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India-Pakistan Nuclear Rivalry: Perceptions, Misperceptions, and Mutual Deterrence

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The history of India-Pakistan rivalry constitutes a chronology of struggle to establish "hegemony"[1] by the former on the latter; "action-reaction"[2] type of security paradigm; misperceptions;[3] underestimation and overestimation, and mutual "fear."[4] The study of hegemonic war comprises a pivotal aspect of international relations theory,[5] and it would be appropriate to conceptualise these theoretical facets before explaining both countries' conflict-ridden history. Gilpin defining the theory of hegemonic war writes: -

> The first is that a hegemonic war is distinct from other categories of war: it is caused by broad changes in political, strategic, and economic affairs…. Since human beings are driven by three fundamental passions – interest, pride, and, above all else, fear – they always seek to increase their wealth and power until other humans, driven by like passions, try to stop them…. Even advances in knowledge, technology, or economic development would not change the fundamental nature of human behaviour or of international relations. On the contrary, increases in human power, wealth, and technology would serve only to intensify conflict among social groups and enhance the magnitude of war. Thucydides the realist, in contrast to Plato the idealist, believed that reason would not transform human beings, but would always remain the slave of human passions. Thus, uncontrollable passions would again and again generate great conflicts like the one witnessed in …history.[6]

But, in the South Asian context, India, by virtue of its size, considers the

entire region as a single cultural, geographical and strategic entity in spite of the existence of different countries in South Asia. Pakistan is the only South Asian country, which has so far challenged India's desire to dominate the subcontinent.[7] Therefore, India considers Pakistan a "regional destabilizer," that has challenged New Delhi's desire to control the entire subcontinent as a single unit.[8]

It is generally accepted that the nuclear weapons play a credible role in preventing wars. According to Kenneth Waltz, a leading theoretician of deterrence, "nuclear weapons have helped to preserve the peace where it has been most endangered and prevented war" from spreading further to the other volatile regions, as it did "between the United States and the Soviet Union, between India and Pakistan" and the Middle East.[9] In theory, if any one country endeavours to assemble nuclear weapons, then, the other threatened state would also do the same. Thus, it would be self-defeating on the part of any country to involve in a nuclear arms race, or to attempt to use the nuclear strength as a weapon of war.[10] India and Pakistan are still in the early stages of nuclear development, and their C^4I^2 (Command, Control, Communications, Computers, and Intelligence and Information) systems are also still in nascent stages. In spite of this, Pakistan's earlier ambiguous nuclear status, and its ability to strike back, had restrained India in the 1980s from a preventive strike.[11] The mere fear of Islamabad returning a nuclear attack had kept the Indian war-machine at bay.[12] As Waltz points out that so much comes in such small packages that it could effectively thwart any design to use the nuclear weapons now, or in the future, as a weapon of war.[13]

Theoretical Debate

Now, it would not be out of context to elaborate the different realist schools of thought associated with the study of international relations. It was Hans Morgenthau, who had introduced "realism" as a methodology to examine the international relations. But, in the 1970s, Kenneth Waltz's "neorealism" made a distinct divergence from Morgenthau's realism that thenceforth was classified as "classical realism."[14] Since the 1970s, international political theory has developed around two types of realism: "structural realism,"[15] and the "offensive realism."[16] There is also the theory of "defensive realism"[17] in addition to other "neoclassical," "contingent," "specific," and "generalist" realism theories.[18] Some theorists assert that the great

powers tend to "maximize their relative" power[19] with continuous endeavours to issue diktats to other states.[20]

"For defensive realists, the international structure provides states with little incentive to seek additional increments of power," writes Mearsheimer, which instead "pushes them to maintain the existing balance of power. Preserving power, rather than increasing it, is the main goal of states."[21] On the other hand, the "Offensive realists…believe that status quo powers are rarely found in world politics, because the international system creates powerful incentives for states to look for opportunities to gain power at the expense of rivals… A state's ultimate goal is to be the hegemon in the system."[22] Interestingly, Kenneth Waltz, who considers that in anarchic conditions in international politics security is the highest end for the states to maintain their positions in the system, rebuts this theory.[23] But, in the nuclear age, regional or global hegemony is only feasible to establish with an explicit nuclear superiority, which Mearsheimer defines as "a capability to devastate its rivals without fear of retaliation."[24] As argued earlier, the entire paradigm of security of South Asia is premised on "security," "fear," and "hegemony" principles; hence, India and Pakistan have entangled themselves in a perpetual cobweb of "offensive" and "defensive" type situations respectively. Consequently, India sought to prevent the emergence of "peer"[25] competitor on the subcontinent and Pakistan, to challenge its hegemony. This "peer" rivalry between the two states took a turning point in 1974, when India conducted its first nuclear test, which ushered in a new era of nuclear arms race on the subcontinent.

