghanistan against the Soviet Union. - Helped finance, recruit, transport, and train Sunni Islamic extremists for the Afghan resistance. - Goal is to reunite Muslims to fight the United States as a means of defeating Israel, overthrowing regimes it deems “non-Islamic,” and expelling Westerners and non-Muslims from Muslim countries. Its eventual goal would be establishment of a Pan-Islamic caliphate throughout the world.</td>
<td>Pan-Islamic caliphate</td>
<td>- Organizational strength is difficult to determine in the aftermath of extensive counterterrorism efforts since 9/11. - The arrests and killing of mid-level and senior al-Qaeda operatives including its chief OBL have disrupted some communication, financial, and facilitation nodes and disrupted some terrorist plots. Al-Qaeda also serves as a focal point of inspiration or initiation for a worldwide network that is comprised of many Sunni Islamic extremist groups.</td>
<td>Middle East, South Asia, Southeast Asia, Africa, and Europe. - Worldwide networks are augmented by ties to local Sunni extremists.</td>
</tr>
<tr>
<td>Tehrik-e-Taliban Pakistan (TTP)</td>
<td>Formally launched in 2007, the TTP is effectively Al Qaeda’s local franchise in Pakistan. - TTP regards Pakistan as a “Dua-ul-Rahul wal Hart” (abode of disbelief and war) and considers its rulers apostates. - The TTP is also increasingly looking at global operations, most recently with its TTP leaders forcing splinter group TTP Jammatul Ahrar; the group has openly pledged their allegiance to the Islamic State of Iraq and Syria (ISIS). Pakistan into an “Islamic state”</td>
<td>Enforcing Sharia</td>
<td>- Pakistan, Afghanistan, FATA. - TTP maintains the strongest footprint with operatives all over the Pakistan and some areas in Afghanistan.</td>
<td></td>
</tr>
<tr>
<td>Lashkar-e-Tehra (LT)</td>
<td>Haif Mohammad Saied and his associates established in 1986. - One of the three largest and best-trained groups fighting in Kashmir against India. - Elements of LT and Jaish-e-Mohammed combined with other groups to mount attacks as “The Seve Kashmir Movement.” Anti-India, Liberation of Kashmir</td>
<td>Anti-India, Liberation of Kashmir</td>
<td>- The LT has several thousand members in Azad Kashmir, Pakistan, in the northern Jammu and Kashmir and Doda regions, and in the Kashmir valley. - The group uses assault rifles, light and heavy machine guns, mortars, explosives, and rocket-propelled grenades. - Have very strong passive and active support from mainland Pakistan.</td>
<td>- Based in Mirik (near Lahore) and Muzaffarnagar.</td>
</tr>
<tr>
<td>Jaish-e-Mohammed (JaM)</td>
<td>An Islamic extremist group based in Pakistan that was created by Masood Azhar, formerly among the senior leadership of Harakat al-Ansar, upon his release from prison in India in early 2000. - The group’s aim is to unite Kashmir with Pakistan, and it has openly declared war against the United States. Anti-India, Liberation of Kashmir</td>
<td>Anti-India, Liberation of Kashmir</td>
<td>- Jaish-e-Mohammed continues to operate openly in parts of Pakistan despite President Musharraf's 2002 ban on its activities. - The group is well-funded, and is said to have tens of thousands of followers who support attacks against Indian targets, the Pakistani Government, and secular minorities.</td>
<td>Pakistan and Kashmir</td>
</tr>
</tbody>
</table>


Nuclear Terrorism

“One of the greatest threats to global security - terrorists getting their hands on a weapon of mass destruction.”

(Former US President Barack Obama)


alleged statement about “acquiring WMDs for the defense of Muslims”184 further aggravated such concerns. The nuclear literature, though hypothetically, shows that non-state actors can get access to weapons of mass destruction (WMDs) to fulfill their heinous objective through following ways:

- “The theft and detonation of intact nuclear weapon
- The theft or purchase of fissile material leading to the fabrication and detonation of a crude nuclear weapon – an improvised nuclear device (IND)
- Attack against and sabotage nuclear facilities, in particular nuclear power plants, causing the release of large amounts of radioactivity
- The unauthorized acquisition of radioactive materials contributing to the fabrication and detonation of a radiological dispersion device (RDD) – a dirty bomb – or radiation emission device (RED).”185

However, stealing of nuclear weapon is too difficult a work to do by any terrorist organization. Firstly, the exact location of nuclear weapons is top guarded secret in any nuclear weapon state. Secondly, usually nuclear weapons are not in intact and assembled form as they are divided in different parts and each part may be located at different place in case of India and Pakistan. Thirdly, if a terrorist group get hold of an intact nuclear device, how it is possible to transfer from one place to another. Fourthly, from where a terrorist group will get a delivery mean. Fifthly, if a code has fixed on a device how it is possible for terrorists to find code or password. Finally, even if all the above steps are completed by the terrorists, the most difficult step is transportation to their intended target which seems next to impossible keeping in view multiple security layers by the nuclear weapons states.186 Naeem Salik argues that the theft or purchase of fissile materials is a very hard job. No country is expected to provide fissile materials to terrorists as states are much aware about their international obligations in the increasingly interconnected world. Furthermore, for weapon purpose the requirement of highly enriched uranium is about 50 to 60 kg and no country can provide such huge amount of these sensitive materials to terrorists.187 He further argues that it

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is not possible for terrorists to attack on nuclear facilities because of strict security system. Nuclear weapons are considered “crown jewels” of any country and they know their security. And terrorists are not technical experts to technically destroy nuclear arsenals.\footnote{Rizwan Zeb, “Pakistan Nuclear Weapons: How Safe Enough? Transparency Versus Opacity”, Defense and Security Analysis, Vol. 30, No. 3, (July 2014), PP. 230-244.}

Certainly, highly sensitive materials and a sophisticated technology is required to build a nuclear bomb that demands colossal financial resources. In order to manufacture a crude nuclear weapon, a terrorist organization needs to possess specialized expertise in areas such as high explosives, propellants, electronics, nuclear physics, chemistry and engineering. Knowledge of the physical and chemical properties of plutonium or highly enriched uranium (HEU) is essential. The terrorist group also must obtain detailed design drawings of weapon components and of the final assembled device.\footnote{Kevin O’Neill, “The Nuclear Terrorist Threat”, Institute for Science and International Security, (August 1997), P.2. Available at http://www.isis-online.org/publications/terrorism/threat.pdf} Depending on the quantity and form of material that they initially acquire, they also need to convert fissile materials from one form to another, requiring expertise in chemistry and access to necessary chemicals and equipment.\footnote{Ibid.} This proves that making a bomb is too difficult process in terms of technology, materials, resources and experts and ostensibly it is beyond the reach of non-state actors.

Generally, it is argued that it is necessary to understand the myth and reality of this terrible problem. Technical aspects of nuclear weapons technology show that there are two types of nuclear weapons. One is a “gun-type” weapon, a mass of highly uranium enriched (HEU) is shot down a tube into another highly uranium enriched (HEU) mass, creating a supercritical mass and a nuclear explosion. The Hiroshima bomb used this approach; its designers had such high confidence in it that they did not test this type of weapon prior to using it. The second type, an implosion weapon, typically uses weapons grade plutonium. A shell of weapons grade plutonium is surrounded by chemical explosives ordered to produce a symmetrical inward moving (implosion) shock wave that compresses the plutonium enough to be supercritical. The Nagasaki bomb was of this type. Notably, it is much more multifaceted in design and manufacture as compared to a gun assembly weapon. An implosion device was tested in New Mexico prior to use on Nagasaki. A National Academy of Sciences report asserts that the “crude HEU weapons could be fabricated without state
assistance.” Some experts believe that terrorists could create an implosion weapon; others disagree.191

As mentioned above that the non-state actors might acquire nuclear weapons or fissile materials in various ways. The source of greatest concern is former Soviet Union Republics.192 It has huge stockpiles of fissile materials. A National Nuclear Security Administration (NNSA) document explicitly indicates that substantial work remains to be done for the safe and secure disposition of this material, and a National Academy of Sciences report states that the risk of diversion of special nuclear material (SNM, or fissile material) from Russia is “high” because “large inventories of special nuclear material (SNM) are stored at many sites that apparently lack inventory controls, and indigenous threats have increased.”193

Moreover, few other nations are also believed to be seeking nuclear weapons capabilities. President Bush, in his 2005 State of the Union Address, said, “today, Iran remains the world’s primary state sponsor of terror, pursuing nuclear weapons ... it must give up its uranium enrichment program and any plutonium reprocessing ...” According to a press report, Mohamed ElBaradei, Director General of the International Atomic Energy Agency (IAEA), says that “he is now certain that the nuclear material his agency once monitored there [in North Korea] has been converted into fuel for four to six nuclear bombs.” And in a statement of February 2005, North Korea declared that it had nuclear weapons.194 Subsequently, North Korea conducted several tests of nuclear weapons including hydrogen bomb. So, non-state actors might conspire with these countries to get hold on weapons of mass destruction (WMDs). International community already consider these countries as source of threat to international peace and security. However, as explained earlier its very unlikely that these non-state actors could acquire a workable nuclear device. It does not mean

191 Robert Gallucci, Dean of School of Foreign Service, Georgetown University Washington DC wrote, “I do not believe that al-Qaida could build a nuclear weapon with a plutonium core, that is a weapon with an implosion design.” Personal correspondence, for a detailed explanation of why it would be much harder for terrorists to build an implosion weapon than a gun-type weapon, see Charles Ferguson and William Potter, The Four Faces of Nuclear Terrorism, PP. 135-138.
that there is any room for complacency, concerted efforts for controlling this danger must continue to thwart any possibility of nuclear terrorism.¹⁹⁵

**Non-State Actors and Threat of Nuclear Terrorism in South Asia**

“*Nuclear terrorism is the most serious danger the world is facing.*”

*Mohamed ElBaradei, (February 1, 2009)*

South Asia is a region of immense concern for international community not for its poverty, backwardness or for that matter alleged human rights violations in the Indian Occupied Kashmir but for enduring rivalry between nuclear armed India and Pakistan. One of the major worry is the presence of transnational terrorist organizations and their potential to cause nuclear terrorism in the region – thereby undermining nuclear deterrence stability in South Asia. Many Western nuclear experts, analysts and officials have extensively written and spoken on this subject. Interestingly, experts are split – many asserting that threat of nuclear terrorism is real and present as terrorists are likely to seize nuclear weapons in Pakistan. Yet, many others contend that the threat is very miniscule as there are remote chances for nuclear weapons falling into the hands of terrorists. The latter category of experts may be called optimists while the former is categorized as pessimists with regards to Pakistan’s nuclear safety and security and nuclear deterrence dynamics in South Asia.

While evaluating nuclear dangers in South Asia Mark Fitzpatrick argues that “there is no doubting the potential for nuclear terrorism in Pakistan. Given the large number of radicalized groups, their ruthlessness and brazenness in attacking military targets and the growing size of the nuclear weapons establishment, the potential intersection of these trends is clear”\(^{196}\). He further added that “Pakistan’s nuclear arsenal – the fastest growing in the world – raises concerns on many grounds. Although far from the scale of the Cold War, South Asia is experiencing a strategic arms race. And the more weapons there are, the more potential for theft, sabotage and nuclear terrorism.”\(^{197}\) At the same time, he admits that “the threat is typically hyped and the efforts that Pakistan has taken to reduce the risks too often overlooked.”\(^{198}\) Many Western nuclear experts believe that being the epicenter of global


\(^{197}\) Ibid.

\(^{198}\) Ibid.
Jihad, Pakistan is increasingly vulnerable for terrorists to get hold on it nuclear weapons. Joseph Cirincione goes at length to equate Pakistan’s nuclear safety and security with some ‘doomsday’ scenarios. He asserts that:

“On any given week, there are several contenders for which country people might feel poses a great danger to global security. Though many, like Iran or Mali, Russia or China, may pose serious problems, the confluence of several disturbing trends make Pakistan the most dangerous country on earth. Pakistan has an unstable government, a fragile economy, strong extremist influences in its military and intelligence agencies, and enough nuclear material for 200 bombs. And Al-Qaeda and half dozen similar groups operate inside the country. If terrorists ever detonate a nuclear device in America, they will likely have gotten the bomb or the material from Pakistan.”

A congressionally mandated US report in 2008 on preventing proliferation of weapons of mass destruction put it graphically that if “one were to map terrorism and weapons of mass destruction today, all roads would intersect in Pakistan.”

Undeniably, Al-Qaeda has been largely weakened in the post Osama Bin Laden killing in May 2011 Abbottabad operation by American Navy Seals. However, empirical evidence suggests that Al-Qaeda with its apocalyptic perspective has openly shown its intent and desire to have a nuclear device or weapons of mass destruction (WMDs). A nuclear terrorism fact sheet of Belfer Center mentions that “in 1998, Osama bin Laden issued a statement, ‘The Nuclear Bomb of Islam,’ declaring that it is the duty of Muslims to prepare as much force as possible to terrorize the enemies of God.” In a video message, he reintegrated his resolve to change the international status quo and eliminate capitalist hegemony through the use of weapons of mass destruction (WMDs) – thereby installing Islamic Caliphate. According to open sources, Al-Qaeda made persistent efforts for nuclear devices in the run-up to the 9/11 attacks. Rolf Mowatt – Larssen notes that “based on the timing and nature of its WMD related activity in the 1990s, al Qaeda hoped to use such weapons in the United States during an intensified campaign following the 9/11 attacks. There is no indication that the

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fundamental objectives that lie behind its WMD intent have changed over time.” 203 Harvard Professor Matthew Bunn and others argue that:

“Al Qaeda’s nuclear ambitions did not end with the loss of their Afghan sanctuary. Beginning in late 2002, U.S. intelligence detected efforts by al Qaeda’s cell in Saudi Arabia to purchase three objects it believed were Russian nuclear bombs. The cell reportedly received instructions from al Qaeda leaders under loose house arrest in Iran—including Sayf al-Adl, recently released from Iran, and Abdel Aziz al-Masri, al Qaeda’s nuclear chief, whose whereabouts today are unknown—to go ahead and make the purchase, if the Pakistani expert with his equipment confirmed the items were authentic. As far as the authors are aware, U.S. intelligence has never managed to identify the Pakistani expert in whom al Qaeda had such confidence; he remains at large. At the same time, al Qaeda commissioned a fatwa, or religious ruling, from a radical Saudi cleric—Nasir bin Hamad al-Fahd, the “constant companion” of Abu Bakr, the cell leader negotiating to buy the weapons—authorizing the use of nuclear weapons against American civilians. Saudi Arabia moved to disrupt the Saudi cell, arresting both the cell leader and al-Fahd. Since then, core al Qaeda has suffered serious blows, and the IS has risen to the forefront of the violent jihadist movement. What impact this will have on the evolving threat of nuclear terrorism remains unknown.” 204

Table 5: State versus Non-State Actors’ Perspective on Nuclear Weapons

<table>
<thead>
<tr>
<th>State Perspective</th>
<th>Non-State Actor Perspective</th>
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<tbody>
<tr>
<td>State security and survival is paramount. One of the main prerogatives of state actors is to ensure the maintenance and preservation of their territorial integrity. Nuclear weapons are weapons of deterrence, not weapons of war. Nuclear weapons are to be acquired when the very survival of the nation-state is at stake. Nuclearisation brings an end to map-making exercises and freezes the territorial status quo. Nuclear weapons may be of little use in waging political-military campaigns from without. The resolution of the Kashmir dispute will lead to peace, prosperity and stability in South Asia. Pakistan’s nuclear weapons are India’s specific reply and are designed to act as a force equalizer to overcome conventional weakness vis-à-vis India. Nuclear weapons are the “crown jewels” and symbols of a strong state. A nuclear war must never be fought. The taboo on the non-use of nuclear weapons must not be broken. Islam’s spread and survival are of paramount importance. The state security or national survival is irrelevant because the very idea of separate nation states is an anathema to non-state actors. The nation-state is not indispensable. The destruction of the modern state system may well be a pre-requisite to the creation of Dar-ul-Islam. It is the religious duty of all Muslims to acquire nuclear, biological and chemical weapons to terminate the enemies of God”—al-Qaeda. All weapons, including WMD, are usable weapons to achieve victory over non-believers and enemies of the faith. Nuclearization paves the way for wage war cheaply, low-intensity conflict without fear of retaliation and can help in settling territorial disputes on favorable terms via coercion, subversion and blackmail. The Kashmir dispute is not about territory; it’s about religion and history and its settlement from India will be the cause of Islamic affairs in the region and eventually lead to the unravelling of the Indian state and pave the way for the creation of a Pure Islamic Caliphate. Pakistan’s “Islamic front” should be used to defend the broader interest of the entire Muslim world. Non-state actors such as al-Qaeda are not concerned with the status symbols of nuclear weapons; they need break, falling and rising states to thrive and accomplish their objectives. There is absolutely nothing to fear from a nuclear war.</td>
<td></td>
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</tbody>
</table>

Source: The table has been drawn from an article, for details; see: Mohan Malik, “The Stability of Nuclear Deterrence in South Asia: The Clash between State and Anti-State Actors”. Available at http://apcss.org/Publications/Edited%20Volumes/ReligiousRadicalism/PagesfromReligiousRadicalismandSecurityinSouthAsia/ch13.pdf

203 Ibid.
204 Matthew Bunn and others, Preventing Nuclear Terrorism: Continuous Improvement or Dangerous Decline? (Cambridge: Belfer Center for Science and International Affairs, Harvard Kennedy School, 2016), P.143.
Since 2007, Tehrik-e-Taliban Pakistan (TTP) with its numerous umbrella terrorist organizations has been posing some of the gravest threats to Pakistan’s national security. Over the years, the group has successfully launched most brutal and dreadful attacks both on Pakistani civilians and tightly guarded military installations. It is true that Tehrik-e-Taliban Pakistan (TTP) is a great source of deep concern for international community in terms of Pakistan’s nuclear weapons safety and security. However, it is hard to establish factually that Tehrik-e-Taliban Pakistan (TTP) has ever unequivocally expressed their intention to attack on Pakistan’s nuclear weapons. According to anecdotal evidence “in June 2009, Saaed al-Masri, allegedly Al-Qaeda’s chief of finance, expressed hope that the Pakistani Taliban would gain control of Pakistan’s nuclear arsenal and use the weapons against the United States.”

According to a report published in *The Economic Times*: “the Taliban has said they have no plans to attack on Pakistan’s nuclear arsenal, asserting it is the only Muslim state possessing such weapons and the terror group aims to take over the country as well as its nukes.” Another news report claims to quote what Umar Khalid Khurasani, the head of the Mohmand Agency chapter of the Tehrik-e-Taliban Pakistan (TTP) says that:

“The Taliban want to seize the Pakistani nuclear weapons and other resources, including the army, to defend Islam. Another objective is to use Pakistan’s military might be including the nuclear bomb, army, and other resources, to guide other Muslim countries for the sake of Islam. Last but not the least, the Taliban will continue their fight even after taking over Pakistan, until global Caliphate is established.”

It is important to clarify that much of international community’s worry of “loose nukes” in Pakistan is based on several high profile attacks by terrorists on highly secure military bases in Pakistan. Christopher Clary opined:

“In 2007, two Pakistan Air Force (PAF) facilities associated with Pakistan’s nuclear weapons complex were targets of attacks. A suicide bomber attacked a bus carrying personnel to the Sargodha Air Force base on November 1, 2007, killing seven Pakistan Air Force (PAF) officers and three civilians. Sargodha is the home of two of Pakistan’s F-16 squadrons. Given that the F-16 aircraft may be capable of delivering a nuclear device, there has been considerable speculation that Sargodha may house nuclear weapons. On December 10, 2007,

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207 “Journalist-turned-militant Khurasani wants to seize nukes, topple govt.”, *The News*, (February 18, 2014)
a suicide attacker targeted a school bus carrying children of Pakistan Air Force (PAF) personnel outside of the Kamra Air Force base.”

In October 2009, Tehrik-e-Taliban Pakistan (TTP) terrorists attacked in a most brazen way on the General Headquarters (GHQ) of the Pakistan Army in Rawalpindi and in May 2011 naval aviation base at PNS Mehran near Karachi came under ferocious attack by terrorists. In August 2012, eight heavily armed personnel launched an attack on Pakistan Air Force’s (PAF) Minhas Airbase located in Kamra. All the eight militants were killed by security forces whereas one security man also died during the attack and the ensuing operation.

In an interview to the author, Tom Sauer maintains that “the political situation in Pakistan is unstable is true as far as I can judge. Whether non-state actors can have access to Pakistan’s nuclear weapons is difficult to say. The most important factor that determines the answer is whether these weapons are mated or not. If they are stored as weapons that can be immediately used, then the dangers increase. In that case, one can only hope that there are sufficient safety mechanisms installed (like PALs), which I doubt. As Pakistan is building smaller, tactical nuclear weapons, the danger exists that these weapons will be mated and therefore more easily used in the hands of non-state actors.”

Brig. Gurmeet Kanwal while expressing Indian concerns on nuclear terrorism in an interview to the author says that “India will be particularly vulnerable if hardliner Lashkar-e-Taiba (LeT) or Jaish-e-Muhammad (JeM) terrorists and their Al Qaeda and Taliban brothers ever lay their hands on Pakistan’s nuclear warheads. India is one of the nations that the Al Qaeda has named as an enemy. Being a contiguous land neighbor, it is also easier to target even if sophisticated delivery systems like ballistic missiles are not available.” Though, Gurmeet leaves a scathing criticism on Pakistan’s nuclear weapons safety and security but he also accepts that “the Pakistani military authorities are extremely concerned about such eventualities and have made elaborate arrangements to ensure that all their nuclear warheads are stored safely. At the same time, contingency plans must be debated, analyzed, made, approved, rehearsed and readied for execution to meet unforeseen eventualities. Maximum

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208 Christopher Clary, “Thinking about Pakistan’s Nuclear Security in Peacetime, Crisis and War”, *Institute for Defence Studies and Analyses*, New Delhi, (September 2010), P. 19.
210 Author’s email interview with Dr. Tom Sour, Associate Professor in International Politics Department of Politics, Antwerp University, (December 12, 2016).
211 Author’s email interview with Brig. Gurmeet Kanwal, Distinguished Fellow at the Institute for Defence Studies and Analyses (IDSA), New Delhi, (March 22, 2017).
cooperation must be extended by the nuclear weapons states (NWS) to Pakistan by way of technology, intelligence and training to help Pakistan to secure its own nuclear warheads. While the world waits with bated breath for the crisis in Pakistan to blow over, the government of Pakistan would do well to ensure that all possible measures are adopted to further enhance the safety and security of the country’s nuclear warheads and delivery means.”212

It’s worth mentioning that according to some Western nuclear experts, the location of some of nuclear weapons storage and other related facilities would be known to terrorists, sooner or later. In this regard, Shaun Gregory notes that the “Pakistani nuclear arsenal will significantly expand the construction of nuclear weapons infrastructure and the number of individuals with nuclear related roles, it is simply not possible that the location of all of Pakistan’s nuclear weapons can remain unknown to terrorists in perpetuity.”213 He further claims that:

“On August 28, 2009, the U.S. Federation of American Scientists published the first open source satellite imagery of a suspected Pakistani nuclear weapons storage facility near Masroor airbase outside Karachi. Within its perimeter walls, the satellite image shows three potential storage bunkers linked by looping roads. The fact that this image is available online, and that the unusual configuration of the base is clear, argues strongly that knowledge of the location of at least some nuclear weapons storage and other related facilities has reached terrorists in Pakistan.”214

Moreover, available literature divulges that the Pakistani nuclear weapons security could be compromised during their transportation from one place to another. It is argued that as the internal security has crumbled with the presence of violent non-state actors and their attacks on iconic civilian and military locations, Pakistani nuclear managers keep nuclear devices in a de-mated form for the purpose of security. Also, they are moved from once place to another for the purpose of security. Jeffrey Goldberg and Marc Ambinder’s assertions point in this direction in the following words:

“One method the SPD uses to ensure the safety of its nuclear weapons is to move them among the 15 or more facilities that handle them. Nuclear weapons must go to the shop for occasional maintenance, and so they must be moved to suitably equipped facilities, but

212 Ibid.
214 Ibid.
Pakistan is also said to move them about the country in an attempt to keep American and Indian intelligence agencies guessing about their locations.215

Also, it is speculated that nuclear weapons and related materials are sometimes transported by helicopter and by roads. For the purpose of subterfuge, sometimes nuclear materials are moved in civilian style vehicles with very less security to avoid the notice of enemies.216 “And according to a senior U.S. intelligence official, the Pakistanis have begun using this low security method to transfer not merely the “de-mated” component nuclear parts but “mated” nuclear weapons.”217 Notably, the Pakistani officials even in 2018 claimed that their weapons are not mated. Nevertheless, the threat of nuclear terrorism cannot be ruled out entirely.

