

CHAPTER 2

REDUCING THE RISK OF NUCLEAR WAR IN SOUTH ASIA

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INTRODUCTION

The new international environment has altered the concept of national security. Threats to international peace and security now emanate not from strategic confrontation between the major powers, but from regional conflicts and tensions and the spread of violent extremism by nonstate actors, threatening nation-states from within and transcending state boundaries and international security. In recent years, the levels of security enjoyed by various states have become increasingly asymmetric—some enjoy absolute security, others none at all. This environment of security imbalance has forced weaker states to adopt a repertoire of strategies for survival and national security that includes alliances and strategic partnerships, supporting low-intensity conflicts, and engaging in limited wars and nuclear deterrence.

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South Asia has witnessed increased regional tensions, a rise in religious extremism, a growing arms race, crisis stand-offs, and even armed conflict in recent years. Nuclear tests did not bring an era of genuine stability between India and Pakistan, though military crises in the region did not escalate into full-fledged wars, underscoring the need for greater imagination to rein in the risks due to the fragility of relations between two nuclear neighbors in an increasingly complex set of circumstances.

Pakistan's primary and immediate threat now is from within. Its western borderlands are rapidly converting into a battleground where ungoverned tribal space in proximity to the porous and disputed border is degenerating into insurgency both to its east into Pakistan as well as to its west into Afghanistan. The al Qaeda threat has now metastasized into a spreading insurgency in the tribal borderlands, which is taking a heavy toll on both Pakistan and Western forces in Afghanistan. The newly elected government in Pakistan has hit the ground running; but still mired in domestic politics, it has been unable to focus on the al Qaeda and Taliban threat that is rapidly expanding its influence and targeting strategy. The most tragic aspect of this conundrum is the success of al Qaeda in creating cracks of misunderstanding between Pakistan and the Western allies, while exacerbating tensions and mistrust between Pakistan's traditional adversaries, India and Afghanistan.¹ For example, Pakistan's security nightmare which perceives India-Afghanistan collusion in squeezing Pakistan is exacerbated, while the Indian and Afghan security establishments perceive Pakistani Intelligence malfeasance as perpetuating the Afghan imbroglio. Worse, the outcome of this confusion and blame generates real advantage for

al Qaeda and the Taliban. Any terrorist act that pits Kabul, New Delhi, and Islamabad against each other and intensifies existing tensions and crises also throws Washington off balance, allowing al Qaeda and its sympathizers the time and space to recoup, reorganize, and reequip, and continue to survive.

The only silver lining in this unhealthy regional security picture is the slowly improving relationship between India and Pakistan, which has developed over the past 4 years. Though relations are tense and still fragile, there is a glimmer of hope in this overall crisis-ridden region. The dialogue process between India and Pakistan has been somewhat resilient in the face of significant setbacks and changing domestic, political, and international landscapes within each.

It is very improbable that a nuclear war between Pakistan and India would spontaneously occur. The history of the region and strategic nuclear weapons theories suggest that a nuclear exchange between India and Pakistan would result from an uninhibited escalation of a conventional war vice a spontaneous unleashing of nuclear arsenals. However, this region seems to be the one place in the world most likely to suffer nuclear warfare due to the seemingly undiminished national, religious, and ethnic animosities between these two countries. Furthermore, lack of transparency in nuclear programs leaves room to doubt the security surrounding each country's nuclear arsenal and the safeguards preventing accidental launches. Therefore, discussions aimed at mitigating a catastrophic nuclear war in South Asia should focus mostly on the unilateral and bilateral anti-escalation measures Pakistan and India can take regarding existing issues. Additionally, each country's perception of its security is interwoven with the political, diplomatic,

and strategic movements of the external powers that wield significant influence in the region. Coherent and consistent behavior that discourages conventional and nuclear escalation, although sometimes imperceptibly, is needed from the United States, China, and Russia. Without this, both Pakistan and India are unlikely to feel confident enough to reduce the aggressive posturing of their conventional forces over existing cross-border issues, leaving the escalation from conventional warfare to nuclear warfare a very real possibility.

This chapter focuses on the India-Pakistan nuclear rivalry, leaving Afghanistan-Pakistan issues and Pakistan internal threat dimensions for later discussion. It argues from the basic premise that nuclear war between India and Pakistan will most likely result from an escalating conventional war that must be prevented at all costs. Though the likelihood is remote, a nuclear exchange from an accident or an inadvertent release cannot be ruled out in a crisis. The stakes for a structured peace and security that reduce the risk of war that could turn nuclear are extremely high and linked to international security.

The chapter is organized into five sections. The first section gives a brief overview of crises and nuclear management in South Asia. The second section analyzes the likely causes of a nuclear exchange and possible scenarios. The third section evaluates the unilateral and bilateral steps that Pakistan and India can take with or without reciprocity. The fourth section examines the roles and influences of external powers in reducing risk and encouraging a peace and security structure in the region. Finally, the fifth section summarizes the key arguments and recommendations.

AN OVERVIEW OF CRISES AND NUCLEAR MANAGEMENT

During the Cold War, two sets of questions about security in the nuclear age were raised by some serious studies pertaining to the management of nuclear capabilities. The first set pertained to the performance of the command system in peace and war, and the second analyzed the dangers of inadvertence during a conventional war breaking out in Europe.² Since the end of the Cold War and the recession of strategic threats, the relevance of these dangers seems no longer important at the global level. Concerns about stability are now more applicable to individual regions where nuclear capability has emerged, especially in South Asia where a bipolar regional rivalry has changed the security dynamics, and violent nonstate actors have created the potential for triggering a war between two distrusting nuclear neighbors. It is essential to understand the differences between the Cold War era U.S.-Soviet nuclear tensions and the nuclear race underway in South Asia, as the latter is fraught with a long history of unsettled disputes, intense cognitive biases, and proximity.

During the gestation period of covert development of their nuclear weapons, India and Pakistan underwent a series of military crises. The occupation of Siachin Glacier (1984) and the Brass Tacks Exercise (1986-87) broke the uneasy spell of peace and tranquility that existed between the two neighbors since the Simla peace accord in 1972. During this period, both countries faced domestic political and separatist challenges, with each side accusing the other of abetting insurgencies.³ By 1989-90, the third military crisis began with the Kashmir uprising and

prompted U.S. presidential intervention for the first time. The 1990 crisis was the first of its kind where the nuclear factor played a role. Controversy still exists with conflicting claims of whether Pakistan conveyed veiled threats and engaged in nuclear signaling during the crisis.⁴ These crises of the 1980s have since shaped the regional security dynamics, which were directly influenced by three intertwined dimensions. The first dimension was the end of the Cold War, which lowered the strategic significance of South Asia, thereby allowing the superpowers to disengage from the region. Second, the war in Afghanistan mutated into intraregional civil war after the Soviet departure. Third, the uprising in Kashmir evolved into a full-fledged insurgency in Indian-administered Kashmir. In the center of all these dimensions was Pakistan. It was first to face the blowback of the Afghan war due to its decade-long involvement in Afghanistan and its vital security interests in both Kabul and Kashmir. In the changed geopolitical environment, Pakistan came under nuclear sanction (the Pressler Amendment) by the United States, which did not stop Pakistan's desire to match India's nuclear and missile developments. Nuclear sanctions, in particular, accelerated the ballistic missile race. As India flight-tested missiles, Pakistan, in a desperate search of suppliers to match India, sought a substitute for the F-16 aircraft, the delivery of which was stalled due to the nuclear sanctions. Pakistan looked east for its missile program and eventually received both liquid and solid fuel technology transfers to enable a strong base to proceed independently. By the end of the century, India and Pakistan would possess a nuclear capacity sufficient to destroy the subcontinent.