The post-World War II international system was primarily based on the US and Soviet bipolarity, and on the concept of bilateral superpower deterrence. The fear of mutual annihilation had maintained peace between the two superpowers during the heydays of the Cold War. Since the end of the World War II, developments in the nuclear weapons technology immensely transformed the destructive consequences of a war. Generally there is a consensus that, "It is highly doubtful that a war between two nuclear powers could be limited and escalation into a full-scale war prevented."[26]

"In the nuclear age," writes Gilpin, "the primary purpose of nuclear forces should be to deter the use of nuclear weapons by one's opponent and thereby prevent the outbreak" of a conflict. However, in contemporary international politics, distrust, uncertainty, and insecurity have compelled states to indulge in arms race in which modern technology has added lethality to weapons as never before.[27] There are growing concerns over

the possibility of accidental war. Thucydides also expressed similar apprehensions concerning the role of accidental war while writing the history of the *Great War* between the Spartans and the Athenians. The war once begun, writes Thucydides, lets loose forces that are completely unforeseen by the protagonists.[28] Even a limited conflict between the two nuclear-armed rivals "could set in motion untoward developments over which they would soon lose control."[29] Hence, even a minor misperception on the subject of a limited war could intensify the "fog of war" thereby reluctantly leading the involved states to a full-scale conflict.[30] This destabilises the very concept of mutual deterrence that has been built on the foundations of nuclear weapons, and may set-up risky dynamics of nuclear deterrence – upon which both Pakistan and India have premised their strategies – the "stability-instability paradox," as some analysts have described the prevailing scenario.[31]

India's 'Peaceful Nuclear Explosion'

On May 18, 1974, India's nuclear detonation at its nuclear testing site in Pokhran, in the Rajasthan desert near the Pakistan border, was claimed by New Delhi as a Peaceful Nuclear Explosion (PNE), undertaken to enhance its scientific and technical advancement. It proved to be the turning point in the history of threats and security perceptions in South Asia. India's nuclear test was perceived in Pakistan as a threat to its security, which required an appropriate response. It immediately revived tensions in India-Pakistan relations, and Pakistan's then Prime Minister, Z. A. Bhutto, termed India's nuclear detonation as its grand strategy to intimidate Pakistan.[32] While, Premier Mrs. Gandhi tried to alleviate Pakistan's security apprehensions by quite conveniently claiming that: "There are no potential or foreign policy implications of this test."[33] This, Pakistan was not prepared to accept. The Bhutto government's initial reaction was to seek assurances from the Nuclear Weapon States (NWS) against possible Indian nuclear blackmail. Pakistan's Foreign Minister, Aziz Ahmed, who visited London, Paris, and Washington, failed to secure the necessary guarantees from these countries. Thus, Bhutto decided to initiate Pakistan's nuclear option vis-à-vis India's possible nuclear blackmail. This, he stated, was imperative and compatible with the country's geostrategic requirements and status as one of the leading states of the Third World and Muslim bloc.[34] Hence, Bhutto expressed determination not to accept Indian nuclear hegemony in the region.[35]

Although India had termed the Pokhran test a peaceful one, it had nevertheless retained the weapons option in order to assemble a nuclear

device at a short notice, if so desired by the Indian policymakers.[36] The history of post-independence India indicates that the BJP was not the first government to consider overt nuclearisation of India in May 1998.[37] The Congress Party government of Indira Gandhi conducted the first overt nuclear test in 1974, and the subsequent Congress government of P.V. Narasimha Rao also planned to conduct a test at the end of 1995,[38] which was postponed for different reasons, including continuing benefiting from the Western and the US scientific and technological cooperation, in order to attain a thermonuclear capability and delivery systems for its nuclear weapons in the future.[39] Secondly, the establishment of non-proliferation regime and the enforcement of US legislation, coupled with growing internal political unrest, had restrained India from carrying out more nuclear tests. Above all, there was no immediate military threat to India's security in the post-1971 period, as it had emerged the sole preponderant military power in the subcontinent after the break up of Pakistan. However, India's aspiration to acquire a nuclear capability dates back to Jawaharlal Nehru's period when the foundations of India's nuclear establishment were actually laid. Since then, to attain the nuclear weapons capability has been part of the Indian diplomacy, especially in the context of its relations with US, and after 1974 with Pakistan.[40]