Most exigently, nuclear safety and security pessimists maintain that as Pakistan’s nuclear weapons infrastructure grows rapidly, more and more people are exposed to nuclear materials, security codes and highly sensitive data. This raises the concern of possibility of insider help for terrorists to acquire sensitive nuclear materials one way or another.218 A report in the The TacStrat Daily Magazine dated February 9, 2017 emphasizes that:

“Meanwhile, the gradual radicalization of the Pakistani army over the past three decades poses a grave danger to Pakistan’s nuclear security in terms of insider threats. These insiders have time and again allied with various jihadi organizations to strike at the state at will. The gravest threat to Pakistan’s nuclear weapons is posed by this insider jihadi collaboration. The possibility of these two potentially dangerous elements coming together and acquiring a nuclear weapon is perhaps one of the most underappreciated threats to international peace and security in the region.”219

Facts prove that Pakistan has very miserable track records when it comes to tackle insider threat to its national security. For instance, nuclear proliferation of AQ Khan. Sultan Bashiruddin Mahmood, who had been in charge of Pakistan’s Khushab reactor, met with Al-

216 Ibid.
217 Ibid.
 Qaeda chief to discuss organization’s nuclear aspirations.\textsuperscript{220} Also, it is noteworthy that Pakistani government accepted that there was insider help in terms of enabling terrorists to attack on PNS Mehran Naval airbase in 2011.\textsuperscript{221} While echoing her take on possibility/probability of nuclear terrorism in the region during an interview Sadia Tasleem notes that: “The probability of non-state actors getting access to nuclear weapons in Pakistan or elsewhere cannot be ruled out. As far as Pakistan is concerned two issues are worth noting. First, Pakistan values its nuclear weapons more than everything else. This means nuclear weapons receive more attention than other aspects of national power. Safety and security of nuclear weapons remains a high priority for the military establishment as well as political leadership in Pakistan. On the other hand, most of the attacks on military sites in Pakistan have revealed the involvement of insiders. Pakistan has invested heavily in its Personnel Reliability Program (PRP). But the SOPs of the program largely remain outside the purview of the common public. It is therefore difficult to evaluate the strengths and weaknesses of the practices undertaken under Pakistan’s PRP. Consequently, the ‘insider threat’ remains a source of serious concern in case of Pakistan’s nuclear weapons related facilities.”\textsuperscript{222}

In an interview to the author, Matthew Bunn says that “it has long been my view that there is too much of Americans saying “this is going to happen” and Pakistanis saying “this can’t happen.” What we are talking about is low-probability but high consequence events. The United States spent trillions of dollars building and operating nuclear forces to deter a Soviet first strike, even though such an attack was always a very, very low probability – because the consequences would have been almost infinite. (One way to think about overall risk is as the product of probability times consequences.) I would argue that the probability of each of your scenarios is small, but not small enough that it can be dismissed, given the consequences involved. Pakistan has invested heavily in nuclear security systems, but there is no such thing as a security system that cannot be breached. It is reasonable to be concerned, given the well-organized, carefully planned attacks on major military sites such as Rawalpindi Army headquarters or Mehran Air Base, which took many hours to defeat, about the possibility of a similar attack (large numbers of well-armed, well-trained attackers, use of deception – such as military uniforms and forged IDs – insider information on the security arrangements) on a

\textsuperscript{221} “Naval base raid: Finally, report admits inside job in Mehran attack”, \textit{The Express Tribune}, (June 30, 2011).
\textsuperscript{222} Author’s interview with Ms. Sadia Tasleem, Lecturer Department of Defence and Strategic Studies, Quaid-i-Azam University Islamabad, Pakistan, (March 3, 2017).
nuclear weapon storage location. This is not to say there is a large probability such an attack would succeed, only that the probability is not zero, and is far enough from zero to be worthy of further review and steps to reduce it further. Nuclear security, like nuclear safety, is never “done,” but must always focus on continuous improvement.” During an interview with the author Maqsudul Hasan Nuri maintains that “The future is always unpredictable as many variables keep on waxing and waning in potency and intensity. Paradoxically, the only predictable thing about Pakistan-India relations is their great unpredictability, as in their complicated relations unforeseen variables can suddenly enter the picture thereby upsetting all calculations. Yet, as social scientists, we can at best hazard some educated guesses. After surveying the present regional and global scenario the trend line allows us to make some probable prognostications. Never has the danger of nuclear weapons slipping into the hands of some terrorist elements/group been greater, notwithstanding the mantra of mutually assured destruction, well-guarded and ably controlled nuclear weapons. Now, not even many Pakistanis but the outside world view Pakistan as an insecure, failing state that could pose danger to regional peace. If other state institutions are collapsing it is being increasingly questioned whether nuclear weapons can remain safe and immune from the influence and hold of militant elements.”

Though, alarmists are paid more heed than optimists or pragmatists with regards to Pakistan’s nuclear weapons safety and security. But, it appears that the main arguments of optimists or pragmatists are well grounded in empirical evidence. However, they believe that there should not be any complacency, Pakistan should continue to improve the standards and best practices to secure its nuclear assets. In this regard, a realistic assessment of the danger of nuclear terrorism shows that Pakistan has substantially strengthened its nuclear security in the past two decades which has reinforced its claim of “zero chance” of falling its nuclear weapons and nuclear materials into the hands of terrorists. In an interview Sitakanta Mishra

223 Author’s interview with Professor Dr. Matthew Bunn, Professor at the Harvard Kennedy School at Harvard University, (March 23, 2017).
224 Author’s interview with Dr. Maqsudul Hasan Nuri, Ex-President Islamabad Policy Research Institute (IPRI), Islamabad, (December 10, 2017).
225 Naeem Salik uses this category of analysts for those who allude hyperbolic characterization of nuclear terrorism in the post 9/11 era. The tragic events of 9/11 brought the issue of terrorism to the center stage of international security discourse. The fact that dangerous terrorist organizations such as al-Qaeda had reportedly expressed some interest in the acquisition of weapons of mass destruction added urgency to the threat. Alarmists have also alluded to the deep psychological impact of 9/11, stating that, “suddenly, the detonation of a crude nuclear device in a major American metropolitan area no longer seemed like some-thing out of a science fiction movie”. For more details, see: Naeem Salik, “Nuclear Terrorism: Assessing the Danger”, Strategic Analysis, Vol. 38, No. 2, (2014).
explains that “Generally nuclear weapons are provided ultimate security in all countries; it is expected that they are safe and secure in Pakistan as well. More importantly, nuclear weapons are priced possession of Pakistan Army which is a professional defense force. It would be difficult to assume that Pakistan Army will not be able to safeguard its nuclear assets in the wake of political turmoil. Unless deliberately transferred to wrong hands, Pakistani nuclear assets will continue to enjoy highest security and safe-keep. But the fear of misuse of nuclear weapons in Pakistan will continue to reverberate in the academic and political circles given the deteriorating security situation in South Asia and extended neighborhood.”\textsuperscript{226}

Mindful of the fact that international community has grave concerns on this issue, Pakistani authorities have taken a number of commendable initiatives both at intuitional as well as legislative level. It is true that Pakistan has been more proactive to formalize its nuclear command and control system. Pakistan established nuclear command and control system in February 2000 that is based on three components. The first being the National Command Authority (NCA) headed by the Prime Minister of Pakistan which acts as the apex decision-making body. This Authority is comprised over two elements; a politico-military constituent called Employment Control Committee containing top political and military decision-makers. The second being the Development Control Committee containing military-technical people including top military officials and the heads of scientific/strategic organizations. The first committee takes policy decisions; the second converts the decisions into developmental goals. The second component of Authority is permanent secretariat Strategic Plans Division (SPD) which formulates policy options for decision-making and oversees their implementation. The third component is Strategic Force Command (SFC) at the level of each service.\textsuperscript{227} By some estimates, the Strategic Force Command (SFC) has 25,000 troops available to guard Pakistani nuclear stocks and facilities.\textsuperscript{228} Strategic Plans Division (SPD) is most important organization in management and functioning of Pakistan’s nuclear arsenal.

The Strategic Plans Division (SPD) has four main directorates:

“The Operations and Planning Directorate: carries out the operational planning, the C4I2SR (Computerized Command, Control, Communications, Information, Intelligence and

\textsuperscript{226} Author’s interview with Professor Dr. Sitakanta Mishra, School of Liberal Studies (SLS), Pandit Dindayal Petroleum University (PDPU) Gandhinagar, Gujarat, India, (June 13, 2014).
\textsuperscript{228} Matthew Bunn and others, Preventing Nuclear Terrorism: Continuous Improvement or Dangerous Decline? P. 47.
Surveillance Directorate) is responsible for developing and maintaining strategic command and communication links, the Strategic Weapons Development Directorate carries out liaison with the strategic organizations, scrutinizes their budgetary demands and carries out audits of funds and the Arms Control and Disarmament Affairs Directorate provides policy recommendations on all Arms Control and Disarmament issues and participates in relevant bilateral and multilateral nonproliferation discussions.  

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Figure 7: Pakistan’s National Command Authority (NCA)

Undoubtedly, Pakistani nuclear managers take pride on measures, which they proclaim to be robust and impregnable, to safeguard their ‘crown jewels’ from any unauthorized, inadvertent or accidental use and from the hands of terrorists. These measures include “practices, procedures and technologies which are believed to be based on copying from US, and comprise: Physical security, Personnel reliability programs, Technical and procedural

safeguards and Deception and secrecy." With regards to physical security of nuclear weapons facilities, Pakistan has installed a multi-tiers system that includes the use of physical barriers and intrusion detectors to secure nuclear weapons facilities, the physical separation of warhead cores from their detonation components, and the storage of the components in protected underground sites. With respect to personnel reliability programs, the personnel appointed to nuclear command and control posts are screened and controlled by four separate top agencies of the country. All personnel’s lives are reportedly controlled and closely monitored. At the same time, their relatives and family members are also monitored. After an initial screening, there are periodic clearance rechecks every two years or when a person is transferred from one area of the program to another. Moreover, additional and random checks may be carried out when deemed essential. It is believed that Pakistan has a “two-man rule”. This is similar to the US system, and lessons have been learned and adapted from the US experience with its personnel reliability program. The Pakistani nuclear establishment maintains that they have a system in place that requires approval, reporting and monitoring of travel for all scientific personnel and especially those that possess sensitive information or expertise. As for as technical and procedural safeguards are concerned, Pakistan’s nuclear weapons are furnished with Permissive Action Links (PALs), coupled with their disassembled status. According to Naeem Salik, “Pakistan has developed its own PALs systems which obviously ensure that even if an unauthorized person gets hold of a weapon, he cannot activate it unless he also has access to the electronic codes.” Finally, regarding the component of deception and secrecy, Pakistan keeps its nuclear weapons infrastructure closely guarded secret. This includes location of storage facilities for nuclear devices and their related components, aspects of the nuclear command and control arrangements, and a number of aspects of the arrangements for nuclear safety and security (such as the numbers of those removed under personnel reliability programs, the reasons for their removal, and how often authenticating and enabling (PAL-type) codes are changed). Apart from this, Pakistan uses deception such as dummy missiles – to complicate the calculus of adversaries and is

232 The “two-man rule” is a control mechanism designed to achieve a high level of security for especially critical material or operations. Under this rule all access and actions requires the presence of two authorized people at all times. In the context of nuclear weapons safety and security, this rule is designed to prevent accidental or malicious launch of nuclear weapons by a single individual.
likely to have extended this practice to its nuclear weapons infrastructure. During an interview with the author former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD) notes that “it is most unfortunate that the largely Western, or Indian, opinions unjustifiably link the issue of terrorism with Pakistan’s nuclear security. It should be noted that Pakistan’s effort for nuclear security has been widely acknowledged across the world. Pakistan’s Centre of Excellence for Nuclear Security has increasingly been seen as an example for other states to emulate. Given Pakistan’s consistent efforts for nuclear security, the chance of its nuclear materials, technologies, equipment, or entities getting any unauthorized access is non-existent. Nevertheless, Pakistan is never complacent about its such responsibilities.”

**International Initiatives to Prevent Nuclear Terrorism and Pakistan**

Indeed, the disclosure of A. Q. Khan network running nuclear black market in the post 9/11 era has been a watershed event for international community. The major stakeholders from international community started working more vigorously to curb any further nuclear proliferation. A number of steps have taken that include UN resolutions, multilateral and unilateral initiatives. As a sensible and responsible nuclear weapons state, besides taking exhaustive measures unilaterally, Pakistan has responded very positively to various international initiatives that are aimed at strengthening national and global nuclear security infrastructure.

- Pakistan became part of Container Security Initiative (CSI) in 2006. The initiative was first conceived and implemented by the US 2002 with the aim to strengthen security of container cargo destined for US ports against any possibility of terrorists using maritime cargo to ship and deliver weapons of mass destruction (WMDs). Every cargo shipment for US originating from Pakistan comes under this initiative and duly screened and checked for illegal goods.

- In 2003, US President Bush announced Proliferation Security Initiative (PSI) which aimed at “interdicting suspected shipments of cargo involving weapons of mass destruction (WMDs) related materials before these could reach the countries of

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236 Author’s interview with Air Cmndr ® Khalid Banuri, former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD), Rawalpindi, (December 16, 2017).

proliferation concern or terrorist groups. As of 2015, 105 state support this Proliferation Security Initiative (PSI).”\textsuperscript{238} It is important to note that Pakistan is yet to join this initiative formally, however, as an observer it has participated in exercises many a times which were conducted under the ambit of Proliferation Security Initiative (PSI).\textsuperscript{239}

- One of the most noteworthy development that has happened because of infamous A. Q. Khan episode is UN Security Council Resolution 1540 and subsequently its implementation by member states including Pakistan. The resolution was passed by the UN on April 2004 which calls upon states to “refrain from supporting by any means non-state actors from developing, acquiring, manufacturing, possessing, transporting, transferring or using nuclear, chemical or biological weapons and their delivery systems.”\textsuperscript{240} Moreover, the resolution made it obligatory on member states to install legal and institutional structures, procedures and mechanism checkmate the same. Under UN 1540, it was enunciated that states need to submit initial reports on their respective compliance measure in six month.\textsuperscript{241} Pakistan acting as a responsible nuclear power enacted nuclear export act 2004 in September 2004 in compliance with its obligations under UNSC Resolution 1540. “In compliance with the Resolution, Pakistan has submitted four reports since October 2004, on the legislative, regulatory and administrative framework to fulfil its commitments to the non-proliferation regime. The fifth report is being finalized and is expected to be submitted soon.”\textsuperscript{242}

- The Global Initiative to Combat Nuclear Terrorism (GICNT) was incepted in 2006 with the aim to “strengthen global capacity to prevent, detect, and respond to nuclear terrorism by conducting multilateral activities that strengthen the plans, policies, procedures, and interoperability of partner nations.”\textsuperscript{243} Under this initiative, the members states of The Global Initiative to Combat Nuclear Terrorism (GICNT) agreed to:

1. “Improve accounting, control and protection of nuclear/radiological material.

2. Enhance security of civilian nuclear facilities.

\textsuperscript{238} “Proliferation Security Initiative”. Available at \url{http://www.psi-online.info/Vertretung/psi/en/Startseite.html}
\textsuperscript{239} Ibid.
\textsuperscript{241} Ibid.
\textsuperscript{242} Malik Qasim Mustafa and others, “Pakistan’s Export Control Regime”, \textit{Islamabad Papers}, Nuclear Paper Series No. 5, (2016), P.12.
\textsuperscript{243} “The Global Initiative to Combat Nuclear Terrorism (GICNT)”. Available at \url{http://www.gicnt.org/}
3. Detect and suppress illicit trafficking of nuclear/radiological material.
4. Improve ability to search for, confiscate and establish safe control of nuclear/radiological material.
5. Assure denial of safe haven and resources from terrorists seeking to acquire or use nuclear/radiological material.
6. Ensure adequate legal frameworks to combat activity related to nuclear terrorism.
7. Respond to and mitigate the consequences of nuclear terrorism.
8. Promote information sharing to prevent and respond to acts of nuclear terrorism.”

In 2007, Pakistan became member of this endeavor. From very first day of its joining, it has been energetically attending different tasks to adopt international best practices. At the same time it has been sharing its own experience in good faith to achieve the objectives of said initiative.

- Nuclear Security Summit (NSS) was the brainchild of President Obama. The first summit took place in March 2010 and the fourth, which was also the last summit, held in Washington DC from March 31 to April 1, 2016. Obama explicitly expressed his desire to secure all nuclear materials within four years through this initiative. The general purpose of the summit process was to “address the threat of nuclear terrorism by minimizing and securing weapons-usable nuclear materials, enhancing international cooperation to prevent the illicit acquisition of nuclear material by non-state actors such as terrorist groups and smugglers, and taking steps to strengthen the global nuclear security system.” It was peddled that with the fourth summit ended, the world has achieved the major goal of securing all nuclear materials in the world. Indeed, the process has successfully inculcated a better environment internationally to understand nuclear safety and security. One can argue that now there is more urge among international stake-holders for collective response to such issues.

Pakistan participated in Nuclear Security Summit (NSS) process vigorously and took huge leap in terms of achieving the very objectives of this effort. For instance, Pakistan established Centre of Excellence on Nuclear Security (PCENS). The center

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244 Ibid.
247 Ibid.
is widely acclaimed for its training workshops, courses and seminars on nuclear education and training. The International Atomic Energy Agency (IAEA) actively supports the activities of this center.\textsuperscript{248} Pakistan has also joined and ratified Convention on the Physical Protection of Nuclear Material (CPPNM) in March 2016.\textsuperscript{249} It has improved security apparatus for a number of medical centers who have radiological facilities. Furthermore, Pakistan regularly participates in International Atomic Energy Agency’s (IAEA) Incident and Trafficking Database (ITDB) initiative with the goal to completely curb illicit trafficking of nuclear and radiological materials. It is essential to point out that Pakistan does not want to seem complacent, it continuously improves mechanism, laws, procedures, structures and national export list to prevent any unwarranted incident. It has also established a national Nuclear Emergency Management System.\textsuperscript{250}

**Assessments**

The threat of nuclear terrorism and linking it with Pakistan’s nuclear weapons safety and security appears to be highly overstated. One needs to take notice of Pakistan’s current internal situation before commenting on this subject. A holistic approach to examine this issue certainly leads to the conclusion that the much of the speculations and hyperbolic analyses regarding the threat of nuclear terrorism in Pakistan portrays different hypothetical scenarios. Most often, these scenarios are encapsulated in flimsy arguments that the terrorists could be assisted and abetted in the acquisition of an intact nuclear weapon or fissile material by individuals employed in the nuclear complex or elements of the military. Such discourse tends to result in the downplaying of the real and complex barriers to terrorists acquiring intact nuclear device or sensitive materials. Marks Fitzpatrick concisely highlights that:

“A robust command and control system is now in place to protect Pakistan’s nuclear assets from diversion, theft and accidental misuse. For the most part, these measures have been transparent and appear to have worked well. Indeed, Pakistan’s openness in explaining its command-and-control structure goes beyond the practice adopted by most other nuclear-capable states. A.Q. Khan and his known cohorts are out of business and Khan Research Laboratories (KRL) is now confined exclusively to enrichment work. Responsibility for nuclear weapons is now clearly in the hands of the National Command Authority and its


\textsuperscript{249} “Pakistan ratifies 2005 Amendment to CPPNM”, *The Nation*, (March 22, 2016).

constituent bodies. General Kidwai and the Strategic Plans Division he commands have gained national and international respect for their professionalism and competency. These steps go a long way toward overcoming the international opprobrium and label of irresponsibility that Pakistan earned thanks to the Khan saga.”  

The very notion of “loose nukes” is flawed. Pakistani nuclear weapons are well protected by the one of most robust security regime which has devised: personnel reliability programs; extensive physical barriers, including location in heavily guarded, often isolated military bases; electronic systems to prevent unauthorized weapons use; and storage of fissile cores separate from other weapons components. Even if unthinkable were to happen and terrorists get insider help coupled with major political chaos even then it’s highly unlikely that they will get access to an intact nuclear device. Pakistan considers its nuclear weapons capability as the lynchpin for national survival and only top leadership in the nuclear establishment knows the exact location of these assets. Moreover, as mentioned earlier they are tightly guarded with multi-layer security arrangements. Chairman of the Joint Chiefs of Staff Admiral Michael Mullen stated on September 22, 2008, that “to the best of my ability to understand it – and that is with some ability – the weapons there are secure. And that even in the change of government, the controls of those weapons haven’t changed. That said, they are their weapons. They’re not my weapons. And there are limits to what I know.”  

While expressing confidence regarding the security of Islamabad’s nuclear weapons. Defense Intelligence Agency Director Stewart stated in February 2016 that: “Islamabad continues to take steps to improve its nuclear security, and is aware of the threat presented by extremists to its program.”  

White House Press Secretary Josh Earnest stated on October 15, 2015 that “we continue to have confidence that the government of Pakistan is well aware of the range of potential threats to its nuclear arsenal, and we continue to be confident that Pakistan has a professional and dedicated security force that understands the importance and the high priority that the world places on nuclear security.” Ambassador Olson told the House Foreign Affairs Committee on December 16, 2015, “that Washington has confidence in the

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252 Remarks by Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, to the L.A. World Affairs Council, September 22, 2008.

253 Quoted in Paul K. Kerr and Mary Beth Nikitin, “Pakistan’s Nuclear Weapons”, CRS Report, (August 1, 2016), P. 17.

254 Ibid.
capabilities of ... the Pakistani security forces to control and secure their nuclear weapons, adding that Islamabad has specifically taken into account the insider threat to its nuclear arsenal.”

Under Secretary of State for Arms Control and International Security Rose Gottemoeller expressed confidence in the security of Pakistan’s nuclear arsenal during a March 17, 2016, Senate Foreign Relations Committee hearing, but added that “Pakistan’s battlefield nuclear weapons are a security concern because such weapons cannot be made as secure when deployed.”

Pakistani government officials time and again reiterated that nuclear weapons are safe and secure and international community should have faith in Pakistan’s nuclear command and control mechanism. During a meeting on February 24, 2016 National Command Authority (NCA) “took a comprehensive review of the security and safety mechanism of the nuclear programme and expressed deep satisfaction on the measures in-place to ensure highly effective security of strategic assets and installations.” It is argued that Pakistan’s nuclear first use doctrine and a delegative command and control system could be exploited by terrorists to seize either an intact nuclear weapons or key components of nuclear weapons. This scenario, however, is farfetched from reality given the fact that Pakistan upholds more assertive command and control system and stocks its nuclear weapons unassembled and dispersed across the country. In 2015, at the Carnegie conference General Khalid Kidwai stated that “I say with full responsibility that nuclear security in Pakistan is a non-issue. You have all your national tactical means to verify, but you might also take my solemn word for it. Our nuclear weapons are safe, secure and under complete institutional and professional control.”

Many scholars agree on the point that it is highly unlikely for terrorists to get hold on an intact nuclear weapon in Pakistan, so they might try to build their own. For this purpose, non-state actors would require highly enriched uranium (HEU) or weapons grade plutonium in

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255 Ibid. 18.

256 “Sen. Bob Corker Holds a Hearing on Reviewing the Administration's Nuclear Agenda, Panel 1,” Senate Committee on Foreign Relations, March 17, 2016.


sufficient quantities.\textsuperscript{260} Given the fact, enriching uranium or reprocessing plutonium is essentially a complicated process. Moreover, sophisticated engineering expertise along with massive funds needed to make a workable nuclear device. So, it is well beyond the capabilities of Al-Qaeda or Tehrik-e-Taliban Pakistan (TTP) to do that. In an interview to author, Sumit Ganguli believes that “the prospects of non-state actors seizing nuclear weapons in Pakistan is slender. Even if the unthinkable were to happen I do not believe that the non-state actors would have the technological knowledge to detonate or launch those weapons. Nuclear weapons are complex entities and cannot be detonated or launched without suitable access codes. It would be foolish to believe that the Pakistani nuclear weapons complex and its managers have not devised suitable safeguards both human and technological to prevent seizure and usage.”\textsuperscript{261}

Furthermore, one may counter argue to inconsistent assumptions of nuclear alarmists on the basis of how non-state actors such as increasingly dismantled and disgruntled Al-Qaeda and Tehrik-e-Taliban Pakistan (TTP) terrorists would deliver the bomb to the target. A senior official of the Inter-Services Intelligence directorate (ISI), the Pakistani military’s spy agency, told The Atlantic that “American fears about the safety of Pakistan’s nuclear weapons were entirely unfounded. Of all the things in the world to worry about, the issue you should worry about the least is the safety of our nuclear program…. It is completely secure…. It is in our interest to keep our bases safe as well. You must trust us that we have maximum and impenetrable security. No one with ill intent can get near our strategic assets.”\textsuperscript{262} Pakistan’s internal security has been much improved and political stability is taking its roots. How it is possible that terrorists will get away security checks in the country. On March 14, 2017 during a seminar organized by the Ministry of Foreign Affairs, Sartaj Aziz, Pakistan’s Advisor on Foreign Affairs “reaffirmed his country’s responsibility to prevent its nuclear weapons from falling into the hands of non-state actors.”\textsuperscript{263}

\textsuperscript{261} Author’s email interview with Dr. Sumit Ganguli, Professor of Political Science at Indiana University, (March 17, 2017).
\textsuperscript{262} Quoted in Jeffrey Goldberg and Marc Ambinder, “The Ally from Hell”.
\textsuperscript{263} “Pakistan and Nuclear Suppliers Group”, Daily Times, (March 25, 2017).
Conclusion

Unquestionably, any incident involving nuclear terrorism anywhere in the world would have devastating implications for international politics. It must also be noted that although nuclear terrorism would be most lethal form of terrorism but at the same time practically there are least chances of its occurrence. The world has learned many lessons especially in the post 9/11 era how to deal with the menace of terrorism, collectively. To counter any possibility of nuclear terrorism, the states have taken concrete actions both nationally and internationally during the last decade. Arguably, the world is much better prepared now to tackle any attempt of nuclear terrorism and also to minimize consequence should such an event occur. It is true that the states who possess nuclear weapons are equally cautious and mindful with respect to nuclear safety and security of their respective nuclear assets, likewise is Pakistan. Over the years, Pakistan has taken numerous institutional and legislative steps to increase security of its military and civilian nuclear infrastructure. Admittedly, many concerns and apprehensions carry weight given the fact that Pakistan is facing precarious security threats internally and externally. But, it seems highly unlikely that non-state actors would be able to get hold of Pakistan’s nukes. Pakistan seems neither complacent nor oblivious to its international commitments under different treaties and agreements. But, certainly it needs to further strengthen the security of its nuclear installations and international community should cooperate in this regard.