In May and June 1999, Pakistan and India were engaged in a high intensity crisis at Kargil that was

unprecedented in terms of its timing, nature, and intensity. The Pakistani opportunistic land occupation purportedly to improve its defenses was no longer considered business as usual along the Line of Control (LOC). In the summer of 1984, India occupied the Siachin Glacier, left undemarcated in 1971, which triggered a series of crises along the relatively quiet northern part of the LOC.⁵ The act triggered instability between nuclear-armed neighbors, unacceptable to a world that was now deeply concerned about the nuclear dimension. The crisis deepened as India vertically escalated the conflict using airpower and threatened horizontal escalation. Its diplomatic and information campaign succeeded both internationally and domestically in rallying support behind India. The opposite happened in Pakistan. The victory of having done something after the ignominy of the loss of Siachin and other posts was short lived. The Pakistani narrative and justification fell on deaf ears both domestically and abroad. Isolated and under severe sanctions, Pakistan's internal mechanisms collapsed into confusion and its army was forced to withdraw after the Pakistani Prime Minister dashed to Washington for help. The breakdown of civil-military relations and its consequences continue to affect Pakistan nearly a decade later.

The Kargil crisis of 1999 remains a highly controversial one for a number of reasons. One aspect was the nuclear dimension of the crises. The U.S. intelligence community and policymakers believe that the Pakistani military made imminent preparations for possibly mating nuclear warheads with ballistic missiles. The Pakistani officials involved with such preparations deny any such actions or event.⁶ Kargil is celebrated as a diplomatic success for the United States

in crisis deescalation; however, this was a shocking blow to Pakistan and a clear manifestation of a U.S. tilt in India's favor, decidedly against Pakistan. With overt nuclear weapons capabilities, the paradigm of stability shifted. But new powers do not learn the shift instantly. Like the old, new nuclear powers take time to move up the learning curve. As Robert Jervis has argued in his work, nuclear revolution is a slow process.⁷

Although the crisis threatened prospects of peace and security, the foundations and potential for a structured peace were laid earlier in 1998-99. Under severe international sanctions, India and Pakistan were pushed into bilateral negotiations culminating in a summit from which the famous Lahore Declaration that encompassed the Lahore Memorandum of Understanding (MOU) was drawn in February 1999. The Lahore MOU recognized the nature of the changed strategic environment and laid down the basis of the potential peace, security, and confidence-building measures.

The run up to the Lahore Declaration, however, was not without highly intensive U.S. engagements with both India and Pakistan. The team, led by Strobe Talbott, was composed of high-level teams of nonproliferation and arms control experts with extensive experience of Cold War negotiations. The U.S. experts, however, were unaware of the nuances of regional security compulsions, while the South Asian security managers and the civil and military bureaucracy were equally inexperienced in the logic, lingo, and implications of classic arms control that had evolved during the Cold War nuclear rivalry.

The Pakistani interaction with the United States (and dialogue with India) indicated a fast learning experience.⁸ Substantive exchange of nonpapers

with the U.S. teams led both sides to understand the obstacles and prospects of a minimum deterrence posture. Pakistan proposed the adoption of a Strategic Restraint Regime (SRR) for South Asia. The SRR was to consist of three interlocking elements: agreed reciprocal measures for nuclear and missile restraints to prevent deliberate or accidental use of nuclear weapons; establishment of a conventional arms balance as a confidence-building measure; and establishment of political mechanisms for resolving bilateral conflicts, especially the core disputes over Jammu and Kashmir.⁹

Of these three components, the two military elements were symbiotic and fundamental to Pakistan's security perspective and deterrent posture. The fundamental principle was a nexus between nuclear restraint and conventional force restraint. India dismissed the notion of conventional force restraints with Pakistan outright, indicating it would only discuss nuclear and missile restraint and doctrinal aspects. The U.S. experts were equally unenthusiastic. One interpretation was that linking conventional force restraints with nuclear restraints contained an implicit legitimization of upping the nuclear ante in the face of conventional threat. To the Pakistanis, tying down the nuclear hand while freeing up the conventional hand was tantamount to legitimizing use of conventional force by India, and delegitimizing the use of nuclear weapons by Pakistan. What, then, was the logic of Pakistani nuclear deterrence that was achieved after 3 decades of opprobrium, sanctions, and military defeat in 1971 – the original *raison d'être* for going nuclear?

The process of separated triangular strategic dialogue between each of the three – Pakistan, the United States, and India – created suspicions as each side was blind to the discussions of the other two. In

Pakistan, suspicion especially grew for two reasons. First, after 50 years of an alliance relationship with the United States, Pakistan was less inhibited in candor and trust. For India, this was probably new. However, U.S. sympathy and the public cozying up of Strobe Talbot and Jaswant Singh lent credence to onlookers that the United States was not interested in an equitable treatment of mutual restraint and potentially had a different agenda with India than with Pakistan. Second, the notion of dehyphenation was evident as the United States began to dismiss Pakistani security concerns; and, increasingly, U.S. negotiators began to mirror the perceptions and positions of their Indian counterparts.¹⁰

The strategic dialogue lost its seriousness, and soon it became a U.S.-India partnership dialogue rather than a U.S.-brokered chance of establishing a structure for regional stability. India was loath to accept any regional-based proposals as these would reduce India's status and elevate that of Pakistan.¹¹ Nevertheless, Pakistan took away many learning experiences. The dialogue process enabled Pakistan to set its priorities and align the key thinking on issues of doctrine, command and control, arms control, and nonproliferation concerns. In particular, the activities of A. Q. Khan crystallized the need for responsible oversight and restraint. There was a hiatus in the dialogue with the military government between 1999 and 2001. President Clinton's reluctant visit in March 2000 with the baggage of Kargil as the backdrop and a failed Agra Summit proved counterproductive in the end.