Pakistan's Nuclear Diplomacy

Since 1974, all successive governments in Pakistan expounded the idea of the establishment of a Nuclear-Weapon-Free-Zone (NWFZ). This India resolutely opposed, and it even refused to talk to Pakistan on the subject. In addition to the NWFZ concept, Pakistan floated numerous other proposals in various national and international forums to India in order to contain the horizontal nuclear proliferation in the region. These proposals included: -

1. Establishment of a NWFZ, made first in 1974.

2. Pakistan repeated the NWFZ proposals to India, in 1976, 1979, 1987, and 1990. On May 4, 2003, President Pervez Musharraf proposed a nuclear-free subcontinent.

3. Pakistan asked India to jointly sign the Non-Proliferation Treaty (NPT), as well as sign bilateral/joint agreements for full-scope safeguards and inspections, in November/December 1984, June 1985, and July 1987. India rejected all these proposals and continued instead to demand a universal, general and complete nuclear disarmament as well as insist on a non-

discriminatory NPT.

4. Declaration to renounce the acquisition, or development of nuclear weapons, in 1978.

5. Simultaneous accession by both India and Pakistan to the NPT, in 1979.

6. Acceptance of full International Atomic Energy Agency (IAEA) safeguards, in 1979.

7. A mutual inspection of each other's nuclear facilities, in 1979.

8. In 1981, 1998 and September 2000, Pakistan offered a No War Pact to India, which was rejected by New Delhi. The No War Pact proposal carries an interesting history. It was in 1949 and 1950 when India had first proposed a No War Pact to Pakistan, which was accepted by the then Prime Minister of Pakistan, Liaquat Ali Khan, if there was a clear timeframe for the settlement of all outstanding issues between the two countries. On June 12, 2004, Pakistan's Foreign Office spokesman proposed "a 'No War Pact' with India," which he said was "already on the table." The spokesman further reiterated that, "If the Indian government offers a pact on 'No First Use of Nuclear Weapons,' let us (India and Pakistan) have a pact for no war at all between the two countries."[41]

9. A signing of a bilateral treaty banning all types of nuclear tests, in 1987. [42]

10. Pakistan offered to India, not to produce or explode nuclear weapons, in 1987 and 1991. India did not respond to Pakistan's proposals.

11. Convening of a conference on the issue of nuclear non-proliferation in South Asia,
to be attended by Russia, the US, China and, India and Pakistan, in June 1991. [43]

12. A South Asian Zero-Missile Zone, in 1993.

These overtures made at different times were rejected by India on the grounds that the nuclear non-proliferation issue in its perspective was a global, rather than a South Asian problem. This clearly indicated how India utilised the ongoing global nuclear disagreement debate to its own advantage

of not relinquishing its nuclear weapons as long as global nuclear disarmament did not materialise. Secondly, India asserted that it would only adhere to the NPT until and unless all the countries had subscribed to the treaty, and the NWS had eliminated their respective nuclear arsenals and submitted to the international inspections, and to the International Atomic Energy Agency's safeguards. All these proposals were part of Pakistan's nuclear policy whilst in hindsight it appears to have been developing nuclear weapons to counter-India's nuclear weapons capability. Pakistan perceived this as its security dilemma - how "to acquire more and more power in order to escape the impact of the power" of India's growing military potential.[44] Pakistan's nuclear testing was the logical outcome of Indian testing, which later on also accorded rationale for a full-scale Indian nuclear weapons programme after overt nuclearisation in May 1998.[45]

Pakistan-Specific Legislations

"Pakistan belongs to a class of states," writes Stephen Cohen, "whose very survival…security-related resources are inadequate" vis-à-vis India.[46] Pakistan decided to develop its nuclear weapons plan in 1974 in order to counter the overwhelming conventional and nuclear forces of India.[47] Pakistan, whose nuclear research and development (R&D) was still at an elementary stage, was expected to face tough international pressures and sanctions while securing vital nuclear technology from abroad when its archrival already possessed an impressive nuclear infrastructure. In addition, India had begun a comprehensive rearmament and modernisation of its conventional forces to expound its 'Indira Doctrine' in the region. Mrs. Gandhi undertook this doctrine as a vehicle to exclude the military presence and influence of the major powers, including China and the US, from the Indian Ocean and South Asia as a whole.[48]