One can conclude that there are very remote chances of nuclear terrorism by non-state actors in South Asia. But, non-state actors, who have been used by both India and Pakistan as proxies to wage sub-conventional warfare, might be able to drag the nuclear antagonists to a crisis in foreseeable future. And then that crisis could escalate to a full-scale war involving nuclear exchange leading to the failure of nuclear deterrence in the region. It is in this context that next chapter would look into how non-state actors are being used as proxies by India and Pakistan and their impact on nuclear deterrence stability in the South Asian region.
CHAPTER-5

Non-State Actors, Sub-Conventional Warfare and India-Pakistan Nuclear Crisis Stability/Instability

Introduction
Non-state actors become more problematic, toxic and lethal for international peace and security when they are used as tools by states to promote their perceived foreign policy goals. The states engage in proxy wars by hiding behind some militant/terrorist organizations. At official level, no state seems willing to own such organizations. Covertly, however, most often it happens that states fund, train and patronize them. In many cases, the states themselves create such organizations, clandestinely. The nefarious activities of non-state actors may lead to catastrophe with global repercussions, if they operate in a region inhabiting two rival nuclear weapons states. Unfortunately, this is the case in South Asia where nuclear deterrence stability is fatally threatened by the presence of non-state actors and their alleged/reported use by Pakistan and India in various ways against each other. Many scholars, experts, analysts and officials argue that the most immediate threat in South Asia is the role of non-state actors in instigating major crises with escalatory potential between India and Pakistan, as happened in the past.

The political, economic, military and strategic issues between both the nuclear armed states have their roots in various geopolitical and geostrategic realities that exist in the region and continue to exacerbate the tensions. It is interesting to note that both the states have very peculiar mindset that resulted in perceived or real insecurities for them. Both view each other’s policies aimed at maximizing strategic gains in the region. India has been endeavoring to become a great power by using its economic prowess and powerful military. At the same time, India believes that by joining international alliances especially with the US, they can counter rising China. India claims that Pakistan’s alleged role in harboring and sponsoring non-state actors and their use to wage proxy and sub-conventional warfare in the region, especially in Kashmir, is a great source of hindrance in its progress – thus incapacitates India’s rise. Many Indians reflect that such a dangerous policy of Pakistan is an existential threat to their national security. They fear that if they extend any concession to Pakistan and show any flexibility on Indian policy “Kashmir as an integral part of India”, it
might have spillover effects on a few other parts of the country which are experiencing secessionist movements. Therefore, India continues to trumpet the issue of terrorism by linking it with militancy in Kashmir and alleged Pakistani support. Accordingly, it perceives that by pressurizing Pakistan at bilateral, regional and International levels, India can deny any space to Pakistan on Kashmir issue. Precisely, through this tactic it has been trying to camouflage the Kashmiris’ right of self-determination movement.

On the other hand, Pakistan deems India as an occupying force in Kashmir that has been committing very horrific human rights violation besides unremittingly trashing UN resolutions on Kashmir. In addition, it views Kashmir issue as an unfinished agenda of sub-continent partition and proclaims that it is ‘jugular vein’ of Pakistan. Similarly, Pakistan is baffled with very serious reservations regarding increasing Indian inroads into Afghanistan. The Pakistani uneasiness arises out of its perception that Indian collusion with Kabul regime threatens Pakistan’s national security with a terrifying two front war scenario. Furthermore, alleged Indian support to Baluch insurgents in Baluchistan province has perplexed Pakistan to the extent that the latter has voiced its concerns internationally by submitting dossiers at different forums, notably to UN general secretary. Also, Pakistan asserts that Tehrik-e-Taliban Pakistan (TTP) terrorists having safe sanctuaries inside Afghanistan are being funded, assisted and trained by Indian secret agencies to weaken Pakistan.

The current dynamics of sub-conventional warfare and militancy in South Asia manifest that non-state actors appear to be less dependent on either of the nuclear rivals by establishing international networks in terms of securing funds and weapons etc. In the post 9/11 era, it is also argued that supporting and backing non-state actors may not be Islamabad’s direct official policy but India still considers Pakistan as an ‘epicenter’ of terrorism. To maintain the credibility and efficacy of its nuclear deterrent, it has threatened Pakistan on several occasions that they will unleash punitive surgical strikes in the wake of any major terrorist attack having origins from Pakistan. These perceptions and strategies, however, do not resolve the continuing conflicts prevalent in the region and could even aggravate tensions to the detriment or complete failure of nuclear deterrence stability between both the states. It is in this context, this chapter attempts to objectively examine and critically analyse non-state actors and their potential impact on nuclear deterrence stability in South Asia. First, the phenomenon of sub-conventional warfare and the role of non-state actors would be discussed, especially in the context of Indian accusations regarding Pakistan’s involvement in Kashmir.
dispute. Similarly, it would be essentially important to discuss alleged Indian role in fueling Tehrik-e-Taliban Pakistan (TTP) militancy and Baluch insurgency directly or indirectly. At the end, the nuclear escalation control would be analyzed keeping in view the US role in historical, current and futuristic perspectives.

**Sub-Conventional Warfare and Non-State Proxy Strategy by Pakistan and India**

The intractable nature of the Kashmir issue makes South Asia an increasingly perilous place in the world. Both India and Pakistan have wholly opposing positions on Kashmir issue since the very first day of their birth. To add to this, now both also find themselves poles apart on Afghanistan issue. India’s alleged abetting of Baluch insurgency has also souring effect on bilateral relationship. Interestingly, each believes with varying degree of intensity and evidence that the other is entertaining aggressive designs by purporting violence through non-state actors in the region. Such kind of contending perceptions have caused intense arms race both in conventional and nuclear realms.264

According to an array of strategic commentators, especially from the West and India, Pakistan’s Kashmir policy is fundamentally premised on the principle of employing sub-conventional warfare through the manipulative use of Islamic notion of Jihad. Paul Kapur tries to delve into militancy in Kashmir by arguing that Pakistan started using militant proxy strategy right after its inception to do all or part of its fighting. This is obvious from a number of events that include: first Kashmir war 1947-48; Second Kashmir war 1965; anti-Soviet war in Afghanistan and subsequent civil war of 1990s; and Kashmir insurgency late 1980s till present.265 Similar views have been alluded by Christine Fair as well when she writes that:

“Pakistan’s use of Islamist militancy as a tool of foreign policy is not new and in fact dates back to the early beginning of statehood. While Pakistan engaged in prolonged covert warfare in Kashmir, by the early 1970s Islamabad had also begun to covertly support Islamist Pashtun militant groups in Afghanistan. Likewise, in the 1980s, Pakistan provided extensive assistance to the Sikh ethno-nationalist insurgency in the Punjab.”266


266 C. Christine Fair, “The Militant Challenge in Pakistan, Asia Policy”, Asia Policy, No.11, (January 2011), P.111.
The Soviet invasion of Afghanistan in late 1979 was yet another key development which shaped Pakistan’s controversial role to materialize US proxy war to defeat the red army through so-called *Mujahideen*. Pakistan proved a principal ally of US to recruit religious holy warriors from across the world to launch a guerrilla warfare against occupying Soviet troops in Afghanistan. It is believed that Saudi Arabia was the main financier of Afghan *Jihad*. Soviets were defeated and pushed back where from they came but the seeds of radicalism, extremism and militancy never left this region. Now, such seeds have taken the shape of a grown up tree. Pervez Hoodbhoy aptly explains that:

“Appearances were illusory, however, and events over the next two decades were to reveal the true costs of the victory. Even in the mid 1990’s – long before the 9/11 attack on the United States – it was clear that the victorious alliance had unwittingly created a dynamic now beyond its control. The network of Islamic militant organizations created primarily out of the need to fight the Soviets in Afghanistan did not disappear after the immediate goal was achieved but, instead, like any good military-industrial complex, grew from strength to strength. It now exists with extensive transnational cooperation, coordination, and close ties. Indeed, these non-state actors have repeatedly targeted their former sponsors, as well as other states and governments globally – Pakistan, India, Egypt, Saudi Arabia, Philippines, Indonesia, Russia, and the United States have been attacked in recent times.”

Paradoxically, over the years, different developments reflected this strategy’s advantages and disadvantages to Pakistan. Paul Kapur maintains that though non-state actors are a central pillar of a long-standing Pakistani grand strategy, however, such an approach has become dangerously counterproductive in the post 9/11 era. From the more recent past, the disastrous strategy is causing horrible consequences for the Pakistani state and society as well as the international and regional security milieu. A close scrutiny of Pakistani approach using non-state actors to fulfill perceived foreign policy objectives demonstrates that while it brings lot of benefits but it has cost so many internal and external security challenges for Pakistan. Among benefits following are worth-mentioning:

- Promoted internal political cohesion
- Helped redress Pakistan’s material weakness vis-à-vis India
- Enabled Pakistan to continue to undermine Indian control of Kashmir
- Impeded Indian responses and enhanced Pakistan’s bargaining leverage

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• Helped Pakistan to shape the strategic environment in Afghanistan

Nonetheless, more recently following costs are evident:
• Militants are exceeding Pakistani state’s control
• Pakistan has to divert scarce resources from pressing domestic projects
• Militant campaign has led India to undertake military improvement that deeply threaten Pakistan
• Costs of such policy by Pakistan may leave it politically unstable and externally insecure.\(^{268}\)

Christine Fair argues that:

“Pakistan has adopted several strategies to manage its security environment, including ideological tools, the pursuit of strategic depth in Afghanistan, and the use of proxy fighters under its expanding nuclear umbrella. Pakistan continues to pursue these strategies even though they are very unlikely to succeed and have imposed a high cost on the state.”\(^{269}\)

Pakistan officially questions above-mentioned narrative and asserts that India occupied Kashmir by force and continuously violating UN sponsored resolutions that legitimately calls for plebiscite, which seems to an appropriate solution to this conflict. Moreover, Pakistani officials claim that Pakistan only provides moral and diplomatic support to the freedom struggle that is going on against Indian brutalities and atrocities in the valley.\(^{270}\) Many analysts oppose Pakistan’s claims and contend that “Pakistani authorities have long had ties to domestic militant groups that help advance the country’s core foreign policy interests, namely in connection with Afghanistan and India.”\(^ {271}\) Paul Kapur concludes that Pakistan has largely failed to address the problem of militancy given the fact that it categorizes militants into two categories “bad militants” and “good militants”. Though, Pakistan’s military has launched extensive operations to eliminate the former category which is comprised over Tehrik-e-Taliban (TTP) and its umbrella outfits. But, to sheer dismay of international community and India, it has done not much to rein in the latter category which include Lashkar-e-Taiba (LeT), Jaish-e-Muhammad (JeM) and many other anti-India militant

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\(^{270}\) “Kashmir Dispute: Background”. Available at [http://www.kashmirlibrary.org/kashmir_timeline/kashmir_files/Pak_position.htm](http://www.kashmirlibrary.org/kashmir_timeline/kashmir_files/Pak_position.htm)

Evidence suggests that this category has successfully unleashed countless attacks on Indian military in Indian held Kashmir. The following figure enlists some of the most brutal attacks.

Figure 8: Non-State Proxy attacks on Indian Military

A close look at Indian reprisal to Pakistan’s non-state proxy strategy reveals that over the years Indians have learnt to teach Pakistan a lesson in the same way – by supporting insurgency in Baluchistan province and aiding anti-Pakistan militancy in tribal areas alongside Pak-Afghan border reportedly through Afghanistan and Iran. Pakistan believes that India is using Baluch Liberation Army (BLA) and Baluch Liberation Front (BLF), which have carried out some brutal attacks on law enforcement agencies and civilians, as a proxy to weaken Pakistan. In 2009, first time a high profile government official – Pakistan’s interior minister Rehman Malik – gives a policy statement that “India is involved in Baluchistan unrest through BLA, which was established with the blessings of the defunct USSR during Afghan war in the 1970s.”

Again in 2010, Pakistan’s foreign secretary Salman Bashir, during his meeting with Indian counterpart, stressed on India to delink the issue of terrorism from composite dialogue process. Otherwise, Pakistan would be compelled to produce before the international media at least “three Indian Ajmal Kasabs” who were directly or indirectly part of the terrorist activities in Baluchistan. He went on to add that “Pakistan would easily establish that the Indian Consulate in the Afghan city of Kandahar was actually a control

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room of terrorist activities organized by the separatist Baluchistan Liberation Army (BLA).”

Speaking at a workshop on ‘Defence, Deterrence and Stability in South Asia’, jointly organized by the Islamabad-based Centre for International Strategic Studies (CISS) and the International Institute for Strategic Studies (IISS) London. Adviser to the National Command Authority (NCA) Lt. General ® Khalid Kidwai pointed out that “India has shifted the conflict to sub-conventional level by resorting to use of terrorism and proxies against Pakistan after realizing that conventional war was inconceivable due to nuclear capabilities.” Moreover, few experts view India-Iran extending amicable relations with skepticism and reportedly believe that India is using its consulates in Iran against Pakistan. In this regards, Christine Fair opines that “having visited the Indian mission in Zahedan, Iran, I can assure you they are not issuing visas as the main activity. Indian officials have told me privately that they are pumping money into Baluchistan.” Similarly, in an interview with the author former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD) asserts that the “terrorism is increasingly becoming a significant global issue, primarily because of the complexity of its non-state nature. In the recent times, where ultra-nationalism tendencies are also growing, India has been fomenting anti-Pakistan sentiment everywhere in the world. In the backdrop of Pakistan’s ardent diplomatic support for the Kashmiri cause, Indian signature appears to be behind the ‘Free Baluchistan’ slogans displayed on vehicles in London recently. If the money trail behind this display is investigated, the Indian connection is most certain to be found.”

In the backdrop of the China-Pakistan Economic Corridor (CPEC) initiative in 2015, Baluchistan has gained more significance in geo-economic and geo-strategic terms. Pakistan proclaims that India wants to sabotage this initiative by using Baluch insurgents. During a conference in Islamabad organized by Islamabad Policy Research Institute (IPRI), Joint Chief of Staff Committee (JCSC) General Zubair Mehmood Hayat said that India is injecting terrorism in Pakistan through Baluch separatists, Taliban and RAW. By sabotaging peace in

275 “Indian Proxies in Play on Pakistan’s Western Border: NCA Advisor”, Express Tribune, (December 7, 2017).
276 Ibid.
277 Author’s interview with Air Cmbr ® Khalid Banuri, former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD), Rawalpindi, (December 16, 2017).
Pakistan the extremist India is playing with fire. Furthermore, he told the conference participants that “the Indian intelligence agency, RAW, has allocated $500 million to carry out sabotage activities against the China-Pakistan Economic Corridor.” On importance of Gwadar port, which is part of China-Pakistan Economic Corridor (CPEC) projects, Mickey Kupecz writes that “Gwadar is of extreme strategic importance to Pakistan. A new deep-water port counters Indian naval projection, consolidates relations with China, and serves as a passageway for Pakistan’s natural resources to the energy hungry markets of India, China, and East Asia.” Similarly, Syed Fazl-e-Haider notes that: “India’s involvement in the Baluchistan unrest cannot be ruled out in view of the rapidly changing geopolitics of the region. India, which has ambitions of dominating the Arabian Sea and the Indian Ocean, is upset over China’s growing stakes in the Gwadar port. A fully developed and functional Gwadar port near the Strait of Hormuz enables China to frustrate India’s dream of dominating regional waterways. New Delhi feels that the Gwadar port would have serious strategic implications for India. It perceives that it would empower Pakistan to control strategically important energy sea-lanes on the Persian Gulf, while India controls no choke-points on the coastline of the subcontinent through which international shipping may pass. India sees Chinese involvement in Gwadar with suspicion and believes that China wants to set up bases and outposts across the globe to monitor and safeguard energy flows.”

In March 2016, Pakistani law enforcement agencies revealed the arrest of Kulbhushan Jadhav, during an intelligence based swoop in Baluchistan’s Chaman area. During a confessional video, Kulbhushan admitted that he is still a serving officer in Indian Navy. He said that he is involved in subversive activities in Karachi and Baluchistan and giving training to Baluch insurgents. In the statement, he confessed to be an agent of Indian intelligence agency Research and Analysis Wing (RAW). Pakistan raised this issue at international level by submitting evidence in the form a dossier to UN. Pakistan also accuses India of supporting Tehrik-e-Taliban Pakistan (TTP) through Afghanistan but lacks any hard evidence to prove such allegations. More recently, Pakistan has brought some evidence in the media which they

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279 Ibid.


281 Syed Fazl-e-Haider, “Is India Fueling Unrest in Baluchistan?”.


believe is enough to expose India in front of international community. On 17 April 2017, Maj Gen Asif Ghafoor, the director general of the Inter-Services Public Relations (ISPR), during a briefing to media revealed that the former spokesperson for the banned Tehreek-e-Taliban Pakistan (TTP) and a main commander of Jamaat-ul-Ahrar (JuA), Ehsanullah Ehsan has surrendered himself to Pakistan military.\(^{284}\) Few days after his surrender, Ehsanullah Ehsan in an astounding video claimed that Indian and Afghan intelligence and security agencies are supporting Tehrik-e-Taliban (TTP) and Jamaat-ul-Ahrar (JuA). He said “they [the TTP leadership] got their [Indian] support, their funding and took money for every activity they did. They pushed the TTP soldiers to the frontlines to fight against the Pakistan Army and went into hiding themselves.”\(^{285}\) He added “these [terrorist] organizations have established committees in Afghanistan through which they communicate and coordinate with RAW. The Indians had given them special documents to help them move around Afghanistan with ease. In Afghanistan, these documents function much like Pakistani ID cards do in Pakistan.”\(^{286}\) The foreign office Pakistan spokesperson during a press briefing on 27 April 2017 stated “revelations made in the confessional statements of Indian spy Kulbhushan Jadhav and former Tehreek-e-Taliban (TTP) spokesman Ehsanullah Ehsan have unveiled India’s nefarious designs in Pakistan. The confessions have proven that India has been involved in supporting terrorist activities in Pakistan.”\(^{287}\) The above discussions divulge how both the states have been involved in sub-conventional warfare through proxies.

**Non-State Actors, Nuclear Crises and Nuclear Escalation**

The non-state proxy strategy invites a realistic assessment of Indian and Pakistani responses to it and ensuing impact on nuclear deterrence stability in South Asia. Before analyzing current state of affairs in the realm of nuclear deterrence keeping in view non-state actors between both the states, it would be relevant to explain few dangerous aspects of past nuclear crises. Historically, non-state militants operating in Kashmir allegedly having roots in Pakistan have caused several crises between both the states during pre-1998 and post-1998 era. As discussed in earlier chapters, Indian attempts to punish Pakistan during those crises resulted in nuclear stability/instability paradox. Cost-benefit analysis and increasingly higher

\(^{284}\) “Former spokesperson of TTP turns himself in”, *The Express Tribune*, (April 17, 2017).

\(^{285}\) “Former TTP, JuA spokesman claims terrorist organizations being ‘used’ by India, Afghanistan”, *The Dawn*, (April 26, 2017).

\(^{286}\) Ibid.

\(^{287}\) Naveed Siddiqui, “Confessions of former TTP spokesman, Indian spy have unveiled India’s nefarious designs”, *The Dawn*, (April 27, 2017).
stacks restricted Indian policy makers not to contemplate any military strike option. Secondly, international interventions also played a very key role in managing those crises by pressuring one side or the other before India could take any retaliatory strikes. Bhumitra Chakma argues in his book that when India deployed additional troops at its side of Kashmir to check insurgents/non-state actors’ activity in 1990s, Pakistan took it as preparing for a limited strike against Pakistan. It is believed that India reportedly had pondered into taking limited punitive strikes against militant training camps in Pakistan. Mark Fitzpatrick writes in his book that “if the assertion by Pakistani Chief of Army Staff General Mirza Aslam Beg is correct – that Benazir Bhutto ordered the army and air force to get ready. A squadron of F-16s were moved to Mauripur and we pulled out our devices … to arm the aircraft.” Then this was the first crisis between both the rivals that had nuclear element to it.

The Kargil conflict of 1999 in the post 1998 era raised eyebrows of several nuclear deterrence optimists. The empirical evidence indicates that non-state actors (Kashmir insurgents) backed by Pakistan were very much part of this conflict. They took part along with Pakistani troops to seize strategically important Kargil heights. The Kargil conflict proved that despite the presence of overt nuclear capabilities between two adversaries, a conflict can occur. It is important to note that Kargil conflict had the escalatory potential which prompted US intervention to end the conflict. Neil Joeck argues that “…the Kargil war, rather than being an example of deterrence “working” to prevent escalation, was rather an example of India and Pakistan engaging in a competition in risk-taking that only ended when Pakistan backed down.”

Eye-ball to eye-ball military standoff of 2001-2002 in the post non-state actors’ attack on Indian parliament has many dimensions to worry about nuclear escalation. Both the states involved in a dangerous belligerent postures and exchanged ominous threats, which kept the international community on its toes during the crisis. Nuclear threats were exchanged. India’s Defense Minister George Fernandes said that “India can survive a nuclear attack, but Pakistan cannot.” Indian Defense Secretary Yogendra Narain stated that “a surgical strike is the answer…. We must be prepared for total

292 Michael Richardson, “India and Pakistan are not ‘imprudent’ on nuclear option; Q&A George Fernandes”, The International Herald Tribune, (June 3, 2002).
mutual destruction.” So, nuclear-tinged crisis could have escalated given the fact that both the states showed their resolve through display of massive military muscles and bellicose rhetoric.

Historically, India’s military planners remained adhered to Sundarji doctrine as a main military ideology since early 1980s. However, the slow and time taking mobilization and deployment of Indian military troops during Operation Parakram alongside western border was believed to be an indicative of weakness of this doctrine. It took almost three weeks to mobilize Indian strike corps to punish Pakistan which provided ample space to latter to take effective counter measures. Conversely, Indian strategic planners conclude that this doctrine has been unsuccessful to integrate the impact of nuclear weapons on South Asian strategic thought. This led to unveiling of new strategy in April 2004 by Indian army chief – famously named as the Cold Start doctrine. Neil Joeck says that:

“The idea behind Cold Start, therefore, was to restructure the Indian Army so that it could address the defects made evident in 2002. With a new approach, the army’s large holding divisions would form eight or 10 smaller integrated battle groups, each of which would be able on very short notice to conduct shallow penetration attacks across the border with Pakistan. This new doctrine was intended to allow the Indian Army to retaliate swiftly before Islamabad could prepare militarily and before outsiders could intervene diplomatically, while also reducing the risk of escalation once the armies were engaged.”

It is essential to analyse how this new doctrine impacts nuclear deterrence stability between both the states in the context of non-state actors and sub-conventional warfare in the region. Before Cold Start doctrine, Pakistan’s nuclear deterrent capabilities mainly aimed at countering the threat of India initiating an all-out war during crises. The threat of unacceptable damage to India might have worked at strategic level by restricting the scope of crises at strategic level, however, this new doctrine aims at exploiting the space at tactical and

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293 “A Surgical Strike is the Answer: interview with defense secretary Yogendra Narain”, Outlook, (June 10, 2002).
294 According to this doctrine, the bulk of Indian military formations was employed along the western border to defend possible incursions from the Pakistan side. These formations, which were mostly defensive in nature, were to hold ground and allow sufficient time for the offensive formations located in central parts of India to mobilize and launch a counter-attack. That would be possible after Indian air force would at least ensure air superiority, if not an air supremacy.
operational level by launching quick punitive strikes without crossing nuclear thresholds. This posits new challenge to Pakistan, as its earlier posture of replying massively with nuclear weapons seems to be disproportionate, especially in the case India contemplates Cold Strat doctrine. At the same time, if Pakistan opts not to respond at all that would undermine the credibility of its nuclear deterrence. To overcome this security dilemma, Pakistan came up with NASR tactical nuclear weapon in 2011. However, both India’s Cold Start doctrine and Pakistan’s tactical nuclear weapons pose grave challenges to nuclear deterrence stability in South Asia where non-state actors have been causing many crises and perhaps likely to do the same in future.297

The threat of non-state actors bringing Pakistan and India on the brink of an all-out war was very much present during the Mumbai crisis of 2008. Ten terrorists, believed to be originated from Pakistan – with or without state support – stormed on two luxury hotels, a Jewish center, and the Railway station in Mumbai, killing 164 and wounding more than 300 others.298 Interestingly, one of terrorists were caught alive by Indian security forces who revealed that he is member of Lashkar-e-Taiba (LeT) and from a district of Punjab, the major province of Pakistan.299 Arguably, there was intense pressure on Indian Political leadership from its military and public to go for punitive measures against Pakistan – who, according to them, is the epicenter of terrorism. India did not repeat the mistake of twin peak crisis and refrained from major military mobilization, instead weighed upon lunching limited surgical strikes on alleged militants’ camps in Muridkay near Lahore.300 India, notwithstanding the military’s earlier declaration of the Cold Start strategy, did not respond militarily. And Prime Minister Manmohan Singh reportedly said in private, “this is the cost of living in this neighborhood.”301 But, the question arises for how long Indian political leadership will continue to show the restraint keeping in view the deep-rooted influence of extremist elements in Pakistan.