Encouraged by the success in Kargil and the U.S. response during negotiations, India announced its draft nuclear doctrine in August 1999, later made

official in 2003. The draft nuclear doctrine, which announced the no-first-use policy, espoused a massive retaliation doctrine to include the use of nuclear weapons in the event of a major attack against India or Indian forces anywhere. If attacked with biological or chemical weapons, India would retaliate with nuclear weapons; and India supported this policy with the development of a triad of land, sea, and air nuclear weapons platforms. This was further enhanced by formal deployment of the Prithvi missile and subsequent development and deployment of the Agni series and other cruise missiles (Brahmos). On January 25, 2000, on the eve of India's constitutional birthday, Indian Defense Minister George Fernandes announced a doctrine of limited war under a nuclear umbrella. From a Pakistani perspective, every Indian pronouncement, India's doctrinal thinking, and its force goals and postures were directed at Pakistan-specific interests and only indirectly referred to other unspecified threats (China).

In December 2001, just when U.S. forces were pounding at the Tora Bora hills to destroy the remnants of the Taliban and al Qaeda, Pakistani armed forces were moving into the Federally Administered Tribal Area (FATA). Operation ENDURING FREEDOM had passed through a critical phase with Pakistan providing major logistics, intelligence, and operational space. Pakistani forces were required to be the anvil as U.S. forces were conducting operations across the region. This was the most crucial phase of the war against al Qaeda for which the United States required major Pakistani military force deployment to block the porous border as best as they could. As military operations proceeded along the Afghanistan-Pakistan border, five alleged terrorists attacked the Indian

parliament in New Delhi on December 13, 2001. This attack was the second of its kind within 2 months. The first attacks were on the State Parliament in Srinagar, Kashmir, on October 1, 2001. Enraged, India ordered complete mobilization of the Indian armed forces, and the Indian Prime Minister called for a decisive war against Pakistan. Since 1984, this was the fifth crisis and the largest and, at 10 months, the longest military standoff between the two rivals. This was also the first time that Pakistani armed forces were physically confronted on two battlefronts, particularly in the Spring of 2002 when U.S. forces conducted another follow-up military operation (Operation ANACONDA).¹² As brinkmanship and force deployment deepened on both sides, another terrorist incident occurred in May 2002, and war between the two neighbors seemed imminent. The consequence of the military standoff between India and Pakistan provided an opportunity for remnants of the Taliban and al Qaeda to escape into the porous borderlands with greater ease than would have been possible had Pakistan focused on a single front. The prospects of Pakistani force effectiveness in the tribal borderlands would have been greater at that time because tribal areas had up until then given no resistance to Pakistani force movement, allowing peaceful penetration into tribal areas. During the compound crises in 2002, India and Pakistan respectively signaled strategic unease through missile testing at two peak moments of their military standoffs. India tested its Agni-1 in January 2002, and Pakistan flight-tested three ballistic missiles in May 2002, prompting U.S. intervention to diffuse the crisis.¹³ Given the propensity of crises in the region for the past decades, and with no prospects of conflict ending, there is not enough confidence that

a miscalculation can be prevented in the future. The region refuses to acknowledge that limited or low-level conflict carries a threat of nuclear escalation.

POSSIBLE CAUSES OF A NUCLEAR EXCHANGE BETWEEN INDIA AND PAKISTAN

The legacy of suspicion created by violent events at partition still exists among many of Pakistan's and India's ruling elites.¹⁴ Consequently, India and Pakistan have focused on internal balancing (i.e., modernizing their armed forces and eventually going nuclear) and external balancing (i.e., forging alliances or treaties of friendship with great powers).¹⁵ This in turn contributed to the hardening of their respective stances on conflict resolution and the increasing frequency of cross-border crises. The nuclear capabilities of each only exacerbate the tensions inherent between the two countries, pushing each toward unilateral internal security-building measures. The double effect of the nuclear capability is that on the one hand it has contained crises and prevented major wars (deterrence optimism), but on the other hand, failed to prevent a series of military crises and dangerous confrontations (proliferation pessimism).¹⁶ The mix of violent extremism and terrorism in the milieu has made regional security issues no longer an exclusive domain of any one state in the region.¹⁷ Today, terrorist acts are not only affecting societies within the South Asian nations, but its effects ripple through the region and the world.

This section begins with the premise that surprise or unexpected nuclear exchange between the two countries is remote. This condition may change in the future for two reasons. One, change will happen

if nuclear weapons are mated with delivery systems and deployed arsenals are routinely maintained, as was the case in Europe during the Cold War. Two, if strategic weapons asymmetry between India and Pakistan is broadened, it will increase India's first strike options in terms of capabilities, notwithstanding India's declared intentions of no first use in its official doctrine. This imbalance will occur in the future due to the introduction of destabilizing technologies and the freeing up of India's domestic fissile stock for military purposes, as and when the Hyde Act of 2007 is implemented.

Three major developments will erode the current balance in the future: Increasing capacities in advanced information, surveillance, and reconnaissance systems (Israeli-supplied Phalcon and Green Pine radars, for example); acquisitions of anti-ballistic missile (ABM) systems; and the steady militarization of outer space in which India has recently shown interest. Even if the possibility of a surprise strike against Pakistan may be remote and arguably meant for balance against China, these developments will force Pakistan into countervailing strategies. Pakistan's geophysical vulnerabilities to Indian aggression will increase, compared to China or any other country. This perceived invincibility against strategic arsenals would encourage India to wage limited wars with conventional forces. Since the 2002 military standoff and relative tranquility between India and Pakistan, the Indian military has experimented with new ideas of waging conventional war with Pakistan, as illustrated by the emerging military doctrine of Cold Start.

India's Cold Start military doctrine envisages creating multiple integrated battle groups that are self sufficient in limited offensive capacities—maneuver

and firepower – forward deployed to garrisons close to Pakistan. One study suggests that the doctrine requires reorganizing offensive power of the three Indian Army strike corps into eight integrated battle groups, each roughly the size of a composite division, comprised of infantry, armor, and supporting artillery and other fire power units. This force would resemble the erstwhile Soviet Union’s offensive maneuver groups, capable of advancing into Pakistan on different axes with the support of the air force and naval aviation.¹⁸ The fundamental purpose of such a doctrine is to redress India’s time-consuming mobilization of offensive mechanized forces, which loses surprise and allows Pakistan time to outpace India due to the short distances required for deployment. This was demonstrated in the 2002 crisis, and the Indian military was somewhat frustrated because of heavy-handed political control, diplomatic intervention, and loss of military opportunity to wage a short and limited, but intense, punitive war. Cold Start reflects several assumptions on the part of India. It dismisses Pakistan’s nuclear capability, assumes accurate calculations of red lines, assumes it can control the degree of escalation, underestimates Pakistan’s reciprocal conventional preparations and the subsequent retaliatory damage, assumes Indian and Pakistani governments will accept a fate accompli, and believes the reaction of outside powers (read United States) would be manageable and would help keep the conflict purely conventional and limited. These are all sizeable and significant assumptions; the failure of any opens the door to uncontrollable escalation to the nuclear level. The possible long-range outcomes for maintaining such a doctrine include an increasingly fortified India-Pakistan border, continued tension and pressure to maintain strategic weapons deployment, and a regional arms race. All three outcomes hinder the

development of each country, but would be especially debilitating for Pakistan as it struggles to maintain two borders and a multitude of domestic crises.