In spite of these provocative developments in the region, still Pakistan's nuclear programme remained comparatively modest, and its ruling elite remained unresponsive right up to 1974 to this emerging danger on the subcontinent.[49] Following the events of 1971 and after 1974, the leaders in Pakistan considered that they could no longer stay insensitive toward the Indian nuclear test, which they perceived posed a direct threat to Pakistan's security and to the subcontinent as a whole. Pakistan, because of its "mechanistic insecurity syndrome," as noted by T. T. Poulouse, "suddenly became active…saw in India's Pokhran explosion the image of a nuclear weapon power in South Asia."[50] According to Pakistani elite, India had not yet reconciled with the creation of Pakistan, which further aggravated

Islamabad's insecurity syndrome.[51] Therefore, it can logically be argued that primarily it was the Pokhran-I test, which gave decisive impetus to Pakistan's nuclear policy coming as it did soon after the country's break-up in which Indian intervened militarily. Military security was the major factor in driving Pakistani nuclear weapons plan soon after 1974.[52] In addition, Pakistan launched a diplomatic campaign on all international forums against the Indian test, to expose the myth of being a "peaceful" explosion by pointing to how India had beefed-up its conventional forces, and expanded its own nuclear strategy.[53]

As discussed above, Pakistan's nuclear programme was actually accelerated by the Indian nuclear test of 1974 with a mandate to neutralise India's conventional and nuclear threats, and to rehabilitate Islamabad's strategic position.[54] Pakistan expedited efforts to realise these foreign and security policy goals, and in this connection, it faced stiff opposition from the NWS and India. Both, the Indian PNE and the anticipated nuclear development by Pakistan also contributed to triggering off the US-sponsored international efforts to establish a series of control regimes and mechanisms to contain any further the horizontal nuclear proliferation. As a result, more than India, Pakistan was deprived of critical technologies, which could enable it to attain a nuclear weapons capability, vis-à-vis India's conventional and strategic forces, through technology collaboration.

The US adopted the Pakistan-specific Symington and Glenn Amendments in 1976 and 1977 respectively to the Foreign Assistance Act of 1961, which ultimately led to the temporary suspension of military and economic assistance to Pakistan in April 1979.[55] Previously, in September 1977, the US had halted military and economic assistance to Pakistan due to its suspected nuclear programme. On the other hand, India and Israel, which had already built reprocessing plants, were excluded from the effects of the Symington-Glenn Amendments. In addition to the United States' Pakistan-specific legislation, the Nuclear Suppliers Group (NSG - also called the 'London Club') also imposed embargoes and restrictions on nuclear exports to Islamabad. Other Pakistan-specific US legislations are as under:

1. In 1981, the Symington-Glenn Amendments were restructured to give waiver to Pakistan, which permitted the US President to waive the prohibitions of section 669 between 1981 and September 30, 1987, to receive assistance

in the wake of Soviet invasion of Afghanistan.

2. In 1985, the Solarz Amendment was approved, regarding the illegal exports of material and technology by a nuclear producing country to Pakistan.[56] This amendment also enabled President Reagan to grant waiver to Pakistan in respect of this legislation.

3. In 1985, the Pressler Amendment required the US President during each fiscal year, to certify that Pakistan did not have a nuclear explosive device. However, President George H. W. Bush Sr. refused to sign the waiver for 1990.

4. The Cranston Amendment of 1985, required annual certification from the US President that Pakistan "does not possess a nuclear explosive device," before any aid could be given to Islamabad.[57]

5. On December 22, 1987, the US Congress extended the waiver authority to April 1, 1990. President Reagan signed the appropriate certificate.

6. In 1989, the waiver authority was extended for another year.[58]

The US non-proliferation interests had revived in October 1990, because the Soviet forces by then had already completed their withdrawal from Afghanistan (in February 1989) in accordance with the Geneva Accords of April 14, 1988. This naturally changed the geostrategic position of Pakistan in overall US global interests.[59] On October 2, 1990, President Bush refused to provide the mandatory certificate in regard to Pakistan for the year 1990. As a result, this led to a suspension of economic and military aid to Pakistan.[60] Agha Shahi, writing about Pakistan-US nuclear and bilateral relations remarked that the real issue between Pakistan and the US was the latter's consistent coercive tactics against Islamabad to force her to renounce its nuclear programme; while India's nuclear weapons project continued unhindered.[61]