297 Ibid.
300 Ibid.
301 George Perkovich, “Preventing Nuclear War in South Asia: Unprecedented Challenges, Unprecedented Solutions”.
The instability injected in the South Asian strategic environment due to India’s evolving concepts of Cold Start doctrine or proactive operations strategy and Pakistan’s responses (NASR tactical nuclear weapon) may be intriguing to discuss in the light of more recent crises between the two states. More alarmingly, these developments become more threatening to nuclear deterrence equation with the increasing of non-state terrorist organizations and extremist elements in the region. During most of 2015, both the states continued with blame game and threats, counter threats. But, at the closing month of the year, Indian Prime Minister Modi paid a surprise visit to Lahore where he attended Premier Nawaz Sharif’s granddaughter wedding ceremony. The meeting between two premiers appeared to be encouraging and expectations for resumption of bilateral dialogue went high. But, then Pathankot incident happened. On January 2, 2015 non-state actors/militants attacked Indian air base in Pathankot that killed several Indian soldiers. India took no time to hurl allegations on Pakistan. “Clearly, like Mumbai in 2008, Pathankot in 2016 is inconceivable without the connivance, complicity and even cooperation of the Pakistani military establishment.”

Michael Kugelman comments that “when it comes to India-Pakistan relations, diplomatic breakthroughs are often sabotaged by terrorist attacks or other provocations. In this sense, Pathankot was a case of déjà vu all over again.” It is reportedly said that for Indians, Pathankot terrorist attack revived the terrible memories of 26/11 Mumbai carnage. India threatened to go after the perpetrators, however, government officials seemingly had no clue how to issue statement of threat to Pakistan regarding punitive actions. India’s defense minister Manohar Parrikar stated that “if someone is harming this country, then that particular individual or organization, I purposely used the words individual and organization, should also receive the pain of such activities. The time and place should be of our choosing.” A senior Bharatiya Janata Party (BJP) leader, Subramanian Swamy, also tweeted that “it is time to put in place a two-year strategic plan and teach Pakistan a lesson by breaking it into four.”

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304 “Whoever Hurts India, will get Same Pain, Parrikar”, The Tribune India, (January 11, 2016)
Yet another crisis developed between both the states in 2016 when non-state actors/militants, allegedly originating from Pakistan, attacked a highly guarded army camp in an Indian Army brigade headquarters in Uri. The terrorist attack resulted in the killing of 19 Indian soldiers. Indians claimed that “the Uri attack was a carefully planned terrorist attack that saw Pakistani handlers exploiting a fleeting opportunity to inflict maximum casualties on Indian troops.”

Unlike during earlier crises, this time Indian government explicitly expressed its resolve and intent to inflict punitive surgical strikes to send a very clear strong message to Pakistan. In this regard, Indian government officials stated that India would pursue a “calibrated surgical strikes against terrorist launching pads across the Line of Control (LOC) and a diplomatic campaign to isolate Pakistan within South Asia, both of which were premised on the wide ranging international condemnation of the Uri attack.”

Indian Prime Minister Narendra Modi said those behind the attack will not go unpunished. Ram Madhav, general secretary of Modi’s Bhartiya Janata Party (BJP), said that “we feel that the time for strategic restraint is over. India needs to tackle this menace with a firm hand and we need to take proactive measures.”

Nuclear Escalation Control in South Asia

The devastating nature of nuclear weapons and their salience in international political arena demands a sensible nuclear stewardship that should aim at avoidance of crises between nuclear adversaries. If for some reasons a crisis erupts then such responsible nuclear stewardship is essentially helpful in mitigating the chances of nuclear escalation, and providing a mechanism for negotiation to manage or resolve the crisis.

Though, nuclear armed India and Pakistan have taken a number of unilateral measures to show the world their respective ‘responsible’ nuclear stewardship. Nonetheless, it is unfortunate that they have dangerously insufficient cooperative mechanisms – military or nuclear related Confidence Building Measures (CBMs) and nuclear risk reduction measures – to resolve any nuclear crisis. Many believe that past nuclear crises were not resolved rather they were managed.

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307 Ibid.
308 Shivam Vij, “Uri attack: Narendra Modi’s aggressive stand on Pakistan might make India more vulnerable to terror”, *Quartz India*, (September 18, 2016).
309 Quoted in Ibid.
because of perceived threat of nuclear escalation and international pressure – primarily from the US administration. Michael Krepon writes that:

“Military-related Confidence Building Measures (CBMs) and Nuclear Risk Reduction Measures (NRRMs) have been few and far between over the past 15 years. The governments of India and Pakistan assert that they have been responsible stewards of their nuclear arsenals, and they have taken steps to increase the security and command and control arrangements for their nuclear deterrents. However, their definition of responsible nuclear stewardship does not appear to include sustained, productive diplomatic engagement to reduce nuclear risks.”

It is worth-mentioning that before overt nuclearization, India and Pakistan institutionalized a few confidence-building measures to avoid the accidental and inadvertent war. A few of them are the following:

- “A hotline between the prime ministers, used episodically and reaffirmed in May 1997
- A hotline between the Directors General of Military Operations (DGMOs), first established following the 1971 War, re-established in December 1990, and reaffirmed in the 1999 Lahore Memorandum of Understanding
- The 1991 Agreement on Advance Notice on Military Exercises, Manoeuvres and troop movements
- The 1991 Agreement on Prevention of Air Space Violations and for Permitting Over Flights and Landings by Military Aircraft.
- In December 1988, for example, both sides agreed not to attack each other’s nuclear facilities. The agreement on non-attack of each other’s nuclear installations was ratified in 1991 on the condition that the two exchange an updated list of nuclear sites in their respective states on January 1 every year.”

Undeniably, in the post overt nuclear era, both the states have failed to achieve concrete measures to manage any towering nuclear crisis bilaterally. The notable nuclear Confidence Building Measures (CBMs) are few and there is big question mark on their effectiveness to thwart any impending nuclear crisis. Interestingly, Lahore MoU was seen as a big success as it contained a complete roadmap and a comprehensive plan of engagement for nuclear Confidence Building Measures (CBMs). Sadly, it was soon jeopardized by Kargil conflict. Lahore MoU outlined following points for India-Pakistan engagements:

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312 Ibid.
\begin{itemize}
\item “shall engage in bilateral consultations on security concepts and nuclear doctrines, with a view to developing measures for confidence building in the nuclear and conventional fields, aimed at avoidance of conflict; 
\item undertake to provide each other with advance notification in respect of ballistic missile flight tests, and shall conclude a bilateral agreement in this regard; 
\item are fully committed to undertaking national measures reducing the risks of accidental or unauthorized use of nuclear weapons under their respective control; 
\item undertake to notify each other immediately in the event of any accidental, unauthorized, or unexplained nuclear incident that could create the risk of a fallout with adverse consequences for both sides, or an outbreak of a nuclear war between the two countries; adopt measures aimed at diminishing the possibility of such actions, or such incidents being misinterpreted by the other; 
\item shall identify/establish the appropriate communication mechanism for notification of nuclear incidents; 
\item shall continue to abide by their respective unilateral moratorium on conducting further nuclear test explosions unless either side, in exercise of its national sovereignty decides that extraordinary events have jeopardized its supreme interests; 
\item shall conclude an agreement on prevention of incidents at sea in order to ensure safety of navigation by naval vessels, and aircraft belonging to the two sides; 
\item shall periodically review the implementation of existing Confidence Building Measures (CBMs) and where necessary, set up appropriate consultative mechanisms to monitor and ensure effective implementation of these Confidence Building Measures (CBMs); 
\item shall undertake a review of the existing communication links (e.g., between the respective Directors-General, Military Operations) with a view to upgrading and improving these links, and to provide for fail-safe and secure communications; and 
\item shall engage in bilateral consultations on security, disarmament, and nonproliferation issues within the context of negotiations on these issues in multilateral fora.”
\end{itemize}

Once the dust of Kargil conflict settled, few elements of Lahore MoU were implemented. Overall, there are some success stories to conclude agreements aimed at reducing the chances of nuclear confrontation that may result because of some misperception or miscalculation. The pertinent agreements include:

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• “Formal ceasefire between India and Pakistan along the International Border (IB), Line of Control (LOC) and the Actual Ground Position Line (AGPL) in Jammu and Kashmir began at midnight of 25 November 2003.

• Biannual meetings between Indian Border Security Forces and Pakistani Rangers – has been in effect since 2004

• Agreement on Advance Notification of Ballistic Missile Tests is in effect since 2005. Under this agreement both the states notify each other 72 hours in advance before testing any ballistic missiles within a 40km radius of the International Border and the Line of Control (LOC).

• Establishment of a Communication Link between Pakistan Maritime Security Agency and Indian Coast Guard came into effect in 2005. It was aimed to have an early exchange of information regarding fishermen detained into each other’s waters.”314

• “Agreement on Reducing the Risk from Accidents Relating to Nuclear Weapons, signed in 2007, extended for another five years in 2012. And again extended for a period of five years in February 2017.”315

Keeping in view India-Pakistan entrenched animosity and historical mistrust, the possibility of nuclear crisis – sooner or later – could be a fact hard to refute. Given the nuclear escalation measures in place, there is an intense skepticism that these would be sufficient to prevent, manage or resolve any nuclear crisis. Mr. Jaspal pointed out that:  

“In both states the adversary is painted as black as possible, an attitude that has overshadowed the confidence building measures (CBMs) that New Delhi and Islamabad have periodically initiated. Consequently, the risk of conventional and nuclear war is an overriding peril, nuclear related risks remain high, and nuclear deterrence continues to be a central concept in both Indian and Pakistani strategic postures. This increases the risk of threat or actual use of military force in a crisis between India and Pakistan.”316

Admittedly, India and Pakistan are continuously developing new military/nuclear technologies and revisiting respective nuclear doctrines. In fact, such trends are outpacing nuclear Confidence Building Measures (CBMs) and nuclear risk reduction efforts in South Asia which seems very perilous for the region. Michael Krepon argues that:

314 Ibid.
“The few CBMs and NRRMs that have been reached since 1998 have not begun to serve as a stabilizing offset to technological and doctrinal developments. No other states possessing nuclear weapons have flight-tested nearly as many types of nuclear weapon delivery systems since 1998 as Pakistan and India. Nuclear risk reduction agreements appear paltry by comparison.” 317

The current state of affairs in the realm of nuclear escalation control arrangement/agreements in South Asia demands a resolute and continuous diplomatic work. There is an urgent need to conclude several new and effective nuclear Confidence Building Measures (CBMs) and nuclear risk reduction mechanisms.

Conclusion
Nuclear deterrence stability in South Asia is an increasingly difficult and complex undertaking to analyse and debate. With varying degree and magnitude, the unique geopolitical and geostrategic dynamics in the region very seriously challenge Cold War nuclear deterrence model. Importantly, the region is going through a most critical phase of its history where non-state militant organizations have practically undermined the concept of stable modern nation-state system. Both hard and circumstantial evidence suggest that both nuclear rivals pitch non-state actors, through sub-conventional warfare, against each other. This has resulted in nuclear deterrence stability-instability paradox fraught with frequent bilateral crises which could have escalated to nuclear exchange. Perhaps, classification of South Asia as the most dangerous place in the world could be a bit of exaggeration. Nevertheless, the history of both states relations reveals that the most immediate threat is the role of non-state actors that they could play in instigating major crises with escalatory potential between India and Pakistan.

Unfortunately, doctrinal and technological developments by India and Pakistan have already offset the existing Confidence Building Measures (CBMs) and nuclear risk reduction measures (NRRMs). So, under the current state of affairs in the realm of nuclear escalation control arrangement/agreements between the two states demands a resolute and continuous diplomatic work. There is an urgent need to conclude several new and effective nuclear Confidence Building Measures (CBMs) and nuclear risk reduction mechanisms. Hence, if current uncertainties continue to prevail on India-Pakistan strategic landscape, there is a

probability that the non-state actors terrorist act in either state may escalate the tension and lead to nuclear crisis in South Asia.
CHAPTER-6

Non-State Actors and Probability of India-Pakistan Nuclear Escalation

Introduction
The preceding chapter thoroughly discussed how and why India and Pakistan are using proxy strategy to fulfill their perceived national security objectives. The tools to use such an extremely treacherous and dangerous strategy are non-state actors. Both the states hurl allegations on each other of subverting and sabotaging internal security by injecting agents of violence in the region. The unending blame-game is continued only to exacerbate the worsening bilateral relationship. In this tense and precarious bilateral environment, the nuclear deterrence stability in the region suffers. Given this fact, the international community explicitly expresses its concerns and many Western scholars and officials believe that South Asia is the most dangerous place on the earth. As explained in earlier chapters, nuclear deterrence stability rests on the assumption that nuclear adversaries have full control over their nuclear arsenals and they totally understand that war is not the option. So, they uphold prevention of conflict that can escalate, intentionally or unintentionally. With regards to India-Pakistan nuclear dyad, the most immediate threat to nuclear deterrence stability, according to Indian and Western perspectives, is that a spectacular terrorist attack on India could prompt a major nuclear crisis between both the nuclear rivals. Such a crisis could easily spiral out of control ultimately leading to nuclear exchange in South Asia.

Admittedly, the likelihood of another nuclear crisis exists between both the states as long as outstanding bilateral disputes are not resolved. However, the chances that such a crisis would result in a nuclear cataclysmic situation is debatable. In this context, this chapter critically examines the prospects of non-state actors causing another nuclear crisis in South which could undermine nuclear stability between both the states. Different perspectives that include Western, Indian and Pakistani would be discussed through an analytical framework.

Non-State Actors and Nuclear Escalation: Western Perspective
Generally, it is believed by many Pakistanis and Indians that the prospect of another war between India and Pakistan is far more unlikely as both the adversaries perceive that a conventional war could cause nuclear exchange which would be a kind of mutual suicide.
Necessarily, this perceptual threat of mutual annihilation erects nuclear deterrence stability between the two states. However, Western perspective on nuclear deterrence in South Asia succinctly rejects this so-called palatable simple narrative and come up with a variety of analytical conclusions. Few observers believe that India and Pakistan might come to disastrous dispensation akin to past crises. Such a situation would be an incredible challenge to nuclear deterrence stability.

Western perspective asserts that the existence of non-state actor militant organizations in the region would cause a nuclear crisis, sooner or later, that may result in inter-state war to the detriment of nuclear deterrence stability. Many observers note that Pakistan’s control over non-state proxy militant outfits has weakened to an extent that it might be very difficult to stop non-state actors – purportedly having safe sanctuaries on its territory – from repeating Mumbai like terrorist event. Gorge Perkovich contradicts the point that Pakistan is a state with ‘unitary rational model’ of foreign policy decision making. He believes that Pakistan as a state has lost ‘unitoriness’ in the backdrop of ever expanding influence of non-state actors in its society. Regarding nuclear deterrence stability and ‘unitary rational model, he argues that:

“Nevertheless, when it comes to functions as portentous and centrally controlled as initiating and managing warfare between nuclear-armed states, it is generally assumed that a tight, coherent line of authority operates approximately in ways consistent with the unitary model. If a state is not functioning as a unitary actor, or claims not to be when it is convenient, or is not perceived to be by those who seek to deter it, the implications for deterrence stability are profound.”

In this context, he raises serious observations on Pakistan’s internal security dynamics. According to him Pakistan has the unity problem of rationality more than any other nuclear weapons state. It has perceived the value of using “irregular” forces to wrestle with Kashmir dispute right from 1947 – ostensibly claiming that it has no control over such forces. In 1971, Pakistan also used such “irregular” forces to suppress Bengalis. In 1980s, Pakistan and the US aided by Saudi Arabia launched the so-called Jihad through “freedom fighters” against Soviets in Afghanistan. The “irregular” forces flushed out the red army in late 1980s. After

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318 Theories of nuclear deterrence rely on the assumption that nuclear competitors are “unitary rational actors”.
that the Pakistan army and intelligence agencies started using these forces as strategic weapons against India in Kashmir. Gorge Perkovich writes that:

“Pakistan nurtured and abetted the growth of jihadi organizations to carry on the struggle with India. Over time, these groups proliferated. There is room to debate the degree to which Pakistani authorities controlled the growth and operations of these groups, but through the present era, Pakistani authorities have not stifled them decisively.”

It is in this strategic ambiance; many Western analysts present many different scenarios of nuclear escalation in South Asia. Gorge Perkovich expounds that:

“...while India could perceive that the terrorist attacks it attributes to Pakistan signal Pakistani aggressiveness, Pakistani leaders (and the public) could perceive the initial terrorist attacks as a reflection that the Pakistani state is merely unable to stop aggrieved citizens from compelling India to make political accommodations, in Kashmir or more broadly. Indian leaders then face a highly unstable dilemma. They could act as if the initial violence reflects the intentions of Pakistan’s chain of command and send countervailing signals of retaliatory action according to normal models of deterrence, in which greater credibility and righteousness tend to reside with the defender. But if Pakistani leaders believe or claim that the perpetrators were not carrying out state policies, and India does escalate, Pakistani leaders will feel that India is the aggressor, significantly changing the dynamics of crisis and deterrence stability. “Normal” models of deterrence do not hold in such a situation.”

So, most of the Western perspective on nuclear deterrence in South Asia challenges the argument that normal model of nuclear deterrence based on Cold War great power rivalry fits into India-Pakistan strategic environment as well. Essentially, one needs to examine carefully the question that what and how do nuclear weapons deter? The record seems clear that they deterred US-USSR war because of the threat of escalation that could have resulted in unacceptable damage. But since nuclear deterrence is primarily a product of the collective psychology of state leaders, there is always a fear that vulnerabilities might be exploited in ways that threaten the existence of the state. This brought forth concepts like missile gaps, and so forth – which tended to drive ever greater arsenal requirements and reinforce reliance on nuclear deterrence to other forms of coercion. This is what South Asia is witnessing today, where both India and Pakistan are exploring the limits of conflict below the threshold of major war while at the same time investing in capabilities and thinking through first strike

320 Ibid. P.26-27.
321 Ibid.
322 Ibid. P.22.
options for damage limitation. The result – if the Cold War experience applies – could be deployment of nuclear weapons on alert, which then places extreme pressure on command and control systems. In this context, escalation pressures given the advantage of first use also rise. Today, it seems less plausible that a security crisis or even confined militarized dispute stemming from a terrorist attack would escalate to nuclear use. But in the future, it becomes a lot less certain, particularly when Pakistan might be concerned about Indian counterforce pre-emption. Granted, these are far-fetched, but the probability is not zero. And that doesn’t even entice accidents or other potential unintended catalysts. Toby Dalton propounds such views when he says during an interview with the author that: “I would challenge the premise that there exists today stable nuclear deterrence in South Asia. It is impossible to prove that nuclear deterrence has worked or not worked. Kargil is a failure of nuclear deterrence or a success, depending on one’s perspective. I would submit that the exploration of space below the nuclear threshold, and Pakistan’s effort to narrow the space for limited conflict, indicates ripeness for deterrence failure. The lower the level of conflict Pakistan seeks to deter with nuclear weapons, the higher the probability of failure on account of lack of credibility.”

Arguably, the non-linear nuclear deterrence equation between India and Pakistan is one of the biggest concerns for international community. The recurrent military crises and convenient use of sub-conventional warfare by both India and Pakistan has made the future highly unpredictable. During an interview with the author, Stephen P. Cohen notes that “there is a big gap between possible/probable and something really happening. Many important events in the past were not predicted in South Asia, even though the facts were all there. There is plenty of room for a mix-up, both in India and Pakistan. They are flying without wings, and a perceptual disaster could overtake them. I am not of the pessimist school, but understand that errors and miscalculation are part of the drill. A mistake could be very costly to India (or Pakistan). Further, the Peoples Republic of China (and the United States of America) are involved, and have their own interests and perceptions.”

Similarly, Michael Krepon argues that:

“Despite or perhaps because of the inconclusive resolution of crises, some in Pakistan and India continue to believe that gains can be secured below the nuclear threshold. How might advantage be gained when the presence of nuclear weapons militates against decisive end

323 Author’s Interview with Toby Dalton, Co-director of the Nuclear Policy Program at the Carnegie Endowment, Washington DC., (June 12, 2014).
324 Author’s email interview with Stephen P. Cohen, Senior Fellow at Foreign Policy Studies and the India Initiative, Brookings, Washington DC., (March 29, 2017).
games? Pakistan has previously answered this question by resorting to unconventional methods. If Indian press reports are to be believed, New Delhi is now contemplating the answer of limited war. Each answer reinforces the other, and both lead to dead ends. If the means chosen to pursue advantage in the next Indo-Pakistan crisis show signs of success, they are likely to prompt escalation, and escalation might not be easily controlled. If the primary alternative to an ambiguous outcome in the next crisis is a loss of face or a loss of territory, the prospective loser will seek to change the outcome."\(^{325}\)

Under this perceived or perhaps real messy and murky nuclear template between India and Pakistan, many strategic commentators from the West discuss different escalation pathways in case non-state actors unleash another terrorist attack in India. Shaun Gregory uses a framework, during an interview with the author, to analyse escalation pathways between India and Pakistan. He is of the view that:

- “Non-state violent actors might attack a state directly in an attack of sufficient gravity to prompt a state-level response. The attack on the Indian parliament being an obvious example and perhaps Mumbai too.
- Non-state violent actors conduct a less serious attack in scale but it is still serious enough to engage state militaries in military action with a potential to escalate to wider conventional conflict. Perhaps Pathankot and Uri have this character.
- Non-state violent actors conduct an action for which there is direct evidence of state backing for the Non-state violent actors. The Haqqani attack on the Indian consulate might be an example.
- Non-state violent actors access nuclear weapons material (dirty bomb) or chemical/biological weapons and cause casualties on a scale large enough to provoke conventional conflict with nuclear war risk.
- Non-state violent actors access a nuclear weapon and seek to exploit in some way to provoke tensions, conflict, and nuclear war risk between states."\(^{326}\)

At the same time Shaun Gregory acknowledges that “it should be evident from the history that safeguards in India and Pakistan, crisis management, and deterrence make most of above mentioned pathways unlikely as causes of nuclear war, but not wholly infeasible.”\(^{327}\) So,

\(^{325}\) Michael Krepon, “From Confrontation to Cooperation”, Henry L. Stimson Center, (November 17, 2004). Available at [https://www.stimson.org/content/confrontation-cooperation](https://www.stimson.org/content/confrontation-cooperation)

\(^{326}\) Author’s email interview with Professor Dr. Shaun Gregory, Director at Durham Global Security Institute, University of Durham, Durham DH1 3TU, UK, (March 26, 2017).

\(^{327}\) Ibid.
Western perspective is based on low-probability but high consequence events framework of analysis.

The probability of non-state actors – who are used by India and Pakistan to wage proxy war – dragging both the states into quagmire of war is low but the consequences of such probability could be total annihilation of these states. Matthew Bunn in an interview alludes that “we have already seen large terrorist attacks in India, such as the attack on Mumbai, provoking crises between India and Pakistan. India has left it fuzzy exactly what level of terrorist attack might provoke an Indian conventional incursion into Pakistan. Pakistan has left it fuzzy exactly what level of Indian attack might provoke a tactical use of nuclear weapons. India has left it fuzzy exactly what level of Pakistani nuclear use might lead India to respond with a strategic use of nuclear weapons. We have seen in crises between the United States and the Soviet Union that just as there is a “fog of war” in which unexpected things happen, people misinterpret what is happening, and commanders are not fully in control of what happens, the same is true in major crises in which military forces are interacting. The potential for inadvertent escalation strikes me as clearly not zero, and likely high enough, given the very large potential consequences, to take steps to try to reduce the chances further.”

Rodney Jones also resonates similar views that “the probabilities that decisions will be made to escalate to higher rungs of Cold Start type operations could be expected to become very high in the wake of high casualty terrorist attacks or amidst the outbreak of any level of conventional war.” Tom Sour in an interview with the author points out that the “non-state actors cannot be deterred with nuclear weapons (because they have no territory and cannot be targeted, and because Muslim terrorists are not afraid to die); as a result, one can predict that attacks from extremist non-state actors from Pakistan against India will continue. In the past, the US tried to convince the Indian government not to react (in order to contain the crisis). If I am not wrong, the Indian government did react last Autumn after similar attacks. As a result, there is indeed a chance that non-state actors may cause a crisis between India and Pakistan that may challenge deterrence stability.”