Nuclear Force Deployment Scenarios.

Should security dynamics unfold as described above, Pakistan will be forced to become a security state, far removed from the vision of a welfare state. In a heightened security environment with no peace prospects, there are four possible general scenarios in which Pakistan would be forced to consider deploying nuclear weapons, as outlined below:

1. Hot pursuit. India conducts punitive raids across the LOC or the international border. Imminent tactical preparations in India will force Pakistani conventional force reserves to mobilize.

2. Brass Tacks and composite crises 2002 revisited. Indian conventional force builds up for coercive deployment or decisive war (Brass Tacks or 2002 deployment), and nuclear forces are alerted and deployed.

3. East Pakistan revisited. India abets internal discords within Pakistan, inducing civil war, and seeks an opportunity to assail it as it did in 1971. Balochistan and parts of Sind and the North West Frontier Provinces, where domestic unrest and religious and tribal extremism are high, are good candidates for such a design.

4. Peacetime deployment of strategic weapons. India opts for formal deployment of nuclear forces, citing China or another strategic threat, and Pakistan follows suit.

The strategic picture profoundly changes should any conditions enumerated above manifest themselves. Lieutenant General Khalid Kidwai, in an interview with two Italian physicists, discussed hypothetical use scenarios and generally defines Pakistan's nuclear thresholds. Paolo Cotta-Ramusino and Maurizio Martellini quote Kidwai:

Nuclear weapons are aimed solely at India. In case that deterrence fails, they will be used if:

- a. India attacks Pakistan and conquers a large part of its territory [space threshold],
- b. India destroys a large part either of its land or air forces [military threshold],
- c. India proceeds to the economic strangling of Pakistan [economic strangling], or
- d. India pushes Pakistan into political destabilization or creates a large scale internal subversion in Pakistan [domestic destabilization].¹⁹

The four thresholds—geographic, military, economic, and domestic, as defined by Lieutenant General Khalid Kidwai—are factors that would determine the decision for deliberate use by a national command authority. These are not red lines, defined and understood by the adversary or other external parties. A clearly defined red line erodes nuclear deterrence and provides room for conventional force maneuver or destruction by firepower. The other possibility is inadvertent nuclear use. In this chapter, I use the Barry Posen model of inadvertent escalation and apply that model to the conditions applicable to South Asia.²⁰

Nuclear Use Scenarios.

In the absence of any structure of strategic restraint between nuclear-armed neighbors, the possibility of conventional wars breaking out is more likely. This then raises the question Barry Posen raised nearly 2 decades ago: the probability of inadvertent use. I argue that once the conventional war breaks out, the fog of war sets in and two major factors can create conditions for inadvertent use. First, during a conventional war, deceptions, countercontrol targeting, and communication breakdowns are routine consequences of warfighting. These elements contribute to the fog of war, which is further thickened by other conditions, as elucidated by Carl von Clausewitz in *On War*. Second, during peacetime, nuclear weapons safety is more important than effectiveness, especially if chances of war are small. But in war, the safety coefficient is of lesser significance than battle effectiveness. Again, this factor is not simply common sense, but critically important for deterrence stability. An unmated safe weapon will likely failsafe but is more vulnerable to preventive strikes. National command authorities cannot afford this risk and therefore must not only make weapons invulnerable but also capable of effective retaliation. It is the combined effect of these two factors that form the danger of inadvertence in the fog of war. As Martin Schram put it, "Danger of inadvertence is not guided by human planning but human frailty."²¹ Following are possible scenarios that can cause inadvertence in the fog of war:²²

Fog of War Scenario One: When strategic arsenals are deployed for war, deployed delivery vehicles capable of carrying both conventional and/or nuclear warheads are dispersed for protection and invulnerability. In

addition, dummy warheads and real ones are mixed to deceive and keep the enemy guessing. The probability of misperceptions with the adversary increases, especially in South Asia. In the midst of war, any launch by such a strategic weapon (ballistic or cruise missile) will reach the target within 3 to 5 minutes. Depending on what warning and damage it does, any weapons fired from a strategic delivery vehicle will evoke unpredictable responses and the dimension of the battle will change.²³

Fog of War Scenario Two: The second scenario could be derived from a communications break down in conjunction with a perceived rumor of decapitation or crippling of national leadership or the national command centers. Most modern wars commence with such a strike. Aircraft and ballistic or cruise missiles are ideal weapons to take out leadership in countercontrol strikes to decapitate nuclear forces, which are then either rendered incapacitated or incapable of effective retaliation. These forces, usually dispersed, camouflaged, and concealed, could then be neutralized by other means. In such an extreme case, for deployed nuclear forces to be effective, the “always” element of the command and control dilemma would become more expedient than the “never” element.²⁴ The last resort scenario would necessitate a “manual override” capability with nuclear weapon units.²⁵ This can only be undertaken in extremis, and it still does not necessarily imply that weapons units are independent or not under command or control of a formalized chain of command.

Fog of War Scenario Three: A conventional attack by aircraft destroys a nuclear weapon convoy or a fixed site on the ground, resulting in an explosion featuring a radioactive plume. In this case, it is unclear whether a nuclear weapon was used or the nuclear asset was blown up on the ground. Imagine a hypothetical scenario in which a Pakistani air force plane or ballistic missile were to hit an Indian nuclear weapon site or ballistic missile convoy. Will India construe this to be a first nuclear strike by Pakistan? Will India retaliate as enunciated in its strategic doctrine, or will India deliberate and evaluate what had happened before responding?

In all of the above scenarios, the best outcome would be that the respective national command authority does not jump the gun, assesses damage, and evaluates options. The worst case response, however, would be one made out of haste or impatience; war situations can cause irrational responses leading to an upward spiraling of panic within militaries and civil societies. The short flight times between countries suggest that this is a plausible scenario; therefore, the confusion and time-compressed reactions and responses in the heat of war should not be discounted. It is hard to predict the reaction and response of units in the field if some of their nuclear assets are destroyed or made ineffective by conventional attacks. In the ensuing chaos, would surviving units, if capable of operating manually, wait for authorization (enabling codes) and deliberation of the national command authority? Discipline, training, and Standing Operating Procedures (SOPs) would suggest they might; but as of yet, there is no precedent in history that sets a barometer to predict battlefield responses of militaries armed with both lethal conventional as well as nuclear weapons.

Pakistan's National Command Authority retains assertive control during peace and war. In a state of war, nuclear weapons will be mated with delivery systems; permissive action links to enable weapons will be established with a two- to three-man rule; and clearly articulated instructions about the authorization will be clearly issued to all commands.²⁶ However, it is unclear how command and control will cope with electronic jamming or other information warfare techniques that may preclude enabling weapon systems. Alternative command and communication channels are therefore always planned. In Pakistan,

command and communication systems are wargamed each year to test the efficacy of the system. Even if redundancies fail, methods of establishing contact will be made through any means of transportation, including helicopters or ground transportation. Absence of communications will force local leaders to make use-it-or-lose-it decisions in case of severe attacks. However, should all other means fail, the last resort would necessitate pre-delegation to next-in-command or alternative commands as redundancy to assure retaliation, further enhancing deterrence.