Pakistan's Nuclear Response

Presumably due to these factors, for the first time, an architect of Pakistan's nuclear research project, Dr. A. Q. Khan, in 1984 revealed to the world that the Kahuta Research Laboratories (KRL) was processing non-weapons-grade uranium.[62] This information was deliberately leaked by the Zia regime in

order to retain nuclear ambiguity so as to deter the large build-up of Indian conventional and strategic forces. In Pakistani perspective, the ambiguity over its nuclear capability had prevented the Indian attack during New Delhi's biggest ever-military exercise in 1986-87 – 'Brasstacks' - in the Rajasthan desert, near the Pakistani border.[63] In November 1986, Bob Woodward of *The Washington Post*, citing a classified US intelligence report, claimed that Pakistan was producing weapons-grade uranium (over ninety per cent) at the KRL.[64]

Despite extensive external pressures and coercive diplomacy directed against Pakistan's nuclear programme, it crossed the Rubicon in the early 1980s. Writing about Pakistan's ability to enrich uranium, Ashok Kapur remarked that:

> The history of Pakistani enrichment work demolishes the Western myth that a poor country lacks the ability to make a quantum jump from the nineteenth century to the twentieth century in the scientific field in a few years…. The history provides mounting evidence of Pakistan's remarkable breakthrough into the closely guarded world of enrichment. [65]

This remarkable achievement by Pakistan in the field of uranium enrichment technology exhibited progress made by the scientific community of Islamabad in a matter of a few years. It was an apt compliment from a leading South Asian writer, because this achievement and breakthrough was attained indigenously in the presence of stiff international opposition. Especially, the NSG and the US had established extensive control regimes, imposed embargoes on sensitive technologies, and tried to isolate Pakistan by various strategies in order to dissuade it from pursuing its nuclear R&D. When Zia died in a plane crash in August 1988, Pakistan had already attained a full-fledged threshold nuclear weapon state status.[66]

By that time it was clear that Pakistan would only change its stance regarding the NPT, if it was universally implemented along with India's adherence to it. Pakistan also refused to accept the coercive diplomacy of the US against its nuclear programme. Incidentally, Washington could not force India, Israel and South Africa to sign the NPT.[67] In 1985, President Zia also acknowledged that Pakistan did possess a capability to convert its peaceful nuclear programme into a non-peaceful one at anytime if it was required. [68] Later issued a policy statement that Pakistan had a right to possess the nuclear capability. It was a clear and rational nuclear policy statement by

the President of Pakistan, which put its stance on the NPT in correct perspective, dual international standards in respect of different countries' nuclear programmes, and reflected the height of Zia's diplomacy. Zia had successfully steered the country out of diplomatic pressure on the issue of the NPT and its nuclear programme, and despite severe international constraints, he meticulously continued the enhancement of Pakistan's nuclear infrastructure. Even the unified nuclear policies of the US, France, Canada, and West Germany to pressurise Pakistan also proved futile and counter-productive, and in a record time Pakistan developed a "more sophisticated route leading to nuclear explosions" as has been remarked upon by Lt. Gen. Kamal Matinuddin. He maintained that the US had intentionally overlooked the Indian nuclear programme, because it wanted to use the latter as a counter to China.[69]

Prime Minister Mian Nawaz Sharif reacting to the Indian nuclear and thermonuclear tests on May 11 and 13, 1998, remarked that: "This is posing a very serious threat to the region" and Pakistan.[70] The Indian nuclear tests were internationally condemned, and most of the world leaders expressed their horror and disgust over the prospect of an escalation of a nuclear arms race between India and Pakistan. President Clinton termed the Indian nuclearisation a "fundamental mistake."[71] A leading US weekly magazine *The Newsweek*, in its analysis held the US policymakers responsible for adopting a naïve and indifferent attitude towards the Indian quest to go nuclear.[72]