328 Author’s email interview with Professor Dr. Matthew Bunn, Professor at the Harvard Kennedy School at Harvard University, (March 23, 2017).
330 Author’s email interview with Professor Dr. Tom Sour, Associate Professor in International Politics Department of Politics, Antwerp University, (December 12, 2016).
The geographical proximity of India and Pakistan makes nuclear rivalry between the two more problematic and could facilitate non-state actors to exploit this reality in their favour. For instance, a terrorist attack by non-state actors in India could easily create misperceptions and miscalculations between the two states – that could lead to disastrous consequences in the region. India proclaims that Pakistan exports violence in India through non-state militant proxy strategy. But, Pakistan firmly denies such proclamation. If a Mumbai like terrorist attack happens again, certainly India would consider Pakistan as an aggressor and would likely to respond by employing Cold Start doctrine or proactive operations strategy. On the other hand, Pakistani government could perceive that they do not have any role in the attack and maintains that it is the work of Kashmiri ‘freedom fighters’ who are waging legitimate struggle against Indian occupation of the valley. Such a situation could create a very serious dilemma for both the states. If India escalates the crisis and threatens Pakistan with punitive strikes, the latter would consider the former as an aggressor. Understandably, this would create great challenge for crisis and nuclear deterrence stability as the normal model of nuclear deterrence theory does not fit into such conditions.\(^{331}\)

Furthermore, if a crisis erupts between both the states because of non-state actors, India’s Cold Start doctrine or proactive strategy and Pakistan’s tactical nuclear weapons could pose a very grave danger to nuclear deterrence stability. In the already combustible strategic environment, India’s Cold Start and Pakistan’s tactical nuclear weapons under first use policy is a perfect recipe for disaster. Labelling them as ‘doomsday doctrines’ Joseph Ciricione argues that because of numerous factors which are apparently out of control of decision makers who would initiate the conflict, the limited war in subcontinent poses a real risk of escalation. The bitter history of misperceptions, blame-game, inefficient intelligence, and India’s stubborn national security decision making system hints that the Cold Start could be an increasingly precarious and dangerous undertaking.\(^{332}\) Gorge Perkovich and Toby Dalton while commenting on Cold Start/Proactive strategy in their co-authored book write that:

> An army-centric strategy to put Indian boots on Pakistani ground bumps against the central effect of nuclear weapons…. An Indian strategy that centers on moving troops and armour into Pakistani territory invites a relatively credible threat of Pakistani nuclear retaliation against those forces. This is particularly true if those troops are crossing over the international

\(^{331}\) George Perkovich, “The Non-Unitary Model and Deterrence Stability in South Asia”. PP.22.

border into Punjab or Sindh which is more likely to be interpreted in Pakistan as anything but a limited attack.”

It is argued that Pakistan’s tactical nuclear weapons coupled with nuclear first use policy is aimed at countering Indian conventional superiority comparable to Cold War North Atlantic Treaty Organization (NATO) strategy against USSR in Europe. As noticed by Zachary Keck when he quotes Feroz Hassan Khan that “Pakistani military leaders explicitly based their nuclear doctrine on NATO’s Cold War strategy.” However, he elaborates by referring the viewpoint of Vipin Narang that there is a big difference between Pakistan’s and the North Atlantic Treaty Organization’s (NATO) strategies as Pakistan uses its nuclear prowess as a shield to support countless terrorist attacks inside India. In this context, Zachary Keck accentuates that:

“It is not hard to imagine a scenario where the two sides stumble into a nuclear war that neither side wants. Perhaps the most plausible scenario would start with a Mumbai style attack that Indian leaders decide they must respond to. In hopes of keeping the conflict limited to conventional weapons, Delhi might authorize limited punitive raids inside Pakistan, perhaps targeting some of the terrorist camps near the border. These attacks might be misinterpreted by Pakistani leaders, or else unintentionally cross Islamabad’s nuclear thresholds. In an attempt to deescalate by escalating, or else to halt what they believe is an Indian invasion, Pakistani leaders could use tactical nuclear weapons against the Indian troops inside Pakistan.”

Once Pakistan used its tactical nuclear weapons, the escalatory ladder could easily get out of control to the level of strategic level of nuclear exchange.

Non-State Actors and Nuclear Escalation: Indian Perspective

Interestingly, Indian perspective leaves onus of responsibility for fragile nuclear deterrence stability in the region purely on Pakistan. India forcefully asserts that Pakistan based anti-

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335 Ibid.
336 Ibid.
India Jihadi forces, who are being used as proxy by the Pakistani authorities, are the biggest factor in destabilizing nuclear deterrence in the region. Pakistan falsely believes that its policy of sub-conventional warfare through non-state actors enhances deterrence against India including stopping the latter from conventional response. It appears to be Pakistani nuclear strategy to use them to generate instability since that is then used to ratchet up nuclear risks and deter India, and engage the international community to restrain India, from responding to proxy provocations. In this way, India considers Pakistan an export factory of terrorism into neighboring states. India’s foreign minister Sushma Swaraj during 72nd session of United Nations Generally Assembly (UNGA) in an acerbic way accused Pakistan that “Islamabad had given the world terrorists while India was producing top notch doctors and engineers.”

In an interview with the author Manpreet Sethi expresses serious concerns over Pakistan’s use of non-state actors to bleed India, especially in Kashmir. She is of the view that “the use of non-state actors by Pakistan makes nuclear deterrence stability more challenging between India and Pakistan. Cold War experience tells us that a nuclear dyad must strive for stability to rule out possibility of inadvertent or mistaken nuclear escalation. But Pakistan’s strategy of using these actors heightens such risks for the region and beyond. In fact, this belief that Pakistan can sustain ‘managed instability’ for as long as it desires is a dangerous proposition by itself. The situation could quickly spiral out of its control if the non-state actors overstep their mandate deliberately or accidentally, thereby leading to deterrence breakdown. The consequences of such an eventuality should not be lost on Pakistan. Seen from this angle, the presence of non-state actors enabled by a hospitable environment created in Pakistan adversely impacts nuclear deterrence in South Asia and even generates security risks at the international level.”

Mohan Malik while underscoring reasons of nuclear deterrence instability in the context of non-state actors between India and Pakistan points out that:

- Pakistan’s continuous use of sub-conventional warfare against India while perceiving that its nuclear weapons would deter the latter from any retaliatory strikes is highly problematic, especially in the post 9/11 era. India now believes that it has every right to emulate US preemptive strategy against the anti-India militant infrastructure inside Pakistan. But, Pakistan’s military planners seem to be convinced that India will not

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338 Author’s email interview with Dr. Manpreet Sethi, Senior Fellow at Centre for Air Power Studies, New Delhi, (December 12, 2016).
resort to surgical strikes. This could lead to misperceptions and miscalculations resulting in a boiling situation where nuclear catastrophe could be the destiny of both the states.

- As the internal security environment of Pakistan is dangerously chaotic where anti-India *Jihadi* elements have backing from inside military. It could be possible that in an increasingly deteriorating situation, sympathizers of militants from Pakistan’s military hand over one or two nukes, perhaps tactical nuclear weapons, and then they threaten to nuke Indian capital city or Mumbai. This could lead to a war between both the states.

- Non-state actors may have vested interested in trapping India and Pakistan in a major conflict. For that, they may secure little radioactive material from low-level waste from a power plant to construct a ‘dirty bomb’ and then detonate it in Mumbai or New Delhi causing some casualties. This act could create deep psychological impact, perhaps lots of fear and panic among the common public and Indian government alike. In such a situation a crisis could erupt which may lead a war between the two antagonists.  

Sameer Patil adds another very important reason that can undermine nuclear deterrence stability between the two states. In an interview with the author he argues that “so far, studies have focused on terrorist attacks as leading to nuclear escalation between India and Pakistan. However, such analyses seem deficient since cyber-attacks have the most potential of becoming a part of the ‘sub-conventional war’ or ‘low-intensity conflict’ in case of South Asia. Anti-India terrorist groups have kept up with the technological advancements to augment their technical capabilities. If opportunities are there, it is only a matter of time that groups like the Lashkar-e-Taiba (LeT) may turn their attention to acquiring cyber capabilities. Getting access to nuclear material is steep, but getting hold of a malware is easy especially with the thriving online black markets. Nuclear deterrence theories on South Asia have not paid enough attention to the role of the cyber-attack that India may face from Pakistan based terrorist groups in triggering a nuclear exchange.”

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With regards to Mohan Malik’s last point, Reshmi Kazi, during an interview with the author, explains that the origin of such nuclear or radiological material could be traced back using nuclear forensics. “India strictly adheres to a no-first-use policy, which professes assured retaliation against any state that has inflicted a nuclear misadventure on India. The complexity arises as this policy does not apply against non-state actors. The situation becomes a catch-22 condition. However, to get out of this dilemma, it is extremely important to provide the highest standards of physical protection measures and secure all nuclear assets in the region. Any use of nuclear weapons or materials by terrorists housed in safe havens of Pakistan can be traced back with the application of nuclear forensics. Pakistan will not only have to be liable to a whole lot of explanations but also consider the responses India might have in such a scenario which I believe will not be pacifying.”

A careful analysis of Indian domestic political dispensation reveals that the current Bharatiya Janata Party (BJP) government seems to be very aggressive and repeatedly accused Pakistan of cross border terrorism. Even in its 2014 election manifesto, the Bharatiya Janata Party (BJP) rhetorically announced that if they come to power corridors, there would be ‘zero tolerance’ on state sponsored terrorism. They heavily criticized Congress party for not showing courage to respond Pakistan in a way that could force the latter to shed out its policy of promoting terrorism in India. It appears that after coming to power, Prime Minister Narendra Modi has been very active in isolating Pakistan on the issue of terrorism. Many times, he stated that Pakistan is the epicenter of terrorism. While discussing escalation pathways to an unstable future in South Asia Manoj Joshi writes that:

“Another mass casualty attack in India that can be traced back to Pakistan is more likely to force the government’s hand, especially a government led by a self-professed nationalist party. So far, the Indian responses have been army centric, moving up the escalation ladder from a possible commando raid on a camp in Pakistan, a Cross LoC operation, or a full scale attack on Pakistan. India does have other options, however, which include strikes by aircraft or cruise missiles. New systems, such as BrahMos supersonic cruise missiles or the KH-59 series of guided aerial bombs, can deliver aerial strikes on targets in Pakistan from Indian territory or from the high seas. These have been gamed and are no longer in the realm of the theoretical. In 2002, India used its Mirage fighter jets and laser designated bombs to attack a

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341 Author’s email interview with Dr. Reshmi Kazi, Associate Professor, Nelson Mandela Centre for Peace and Conflict Resolution, Jamia Millia Islamia University, New Delhi, (December 12, 2016).
Pakistani squad attempting to capture an Indian observation post on the LoC. The location of the post was such that a ground assault was deemed too costly.

Empirical evidence suggests that in recent years, there has been visible increase in voices who want a hawkish approach towards terrorism issue in India allegedly perpetrated by Pakistan. Such voices advocate military solution for the problem that Indian army should launch surgical strikes across the Line of Control (LOC) in the event a major terrorist attack occurs in India. In fact, many in India no longer subscribe the argument that these are non-state actors. In this regard, Sameer Patil in an interview with the author emphasizes that “the perception within India, at present, however is not to view these terrorist groups as ‘merely non-state actors’ but as ‘non-state actors propped up with a complicity of the Pakistani state’. Therefore, any response to the attack carried out by these groups will be guided by that perception. While India has a declared NFU policy, there is a high possibility that any response from India to the non-state actors’ attacks will invite a conventional response. Depending on what sort of response comes from Pakistan, this then might climb the nuclear ladder. This is how non-state actors can impact deterrence stability.”

Many Indians argue that India showed enormous strategic restraint despite Pakistan’s provocations when it backed terrorist attacks on Indian parliament in 2001 and then Mumbai in 2008. Gurmeet Kanwal points out that “by not taking the fight across the LoC into PoK, India avoided escalation to full-fledged war with Pakistan with nuclear undertones. While this strategy succeeded in ensuring uninterrupted economic growth, it failed to create any disincentives for Pakistan’s Deep State to force it to stop its war for Kashmir through asymmetric means.”

However, it is important to note that the incumbent Bharatiya Janata Party (BJP) government has taken a bold step by launching surgical strikes across the Line of Control (LOC) in the wake of Uri terrorist event. Though, Pakistan has out rightly rejected such claims of surgical strikes, Indians believe that the strikes have achieved many goals. First, India has taken revenge for terrorist attack on Uri army camp. Second, it has sent very strong message that India’s threshold of tolerance has been crossed. Third, India signaled that self-imposed restrictions in its counter insurgency operations will no longer be observed and that terrorists will be hunted down wherever they are found. Forth, India has explicitly warned Pakistan

343 Ibid. P.56.
that it should expect more lethal vigorous response for any act of terrorism that its army and agencies export to Indian soil. 346

On the other hand, Pakistan military quickly rubbished aside Indian claims of surgical strikes. A military statement said that “the notion of surgical strike linked to alleged terrorists’ bases is an illusion being deliberately generated by Indians to create false effects.” 347 The military statement further said that “this quest by the Indian establishment to create media hype by rebranding cross border fire as a surgical strike is fabrication of the truth. Pakistan has made it clear that if there is a surgical strike on Pakistani soil, the same will be strongly responded.” 348 So, Pakistan has categorically communicated to India after Uri incident that any misadventure by India would get a befitting response. Suppose, another Uri like terrorist incident happens and India launches surgical strikes against the alleged terrorist sanctuaries on Pakistani side of the Line of Control (LOC). And, Pakistan considers such surgical strikes as blatant intolerable violation of its sovereignty and an act of war. In such circumstances, Pakistani military planners warrant a military response by initiating a limited war. No one knows that such limited war would remain limited, it could easily escalate to full fledge conventional war and then to strategic level where nuclear exchange may occur. In this context, it is important to mention India’s air force chief statement that he gave during a press conference in response to a question on the possibility of using tactical nuclear weapons by Pakistan against India. He said that “… what happens when the enemy decides to use nuclear weapons on us. As far as the IAF is concerned, it has the ability to locate, fix and strike and that is not only for tactical nuclear weapons but also for other targets across the border.” 349 While declaring this statement of Indian air force chief as a highly irresponsible and extremely provocative Pakistan’s foreign minister stated during a talk at United States Institute of Peace (USIP) that “… the Indian air chief said we will hit, through another surgical strike, Pakistan’s nuclear installations. If that happens, nobody should expect restraint from us. That’s the most diplomatic language I can use.” 350

346 Ibid.
347 “Army rubbishes Indian ‘surgical strikes’ claim as two Pakistani soldiers killed at LoC”, The Dawn, (September 29, 2016).
348 Ibid.
There is another very delicate dimension of this issue which could be caused by misperception and miscalculation. It is possible that Indian decision makers might perceive that Pakistan’s aggressive nuclear posture is based on ‘bluff and bluster’ and it deliberately exacerbates the fear of nuclear escalation. But, in reality it would not seriously consider using nuclear weapons in case a limited war starts between the two states. In this context, Kargil war could be a glaring example. Such perceptions or misperceptions could be extremely puzzling as these would encourage Indian leaders to respond any terrorist attack originating from Pakistan with surgical strikes or initiating a limited war. Likewise, Pakistani decision makers might perceive Indian escalation to be very low and resultantly emboldening them to continue tolerating a certain level terrorist activity against India under the perceived protection of tactical nuclear weapons.\(^{351}\) While referring to such tedious situation Biber notes that:

“The fact that Pakistan feels India is out to destroy it, and the assertion by BJP leaders that Pakistan is determined to use its nuclear bomb against India ... as long as Pakistan will exist, India will be in danger. Pakistan should, therefore, be wiped off the map only makes matters worse, that one side may be prompted to attack pre-emptively to ensure its security. Indeed, perpetual dynamics could cause statesmen to see policies as safe when they actually were very dangerous or, in the final stages of deep conflict, to see war as inevitable and therefore to see striking first as the only way to limit destruction.” \(^{352}\)

Nevertheless, there are also some saner opinions in India who argue that both India and Pakistan are not foolish and naïve to engage in a nuclear war. In this regard, Sitakanta Mishra, during an interview with the author, resonates his views that the “non-state actors assume greater role between Indo-Pak bilateral relations for the fact that there is minimal direct interaction between the two countries. Act of terrorism is certainly the flash point of any future conflict between them but the assumption of escalation of a sub-conventional to conventional and subsequently to strategic level is far-fetched. Both countries understand fully the role of nuclear deterrence, and the repercussions of a nuclear war. Both countries cannot afford to initiate a nuclear exchange, let alone withstanding a nuclear holocaust.”\(^ {353}\) Similarly Rajesh Rajagopalan, in an interview with the author, cautiously notes that “I am not

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\(^{352}\) Ibid. P.68.

\(^{353}\) Author’s interview with Dr. Sitakanta Mishra, Assistant Professor of International Relations, Managing Editor, Liberal Studies Journal School of Liberal Studies (SLS), Pandit Deendayal Petroleum University (PDPU) Gandhinagar, Gujarat, (June 12, 2014).
overly concerned about the possibility of non-state actors acquiring nuclear weapons, including in Pakistan. This is a concern for both government of India and it is reflected in the opinions of a lot of analysts in New Delhi, but I happen not to be one of them. The reason is that since nuclear weapons are the crown jewels of any country, especially Pakistan, I expect that they will be guarded with extreme care. The fact that there are only a few, a couple of hundred at the most, also makes it easier to guard them. The Pak army has little interest in a nuclear war, though they would like to keep threatening one as a way of keeping India off-balance and preventing India from retaliating to terrorist attacks. But they have little interest in actually starting a nuclear war. This means that they will do their utmost to prevent non-state actors from stealing one of their nukes, because they know that if any non-state actors steal one of their nukes and use it on India, India’s response will be terrible. Nuclear forensics are sufficiently advanced that investigators will be able to trace where the fissile material for the weapon was sourced, which means that Pakistan cannot reliably exercise ‘plausible deniability’. There is of course a possibility that despite Pak army precautions, a weapon does get stolen. Even then, I am not clear what the purpose of using it will be, unless it is stolen by a group such as ISIS or al Qaeda, who have no discernible practical political goals. Groups, such as LeT or JeM or others that operate in J&K have political objectives, and these require the groups to be legitimate and credible. They would lose that if they attempted to acquire nukes. Still, given the consequence of a terrorist use of nukes, I don’t want to completely rule out the threat. I just don’t think it is very likely or credible, for reasons of both technical difficulties but equally because it will make no political sense.\(^{354}\) Reshmi Kazi, during an interview with the author, points out that “it can be assumed with a certain degree of confidence that India and Pakistan - both nuclear capable states will not initiate to destabilize the nuclear deterrence calculus in the region. Any situation of a nuclear war between India and Pakistan triggered by non-state actors would signal two things – failure of nuclear deterrence in the region and failure of the nuclear non-proliferation regime. It would also imply poor security of nuclear assets which makes them easily accessible to non-state actors for wrong purposes. There is a strong belief that terrorist organizations based in safe havens in Pakistan have close links with the Al Qaeda – have declared their intention to acquire weapons of mass destruction. However, while it can be ascertained that India and Pakistan will help maintain the nuclear deterrence, the picture takes a complicated turn with the involvement of the non-state actors. The terrorist groups operating in the region can be

\(^{354}\) Author’s interview with Dr. Rajesh Rajagopalan, Professor at Centre for International Politics, Organization and Disarmament, Jawaharlal Nehru University, New Delhi, (December 12, 2016).
expected to have little concern for the breakdown of nuclear deterrence in the region. For e.g. Syed Salahuddin, head of the terrorist group Hizbul Mujahideen, has threatened a nuclear war on India over the Kashmir issue.”\footnote{Author’s email interview with Dr. Reshmi Kazi, Associate Professor, Nelson Mandela Centre for Peace and Conflict Resolution, Jamia Millia Islamia University, New Delhi, (December 12, 2016).}

Then there are voices in India who advocate that India should very actively work to break the alleged links between Pakistan and sub-conventional forces. India needs to reassert the credibility of its nuclear deterrence by showing that it will have escalation dominance in the event a limited war starts – provoked by terrorist attack in India. For escalation dominance, India needs to create harmony between its nuclear force posture and counter-force capabilities. Toby Dalton and Gorge Perkovich point out that there are some Indians in policy, academics and media circles who unwaveringly support that India should augment credibility of its nuclear deterrence by developing tactical nuclear weapons. By doing so, they assert, India could avoid from Pakistan’s ‘nuclear blackmailing’. “Some Indian… strategists advocate India’s development of tactical nuclear weapons to counter Pakistan’s. This could give India sufficient perceived advantage in an escalating conflict to motivate Pakistan to stop cross-border terrorism.”\footnote{Toby Dalton and Gorge Perkovich, “India’s Nuclear Options and Escalation Dominance”, Carnegie Endowment for International Peace, (May 2016), PP.1-2.} However, there are so many complexities involved with this approach. While India would be contemplating limited nuclear war options for escalation dominance. Who would ensure that such limited nuclear war would remain limited and would not escalate to full fledge nuclear war between the two states.

**Non-State Actors and Nuclear Escalation: Pakistani Perspective**

Pakistani perspective on the assumption that the non-state actors may cause another crisis between India and Pakistan which could escalate to nuclear exchange is largely based on the narrative that Pakistan does not support any terrorist attack against India. It maintains that the Kashmir insurgency is purely home grown through which Kashmiris are fighting for freedom from Indian occupied forces. Though, Pakistan has been facing very grave internal security challenges from a syndicate of terrorist organizations and an increasingly instable Afghanistan in the post 9/11 period, but it has fought back with full resilience. Perhaps, now it can claim that it has solved the issue of internal security to a large extent by clamping down terrorist networks inside its territory especially in federally administered tribal areas (FATA).

The noticeable decline in terrorist incidents has been recognized internationally. For example,
Institute for Economics and Peace, an Australia based think tank, placed Pakistan at the fifth place on Global Terrorism Index in its 2017 report. It is important to note that in previous years’ reports, the institute placed Pakistan in top four countries of the world who were most affected by terrorism.\(^{357}\) Since, the nature of terrorism issue is transnational, it should be tackled by collective efforts in the region. At the same time, Pakistan upholds that till the time India does not give Kashmiris their right of self-determination and stops using Afghan soil against Pakistan, the issue will not be resolved. Indian policies in the region are the major cause of terrorism in South Asia. As Pakistan’s permanent representative at the United Nations (UN) Maleeha Lodhi stated that “India is the mother of terrorism in South Asia.”\(^{358}\) Reiterating Pakistan’s stance on Kashmir dispute she affirms that “Kashmir is not a part of India but the state has illegally been occupied by the country. She termed India’s refusal to implement the UN resolutions on Kashmir dispute a deception and aggression. The so-called largest democracy is the largest ‘hypocrisy’.”\(^{359}\) During an interview to the author Ikram Sehgal advocates that “when it comes to the menace of terrorism in India, mostly it is about Naxalites as former Indian Prime Minister stated that 70% of terrorism in India is because of Naxalites and only 17% is because of Islamist terrorist. Pakistan is a responsible nuclear weapons state. Iran and North Korea have been considered a threat by international community in terms of crossing the nuclear threshold to develop nuclear weapons. Pakistan even is not considered as a threat by international community. If India uses the pretext of terrorism and accuses Pakistan is backing terrorist attacks inside India. And subsequently it goes for so-called punitive strikes against Pakistan. It would be very dangerous for India as it has much to lose.”\(^{360}\)

Additionally, many in Pakistan believe that India, in recent times, has started waging sub-conventional warfare against Pakistan. Indian role in fueling and abetting insurgency in Pakistan’s impoverished province Baluchistan (discussed in earlier chapter) has its own risks of escalation and instability. It is commonly perceived in Pakistan that India’s nefarious designs primarily triggered dismemberment of Pakistan in 1971. In the words of Junaid Ahmad “the genesis of the creation of Bangladesh can be traced back to the feeling in the entire Indian leadership, be it the Indian National Congress or the Hindu rightist

\(^{359}\) Ibid.
\(^{360}\) Author’s interview with Ikram Sehgal, Managing Editor of Defence Journal Karachi and Chairman of Pathfinder Group, (December 5, 2017).
(communalist) parties that believed and/or still believe that the partition of British India would be a temporary and a short-lived event.”

Ardeshir Cowasjee quotes from Hamoodur Rahman’s judicious report of 1972 in his Op-Ed that:

“On the 30th of January 1971, the Indian authorities staged the hijacking of one of their planes to Lahore, and its subsequent destruction by the hijackers who have been found to be Indian agents as a result of a judicial inquiry held by a Judge of the Sind and Baluchistan High Court. This incident was seized upon by the Indian government to ban flights of Pakistan’s civil aircraft in order to increase difficulties and tensions between the two wings of Pakistan at a critical juncture in the political and constitutional negotiations between the Pakistan government and the leadership of the Awami League in East Pakistan.”

So, India has a history creating instability in Pakistan using special *modus operandi*. In this context, few retired Indian military officers have been suggesting Indian government that it should use sub-conventional warfare to weaken Pakistan. Lt Gen Prakash Katoch while arguing that Indian national security strategists should understand the vitality and effectiveness of sub-conventional warfare in modern times suggests that “establishing a credible deterrence to sub-conventional war needs to be accorded the highest priority by the government.”

To cite plausibility for such strategy he says that “in today’s world, one cannot guard one’s house without patrolling the streets, no matter what barricades are erected.”