UNILATERAL AND BILATERAL ANTI-ESCALATION STEPS FOR PAKISTAN AND INDIA

Unlike Pakistan, India is in a different position when it comes to reducing military tension between itself and Pakistan specifically and in South Asia generally. Its geographical size, central location, and military strength give India a hegemonic influence that it uncomfortably and inconsistently wields. In South Asia's turbulent history, India passed through its most dangerous decades relatively better than others, its smaller neighbors lacking adequate structure and strength to stem crises and wars. Regional security issues compounded also due to India's steadfast reluctance to accommodate its neighbors and to focus on a grand strategy of regional hegemony.²⁷

India is still searching for the right strategy to deal with its neighbors, arguably impeding its own rise.²⁸ Two opposing schools of thought have emerged in the past 2 decades. The first school was based on engagement with its smaller neighbors on the basis of nonreciprocity, also referred to as the Gujral Doctrine.²⁹

The second school of thought seeks a dominant posture and assertive policy towards neighbors, as enunciated in the Gandhi Doctrine.³⁰ India followed both tracks at various times, eventually favoring the hegemonic model. Had India pursued a broad approach of accommodation with its neighbors, it would not only facilitate better regional integration, but the prospects of fostering sustained peace and conflict resolution would be greater as well. A self-confident neighborhood that has a stake in, rather than a fear of, India's rise is a harbinger for stronger structures of peace.

As identified above, India enjoys an edge in geophysical as well as qualitative and quantitative superiority over Pakistan. India can choose the time and place for an offensive, and it "is the conventional imbalance that could bring both sides to the nuclear brink."³¹ Zavar Haider Abidi explains the Pakistani nuclear posture, which rejects the concept of no first use primarily due to its perceived vulnerability to Indian conventional advantage.³² A RAND Corporation study endorses the unlikelihood of a change in Pakistan's nuclear posture "without shifts in the conventional balance of forces, requiring CBMs [confidence-building measures] to demonstrate non-hostile intent" (e.g., halting training along the LOC in Kashmir or the prenotification of major military exercises).³³ As argued elsewhere in this chapter, the best pathway to assured nonuse of nuclear weapons is to undertake conventional arms control measures.

India and Pakistan go back a long way in negotiating treaties and elaborate CBMs.³⁴ Unfortunately, the record of implementation is rather unimpressive.³⁵ CBMs are no panacea for peace and security, but they are a useful foundation for potential structural arms

control agreements. The basic reasons for the failure of CBMs is continuing distrust, aggressive force postures, forward deployment of military units, and continuing violence in the region. As one Indian author says,

India has significant and identical CBMs with both China (stronger) and Pakistan (weaker) neighbors, the implementation of Sino-India and Indo-Pakistani CBMs have been different. With China, India has had positive experiences, with forces pulled back and tensions eased. India believes this is so because there is greater political will and common desire to normalize relations in the case of China, but not so in the case with Pakistan.³⁶

The reasons go beyond the political will: India's and China's force deployments against each other are neither threatening in real time nor accompanied by active violence.

There is also a fundamental disagreement over the approach to peace and CBMs. India insists on transparency of doctrines as an important ingredient to tension reduction, particularly emphasizing a no first-use policy. Since Pakistan refuses to agree to such a step in the face of a superior conventional force, its diplomats concentrate on bilateral conventional and nuclear force reduction steps and India's offensive doctrines and force postures.³⁷ Subsequently, the process of agreement is extremely slow. Regardless, there are unilateral and bilateral measures the two countries can take to reign in the nuclear risks.

Unilateral Anti-Escalation Measures.

Even though bilateral measures have the greater potential to reduce the likelihood of conventional escalation, there are steps each country can take

without reciprocity, which could also mitigate escalation. On Pakistan's side, they can go beyond their ill-defined deterrence doctrine by specifically defining (and announcing) specific policies on key issues with appropriate parliamentary backing.

Strategic Weapons (warheads and missiles). Pakistan could make an official strategic doctrine that encompasses its concerns, doctrinal approach, and security obligations. Four main ingredients around which its doctrinal pronouncements could revolve are:

1. Minimum credible deterrence and eschewing of an arms race with India;
2. No first use of force—conventional or nuclear;
3. No transfer of nuclear technology to any state or nonstate entity or provision of extended deterrence to any other country; and,
4. No use or threat of use of force against a non-nuclear state.

Strategic force postures. Pakistan can formally announce that unless the security situation dramatically deteriorates, its nuclear weapons will remain dealerted, its missiles and nuclear warheads will not be kept mated with delivery vehicles (aircraft or missiles), strategic weapons will remain operationally nondeployed, and Pakistan will provide notification of all missile tests. Islamabad should consider broadening its notification policy by including all neighbors of its tests, particularly Iran, Afghanistan, and China.

Conventional forces. Pakistan can formally announce it will not engage in a conventional arms race and will only maintain an acceptable ratio commensurate with its threats; and will not engage in dangerous hot pursuits, surgical strikes, or limited war with any neighbors across recognized borders or agreed lines of deployment (i.e., no more Kargils.)

Low-intensity conflicts. Pakistan should explicitly renounce the asymmetric strategies of using noncombatants in any shape or form as part of its security policy. It should explicitly announce that it will not allow its state territory or territory under its control to be used for training, organizing, preparing, and executing any form of cross-border violence (i.e., no more Operation GIBRALTAR or other forward policy as an extension of strategic depth). Pakistan should offer a joint regional terrorism cooperative center and open it to all neighbors and likeminded countries.

India, too, has some nonreciprocity steps it can take to mitigate conventional escalation. The South Asian hegemon can unilaterally announce that it will neither cross borders or the LOC (i.e., no more Siachins), mobilize mechanized forces (i.e., no more Exercise Brass Tacks), or undertake coercive operations (i.e., no more Operation PARAKARMS) against South Asian Association for Regional Cooperation (SAARC) members, and that it will only maintain defensive formations within its border areas. This would preclude Brass Tacks-like developments and allow its smaller neighbors, Pakistan in particular, to focus their domestic military operations on counterinsurgency efforts. Furthermore and most importantly, India does have room to renounce its offensive military doctrines such as Cold Start and unlink future doctrines from the concept of limited war under a nuclear umbrella. Also, India's offensive military exercises can be reshaped not to portray Pakistan obtusely as the sole opposition force. Brazen Chariots, an exercise conducted in April 2008, is one such example that continues to harden Pakistan's belief that India's war preparations are Pakistan-specific. Lastly, India has the capacity to take the lead in coordinating joint military and naval

exercises that support regional objectives, such as piracy reduction, expansion of search and rescue networks, and support of disaster relief contingencies. Such exercises not only expand the capabilities and skill sets of each country's militaries and actually improve the safety and security of the region, but they expand the breadth of relationships between rival countries, thereby lessening the chances of a conventional or escalating war.