Pakistan had been frequently cautioning the world community about the Indian nuclear weapons plan. This was generally regarded by the US policymakers and the other countries, as Islamabad's obsession towards New Delhi and its insecurity syndrome. On April 16, 1998, Pakistan's Foreign Minister, Gohar Ayub Khan, in his meeting with Bill Richardson during the latter's visit to Islamabad, informed the dignitary about an Indian plan to introduce nuclear weapons in its arsenal.[73] To this, reportedly Richardson had replied: "Are you trying to say the Indian leadership has made suckers of us." To which reportedly Ayub had replied: "Yes. You've just been duped."[74] Yet the US maintained that Pakistan did not provide them with any concrete evidence about the Indian nuclearisation programme.[75] Unlike the US, Pakistan had no satellites orbiting the Indian nuclear testing site. Therefore, it was difficult for Islamabad to provide technical evidence, except through whatever channels and sources it possessed to ascertain the Indian weaponisation plan, and to inform the international community accordingly, including Washington about the impending dangers of nuclear

proliferation in South Asia. This controversy has been aptly summarised by the *Newsweek*:

> American policymakers have long suspected the Pakistanis of crying wolf about the Indian nuclear programme; partly to justify their secret weapons collaboration with the Chinese. President Clinton was said by his aides to be personally wounded by India's perfidy. That may be because he had assigned an unrealistic role to India in his 'bridge to the 21st century' imaginings. Clinton has spoken of India's high-tech prowess, its claim to the 'world's largest middle class,' and envisioned a kind of benign, peace-loving presence stabilizing the Asian Subcontinent. Indian rhetoric can be lulling… Will other technologically advanced nations follow India's example and try to barge into the nuclear club.[76]

"Hence a state that is amassing instruments of war," writes Kenneth Waltz regarding the proliferation of nuclear weapons, even for its own defence, "is cast by others as a threat requiring response."[77] This is precisely how the Indian nuclear tests were perceived in Pakistan.[78] Moreover, Pakistan felt threatened by Indian leaders' bellicose statements in the aftermath of Pokhran-II. Soon after the tests, Prime Minister Vajpayee, speaking in the Lok Sabha, claimed that India possessed a "big bomb," and in unambiguous language declared India a nuclear weapon state and even threatened to use nuclear weapons.[79] He further clarified India's new nuclear policy by saying: "It is not a conferment we seek nor is it a status for others to grant" to India.[80] It was in such a charged situation that President Clinton sent his Under-Secretary of State, Strobe Talbott, to Pakistan to persuade its policymakers not to test nuclear weapons in retaliation. At that time, the Indian leadership was repeatedly threatening Pakistan. Therefore, Islamabad considered the "vague promises of enhanced economic support" of the US without any credible guarantees against conventional or nuclear attack by India, obviously insufficient to forego its nuclear weapons option.[81] Secondly, the muted international reaction to the Indian testing had disillusioned Prime Minister Nawaz Sharif, who could not have possibly gone against the popular demand for a retaliatory nuclear testing.[82] Thirdly, the domestic political pressure was a significant contributory factor, which had motivated Pakistan to overt nuclearisation.[83] Besides, the Indian threats had been explicitly directed against the very survival of Pakistan.

After the Indian tests, India's Home Minister, L. K. Advani, "vowed to end the

Pakistani menace" once and for all.[84] Similarly, the Indian Minister for Science and Technology, Murli Manohar Joshi, on May 12, 1998, declared that the Indian scientists "will put a nuclear warhead on missiles as soon as the situation requires."[85] Pakistan's failure to retaliate would have dissolved its nuclear deterrence strategy into a hot air. In the eventuality of an India-Pakistan confrontation, Pakistan could not sustain its nuclear deterrence doctrine. Because, a nuclear test would benefit Pakistan by removing any doubt in India's mind. Therefore, for Pakistan, the show of overt nuclear weapons capability was necessary for military security objective, and to neutralise India's edge in the strategic and conventional forces. According to Neil Joeck:

Thus a nuclear test would benefit Pakistan by removing any doubt in India's mind. It would harm Pakistan, however, in that it would force nuclear deterrence and its prerequisites more squarely into the centre of Pakistani strategic planning while delivering a severe blow to the economy…. Pakistanis complain that they had to pay the price for India's nuclear detonation in 1974, which galvanized the international community and precipitated the development of extensive export controls…. Where India by 1974 had developed its own nuclear capability (with significant help from Western countries, Pakistanis always argue), Pakistan was lagging behind and felt that it had to take any necessary measures to catch up.[86]

Therefore, for Pakistan, the show of overt nuclear weapons capability was necessary for military security objectives, and to neutralise India's edge in the strategic and conventional forces. The Indian strategic and conventional superiority, in Pakistani perception, could only be held at bay by erecting its own nuclear weapons shield. The Indian testing of the whole range of nuclear weaponry, including "battlefield/tactical nuclear weapons" were Pakistan-specific, remarked Foreign Minister Gohar Ayub in the Pakistan Senate on May 13, 1998. He further stated: "Indian actions, which pose an immediate and grave threat to Pakistan's security, will not go unanswered."[87]