While arguing that India’s posture at conventional, sub-conventional and nuclear levels has been based on deterrence by denial strategy Joy Mitra concludes that this strategy has completely failed to bring desired results at sub-conventional level. Pakistan has been successfully engaged in sub-conventional warfare against India as the latter has been unsuccessful in deterring the former at this ladder of conflict. He proposes that:

“It is advisable … for India to graduate from simple deterrence to a more proactive compellent stance where mutual violence and mutual hurt are leveraged to secure favorable outcomes. In effect such a strategy will seek to maintain a balance of terror and the limitation will come in the means employed, geographical scope of attacks, frequency and distinction between civilian and non-civilian targets. This tacit bargaining of violence can usher in a new

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364 Ibid.

dynamic normal of violence in the region that India can better control and keep within reasonable limits."\textsuperscript{366}

From a Pakistani perspective, India invariably takes all measures to weaken Pakistan internally. However, India’s alleged use of anti-Pakistan militants/insurgents such as Tehrik-e-Taliban Pakistan (TTP), Baluchistan Liberation Army (BLA) and Baluchistan Liberation Front (BLF) comes with many risks of escalation. For instance, suppose Tehrik-e-Taliban Pakistan (TTP) successfully unleashes a major terrorist attack on some central military place inside Pakistan – perhaps repeating General Headquarters (GHQ) Rawalpindi like terrorist attack. Subsequently, Pakistani investigators find that the attackers came from Afghanistan where they were trained by Indian intelligence agency RAW. Imagine, what would be Pakistan’s response – possibly tit for tat, it may use sub-conventional forces to bleed India. It is very likely that such a scenario would result in a crisis situation between both the states. And that crisis may escalate to major war, ultimately to the failure of nuclear deterrence between the two. Maqsudul Hasan Nuri argues in an interview with the author that “radicalization within armed forces, any spike in regional tensions, through non-state actors could unwittingly lead to India-Pakistan confrontation. Albeit India does not want to enter into any military confrontation and would bank upon internal hemorrhage and implosion of Pakistan any rash decision, failed intelligence, malfunction of the system, over-zealous commander or misjudgment could bring this stage. This could be from either side but more likely from an insecure and internally enfeebled state. In fact, the more Pakistan feels isolated, threatened and weakened internally the lower its threshold for use of weapons might be. Preemptive strike, wrong intelligence, judgement failure and malfunction could take place. Should a nuclear state start imploding and any attack by other side could easily trigger a conflict involving use of nuclear weapons. Global events are fueling Muslim militancy. The idea of Jerusalem as Israel’s future capital and re-location of US embassy has stirred a hornet’s nest in the already volatile Islamic world. This will further spike radicalization and provide grist to mills of militancy and radicalism in Pakistan."\textsuperscript{367} Similarly, during an interview with the author former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD) points out that “given the legacy of mistrust and suspicion between India and Pakistan, the non-state actors may have the

\textsuperscript{366} Ibid.
\textsuperscript{367} Author’s interview with Dr. Maqsudul Hasan Nuri, Ex-President Islamabad Policy Research Institute (IPRI), Islamabad, (December 10, 2017).
potential to whip up a crisis between the two through, for example, a terrorist incident, but three aspects merit attention in this situation: One, that while Pakistan’s nuclear security efforts are unmatched, whereas not much is known about how India ensures its nuclear security. Secondly, both Pakistan and India have used respective hotlines in crisis situations in the past, which can help build confidence by removing ambiguity and suspicion. Third, Pakistan has ratified the ‘Amended Convention of Physical Protection of Nuclear Materials’ with complete confidence, as our efforts in this field are consistent and irreversible. The weakest link in the chain however appears to be the Indian refusal to come to the table to enhance this confidence further.”

Irrefutably, Indian domestic radicalism with confrontational rhetoric and hate mongering against Pakistan could further heat up South Asian strategic environment. It is widely believed that radical ideology ‘Hindutva’ could be exploited by Hindu fanatic groups against Muslims. In this connection, one can discuss infamous anti-Muslim Gujrat riots which took place back in 2002. More than 1000 people, mostly Muslims, were brutally killed in those riots. The incumbent Indian Prime Minister, who is from right wing political party, is accused of fueling and conniving with Hindu radical groups for those riots in Gujrat. He was Chief Minister of Gujrat state at that time. Now, his dubious and ugly role in those rights have been proved by a senior Indian police officer’s statement in the Indian Supreme Court. The police officer said in his testimony that “... his position allowed him to come across large amounts of information and intelligence both before and during the violence, including the actions of senior administrative officials. Gujarat Chief Minister Narendra Modi deliberately allowed anti-Muslim riots in the state.” Currently, the same Chief Minister is India’s Prime Minister. Under his premiership, the wave of Hindu extremism is rapidly going upward, which is evident from many incidents. Under the pretext of ‘protecting mother cow’ many Hindu zealots have been attacking Muslims in recent times. Since, Prime Minister Narendra Modi came to power in 2015, dozens of Muslims have been lynched by Hindu extremists.

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368 Author’s interview with Air Cmndr ® Khalid Banuri, former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD), Rawalpindi, (December 16, 2017).

369 Hindutva, a term popularized by Vinayak Damodar Savarkar in 1923, is the predominant form of Hindu nationalism in India. The Bharatiya Janata Party adopted it as its official ideology in 1989.


Likewise, extremist policies of Uttar Pradesh (UP) Chief Minister Yogi Adityanath are only worsening the internal situation of India against Muslims. It appears that he is proactively implementing ‘Hindutva’ ideology. When he was a member parliament in Lok Sabha he sponsored five bills and among them a national law banning cow slaughter, changing the name of India as Bharat and ban on forced religious conversions were usually viewed as extremist proposals. In fact, he is actively fostering belligerent monolithic Hindu nationalism by different measures of Muslim alienation. Recently, he has removed the iconic Taj Mahal from Uttar Pradesh’s (UP) official list of tourist spots for which the state is famous worldwide. He has given an absurd reason for his discriminatory decision that the 17th century marvel in Agra does not represent Indian ethos.\textsuperscript{372} While commenting on this decision Irfan Husain writes that “this is akin to Paris deleting the Eiffel Tower from its tourist brochures, or New York downplaying the Empire State Building.”\textsuperscript{373} Pakistan has shown genuine concerns on this mounting Hindu extremism in India. Many Pakistani scholars in private discussions highlight that if Gujrat II happens in which hundreds of Indian Muslims are barbarically terminated by Hindu zealots. What would be the response of hardline Islamists in the region? In such a scenario, perhaps transnational terrorist organizations such as Lashkar-e-Taiba (LeT), Jash-e-Muhammad (JeM), Al-Qaida, IS, or for that matter Tehrik-e-Taliban Pakistan (TTP) could aim at taking revenge from ‘Hindu India’ by attacking some key places inside India. Afterwards, India alleges that the origin of these terrorists is Pakistan and blames that its military and intelligence agencies have sent them to inflict damage to India. This could cause a very severe crisis between both the states. And who knows both states would be able to manage that crisis or not. Sadia Tasleem argues that “it is difficult to challenge the assumption that there is a strong possibility/probability that non-state actors may cause a crisis between India and Pakistan which may escalate to the detriment of deterrence stability in South Asia. Various studies suggest that the next crisis between India and Pakistan might be spurred by non-state actors. The likelihood of Pakistan based anti-India militant groups instigating a crisis between the two countries is highly predictable however the probability of anti-Muslim extremists in India causing a similar crisis remains under-studied. It is important to understand and evaluate the risks posed by
non-state actors on both sides and undertake measures that could mitigate the impending dangers of a nuclear war between India and Pakistan.”

It is worth mentioning that Pakistan seems to be very upset on the growing Indo-US strategic alignments. Many Pakistani believe that US president Trump’s new strategy for the region could aggravate the blistering geo-strategic landscape. According to new strategy, the US wants India to play a major role in Afghanistan. However, Pakistan perceives that India is involved in destabilizing Pakistan through Afghanistan. Pakistani policy circles have a strong conviction that the US and the West are still not reconciled to Pakistan’s nuclear weapons and missile capabilities. Referring to this Munir Akram proclaims that “an Islamic nuclear power was always anathema for America and much of the Western world. The US worked ceaselessly – even when Pakistan was a close ally – to retard and reverse its nuclear and missile programmes. This endeavor has intensified since the emergence of the American alliance with India.” Further he notes that “there are credible and not-so-secret reports that the US has formulated plans to seize or destroy Pakistan’s nuclear weapons in a crisis.” It might be possible that India conspires with the secret help of US to denuclearize Pakistan. Both may make a plan to achieve this heinous and risky objective. Perhaps, the US might give assurances to India that it will come for its help in the event limited war starts with Pakistan. It might stage a spectacular terrorist attack inside India using its proxies and then blame Pakistan that the terrorists have been sent by Pakistan army and its intelligence agencies. Subsequently, it launches surgical strikes against alleged terrorist sanctuaries inside Pakistan with the aim to escalate the conflict so that the US may be provided justification for physical intervention, may be for denuclearization. In such a scenario, Pakistan would be in ‘use it or lose it’ dilemma. This is how Indian obsession with using proxies and strategic alignment with US could cause nuclear deterrence failure in the region.

Related to above discussed hypothetical scenario, another development may undermine nuclear deterrence stability between the two states. India may deliberately facilitate Tehrik-e-Taliban Pakistan (TTP) or other militants during some crisis between both the states to get hand on some radioactive material. And then that nuclear or radioactive material is detonated in India to convince the world that Pakistan based Islamist militants has carried a nuclear

374 Author’s interview with Ms. Sadia Tasleem, Lecturer at the Department of Defence and Strategic Studies, Quaid-i-Azam University Islamabad, Pakistan, (January 15, 2017).
376 Ibid.
attack on India. Consequently, India has the right to respond with massive nuclear retaliatory strike under its nuclear doctrine. Moreover, if Pakistan deploys its tactical nuclear weapons alongside Line of Control (LOC) or international border during intense crisis situation. India may help anti-Pakistan militants such as Tehrik-e-Taliban Pakistan (TTP) to exploit the chaotic situation to attack on the deployment and try to sabotage the security of nuclear warheads. If that happens, India may propagate to West and US that Pakistan’s nuclear weapons are not in safe hands, it should be denuclearized. Former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD) Naeem Salik during an interview with the author maintains that “the possibility of full fledge war between India and Pakistan is very minimum. I do not see any major event taking place like attack on Indian Parliament in 2001 or Mumbai attack of 2008. But, India can stage a drama of exploding some dirty bomb and then accuse Pakistan of sponsoring that event. In such a situation escalation could occur”.\textsuperscript{377}

**Conclusion**

From above discussions, one can deduce that nuclear future of South Asia is uncertain given the fact that multiple variables affect possible outcomes. The single most powerful variable that is likely to cause a nuclear crisis is non-state actors and their alleged use by both India and Pakistan for sub-conventional warfare. While Western and Indian perspectives on nuclear escalation are seem to be hyperbolic, prejudiced and exaggerated; Pakistan’s views on this matter underestimate the threat. Such trends are only worsening the prevalent strategic environment instead of providing substantial workable solutions to stabilize bilateral nuclear deterrence template. In fact, Pakistan realized the potential benefits of non-state proxy strategy far earlier than India. The empirical evidence suggests that non-state proxy strategy has provided enormous advantages and benefits to Pakistan, but more recently this policy has caused a serious inconvenience to Pakistan’s foreign policy. India appears to be late entrant in the realm of waging non-state proxy war against Pakistan. Perhaps, India has started using Pakistan’s precarious internal security situation in its benefit by exploiting anti-Pakistan elements. So, current ground realities amply manifest that both the states are involved in low intensity conflict through non-state proxy strategy with varying degrees.

\textsuperscript{377} Author’s interview with Brig. ® Dr. Naeem Salik, former Director General Arms Control and Disarmament Agency (ACDA) at the Pakistan’s Strategic Plans Division (SPD), Rawalpindi and Senior Research Fellow at the Center for International Strategic Studies (CISS), Islamabad, (December 14, 2017).
In retrospect, it is evident that past crises could have been easily escalated, had India not adopted the policy of restraint and had the US not intervened. But, one cannot claim with any certainty that same will be repeated in the event another crisis erupts. The doctrinal and technological mismatch between the two states reflects that there is huge asymmetry in terms of conventional and nuclear thresholds. Such asymmetry provides enough grounds for hypothetical scenarios of nuclear war in South Asia. The following last part of the study will describe the findings and contributions of the study along with recommendations.
Conclusion

This dissertation sought to examine the fragility of nuclear deterrence stability in South Asia keeping in view the undermining role of non-state actors. One category of nuclear theorists tends to argue that nuclear adversaries would not embroil in a clash with each other because of fear of escalation to conventional war which might result into a nuclear exchange. The other category tends to believe that because of several factors such as miscalculation or misperception, doctrinal and technological changes, there could be severe real risks for nuclear deterrence stability. Prior to overt nuclearization of South Asia, the discourse on nuclear deterrence between India and Pakistan was primarily based on theoretical grounds. However, in the post overt nuclearization era, both the belligerent foes involved in one low-intensity conflict and a number of crises that challenge fundamental assumptions of first category of nuclear theorists.

The main bone of contention between both the states is Kashmir issue right from the partition of Sub-continent. Besides this issue, there are other perpetual bilateral problems that have aggravated the animosity. Most prominent among them are water issues, terrorism, trade and visas, Siachen and Afghanistan. Both the states have diametrically opposite positions on Kashmir issue which created skepticism, mistrust and enduring rivalry over the years. Though, India and Pakistan have tried many times to normalize the bilateral relationship but such efforts have largely been sabotaged by so-called spoilers from both sides. These bitter realities shaped strategic perceptions of both the states. Beneath these ‘peculiar’ strategic perceptions, Pakistan engaged in exploiting the benefits of sub-conventional warfare through non-state actors under the nuclear overhang. To counter this, India has explored new doctrines which are believed to provide space for effective retaliation below the nuclear threshold. In consequence, Pakistan has developed tactical nuclear weapons to ensure ‘full spectrum nuclear deterrence’. To make bilateral nuclear template more complex, India is working on ballistic missile defense system (BMDs) and sea-based nuclear deterrent capabilities. To reply these nuclear advancements by India, Pakistan has also discovered avenues to achieve naval nuclear deterrence. These growing nuclear trajectories have already signaled an array of risks. Lately, India has also stepped into using sub-conventional warfare to weaken Pakistan, allegedly through Tehrik-e-Taliban Pakistan (TTP) and Baluchistan Liberation Army (BLA).
It is true that non-state actors caused numerous nuclear crises between both the states in the post 1998 era. The risks of escalation these crises carried prompted international community, especially the US, to intervene and mediate. Though, conventional and nuclear doctrines of both the states are yet to be tested but both have shown sufficient resolve to respond to even a small territorial transgression with aggressive retaliation. India has firmly communicated to Pakistan that it will no longer show restraint that it did during Twin Peaks Crisis of 2001-2002, Mumbai 2008 and Pathankot 2016 crises. Uri incident of 2016 which spurred by terrorist attack on Uri military camp in Indian held Kashmir reportedly proved to be the limit of Indian restraint. India claimed that it successfully carried surgical strikes against alleged ‘terrorist launching pads’ at Pakistani side of the Line of Control (LOC). However, Pakistan out rightly rejected such claims and expressed firm resolve that if such aggression is contemplated by India, it would invite a befitting response from Pakistan. It is in this context, if a crisis occurs between both the states due to a major terrorist attack by non-state actors believed to be tolerated or backed by either state, what would be strategic situation in the region? Obviously, both the states would aim at maintaining the credibility of its nuclear deterrence. For that to happen, nuclear doctrines would be employed to deter any impending aggression. It might be possible that both would be able to repel any international pressure or mediation to demonstrate resolve. Such a scenario could bring both the states at the verge of ‘nuclear Armageddon’.

To critically examine the above discussed puzzle, the study has developed a model of non-state proxy strategy. Then the theory of nuclear deterrence has been tested through this model. The model utilized a single case study method and proved to be very useful in understanding the impact of non-state actors on nuclear deterrence stability between India and Pakistan. The study, through this framework of analysis, reached to certain conclusions and findings. The model has explained that sometimes the non-state actors are conveniently used by different states as their proxies to fulfill foreign policy goals. Non-state proxies can offer sponsor states significant benefits, especially if the sponsor is weak relative to its main adversary. Most often, for weaker states fielding proxies is cheaper as compared to fielding a conventional army. Non-state actors operating as proxies do not need sophisticated training or equipment. By sending non-state actors into battlefield areas, the states avoid risking lives of their own soldiers from stronger adversary. Moreover, such proxies have a number of operational advantages; using militant proxies enables weaker states to increase the difficulty
of military responses that are open to stronger opponent. The stronger opponent has two main avenues that include denial and punishment to respond when facing weaker challenger. The denial seeks to defeat the weak adversary’s operations essentially battlefield and punishment seeks to inflict harm at the time and place not necessarily connected to the initial confrontation. However, both of these strong state options holds significant risks for the weak challenger.

The model discovered that paradox of non-state proxy strategy does not offer unmitigated benefits to sponsor state. As a matter of fact, such a strategy has enormous downsides as well. It may happen that the weakness of sponsor state makes it too difficult to control the militants. And in this case strong adversary may actually be unwilling to bargain with them because they would not call off proxies even if they want to. In addition, militant proxy forces could take actions that directly harm a weak sponsor state, for example, the proxies could adopt agenda more ambitious than those of sponsor leading them to provoke sponsor – stronger adversary without sponsor state approval. The sponsor should tempt to reestablish control over the proxies, the proxies could turn directly against it. Apart from these control problems, a proxy strategy can force the sponsor state to make painful resource tradeoffs. These could be:

- Investments in militants divert scarce resources from other goals
- Successful militant strategy increases the competitiveness of strategic environment (sponsor has to divert more resources to military)
- Domestic development suffers.

It is concluded that this model cannot be applied on Cold War nuclear deterrence equation as at that time transnational non-state actor militant organizations were largely non-existent. Application of this model on South Asian nuclear deterrence finds that the intractable nature of the Kashmir issue makes South Asia an increasingly perilous place in the world. Both India and Pakistan believe with varying degree of intensity and evidence that the other is entertaining aggressive designs by injecting violence through non-state proxy strategy in the region. The contending perceptions have caused intense arms race both in conventional and nuclear realms. It is found that Pakistan’s Kashmir policy is primarily based on the principle of employing sub-conventional warfare through the manipulative use of Islamic notion of *Jihad*. In fact, Pakistan started using militant proxy strategy right after its inception to do all
or part of its fighting. This is obvious from a number of events that include: first Kashmir war 1947-48; Second Kashmir war 1965; anti-Soviet war in Afghanistan and subsequent civil war of 1990s; and Kashmir insurgency late 1980s till present.

Paradoxically, different developments manifested advantages and disadvantages of non-state proxy strategy to Pakistan. Though non-state actors have been a central pillar of a long-standing Pakistani grand strategy but such an approach has become dangerously counterproductive in the post 9/11 era. From the more recent past, the disastrous strategy is causing horrible consequences for the Pakistani state and society as well as the international and regional security milieu. A close scrutiny of Pakistani approach using non-state actors to fulfill perceived foreign policy objectives demonstrated that while it resulted in several benefits but it has cost so many internal and external security challenges for Pakistan. Certainty, it promoted internal political cohesion which helped Pakistan to overcome its material weakness vis-à-vis India. Pakistan successfully undermined Indian control of Kashmir and enhanced its bargaining leverage. Moreover, through this strategy, Pakistan has been shaping the strategic environment in Afghanistan

Nonetheless, more recently the blow back of this strategy brought immense disadvantages for Pakistan. Many militant organizations are out of Pakistani state’s control and many have become anti-Pakistan. To counter this threat, Pakistan has been fighting internal war which proved to be tremendously costly. India has learned many lessons and undertook military improvement that deeply threaten Pakistan. This non-state militant strategy has made Pakistan politically instable and externally insecure. It is concluded that Pakistan has largely failed to address the problem of militancy given the fact that it categorizes militants into two categories “bad militants” and “good militants”. Though, Pakistan’s military has launched extensive operations to eliminate the Tehrik-e-Taliban (TTP) and its umbrella outfits. But, to sheer dismay of international community and India, it has done not much to rein in Lashkar-e-Taiba (LeT), Jaish-e-Muhammad (JeM) and many other anti-India militant organizations.

Another finding of the study is that India, over the years, has also started using non-state proxy strategy against Pakistan. It is supporting insurgency in Baluchistan province and aiding anti-Pakistan militancy in tribal areas alongside Pak-Afghan border reportedly through Afghanistan and Iran. India is using Baluch Liberation Army (BLA) and Baluch Liberation Front (BLF), which have carried out some brutal attacks on law enforcement agencies and
civilians, as a proxy to weaken Pakistan. This is how both the states have been involved in sub-conventional warfare against each other through proxies.

While testing India-Pakistan nuclear deterrence stability through non-state proxy strategy model the study concluded that India-Pakistan confrontation template is entirely different from US-USSR rivalry during Cold War. However, in nuclear context one can draw some similarities in the sense that both the states developed nuclear weapons. Moreover, both the states are involved in a continued nuclear arms race to multiply and diversify their respective nuclear arsenals. According to Indian perspective, their deterrent posture is aimed at China; primarily it is to counter Chinese threat though in recent years it has become evident that Indian policy makers cannot ignore threats emanating from Pakistan’s national security policies. Pakistan, On the other hand, perceives India as the primary conventional and nuclear threat. Arguably, Pakistan’s security policies, right from its inception, have been India-centric. Pakistan believes that its nuclear deterrent capabilities are cost-effective way to bridge huge conventional asymmetries with India. While both are involved in ensuing nuclear arms race but such trends are inherently dangerous for nuclear deterrence stability in South Asia.

It is concluded that the overt nuclearization of South Asia has raised the specter of nuclear war between India and Pakistan. The pre-1998 and post-1998 strategic developments have amply manifested that bilateral nuclear deterrence template is far from stable. Given the fact of decades-long mistrust, hostility and frequent military crises, fueled by long-standing disputes, the nuclear pessimists readily find many challenges which endanger nuclear deterrence stability between the two states. Perhaps, such challenges rightly make South Asia a ‘nuclear flashpoint’. Precisely for this reason, many strategic experts use stability-instability paradox as a useful framework to understand India-Pakistan nuclear deterrence calculus. Though, this calculus currently is facing multiple political, strategic and nuclear command and control challenges, but it is the threat of non-state actors which could lead South Asia to a possible disaster. The proponents of doomsday scenarios argue that non-state actors want to get hold on a nuclear device or some radiological material for nuclear terrorism. The study found that the assumption that Pakistan’s nuclear weapons safety and security could be threatened by non-state actors who would get direct access to nuclear devices/materials in the wake of a deteriorating political situation and a major terrorist attack on a high profile place inside the country is highly exaggerated. Unquestionably, any incident
involving nuclear terrorism anywhere in the world would have devastating implications for international politics. It must also be noted that although nuclear terrorism would be most lethal form of terrorism but practically there are least chances of its occurrence. The world has learned many lessons especially in the post 9/11 era how to deal with the menace of terrorism collectively. To counter any possibility of nuclear terrorism, the states have taken concrete actions both nationally and internationally during the last decade. Arguably, the world is much better prepared now to tackle any attempt of nuclear terrorism and also to minimize consequences should such an event occur. It is true that the states who possess nuclear weapons are equally cautious and mindful with respect to nuclear safety and security of their respective nuclear assets, likewise is Pakistan. Over the years, Pakistan has taken numerous institutional and legislative steps to increase security of its military and civilian nuclear infrastructure. Admittedly, many concerns and apprehensions carry weight given the fact that Pakistan is facing precarious security threats internally and externally. But, it seems highly unlikely that non-state actors would be able to get hold of Pakistan’s nukes. Pakistan seems neither complacent nor oblivious to its international commitments under different treaties and agreements. But, certainly it needs to further strengthen the security of its nuclear installations and international community should cooperate in this regard. One can conclude that there are very remote chances of nuclear terrorism by non-state actors in South Asia.

It is concluded that the assumption that non-state actors, who have been used by both India and Pakistan as proxies to wage sub-conventional warfare against each other, might be able to drag the nuclear antagonists to a crisis in foreseeable future and then that crisis could escalate to a full-scale war involving nuclear exchange leading to the failure of nuclear deterrence in the region holds weight. Nuclear deterrence stability in South Asia is an increasingly difficult and complex undertaking to analyse and debate. With varying degree and magnitude, the unique geopolitical and geostrategic dynamics in the region very seriously challenge Cold War nuclear deterrence theory. Sadly, the region is going through a most critical phase of its history where non-state militant organizations have nearly undermined the concept of stable modern nation-state system. Both hard and circumstantial evidence suggest that nuclear rivals, India and Pakistan, pitch non-state actors through sub-conventional warfare against each other. This has resulted in nuclear deterrence stability-instability paradox fraught with frequent bilateral crises which could have escalated to nuclear exchange. Perhaps, classification of South Asia as the most dangerous place in the world would be a bit of exaggeration but certainly the most immediate threat is the role of
non-state actors that they could play in instigating major crises with escalatory potential between India and Pakistan, as happened in the past. Another finding of the study is that the doctrinal and technological developments by India and Pakistan have offset the existing Confidence Building Measures (CBMs) and nuclear risk reduction measures (NRRMs). The doctrinal and technological mismatch between the two states reflects that there is huge asymmetry in terms of conventional and nuclear thresholds. Such asymmetry provides enough grounds for hypothetical scenarios of nuclear war in South Asia.

Overall, the study concludes that the hypothesis *The continuity of inter-state and intra-state conflicts in India and Pakistan provide a space for the existence of non-state actors in South Asia. Ironically, both New Delhi and Islamabad use them in the low-intensity conflicts to bleed each other. This trend is alarming for the nuclear deterrence stability in the region* proved to be true under the hard and anecdotal evidence discussed in above chapters.

Managing this grimmer outlook needs realistic, rational and pragmatic approach by India and Pakistan. Blind faith in the efficacy and reliability of nuclear deterrence needs re-visiting on both sides. Nuclear deterrence can fail and mutually assured destruction argument is inducing smug complacency that cannot hold under all circumstances. The remedy, if any lies in normalization of relations (at least working relations) by both the states and then bolstering economic relations, forging of a working consensus to prevent any precipitous slide into any nuclear showdown. Both should understand that the wars in history have not been always planned; they have also happened by accident, insecurity, over-confidence and false confidence of over-zealous leaders. Nuclear deterrence can only work for a specific situation of an armed invasion and cannot address diverse forms of threats lurking on South Asian landscape.