Bilateral or Reciprocal Anti-escalation Measures.

On the heels of the unilateral measures described above, previously hard-to-attain bilateral agreements will not be so daunting. And as far as reducing the risk of nuclear war on the subcontinent, bilateral and reciprocal measures will have exponentially greater success, making them essential ingredients to long-term nuclear stability. Since nuclear war will most likely be a result of conventional escalation, preventing military crises is the optimum goal of bilateral agreements and can be achieved through systematic steps.

First, India and Pakistan must agree to pull back forces that are identified as offensive and threatening to the other. This is not an untenable goal and, even if not entirely successful at first, can have a stabilizing effect. Merely getting together and pointing out what force postures are threatening will create an awareness of issues and attenuate the risk of inadvertently sending the wrong strategic message. After that could come the mutual creation of a "Low Force Zone" in which force deployments will be mutually negotiated and a "No Offensive Forces Zone" as appropriate.

The next series of bilateral steps would focus on the nuclear weapons themselves. However, such

achievements are unlikely without outside support for such moves, particularly from the United States and China, and will therefore be discussed in the next section.

THE ROLES AND INFLUENCES OF EXTERNAL POWERS IN REDUCING RISK

Unfortunately, the influences of the United States, China, and Russia have not historically been consistently beneficial to the stability of South Asia. The superpowers have notoriously applied military and diplomatic pressure upon Pakistan and India when and where it seemed to best oppose the converse efforts of the adversaries, regardless of the effects it had on the civilians and governments that bore the brunt. Aid and technology was granted and denied to South Asia based not on the long-term regional stability implications, but on the respective central government's perception of its own periphery threats and its ability to provide such support. As the tides of support ebbed and flowed, South Asian countries redirected their solicitation as needed.

U.S. military and economic support was particularly critical to Pakistan's survival, but the United States lent support to India when it was in its own interest, as during the 1962 war with China. In addition, the United States has played a significant role in deescalating Indo-Pak crises a number of times. Invariably, the regional countries looked towards other partners, namely Russia and China, when the expected U.S. support did not measure up or materialize.

The United States still exhibits the same pattern of behavior. In the decade following the end of Cold War, it abandoned Pakistan in favor of connecting with a

rising India, only to return to Pakistan after September 11, 2001 (9/11).³⁸ Seven years later, the United States is in an unprecedented position of influence in New Delhi, Kabul, and Islamabad, each an important partner in its own right and significance. However, the mutual suspicions in the ongoing regional rivalry compound regional and global security prospects and, worse, help enemies such as al Qaeda.

A contention of this chapter is that the prevention of war between India and Pakistan is intrinsic to war against al Qaeda—a hostile Indo-Pak relationship, particularly if it escalates toward force mobilizations against each other, hampers the U.S.-led war on terror. The U.S. policy has been to prevent nuclear weapon acquisition by war-prone states, and, if that fails, to prevent wars between nuclear-armed states. However, the India-Pakistan rivalry has direct impact on the most crucial security issue in contemporary times and all efforts to prevent nuclearization have failed, mandating a change of tack for the states wielding influence in South Asia. The United States, China, and Russia should proactively engage in three areas: (1) conflict resolution among all states; (2) strategic weapon threat reduction between India and Pakistan; and (3) conventional arms control between India and Pakistan.³⁹

Conflict Resolution.

The United States will need to expend a huge amount of time, energy, and money to bring Pakistan, Afghanistan, and India into a mode of conflict resolution, which is hampered by anti-U.S. sentiment in all these countries. But it is time to override objections and find a way to convince India that concessions

made in the name of conflict resolution neither reduce India's status nor undermine its ambitions. Chinese involvement can serve to assuage fears of U.S. imperialism or overreaching while also providing a hegemonic stability upon which secure regimes can be constructed. The new U.S. administration should soon consider a Madrid-like process for South Asia.

Strategic Weapons Threat Reduction.

It will likely be futile for the United States to work on lowering strategic force goals, as past experience has indicated resistance from both India and Pakistan. It would be more pragmatic to help India and Pakistan formalize nondeployment plans for their strategic weapons, dissuade the introduction of nuclear and non-nuclear destabilizing technologies, and assist in best practices for their nuclear regimes. Specifically, international actors should encourage Pakistan and India along the following four areas:

1. Nuclear Risk Reduction Centers (NRRCs). The basic purpose of NRRCs in each capital will be to have a focal point to prevent an impending crisis from escalating. Outside countries can join in to help establish such centers. The United States can play a vital role in encouraging nuclear and political confidence building measures.

2. Personnel Reliability Program (PRP). Sharing experience on organization best practices such as PRPs and procedures to manage sensitive technologies will help respective national command authorities adopt most stringent practices of safety, security, and reliability. As mentioned, training and selection of personnel to withstand psychological pressures in the fog of war will be of the utmost importance in the crisis-prone region.

3. Accident Avoidance. The United States, China, and Russia all have a role to play in the realm of accident avoidance since they provided much of the original technology in use in South Asia. They could also share and possibly train a core of people on accident avoidance techniques and reduction of technological errors, such as electromagnetic radiation and computer fallibility.

4. Physical Protection Technology. The use of some generic physical protection and material accounting practices such as sophisticated vaults and access doors, portal command equipment should be mutually agreeable.⁴⁰ Again, there is sensitivity in both countries to such intrusion, so this cooperation must remain within the bounds of general training and allow countries to develop their own technology if desired.

Conventional Force Restraints.

There are three principal reasons for a U.S. role in conventional force restraints in South Asia. First, between 1999 and 2001 the United States was the main supplier of sophisticated technologies and state-of-the-art platforms to the region. It must understand how this affects regional strategic instability, and why the need for conventional agreement is necessary. Second, the U.S. prime concerns are on the Pakistan-Afghanistan border. The United States expects and desires Pakistan armed forces to focus their military power on this all-important front – an unlikely occurrence absent a force restraint agreement with India. Third, the United States needs to examine not just the physical postures and build up of conventional forces but emerging military doctrines (Cold Start and low intensity conflicts/proxy wars) under the nuclear umbrella. These strategies undermine U.S. objectives of war against al Qaeda.

The United States should encourage the development of overarching principles of identification, mechanism, and nonaggression agreements coupled with strategic weapon restraints. It would make sense to proceed gradually and simultaneously on parallel tracks towards conventional force restraint. Four stages of a conventional arms agreement can be brokered:

1. Identify offensive and defensive forces and requirements for other security forces.

2. Agree on designation of a determined "Low Force Zone." Any increase in strength equipment or structure is voluntarily made known to each other under a CBM.

3. Engage in restructuring and relocation of offensive conventional forces so as to build confidence and trust as other peace objectives are achieved.

4. India and Pakistan must engage in proportional force reduction efforts similar to the pattern of Mutually Balanced Force Reductions (MBFR).