Accordingly, on May 28 and 30, 1998, Pakistan conducted a series of six nuclear tests at its nuclear testing site in the Chagai Hills of Balochistan province. Thereby neutralising India's nuclear edge once for all, which in Nawaz Sharif's perspective, was essential to equalise the nuclear score with India.[88] There was a direct link between Pakistan's overt nuclear weapons capability and its concept of military security vis-à-vis India. Like India, the retaliatory decision by Pakistan for overt nuclearisation was also indicative of

the predominance of "security" perception as a factor in "domestic politics."[89] Hence, "Islamabad's response was heavily based on domestic political considerations," writes Neil Joeck, "given the vulnerabilities of its national political leaders and given the arguments that India was already deterred by Pakistan's previously veiled nuclear capabilities."[90] Therefore, a stable nuclear deterrence was considered an essential element even to reduce the probability of a limited conventional conflict.[91] Moreover, Pakistan considered its nuclear tests as an imperative to contain the hegemonic designs of the Indian foreign and security policy, and essential to neutralise New Delhi's conventional and nuclear forces. It thus provided Islamabad with a strategic equity vis-à-vis New Delhi. After the tit-for-tat nuclear testing, India announced its Draft Nuclear Doctrine in August 1999 as a rationale to further develop and deploy nuclear weapons. It has further escalated tension and priming of nuclear trigger foreboding horrendous consequences for both the countries.[92]

India's Nuclear Doctrine

India's nuclear testing in May 1998 had compelled Pakistan, as argued in the preceding pages, to respond with retaliatory nuclear weapons tests, which opened-up "a renewed wave of proliferation" in the 1990s.[93] Both India and Pakistan "followed these tests," writes Wolfsthal, "with steps to institutionalise their nuclear weapon arsenals and expand their delivery capabilities."[94] India and Pakistan had acquired nuclear weapons for divergent objectives. India's motives to pursue a nuclear weapons plan was inspired from its inherent desire to achieve a great power status – for hegemonic motives.[95] India was so obsessed with its yearning for a great power status that any non-proliferation regime would have been ineffective before its aspirations and for the domestic political motives of the BJP (Bharatiya Janata Party) who was then in power.[96] The Indian policymakers had from time to time spoken of the need for overt nuclearisation as the "universal currency" of strategic strength and "autonomy" of a country in international politics.[97] More significantly, the ruling BJP intended to exploit the nuclear weapons capability as a symbol of India's prowess and of Hindu "pride and nationalism."[98] With the induction of nuclear weapons in its arsenal – India intended to establish its military and political hegemony on the subcontinent.[99] After acquiring an overt nuclear weapon state status, a state in the category of India would tend to exploit that potential to achieve a position of greater significance within its particular geographical region.[100] Therefore, after the overt

nuclearisation by India and Pakistan, both states were logically expected to establish the command and control systems, as well as to announce their nuclear doctrines with a view to attain a viable deterrent, and to minimise the prospects of nuclear confrontation.[101]

Unlike Pakistan, India first announced its Draft Nuclear Doctrine (DND) in August 1999, and subsequently established its Nuclear Command Authority (NCA) almost four years later on January 4, 2003. The announcement of DND and the organization of NCA, was followed by the handing-over of nuclear weapons to the armed forces of India under the newly set-up Strategic Forces Command.[102] Way back in 1987, the then Army Chief, General Sundarji, had stated that India would not like Pakistan to catch-up with India in nuclear weapons field.[103] The Indian rationale for the acquisition of nuclear weapons was inherently quite strong based on the view that it was necessary to sustain its conventional and strategic forces competitive advantage vis-à-vis Pakistan.[104] Accordingly, the establishment of India's NCA had formalised the existing eight-point DND under the Political Council, the Executive Council, and the C-in-C of Strategic Forces Command - headed by Air Marshall, T. M. Asthana, was merely instituted to achieve New Delhi's strategic objectives and to enhance its military preparedness.