Both the states need to expedite nuclear learning curve whereby they should realize that the use of non-state proxy strategy would be devastating to both the sides. Both the states should abandon this strategy sooner the better as it is weakening the both politically, economically, diplomatically and above all socially. Both the states ought to recognize that current role of non-state actors is further complicating the bilateral nuclear deterrent relationship. In this regard, the major responsibility goes on the shoulders of Pakistan, it needs to ensure that its soil would not be used to perpetrate terror into India. India also needs to reciprocate in the
same manner. Under the current state of affairs in the realm of nuclear escalation control arrangement/agreements between the two states demands a resolute and continuous diplomatic work. There is an urgent need to conclude several new and effective nuclear Confidence Building Measures (CBMs) and nuclear risk reduction mechanisms. The new measures would prove useful in averting miscalculated escalations and military adventurism. The decision making elites from both the states need to holistically understand what purpose nuclear weapons can serve to promote security. This would be only political utility of nuclear weapons that is for erecting bilateral nuclear deterrence. The political elites from both the sides required to be more rational and responsible, they should not involve in high risk behavior. Most importantly, however, both states urgently need to resolve the contradictions, ambiguities and destabilizing potential in their own nuclear doctrines and postures. Until that happens, the complexity of south Asian nuclear deterrent relationships is likely to remain at a higher level than in most other regions of the world today.
Appendix-1

United Nations Resolution 1540

Adopted by the Security Council at its 4956th meeting, on 28 April 2004

The Security Council,

Affirming that proliferation of nuclear, chemical and biological weapons, as well as their means of delivery, constitutes a threat to international peace and security,

Reaffirming, in this context, the Statement of its President adopted at the Council’s meeting at the level of Heads of State and Government on 31 January 1992 (S/23500), including the need for all Member States to fulfil their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction,

Recalling also that the Statement underlined the need for all Member States to resolve peacefully in accordance with the Charter any problems in that context threatening or disrupting the maintenance of regional and global stability,

Affirming its resolve to take appropriate and effective actions against any threat to international peace and security caused by the proliferation of nuclear, chemical and biological weapons and their means of delivery, in conformity with its primary responsibilities, as provided for in the United Nations Charter,

Affirming its support for the multilateral treaties whose aim is to eliminate or prevent the proliferation of nuclear, chemical or biological weapons and the importance for all States parties to these treaties to implement them fully in order to promote international stability,

Welcoming efforts in this context by multilateral arrangements which contribute to non-proliferation,

Affirming that prevention of proliferation of nuclear, chemical and biological weapons should not hamper international cooperation in materials, equipment and technology for peaceful purposes while goals of peaceful utilization should not be used as a cover for proliferation,

Gravely concerned by the threat of terrorism and the risk that non-State actors* such as those identified in the United Nations list established and maintained by the Committee established under Security Council resolution 1267 and those to whom resolution 1373 applies, may acquire, develop, traffic in or use nuclear, chemical and biological weapons and their means of delivery,
Gravely concerned by the threat of illicit trafficking in nuclear, chemical, or biological weapons and their means of delivery, and related materials, which adds a new dimension to the issue of proliferation of such weapons and also poses a threat to international peace and security,

Recognizing the need to enhance coordination of efforts on national, sub regional, regional and international levels in order to strengthen a global response to this serious challenge and threat to international security,

Recognizing that most States have undertaken binding legal obligations under treaties to which they are parties, or have made other commitments aimed at preventing the proliferation of nuclear, chemical or biological weapons, and have taken effective measures to account for, secure and physically protect sensitive materials, such as those required by the Convention on the Physical Protection of Nuclear Materials and those recommended by the IAEA Code of Conduct on the Safety and Security of Radioactive Sources,

Recognizing further the urgent need for all States to take additional effective measures to prevent the proliferation of nuclear, chemical or biological weapons and their means of delivery,

Encouraging all Member States to implement fully the disarmament treaties and agreements to which they are party,

Reaffirming the need to combat by all means, in accordance with the Charter of the United Nations, threats to international peace and security caused by terrorist acts,

Determined to facilitate henceforth an effective response to global threats in the area of non-proliferation,

Acting under Chapter VII of the Charter of the United Nations,

1. Decides that all States shall refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery;

2. Decides also that all States, in accordance with their national procedures, shall adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture,

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378 * Definitions for the purpose of this resolution only:
Means of delivery: missiles, rockets and other unmanned systems capable of delivering nuclear, chemical, or biological weapons, that are specially designed for such use.
Non-State actor: individual or entity, not acting under the lawful authority of any State in conducting activities which come within the scope of this resolution.
Related materials: materials, equipment and technology covered by relevant multilateral treaties and arrangements, or included on national control lists, which could be used for the design, development, production or use of nuclear, chemical and biological weapons and their means of delivery.
acquire, possess, develop, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as attempts to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them;

3. Decides also that all States shall take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials and to this end shall:

(a) Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport;
(b) Develop and maintain appropriate effective physical protection measures;
(c) Develop and maintain appropriate effective border controls and law enforcement efforts to detect, deter, prevent and combat, including through international cooperation when necessary, the illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law;
(d) Establish, develop, review and maintain appropriate effective national export and trans-shipment controls over such items, including appropriate laws and regulations to control export, transit, trans-shipment and re-export and controls on providing funds and services related to such export and trans-shipment such as financing, and transporting that would contribute to proliferation, as well as establishing end-user controls; and establishing and enforcing appropriate criminal or civil penalties for violations of such export control laws and regulations;

4. Decides to establish, in accordance with rule 28 of its provisional rules of procedure, for a period of no longer than two years, a Committee of the Security Council, consisting of all members of the Council, which will, calling as appropriate on other expertise, report to the Security Council for its examination, on the implementation of this resolution, and to this end calls upon States to present a first report no later than six months from the adoption of this resolution to the Committee on steps they have taken or intend to take to implement this resolution;

5. Decides that none of the obligations set forth in this resolution shall be interpreted so as to conflict with or alter the rights and obligations of State Parties to the Nuclear Non-Proliferation Treaty, the Chemical Weapons Convention and the Biological and Toxin Weapons Convention or alter the responsibilities of the International Atomic Energy Agency or the Organization for the Prohibition of Chemical Weapons;
6. Recognizes the utility in implementing this resolution of effective national control lists and calls upon all Member States, when necessary, to pursue at the earliest opportunity the development of such lists;

7. Recognizes that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure, implementation experience and/or resources for fulfilling the above provisions;

8. Calls upon all States:
   (a) To promote the universal adoption and full implementation, and, where necessary, strengthening of multilateral treaties to which they are parties, whose aim is to prevent the proliferation of nuclear, biological or chemical weapons;
   (b) To adopt national rules and regulations, where it has not yet been done, to ensure compliance with their commitments under the key multilateral non-proliferation treaties;
   (c) To renew and fulfil their commitment to multilateral cooperation, in particular within the framework of the International Atomic Energy Agency, the Organization for the Prohibition of Chemical Weapons and the Biological and Toxin Weapons Convention, as important means of pursuing and achieving their common objectives in the area of non-proliferation and of promoting international cooperation for peaceful purposes;
   (d) To develop appropriate ways to work with and inform industry and the public regarding their obligations under such laws;

9. Calls upon all States to promote dialogue and cooperation on non-proliferation so as to address the threat posed by proliferation of nuclear, chemical, or biological weapons, and their means of delivery;

10. Further to counter that threat, calls upon all States, in accordance with their national legal authorities and legislation and consistent with international law, to take cooperative action to prevent illicit trafficking in nuclear, chemical or biological weapons, their means of delivery, and related materials;

11. Expresses its intention to monitor closely the implementation of this resolution and, at the appropriate level, to take further decisions which may be required to this end;

12. Decides to remain seized of the matter.
Appendix-2


ISLAMABAD, MONDAY, SEPTEMBER 27, 2004

WHEREAS the Islamic Republic of Pakistan--
(a) is determined to safeguard its national security and foreign policy objectives and to fulfill its international obligations as a responsible nuclear weapon State;
(b) as a party to the Chemical Weapons Convention has promulgated the Chemical Weapons Convention Implementation Ordinance, 2000 (LIV of 2000); and
(c) is committed to prevent proliferation of nuclear and biological weapons and missiles capable of delivering such weapons;

AND WHEREAS to achieve the aforesaid objectives it is necessary to strengthen controls on the export, re-export, transshipment and transit of goods and technologies, material and equipment related to nuclear and biological weapons and missiles capable of delivering such weapons;

AND WHEREAS it is expedient to provide for export control on, goods, technologies, material and equipment related to nuclear and biological weapons and their delivery systems;

It is hereby enacted as follows:
(2) It extends to the whole of Pakistan. (3) It applies to--

(a)
(b) (c)
every citizen of Pakistan or a person in the service of Pakistan within and beyond Pakistan or any Pakistani visiting or working abroad;
any foreign national while in the territories of Pakistan; and
any ground transport, ship or aircraft registered in Pakistan wherever it may be.
(4) It shall come into force at once.
2. Definitions. -- In this Act unless there is anything repugnant in the subject or context.--
(a) "basic scientific research" means theoretical- or experimental work undertaken principally to acquire new knowledge of the fundamental principles of phenomena or observable facts;
(b) "biological weapon" means any weapon designed to kill or harm or infect people, animals or plants on a large scale through effects of the infectious or toxic properties of a biological warfare agent;
"delivery system" means missiles exclusively designed and adapted to deliver a nuclear of biological weapon;
"development" means any activity or phase prior to production and may include or relate to design research, design analysis, design concept, assembly and testing of prototypes, pilot production schemes, design data, the process of transforming designed data into product, configuration design and integration design or layout;
(c) (d)
(e) "equipment" means an assembly which may, comprise electrical, electronic, mechanical, chemical and metallurgical components, including those used in' manufacturing or pilot plants, used in the production of nuclear and biological weapons;
(f) "export" means--
(i) shipment, transfer or transmission of goods or "technology out of the territory of Pakistan; and
(ii) a transfer of goods or technology within Pakistan with the knowledge or intent that the goods or technology will be shipped, transferred or transmitted to an unauthorized recipient outside Pakistan;
9. (g) "goods" means any article natural or man-made substance, material supply or manufactured product, -including inspection and test equipment except technology;
10. (h) "material" means materials used in the production of nuclear and biological weapons and their delivery system;
11. (i) "nuclear weapon" means any weapon designed to kill or cause destruction or harm people on a large scale through the effects of a nuclear explosion;
12. (j) "re-export" means export of an item from any end user State or entity after having imported any goods or technology covered under this Act from Pakistan to any other State or entity;
13. (k) "services" means providing training and technical assistance including intangible
transfer such as disclosure of technical data relating to the purposes of this Act;
"technology" means any documents including blueprints, plans, diagrams, models, formulae, tables, engineering designs or specifications', manuals or instructions, necessary for the development and production of nuclear or biological weapons and their delivery systems, including on-the-job training, expert advice and services attached therewith except--
14. (i) any document or information that is in the public domain or is related to basic scientific research and other peaceful applications of such technology including that related to its application for protective purposes; and
15. (ii) any application of the grant of a patent or any other form of protection for inventions or for the registration of a design in each case under the law of the Islamic Republic of Pakistan or any other country or under any treaty or international conventions to which Pakistan is a party or any document necessary to enable any such application to be filed, made or pursued;

(m) "transit" means transportation through the territory of Pakistan by land, air or amphibious means of transportation; and
(n) "transshipment" means shipment through ports of Pakistan.

(1)

3. Authority. --(1) For the purposes of this Act, the authority rests with the Federal Government and the Federal Government, as and when necessary, may--
. (a) make such rules and regulations as are necessary for implementation of this Act;
. (b) delegate authority to administer all activities under this Act to such Ministries, Divisions, Departments and Agencies as it may deem appropriate;
. (c) establish a government Authority to administer export controls established under this Act;
. (d) designate the agency or agencies authorized to enforce this Act;
. (e) establish an Oversight Board to monitor the implementation of this Act; and
. (f) require licenses for exports from Pakistan of goods and technology, and the re-export of goods and technology that originated in Pakistan.

(2) Officials of the designated agency or agencies are authorized to inspect consignments declared for export and review, acquire or confiscate records of persons engaged in the exporting or holding an export license under this Act, with the same powers in respect of
exports in contravention of any provision of this Act. The Federal Government may vest any investigatory powers and powers of arrest authorized by law in officials of the customs administration or other appropriate agencies.

4. Control Lists.--(1) The Federal Government shall maintain Control Lists, to be notified separately, of goods and Technologies subject to licensing requirements under this Act.

(2) The control lists shall be reviewed periodically, and revised or updated, as required by the Federal Government and notified accordingly.

(3) The Federal Government shall notify all licensing requirements and procedures.

16. (4) The Federal Government shall control export, re-export, transshipment, transit of goods, technologies, material and equipment, subject to the provisions of this Act, which may contribute to the designing, development, production, stockpiling, maintenance or use of nuclear and biological weapons and their delivery systems.

17. (5) Nothing in this Act shall be construed to restrict or prohibit basic scientific research in Pakistan or other peaceful applications or relevant technologies.

5. Licensing.--(1) The Federal Government shall frame and notify the licenses required under this Act, and also adopt and notify the procedures under which such licenses shall be approved or rejected.

(2) Licenses for export of goods and technologies for peaceful applications may be approved unless the Government determines that the export would be in contravention of the provisions of this Act.

(3) An exporter is under legal obligation to notify to the competent authority if the exporter is aware or suspects that the goods or technology are intended, in their entirety or in part, in connection with nuclear or biological weapons or missiles capable of delivering such weapons.

(4) Nothing in this Act shall be taken to prohibit the export of licensed goods and technology, provided that all conditions attached to the said license are complied with.

6. Record keeping.--(1) All exporters shall maintain records of all transactions and report these to the designated authorities.

(2) Any Government agency or department involved in export licensing procedure shall keep records of their recommendations and decisions. Such records shall be made available to other agencies or departments involved in export licensing, upon request.

7. Offences, etc., to be tried by a Court of Session.-- Any person who contravenes any provision, or attempts to commit or abets the commission of an offence, under this Act or any
order, rules and regulations framed thereunder shall be tried by a Court of Session only upon complaint in writing made by an officer of the Federal Government authorized in this behalf by the Federal Government.

8. Offences and penalties.--(1) Any person who contra any provision of this Act or any order, rules and regulations framed thereunder, or provides false information concerning matters governed by this Act to any of the agencies responsible for administering this Act, shall be guilty for an offence punishable on conviction by imprisonment for a term which may extend to fourteen years, or with fine not exceeding five million rupees or both, and, on conviction offender's property and assets, wherever they may be, shall be forfeited to the Federal Government.

(2) Any person who attempts to commit or abets the commission of an offence under this Act shall be proceeded against in the manner as if he had committed such an offence.

(3) In case the offence is not serious for criminal proceedings, administrative actions, which may be determined from time to time, shall be taken against the individuals contravening any provision of this Act.

9. Appeal.-- Any person sentenced under this Act may within thirty days of the decision prefer an appeal before the High Court having jurisdiction.

10. Diversion of controlled goods or technologies to unauthorized use.-- Whenever the Federal Government determines that a recipient of controlled goods or technologies has knowingly diverted these goods or technologies to unauthorized use in violation of the conditions of an export license issued by, the Government of Pakistan, the Federal Government or officials of the appropriately designated agency may deny—

(a) further export to that recipient of goods or technologies for a specified period for each offence; or

(b) the recipient the privilege of exporting products into Pakistan for a specified period for each offence.

11. Act not to derogate from other laws, etc.-- The provisions of this Act shall be in addition to, and not in derogation of, any law, rules, orders or notifications for the time being in force.
President Barack Obama’s Prague Speech April 05, 2009

Hradcany Square Prague, Czech Republic 10:21 A.M. (Local)

PRESIDENT OBAMA: Thank you so much. Thank you for this wonderful welcome. Thank you to the people of Prague. Thank you to the people of the Czech Republic. (Applause.) Today, I'm proud to stand here with you in the middle of this great city, in the center of Europe. (Applause.) And, to paraphrase one of my predecessors, I am also proud to be the man who brought Michelle Obama to Prague. (Applause.) To Mr. President, Mr. Prime Minister, to all the dignitaries who are here, thank you for your extraordinary hospitality. And to the people of the Czech Republic, thank you for your friendship to the United States. (Applause.)

I've learned over many years to appreciate the good company and the good humor of the Czech people in my hometown of Chicago. (Applause.) Behind me is a statue of a hero of the Czech people — Tomas Masaryk. (Applause.) In 1918, after America had pledged its support for Czech independence, Masaryk spoke to a crowd in Chicago that was estimated to be over 100,000. I don't think I can match his record -- (laughter) -- but I am honored to follow his footsteps from Chicago to Prague. (Applause.)

For over a thousand years, Prague has set itself apart from any other city in any other place. You've known war and peace. You've seen empires rise and fall. You've led revolutions in the arts and science, in politics and in poetry. Through it all, the people of Prague have insisted on pursuing their own path, and defining their own destiny. And this city — this Golden City which is both ancient and youthful — stands as a living monument to your unconquerable spirit.

When I was born, the world was divided, and our nations were faced with very different circumstances. Few people would have predicted that someone like me would one day become the President of the United States. (Applause.) Few people would have predicted that an American President would one day be permitted to speak to an audience like this in Prague. (Applause.) Few would have imagined that the Czech Republic would become a free nation, a member of NATO, a leader of a united Europe. Those ideas would have been dismissed as dreams. We are here today because
enough people ignored the voices who told them that the world could not change. We're here today because of the courage of those who stood up and took risks to say that freedom is a right for all people, no matter what side of a wall they live on, and no matter what they look like. We are here today because of the Prague Spring — because the simple and principled pursuit of liberty and opportunity shamed those who relied on the power of tanks and arms to put down the will of a people. We are here today because 20 years ago, the people of this city took to the streets to claim the promise of a new day, and the fundamental human rights that had been denied them for far too long. Sametová Revoluce -- (applause) -- the Velvet Revolution taught us many things. It showed us that peaceful protest could shake the foundations of an empire, and expose the emptiness of an ideology. It showed us that small countries can play a pivotal role in world events, and that young people can lead the way in overcoming old conflicts. (Applause.) And it proved that moral leadership is more powerful than any weapon. That's why I'm speaking to you in the center of a Europe that is peaceful, united and free -- because ordinary people believed that divisions could be bridged, even when their leaders did not. They believed that walls could come down; that peace could prevail. We are here today because Americans and Czechs believed against all odds that today could be possible. (Applause.) Now, we share this common history. But now this generation — our generation — cannot stand still. We, too, have a choice to make. As the world has become less divided, it has become more interconnected. And we've seen events move faster than our ability to control them — a global economy in crisis, a changing climate, the persistent dangers of old conflicts, new threats and the spread of catastrophic weapons. None of these challenges can be solved quickly or easily. But all of them demand that we listen to one another and work together; that we focus on our common interests, not on occasional differences; and that we reaffirm our shared values, which are stronger than any force that could drive us apart. That is the work that we must carry on. That is the work that I have come to Europe to begin. (Applause.) To renew our prosperity, we need action coordinated across borders. That means investments to create new jobs. That means resisting the walls of protectionism that stand in the way of growth. That means a change in our financial system, with new rules to prevent abuse and future crisis. (Applause.) And we have an obligation to our common prosperity and our common humanity to extend a hand to those emerging markets and impoverished people who are suffering the most, even
though they may have had very little to do with financial crises, which is why we set aside over a trillion dollars for the International Monetary Fund earlier this week, to make sure that everybody -- everybody -- receives some assistance. (Applause.)

Now, to protect our planet, now is the time to change the way that we use energy. (Applause.) Together, we must confront climate change by ending the world's dependence on fossil fuels, by tapping the power of new sources of energy like the wind and sun, and calling upon all nations to do their part. And I pledge to you that in this global effort, the United States is now ready to lead. (Applause.)

To provide for our common security, we must strengthen our alliance. NATO was founded 60 years ago, after Communism took over Czechoslovakia. That was when the free world learned too late that it could not afford division. So we came together to forge the strongest alliance that the world has ever known. And we should -- stood shoulder to shoulder -- year after year, decade after decade -- until an Iron Curtain was lifted, and freedom spread like flowing water.

This marks the 10th year of NATO membership for the Czech Republic. And I know that many times in the 20th century, decisions were made without you at the table. Great powers let you down, or determined your destiny without your voice being heard. I am here to say that the United States will never turn its back on the people of this nation. (Applause.) We are bound by shared values, shared history -- (applause.) We are bound by shared values and shared history and the enduring promise of our alliance. NATO's Article V states it clearly: An attack on one is an attack on all. That is a promise for our time, and for all time.

The people of the Czech Republic kept that promise after America was attacked; thousands were killed on our soil, and NATO responded. NATO's mission in Afghanistan is fundamental to the safety of people on both sides of the Atlantic. We are targeting the same al Qaeda terrorists who have struck from New York to London, and helping the Afghan people take responsibility for their future. We are demonstrating that free nations can make common cause on behalf of our common security. And I want you to know that we honor the sacrifices of the Czech people in this endeavor, and mourn the loss of those you've lost.

But no alliance can afford to stand still. We must work together as NATO members so that we have contingency plans in place to deal with new threats, wherever they may come from. We must strengthen our cooperation with one another, and with other nations and institutions around the world, to confront dangers that recognize no borders. And we must pursue constructive relations with Russia on issues of common concern.

Now, one of those issues that I'll focus on today is fundamental to the security of our nations
and to the peace of the world — that's the future of nuclear weapons in the 21st century.
The existence of thousands of nuclear weapons is the most dangerous legacy of the Cold War. No nuclear war was fought between the United States and the Soviet Union, but generations lived with the knowledge that their world could be erased in a single flash of light. Cities like Prague that existed for centuries, that embodied the beauty and the talent of so much of humanity, would have ceased to exist.

Today, the Cold War has disappeared but thousands of those weapons have not. In a strange turn of history, the threat of global nuclear war has gone down, but the risk of a nuclear attack has gone up. More nations have acquired these weapons. Testing has continued. Black market trade in nuclear secrets and nuclear materials abound. The technology to build a bomb has spread. Terrorists are determined to buy, build or steal one. Our efforts to contain these dangers are centered on a global non-proliferation regime, but as more people and nations break the rules, we could reach the point where the center cannot hold.

Now, understand, this matters to people everywhere. One nuclear weapon exploded in one city — be it New York or Moscow, Islamabad or Mumbai, Tokyo or Tel Aviv, Paris or Prague — could kill hundreds of thousands of people. And no matter where it happens, there is no end to what the consequences might be — for our global safety, our security, our society, our economy, to our ultimate survival. Some argue that the spread of these weapons cannot be stopped, cannot be checked — that we are destined to live in a world where more nations and more people possess the ultimate tools of destruction. Such fatalism is a deadly adversary, for if we believe that the spread of nuclear weapons is inevitable, then in some way we are admitting to ourselves that the use of nuclear weapons is inevitable.

Just as we stood for freedom in the 20th century, we must stand together for the right of people everywhere to live free from fear in the 21st century. (Applause.) And as nuclear power — as a nuclear power, as the only nuclear power to have used a nuclear weapon, the United States has a moral responsibility to act. We cannot succeed in this endeavor alone, but we can lead it, we can start it.

So today, I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons. (Applause.) I'm not naive. This goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, "Yes, we can." (Applause.)

Now, let me describe to you the trajectory we need to be on. First, the United States will take concrete steps towards a world without nuclear weapons. To put an end to Cold War
thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same. Make no mistake: As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies — including the Czech Republic. But we will begin the work of reducing our arsenal.

To reduce our warheads and stockpiles, we will negotiate a new Strategic Arms Reduction Treaty with the Russians this year. (Applause.) President Medvedev and I began this process in London, and will seek a new agreement by the end of this year that is legally binding and sufficiently bold. And this will set the stage for further cuts, and we will seek to include all nuclear weapons states in this endeavor.

To achieve a global ban on nuclear testing, my administration will immediately and aggressively pursue U.S. ratification of the Comprehensive Test Ban Treaty. (Applause.) After more than five decades of talks, it is time for the testing of nuclear weapons to finally be banned.

And to cut off the building blocks needed for a bomb, the United States will seek a new treaty that verifiably ends the production of fissile materials intended for use in state nuclear weapons. If we are serious about stopping the spread of these weapons, then we should put an end to the dedicated production of weapons-grade materials that create them. That’s the first step.

Second, together we will strengthen the Nuclear Non-Proliferation Treaty as a basis for cooperation.

The basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy. To strengthen the treaty, we should embrace several principles. We need more resources and authority to strengthen international inspections. We need real and immediate consequences for countries caught breaking the rules or trying to leave the treaty without cause.