In addition to the objectives outlined above, Chinese actions carry some added weight. Whether or not China builds up its nuclear capability based on South Asian security concerns or outside influences, it upsets whatever balance India might feel it has regarding the Asian power. The U.S. reliable replaceable warhead (RRW) program exemplifies this. Although China may feel its 200 nuclear warheads is an adequate balance to the 10,000 U.S. warheads, the RRW threatens that balance and could cause escalatory ripples in South Asia via China.⁴¹ Although Chinese-Indian interaction has become increasingly positive and more frequent as of late, China's internal force posturing, especially in the nuclear realm will invariably create waves in India and, in turn, Pakistan. Support for Pakistan has

become less overt under the scrutiny of U.S. military involvement in the area, but China also needs to keep in mind the indirect effect China has on the subcontinent when it starts altering the status quo of its forces.

KEY ARGUMENTS AND RECOMMENDATIONS

A nuclear-armed subcontinent is a reality. The best way to achieve strategic stability in the region is by establishing a structural peace and security framework for conventional war avoidance and formalizing the nondeployed status of nuclear weapons. Recent history has shown that reliance on the nuclear umbrella sheltering South Asia seems to have provided militaries on both sides of the border more strategic room with respect to perpetuating low intensity warfare and escalating conventional warfighting doctrines. Additionally, this chapter has argued that the most probable cause of a nuclear exchange on the subcontinent will be a result of conventional war escalation—either through accident in the fog of war or due to established protocols—and less due to accidental launches. Preventing a nuclear exchange in South Asia is, therefore, less dependent on strategic weapons safeguards, although they remain a key to strategic stability, rather more dependent on the prevention of conventional war escalation. Conventional, and therefore nuclear, stability can start through unilateral steps taken by Pakistan as well as India. More importantly, India as the primary regional power has significant responsibilities in preventing nuclear war and initiating anti-escalation measures. Where real stability will be achieved, though, is through bilateral and multilateral strategic actions improving the safeguards and reducing the apparent threats to

opponents, superimposed by coherent superpower policies and involvement.

Because of India's primacy in South Asia, it must take the lead initiating stability-inducing policies and doctrines, particularly due to its relative military strength. Its behavior has not been consistent over time, vacillating between accommodating (Gujral doctrine) and confronting (Indira Gandhi doctrine) in its dealings with other South Asian neighbors. India has leaned towards the latter as new international trends like Asian power balance and globalization, for instance, favored India leaving little incentive for the former model.⁴² Shifts in the international system—global terrorism, globalization, and informational and economic interdependence—will make traditional security issues less relevant. Regional security issues in South Asia are now qualitatively different and interrelated such as energy, water, food, poverty, terrorism, and rising religious extremism. India must take the lead.

A structured peace and security regime between India and Pakistan is now a geo-political compulsion. A cooperative relationship between India and Pakistan is directly related to peace and stability in Afghanistan. Unless India and Pakistan stabilize their relationship and change the culture from confrontation and exploitation to cooperation and collective gain, success in the global war against al Qaeda will remain elusive.

The United States, in concert with major powers, can turn this grim and seemingly intractable security situation into a unique opportunity of security paradigm change from suspicion and rivalry to one of conflict resolution and stability. The stakes of preventing war and crisis between India and Pakistan (and Pakistan and Afghanistan) is now an extremely

important ingredient of the global war on terror and is not just simply a matter of moving toward a peace between two nuclear-armed countries.

Nuclear neighbors with a long history of unsettled disputes, cognitive biases, crises, and wars require years of crisis-free confidence and trust building to mature into détente, aided by a supportive international community. Conditions for instabilities will continue so long as the dangerous trend of seeking space for low-level conflicts continues, and the feasibility to wage limited conventional war under the nuclear threshold is not taken off the table. Nevertheless, as has been shown in this chapter, there are unilateral and bilateral steps India and Pakistan can take to rein in the risk of nuclear war on the subcontinent.

ENDNOTES - CHAPTER 2

1. On July 7, 2008, a suicide car targeted the Indian embassy in Kabul, killing many including the Indian defense attaché. This terrorist incident has triggered angry responses from people in New Delhi, India, and Kabul, Afghanistan, who, not surprisingly, are pointing fingers at the Pakistani Inter-Service Intelligence. Relations are tense within the region. (At the time of this writing, September 13, 2008, in yet another terrorist incident in New Delhi, India, five blasts killed over 20 and injured dozens.)

2. See, for example, Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations*, Washington, DC: Brookings Institution Press, 1987; Desmond Ball, "Can a Nuclear War Be Won?" *Adelphi Papers* 169, London, UK: The International Institute for Strategic Studies (IISS), 1981; and Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks*, Ithaca, NY: Cornell University Press, 1991.

3. India was involved in Sikh, Tamil, and Naxalite insurgencies and also experienced emergency rule in the mid-1970s. Pakistan underwent political turmoil leading to martial law in 1977 and insurgencies in Balochistan and Sindh.

4. The author's interviews with several Pakistani senior military and civil servants indicate conflicting claims and denials about Pakistan sending their Foreign Minister, Sahibzada Yaqub, to convey a subtle threat, which Yaqub-Khan denies having been either tasked or having conveyed. Reports of F-16s being prepared to signal deterrence also remain unverified whether it was a post-event rhetorical claim for domestic political purposes or otherwise.

5. India felt justified in its land grab of Siachin as it was outside the demarcated LOC. The international community saw this crisis as another between India and Pakistan over Kashmir. It was before the start of the South Asian nuclear era., recognized as 1998 and not 1974.

6. The most oft-cited reference is from Bruce Reidal, who was the note taker during the Clinton-Sharif meeting on July 4, 1999. The categorical denial comes from Pervez Musharraf in *In the Line of Fire*, New York: Simon & Schuster, 2006. Also, Lieutenant General Khalid Kidwai, during a briefing tour in the United States in the fall of 2006, repeatedly denied any such preparations. Also see Feroz Hassan Khan's interview with Aziz Haniffa in "Pakistan Did Not Prepare Nuclear Weapons in Kargil Crisis," *India Abroad Weekly Journal*, April 2002.

7. Robert Jervis, *The Meaning of Nuclear Revolution: Statecraft and the Prospect of Armageddon*, Ithaca, NY: Cornell University Press, 1989.

8. Pakistan took the lead on issues of arms control and disarmament since it had set up a dedicated cell in Army Headquarters in 1994. The author was the first director of this organization, which was later merged with the Strategic Plans Division, Joint Service Headquarters in 1999. See Stephen P. Cohen, *The Pakistan Army*, New York: Oxford University Press, 1998.

9. Statement by Ambassador Munir Akram, Permanent Representative of Pakistan to the United Nations, New York, in the General Debate of the First Committee of the 58th Session of the U.N. General Assembly, October 10, 2003.