And we should build a new framework for civil nuclear cooperation, including an international fuel bank, so that countries can access peaceful power without increasing the risks of proliferation. That must be the right of every nation that renounces nuclear weapons, especially developing countries embarking on peaceful programs. And no approach will succeed if it’s based on the denial of rights to nations that play by the rules. We must harness the power of nuclear energy on behalf of our efforts to combat climate change, and to advance peace opportunity for all people.
But we go forward with no illusions. Some countries will break the rules. That's why we need a structure in place that ensures when any nation does, they will face consequences. Just this morning, we were reminded again of why we need a new and more rigorous approach to address this threat. North Korea broke the rules once again by testing a rocket that could be used for long range missiles. This provocation underscores the need for action -- not just this afternoon at the U.N. Security Council, but in our determination to prevent the spread of these weapons. Rules must be binding. Violations must be punished. Words must mean something. The world must stand together to prevent the spread of these weapons. Now is the time for a strong international response -- (applause) -- now is the time for a strong international response, and North Korea must know that the path to security and respect will never come through threats and illegal weapons. All nations must come together to build a stronger, global regime. And that's why we must stand shoulder to shoulder to pressure the North Koreans to change course. Iran has yet to build a nuclear weapon. My administration will seek engagement with Iran based on mutual interests and mutual respect. We believe in dialogue. (Applause.) But in that dialogue we will present a clear choice. We want Iran to take its rightful place in the community of nations, politically and economically. We will support Iran's right to peaceful nuclear energy with rigorous inspections. That's a path that the Islamic Republic can take. Or the government can choose increased isolation, international pressure, and a potential nuclear arms race in the region that will increase insecurity for all. So let me be clear: Iran's nuclear and ballistic missile activity poses a real threat, not just to the United States, but to Iran's neighbors and our allies. The Czech Republic and Poland have been courageous in agreeing to host a defense against these missiles. As long as the threat from Iran persists, we will go forward with a missile defense system that is cost-effective and proven. (Applause.) If the Iranian threat is eliminated, we will have a stronger basis for security, and the driving force for missile defense construction in Europe will be removed. (Applause.) So, finally, we must ensure that terrorists never acquire a nuclear weapon. This is the most immediate and extreme threat to global security. One terrorist with one nuclear weapon could unleash massive destruction. Al Qaeda has said it seeks a bomb and that it would have no problem with using it. And we know that there is unsecured nuclear material across the globe. To protect our people, we must act with a sense of purpose without delay. So today I am announcing a new international effort to secure all vulnerable nuclear material
around the world within four years. We will set new standards, expand our cooperation with Russia, pursue new partnerships to lock down these sensitive materials.

We must also build on our efforts to break up black markets, detect and intercept materials in transit, and use financial tools to disrupt this dangerous trade. Because this threat will be lasting, we should come together to turn efforts such as the Proliferation Security Initiative and the Global Initiative to Combat Nuclear Terrorism into durable international institutions. And we should start by having a Global Summit on Nuclear Security that the United States will host within the next year. (Applause.)

Now, I know that there are some who will question whether we can act on such a broad agenda. There are those who doubt whether true international cooperation is possible, given inevitable differences among nations. And there are those who hear talk of a world without nuclear weapons and doubt whether it's worth setting a goal that seems impossible to achieve. But make no mistake: We know where that road leads. When nations and peoples allow themselves to be defined by their differences, the gulf between them widens. When we fail to pursue peace, then it stays forever beyond our grasp. We know the path when we choose fear over hope. To denounce or shrug off a call for cooperation is an easy but also a cowardly thing to do. That's how wars begin. That's where human progress ends.

There is violence and injustice in our world that must be confronted. We must confront it not by splitting apart but by standing together as free nations, as free people. (Applause.) I know that a call to arms can stir the souls of men and women more than a call to lay them down. But that is why the voices for peace and progress must be raised together. (Applause.) Those are the voices that still echo through the streets of Prague. Those are the ghosts of 1968. Those were the joyful sounds of the Velvet Revolution. Those were the Czechs who helped bring down a nuclear-armed empire without firing a shot. Human destiny will be what we make of it. And here in Prague, let us honor our past by reaching for a better future. Let us bridge our divisions, build upon our hopes, accept our responsibility to leave this world more prosperous and more peaceful than we found it. (Applause.) Together we can do it.

Thank you very much. Thank you, Prague.
Appendix-4

United Nations Resolution 1887

Adopted by the Security Council at its 6191st meeting, on 24 September 2009

The Security Council,
Resolving to seek a safer world for all and to create the conditions for a world without nuclear weapons, in accordance with the goals of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), in a way that promotes international stability, and based on the principle of undiminished security for all,
Reaffirming the Statement of its President adopted at the Council’s meeting at the level of Heads of State and Government on 31 January 1992 (S/23500), including the need for all Member States to fulfil their obligations in relation to arms control and disarmament and to prevent proliferation in all its aspects of all weapons of mass destruction,
Recalling also that the above Statement (S/23500) underlined the need for all Member States to resolve peacefully in accordance with the Charter any problems in that context threatening or disrupting the maintenance of regional and global stability,
Reaffirming that proliferation of weapons of mass destruction, and their means of delivery, constitutes a threat to international peace and security,
Bearing in mind the responsibilities of other organs of the United Nations and relevant international organizations in the field of disarmament, arms control and non-proliferation, as well as the Conference on Disarmament, and supporting them to continue to play their due roles,
Underlining that the NPT remains the cornerstone of the nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament and for the peaceful uses of nuclear energy,
Reaffirming its firm commitment to the NPT and its conviction that the international nuclear non-proliferation regime should be maintained and strengthened to ensure its effective implementation, and recalling in this regard the outcomes of past NPT Review Conferences, including the 1995 and 2000 final documents,
Calling for further progress on all aspects of disarmament to enhance global security,
Recalling the Statement by its President adopted at the Council’s meeting held on 19
Welcoming the decisions of those non-nuclear-weapon States that have dismantled their nuclear weapons programs or renounced the possession of nuclear weapons,

Welcoming the nuclear arms reduction and disarmament efforts undertaken and accomplished by nuclear-weapon States, and underlining the need to pursue further efforts in the sphere of nuclear disarmament, in accordance with Article VI of the NPT,

Welcoming in this connection the decision of the Russian Federation and the United States of America to conduct negotiations to conclude a new comprehensive legally binding agreement to replace the Treaty on the Reduction and Limitation of Strategic Offensive Arms, which expires in December 2009,

Welcoming and supporting the steps taken to conclude nuclear-weapon-free zone treaties and reaffirming the conviction that the establishment of internationally recognized nuclear-weapon-free zones on the basis of arrangements freely arrived at among the States of the region concerned, and in accordance with the 1999 United Nations Disarmament Commission guidelines, enhances global and regional peace and security, strengthens the nuclear non-proliferation regime, and contributes toward realizing the objectives of nuclear disarmament,

Noting its support, in this context, for the convening of the Second Conference of States Parties and signatories of the Treaties that establish Nuclear-Weapon-Free Zones to be held in New York on 30 April 2010,

Reaffirming its resolutions 825 (1993), 1695 (2006), 1718 (2006), and 1874 (2009),


Reaffirming all other relevant non-proliferation resolutions adopted by the Security Council,

Gravely concerned about the threat of nuclear terrorism, and recognizing the need for all States to take effective measures to prevent nuclear material or technical assistance becoming available to terrorists,

Noting with interest the initiative to convene, in coordination with the International Atomic Energy Agency (IAEA), an international conference on the peaceful uses of nuclear energy,

Expressing its support for the convening of the 2010 Global Summit on Nuclear Security,

Affirming its support for the Convention on the Physical Protection of Nuclear Material and its 2005 Amendment, and the Convention for the Suppression of Acts of Nuclear Terrorism,

Recognizing the progress made by the Global Initiative to Combat Nuclear Terrorism, and the G-8 Global Partnership,
Noting the contribution of civil society in promoting all the objectives of the NPT,
Reaffirming its resolution 1540 (2004) and the necessity for all States to implement fully the
measures contained therein, and calling upon all Member States and international and
regional organizations to cooperate actively with the Committee established pursuant to that
resolution, including in the course of the comprehensive review as called for in resolution
1810 (2008),
1. Emphasizes that a situation of non-compliance with non-proliferation obligations shall be
brought to the attention of the Security Council, which will determine if that situation
constitutes a threat to international peace and security, and emphasizes the Security Council’s
primary responsibility in addressing such threats;
2. Calls upon States Parties to the NPT to comply fully with all their obligations and fulfil
their commitments under the Treaty,
3. Notes that enjoyment of the benefits of the NPT by a State Party can be assured only by its
compliance with the obligations thereunder;
4. Calls upon all States that are not Parties to the NPT to accede to the Treaty as non-nuclear-
weapon States so as to achieve its universality at an early date, and pending their accession to
the Treaty, to adhere to its terms;
5. Calls upon the Parties to the NPT, pursuant to Article VI of the Treaty, to undertake to
pursue negotiations in good faith on effective measures relating to nuclear arms reduction and
disarmament, and on a Treaty on general and complete disarmament under strict and
effective international control, and calls on all other States to join in this endeavour;
6. Calls upon all States Parties to the NPT to cooperate so that the 2010 NPT Review
Conference can successfully strengthen the Treaty and set realistic and achievable goals in all
the Treaty’s three pillars: non-proliferation, the peaceful uses of nuclear energy, and
disarmament;
7. Calls upon all States to refrain from conducting a nuclear test explosion and to sign and
ratify the Comprehensive Nuclear Test Ban Treaty (CTBT), thereby bringing the treaty into
force at an early date;
8. Calls upon the Conference on Disarmament to negotiate a Treaty banning the production
of fissile material for nuclear weapons or other nuclear explosive devices as soon as possible,
welcomes the Conference on Disarmament’s adoption by consensus of its Program of Work
in 2009, and requests all Member States to cooperate in guiding the Conference to an early
commencement of substantive work;
9. Recalls the statements by each of the five nuclear-weapon States, noted by resolution 984
(1995), in which they give security assurances against the use of nuclear weapons to non-nuclear-weapon State Parties to the NPT, and affirms that such security assurances strengthen the nuclear non-proliferation regime;

10. Expresses particular concern at the current major challenges to the non-proliferation regime that the Security Council has acted upon, demands that the parties concerned comply fully with their obligations under the relevant Security Council resolutions, and reaffirms its call upon them to find an early negotiated solution to these issues;

11. Encourages efforts to ensure development of peaceful uses of nuclear energy by countries seeking to maintain or develop their capacities in this field in a framework that reduces proliferation risk and adheres to the highest international standards for safeguards, security, and safety;

12. Underlines that the NPT recognizes in Article IV the inalienable right of the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II, and recalls in this context Article III of the NPT and Article II of the IAEA Statute;

13. Calls upon States to adopt stricter national controls for the export of sensitive goods and technologies of the nuclear fuel cycle;

14. Encourages the work of the IAEA on multilateral approaches to the nuclear fuel cycle, including assurances of nuclear fuel supply and related measures, as effective means of addressing the expanding need for nuclear fuel and nuclear fuel services and minimizing the risk of proliferation, and urges the IAEA Board of Governors to agree upon measures to this end as soon as possible;

15. Affirms that effective IAEA safeguards are essential to prevent nuclear proliferation and to facilitate cooperation in the field of peaceful uses of nuclear energy, and in that regard:
   a. Calls upon all non-nuclear-weapon States party to the NPT that have yet to bring into force a comprehensive safeguards agreement or a modified small quantities protocol to do so immediately,
   b. Calls upon all States to sign, ratify and implement an additional protocol, which together with comprehensive safeguards agreements constitute essential elements of the IAEA safeguards system,
   c. Stresses the importance for all Member States to ensure that the IAEA continue to have all the necessary resources and authority to verify the declared use of nuclear materials and facilities and the absence of undeclared activities, and for the IAEA to report to the Council
accordingly as appropriate;
16. Encourages States to provide the IAEA with the cooperation necessary for it to verify whether a state is in compliance with its safeguards obligations, and affirms the Security Council’s resolve to support the IAEA’s efforts to that end, consistent with its authorities under the Charter;
17. Undertakes to address without delay any State’s notice of withdrawal from the NPT, including the events described in the statement provided by the State pursuant to Article X of the Treaty, while noting ongoing discussions in the course of the NPT review on identifying modalities under which NPT States Parties could collectively respond to notification of withdrawal, and affirms that a State remains responsible under international law for violations of the NPT committed prior to its withdrawal;
18. Encourages States to require as a condition of nuclear exports that the recipient State agree that, in the event that it should terminate, withdraw from, or be found by the IAEA Board of Governors to be in non-compliance with its IAEA safeguards agreement, the supplier state would have a right to require the return of nuclear material and equipment provided prior to such termination, non-compliance or withdrawal, as well as any special nuclear material produced through the use of such material or equipment;
19. Encourages States to consider whether a recipient State has signed and ratified an additional protocol based on the model additional protocol in making nuclear export decisions;
20. Urges States to require as a condition of nuclear exports that the recipient State agree that, in the event that it should terminate its IAEA safeguards agreement, safeguards shall continue with respect to any nuclear material and equipment provided prior to such termination, as well as any special nuclear material produced through the use of such material or equipment;
22. Welcomes the March 2009 recommendations of the Security Council Committee established pursuant to resolution 1540 (2004) to make more effective use of existing funding mechanisms, including the consideration of the establishment of a voluntary fund, and affirms its commitment to promote full implementation of resolution 1540 (2004) by Member States by ensuring effective and sustainable support for the activities of the 1540 Committee;
23. Reaffirms the need for full implementation of resolution 1540 (2004) by Member States and, with an aim of preventing access to, or assistance and financing for, weapons of mass
destruction, related materials and their means of delivery by non-State actors, as defined in the resolution, calls upon Member States to cooperate actively with the Committee established pursuant to that resolution and the IAEA, including rendering assistance, at their request, for their implementation of resolution 1540 (2004) provisions, and in this context welcomes the forthcoming comprehensive review of the status of implementation of resolution 1540 (2004) with a view to increasing its effectiveness, and calls upon all States to participate actively in this review;

24. Calls upon Member States to share best practices with a view to improved safety standards and nuclear security practices and raise standards of nuclear security to reduce the risk of nuclear terrorism, with the aim of securing all vulnerable nuclear material from such risks within four years;

25. Calls upon all States to manage responsibly and minimize to the greatest extent that is technically and economically feasible the use of highly enriched uranium for civilian purposes, including by working to convert research reactors and radioisotope production processes to the use of low enriched uranium fuels and targets;

26. Calls upon all States to improve their national capabilities to detect, deter, and disrupt illicit trafficking in nuclear materials throughout their territories, and calls upon those States in a position to do so to work to enhance international partnerships and capacity building in this regard;

27. Urges all States to take all appropriate national measures in accordance with their national authorities and legislation, and consistent with international law, to prevent proliferation financing and shipments, to strengthen export controls, to secure sensitive materials, and to control access to intangible transfers of technology;

28. Declares its resolve to monitor closely any situations involving the proliferation of nuclear weapons, their means of delivery or related material, including to or by non-State actors as they are defined in resolution 1540 (2004), and, as appropriate, to take such measures as may be necessary to ensure the maintenance of international peace and security;

29. Decides to remain seized of the matter.
Appendix-5

Communique of the Washington Nuclear Security Summit (NSS) April 13, 2010

Nuclear terrorism is one of the most challenging threats to international security, and strong nuclear security measures are the most effective means to prevent terrorists, criminals, or other unauthorized actors from acquiring nuclear materials.

In addition to our shared goals of nuclear disarmament, nuclear nonproliferation and peaceful uses of nuclear energy, we also all share the objective of nuclear security. Therefore those gathered here in Washington, D.C. on April 13, 2010, commit to strengthen nuclear security and reduce the threat of nuclear terrorism. Success will require responsible national actions and sustained and effective international cooperation.

We welcome and join President Obama’s call to secure all vulnerable nuclear material in four years, as we work together to enhance nuclear security.

Therefore, we:

1. Reaffirm the fundamental responsibility of States, consistent with their respective international obligations, to maintain effective security of all nuclear materials, which includes nuclear materials used in nuclear weapons, and nuclear facilities under their control; to prevent non-state actors from obtaining the information or technology required to use such material for malicious purposes; and emphasize the importance of robust national legislative and regulatory frameworks for nuclear security;

18. Call on States to work cooperatively as an international community to advance nuclear security, requesting and providing assistance as necessary;

19. Recognize that highly enriched uranium and separated plutonium require special precautions and agree to promote measures to secure, account for, and consolidate these materials, as appropriate; and encourage the conversion of reactors from highly enriched to low enriched uranium fuel and minimization of use of highly enriched uranium, where technically and economically feasible;

20. Endeavor to fully implement all existing nuclear security commitments and work toward acceding to those not yet joined, consistent with national laws, policies and procedures;

21. Support the objectives of international nuclear security instruments, including the Convention on the Physical Protection of Nuclear Material, as amended, and the
International Convention for the Suppression of Acts of Nuclear Terrorism, as essential elements of the global nuclear security architecture;

22. Reaffirm the essential role of the International Atomic Energy Agency in the international nuclear security framework and will work to ensure that it continues to have the appropriate structure, resources and expertise needed to carry out its mandated nuclear security activities in accordance with its Statute, relevant General Conference resolutions and its Nuclear Security Plans;

23. Recognize the role and contributions of the United Nations as well as the contributions of the Global Initiative to Combat Nuclear Terrorism and the G-8-led Global Partnership Against the Spread of Weapons and Materials of Mass Destruction within their respective mandates and memberships;

24. Acknowledge the need for capacity building for nuclear security and cooperation at bilateral, regional and multilateral levels for the promotion of nuclear security culture through technology development, human resource development, education, and training; and stress the importance of optimizing international cooperation and coordination of assistance;

25. Recognize the need for cooperation among States to effectively prevent and respond to incidents of illicit nuclear trafficking; and agree to share, subject to respective national laws and procedures, information and expertise through bilateral and multilateral mechanisms in relevant areas such as nuclear detection, forensics, law enforcement, and the development of new technologies;

26. Recognize the continuing role of nuclear industry, including the private sector, in nuclear security and will work with industry to ensure the necessary priority of physical protection, material accountancy, and security culture;

27. Support the implementation of strong nuclear security practices that will not infringe upon the rights of States to develop and utilize nuclear energy for peaceful purposes and technology and will facilitate international cooperation in the field of nuclear security; and

28. Recognize that measures contributing to nuclear material security have value in relation to the security of radioactive substances and encourage efforts to secure those materials as well.

29. Maintaining effective nuclear security will require continuous national efforts facilitated by international cooperation and undertaken on a voluntary basis by States.
We will promote the strengthening of global nuclear security through dialogue and cooperation with all states.

31. Thus, we issue the Work Plan as guidance for national and international action including through cooperation within the context of relevant international fora and organizations. We will hold the next Nuclear Security Summit in the Republic of Korea in 2012.
Appendix-6

Nuclear Security Summit Washington DC 12-13 April 2010

PAKISTAN NATIONAL STATEMENT

Pakistan welcomes the initiative taken by President Barack Obama to convene a Nuclear Security Summit (NSS). The initiative is timely and raises awareness about nuclear security, which is a common global concern. It gives primacy to an issue that requires attention at the highest level. Pakistan believes that this Summit will act as a catalyst for fostering a nuclear security culture. Pakistan has keenly promoted this culture. Pakistan welcomes President Obama’s call for security of nuclear material. At this Summit, we reaffirm our commitment to the objective of strengthening nuclear security and to stop terrorists from gaining access to nuclear or radiological materials for terror. Nuclear security within a state is a national responsibility. Within this framework, the international community must continue to explore space for cooperation in nuclear security which subsumes measures to combat the threat of nuclear terrorism. Currently the international regime dealing with nuclear security is quite extensive ranging from the measures taken by the IAEA and the United Nations to several initiatives that have been taken in the recent past. We do not need new or parallel mechanisms for cooperation on nuclear security or to address the threat of terrorism. But we do need better coordination amongst different initiatives. Moreover, faithful application of the widely agreed standards and provision of matching assistance, where necessary and acceptable, can equip international community with more effective tools to strengthen nuclear security and prevent nuclear terrorism. This Summit enables us to look at the bigger picture and synergize the work of international forums and partnerships to strengthen the security of nuclear materials and prevent possible acts of terrorism. Our main objective is to share, on a voluntary basis, expertise and experiences in nuclear security, to learn from best practices, to share information and intelligence, in a nonbinding, non-prescriptive manner to enhance capabilities to fight nuclear terrorism, and to enhance capacities to respond to nuclear security incidents. The Summit has kept a sharp focus on nuclear security and has avoided going into the areas of non-proliferation and disarmament, which are being discussed at other relevant forums. It also recognizes that nuclear security measures should not infringe on the nations’ rights to peaceful uses of nuclear energy, including the production, transfer,
use and exchange of nuclear materials for peaceful purposes. Pakistan’s nuclear programme has been security conscious right from the beginning. Since its inception, we had imposed tight measures for nuclear security. After the nuclear tests of 1998, these measures were further institutionalized into an elaborate and effective nuclear security regime. Our nuclear security regime has four pillars: One, a well defined command and control system comprising the National Command Authority, the Strategic Plans Division, and the Strategic Forces Commands, exercises strict control over all aspects of policy, procurement, operations, and, most importantly, nuclear security. Two, strict regulatory regime covering all matters related to nuclear safety and security, including physical protection of materials and facilities, material control and accounting, transport security, prevention of illicit trafficking and border controls, as well as plans to deal with possible radiological emergencies. Three, an extensive export control regime. Four, international cooperation, consistent with our national policies and interests as well as international obligations. Today a robust command and control system is in place, which protects our strategic assets against theft, diversion, and accidental or unauthorized use. The NCA, the apex decision-making body, chaired by the Prime Minister of Pakistan, makes all major decisions regarding nuclear policy, planning, use and security. Within this overall framework, the SPD develops technical solutions, personnel and human reliability programmes, and intelligence capabilities to deal with nuclear security, non-proliferation, accidents and WMD terrorism. The Pakistan Nuclear Regulatory Authority (PNRA), an autonomous oversight body, regulates the safety and security of civilian nuclear materials and facilities. It works closely with IAEA on safety and security issues and benefits from its recommendations and guidance. The national Nuclear Security Action Plan (NSAP), being implemented by the PNRA in collaboration with the IAEA, encompasses several aspects of nuclear security including physical protection, prevention of illicit trafficking, management and security of radioactive sources and response to unauthorized acts involving nuclear and radioactive material. It has trained more than 1000 personnel from relevant national organizations in various aspects of nuclear security. It also collaborates with Pakistan Institute of Engineering and Applied Sciences to run a Master’s programme in nuclear engineering with a specialization in nuclear security. Under the Plan, Pakistan has established national nuclear security emergency coordinating center and a network of six emergency-response mobile labs. We have equipped strategic entry and exit points with radiation detection equipment for prevention and detection of illicit trafficking in nuclear and radioactive materials. Our export control laws are at par with the standards followed by the Nuclear Suppliers Group (NSG), the Missile Technology Control Regime (MTCR), and the
Australia Group (AG), as well as European Union Guidelines. The jurisdiction of the 2004 Export Control Act, which has a catch all clause, extends to the entire territory of Pakistan and all citizens whether at home or abroad. Severe punishments under the law include up to 14 years’ imprisonment, heavy fines and confiscation of assets. It also covers offenses falling in the category of illicit transfer of intangible technology such as services, training, and advice. To ensure consistent implementation of the law, an interagency Strategic Export Control Division (SECDIV) and an Oversight Board have been established in the Ministry of Foreign Affairs.

Pakistan has maintained highest standards for non-proliferation. When problems surfaced we addressed them definitively and kept the international community informed. Pakistan has been working with, and reporting to, the UNSCR 1540 Committee. Pakistan is a party to the Nuclear Safety Convention, Convention on Physical Protection of Nuclear Material (CPPNM), the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in case of a Nuclear Accident or Radiological Emergency. We subscribe to the IAEA Code of Conduct on Safety and Security of Radioactive Sources and participate in the IAEA Illicit Trafficking Database. This relationship has been highly productive for Pakistan and IAEA. Pakistan joined the Container Security Initiative in 2006 and has been observing the exercises of Proliferation Security Initiative. Pakistan’s participation in the Global Initiative to Combat Nuclear Terrorism (GICNT) underlines our commitment to become a partner in the international efforts against contemporary global challenges. Pakistan believes that all nations, including those in South Asia, should work closely for security, development and prosperity. All nations should pursue this goal on the basis of sovereign equality, mutual trust, and mutual respect. Pakistan’s nuclear programme is security-driven. It was an existential choice we made to deter aggression, prevent war and defend ourselves. Our objective has been development of a minimum credible nuclear deterrent. We are against an open-ended arms race in South Asia. We have always tried to maintain peace and security in South Asia at the lowest levels of armaments. Pakistan has proposed the establishment of a Strategic Restraint Regime in South Asia, which would promote nuclear and missile restraint, a balance in conventional forces, and conflict resolution. We have concluded with India risk reduction and confidence building measures which include a hot line, prior notification of ballistic missile tests, and an agreement on reducing the risk of accidents relating to nuclear weapons.
More than ever, India and Pakistan need a substantive, structured and sustained dialogue on all issues, including nuclear CBMs. Pakistan has legitimate needs for power generation to meet the growing energy demand of our expanding economy. Civil nuclear power generation under IAEA safeguards is an essential part of our national energy security plan to support sustained economic growth and industrial development. Pakistan has more than thirty five years of experience in running nuclear power plants. With trained professional manpower and a strong nuclear safety and security culture, Pakistan fully qualifies for participation in civil nuclear cooperation at the international level. We urge all relevant forums to give Pakistan access to nuclear technology for peaceful uses, in a nondiscriminatory manner, to meet its growing demand for energy. We welcome the renewed international interest in nuclear power generation to meet the challenge of climate change. As a country with advanced fuel cycle capability, Pakistan is in a position to provide nuclear fuel cycle services under IAEA safeguards, and to participate in any non-discriminatory nuclear fuel cycle assurance mechanism. Pakistan is strongly committed to nuclear security. It would continue to refine and modernize its technical and human resources and mechanisms on safety and security of nuclear weapons, nuclear materials, facilities, and assets. Pakistan would cooperate with the global community in accordance with its national policies and requirements as well as international obligations.
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