10. Strobe Talbott, *Engaging India*, Washington, DC: Brookings Institution Press, 2004.

11. Zafar Iqbal Cheema, "Prospects of Strengthening the CBMs Regime in South Asia," in Pervaiz Iqbal Cheema and Imtiaz Bokhari, eds., *Conflict Resolution and Regional Cooperation in South Asia*, Islamabad, Pakistan: Islamabad Policy Research Institute, 2004, p. 48. "Cheema Cites India Not in Favor of Disarmament," *News India*, November 14, 1987.

12. Pakistan was also confronted on two fronts in the 1980s crises, but its armed forces were not physically involved. It was focused on proxy war against the then Soviet Union.

13. Feroz Hassan Khan, "Nuclear Signaling, Missiles, and Escalation Control in South Asia," in Michael Krepon, Rodney Jones, and Ziad Haider, eds., *Escalation Control and the Nucleus Option in South Asia*, Washington, DC: Henry L. Stimson Center, 2004, p. 88.

14. Rifaat Hussain, "The India-Pakistan Peace Process," *Defense & Security Analysis*, Vol. 22, No. 4, 2006, p. 409.

15. Stephen P. Cohen, *India: Emerging Power*, Washington, DC: Brookings Institution Press, 2001, pp. 204, 209- 211.

16. Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate Renewed*, New York: W. W. Norton & Company, Inc., 2003.

17. Right wing politics in both India and Pakistan generate religious hatred and extremist ideological positions. A ritual cleaning act was performed by Jamaat Islami and Shiv Sena respectively after PM Vajpaae's visit to the Pakistan Monument in 1999 and President Musharraf's visit to the Gandhi Memorial in 2001. See Rizwan Zeb and Suba Chandran, "Indo-Pak Conflicts Ripe to Resolve," *RCSS Policy Studies*, Vol. 34, Colombo, Sri Lanka: Regional Center for Strategic Studies, 2005, p. 23.

18. Walter Ludwig III, "A Cold Start for Hot Wars? Indian Army's New Limited War Doctrine," *International Security*, Vol. 32, No. 2, Winter 2007/08, pp. 158-190.

19. "Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan," Como, Italy: Landau Network, Centro Volta, January 2002, available from lxmi.mi.infn.it/~landnet/Doc/pakistan.pdf.

20. Barry R. Posen, *Inadvertent Escalation: Conventional War and Nuclear Risks*, Ithaca, NY: Cornell University Press, 1991.

21. Martin Schram, *Avoiding Armageddon: Our Future, Our Choice*, New York: Basic Books, 2003, p. 53.

22. Also author's interview with Martin Schram for PBS Ted Turner Documentaries, PBS series. This was compiled in the book, *Avoiding Armageddon*, cited above, which gives identical scenarios extracted from the author's interview, pp. 53-57.

23. India's Prithvi and Pakistan's Hatf series of ballistic missiles, if deployed, may have mixed warheads. Improved surveillance and intelligence capabilities in both countries will know both deployment sites and launch times; but neither side will ever be certain about the composition of incoming warheads. A launch-to-target time of only a few minutes will reveal the kind of warhead used once the first warhead explodes on target. However, strategic weapons fire exchanges from nuclear-capable delivery systems will inevitably follow, which will leave neither side assured of constant non-nuclear responses through the duration of war. If a conventionally armed warhead launched from a nuclear-capable delivery vehicle targets a nuclear weapon site of the adversary, it is reasonable to believe that a nuclear response would result.

24. The term "never-always" is borrowed from Peter Feaver. See Peter Douglas Feaver, *Guarding the Guardians: Civilian Control of Nuclear Weapons in the United States*, Ithaca, NY: Cornell University Press, 1992.

25. The term "manual override" implies passing the electronic code manually to enable the launching of weapons. In Western jargon, the term "jury-rigged" is often used.

26. Kidwai interview with Maurizio and Paolo.

27. Manjeet Singh Pardesi, "Deducing India's Grand Strategy of Regional Hegemony from Historical and Conceptual Perspectives," *Draft Working Paper No 76*, Singapore: Institute of Defense and Strategic Studies, April 2005, available from www.ntu.edu.sg/rsis/publications/workingpapers.asp?selYear=2005.

28. C. Raja Mohan, *Crossing the Rubicon: The Shaping of India's New Foreign Policy*, New Delhi, India: Viking, 2004, p. 156.

29. Peter J Katzenstein, *A World of Regions: Asia and Europe in the American Imperium*, Ithaca, NY: Cornell University Press, 2005, p. 236.

30. The doctrine is named after Prime Minister Indira Gandhi and her son, Rajiv Gandhi, for their security approach in the 1970s and 1980s when India aggressively pursued a policy of assertion with all its neighbors from Sri Lanka to China. Major military and naval exercises were conducted along the Pakistani and Chinese borders, India flexed its muscles in Sri Lanka with the peace accord of 1987, and it intervened in the Maldives.

31. Andrew Winner and Toshi Yoshihara, "India and Pakistan at the Edge," *Survival*, Vol. 44, No. 3, Autumn 2002. Also see Rodney Jones, *Conventional Military Imbalance and Strategic Stability in South Asia*, *South Asian Strategic Stability Unit*, Bradford, UK: University of Bradford, 2005.

32. Zavar Haider Abidi, "Threat Reduction in South Asia," *Occasional Paper 49*, Washington, DC: Henry L. Stimson Center, 2003.

33. Dalis Dassa Kaye, *Talking to the Enemy: Track Two Diplomacy in the Middle East and South Asia*, Santa Monica, CA: RAND Corporation Study, 2007.

34. The Karachi Agreement of 1949, the Simla Accord of 1972, the Lahore Agreement of 1999, and the Islamabad Accord of 2004 are some of the impressive bilateral accords.

35. An acknowledgement to this effect has been in the Lahore MOU that seeks a mechanism for the implementation of existing CBMs.

36. Karan R. Sawny, "The Prospects for Building a Peace Process Between India and Pakistan," in Cheema and Bokhari, eds., *Conflict Resolution and Regional Cooperation in South Asia*, p. 32-40.

37. See, for example, the statement by Ambassador Munir Akram in the general debate of the first committee of the 58th session of the U.N. General Assembly, New York, October 10, 2003.

38. At the time of this writing in September 2008, there is an unprecedented tension between United States and Pakistan. Pakistan has strongly protested U.S. Special Forces' cross-border incursions and open statements by U.S. policymakers to expand the war into Pakistani territory.

39. India and Pakistan should engage in the three areas bilaterally. The initial U.S. role should be to act as a catalyst and honest broker between allies.

40. David Albright, "Securing Pakistan's Nuclear Weapons Complex: Thought-Piece for the South Asia Working Group," paper presented at the Stanley Foundation conference on "US Strategies for Regional Security," Airlie Conference Center, Warrenton, VA, October 25-27, 2001.

41. Dingli Shen, "Upsetting a Delicate Balance," *Bulletin of the Atomic Scientists*, Vol. 63, No. 4, July 1, 2007, p. 37.

42. Mohan, pp. 155-156.