India is reportedly also endeavouring to acquire the Green Pine radars, the Phalcon Airborne Early Warning radar system, and the Command and Control Systems (AWACS) from Israel in June 2002 and May 2003 respectively.[105] The acquisition and deployment of nuclear weapons; and institutionalisation of anti-ballistic missiles systems with Green Pines, Raytheon's Patriot Advanced Capability-3 anti-missile and AWACS systems; and the possibility of an adoption of launch on warning (LOW) doctrine, would further compound the risks of accidental nuclear conflict on the subcontinent.[106] In the absence of robust C^4I^2 systems,[107] it is expected to lower the threshold and erode the nuclear deterrence. Moreover, the growing conventional weaponry disparity between India and Pakistan is quite critical from the South Asian nuclear perspective. Because, any conventional arms procurement by India would escalate the possibility of Pakistan's quest to enhance its nuclear capability against India. Thus, understandably Pakistan would strive to ensure that its nuclear forces remain robust, and capable of surviving an Indian pre-emptive attack.

The formulation of NCA actually operationalised India's DND by inducting strategic weapons into the forces and, their deployment in order to inflict an

unacceptable damage on the adversary in the case of 'first-strike'.[108] In addition, the NCA also envisaged New Delhi's right to retaliate with nuclear weapons in event of "a major attack against India or Indian forces anywhere" even with the "biological or chemical weapons."[109] India prima facie appears to be inspired from an emergent new concept - to retaliate with nuclear weapons - which was enunciated by the Bush administration as its new National Strategy to Combat Weapons of Mass Destruction (NSCWMD) in December 2002.[110] The chemical or biological weapons attack, even in a conventional conflict, would be responded to, and managed and executed by the all-service Strategic Forces Command (SFC).[111] At occasions, it would require a pre-delegation of powers in one form or the other, to the SFC to retaliate with punitive strikes against the adversary in the eventuality of such an attack with the chemical or biological weapons.[112] This raises some serious and fundamental questions concerning the actual control of the nuclear arsenal, although, symbolically the Prime Minister "will have his finger on the nuclear button."[113]

Some obvious flaws in NCA's functioning includes:

- A centralised system of command and control of nuclear weapons would continue to motivate the policymakers to maintain a deployed arsenal at the highest state of alertness – launch on warning (LOW). This in effect means a perpetual state of nuclear readiness, which would be available to the policymakers to authorise their launch on warning.

- A perpetual state of nuclear preparedness would require a "super safe, watertight, and based on a clear line of authority" system of C^4I^2 (discussed later). [114] New Delhi had reluctantly formulated a nuclear weapons command system in January 2003, while Pakistan had established its National Command Authority in February 2000. Behind these efforts was a considerable pressure from the West and US at a time when India-Pakistan were "at the brink of war."[115] Regarding the command systems of both countries, it is not clear what type of operational relationship would the different tiers of armed forces commanders would have with each other. For instance, exact relationship the Strategic Forces Command would maintain with the three services chiefs, including with the Chiefs of Staff Committee (CSC) and the NCA. Especially, the role of the NCA and the Executive

Council vis-à-vis to the SFC, the CSC, and the National Security Advisor. As the Executive Council is comprised of senior civil bureaucrats, services officers, including intelligence officials, who would bring into play an organizational bias and conflict. While, the bureaucrats attached with the "Government Politics" would tend to play a "central, competitive game" for political or governmental hierarchical status. This distinct incompatibility between all hierarchies would sharply differ in their perceptions, estimates, and problems tackling approach, consequences and finding solutions for the issue,[116] thereby further compounding the situation in the case of an eruption of crisis.

- Neither India nor Pakistan possess the requisite economic and technological resources, nor the infrastructure, even to establish a partial defence against the kind of nuclear weapons and ballistic missiles, which the US and the former Soviet Union could establish during the heyday of the Cold War.[117] This would obviously multiply the chances of accidental use, leading to an outbreak of nuclear war on the subcontinent. According to Michael Krepon, President of the Henry L. Stimson Center, "This is a region that tends towards misreading, tends towards surprises, tends towards misperceptions."[118]
- The flight-time of a missile between the two countries is dangerously minimal - ranging from three to around eight/nine minutes, allowing hardly any time for the leadership of the two countries to correctly analyse the situation, or the implications of decisions. For example, during the Cold War, the US Commander of the Strategic Air Command had a designated authority to launch the air force, except authority to proceed towards their target, in the case of a warning of a nuclear attack.[119] There are also limitations of the civilian leadership to maintain an effective control over the entire nuclear arsenal, including over the other Standard Operating Procedure (SOP) of the three services concerning the operational practices, deployment, training and the targeting elements of these weapons, which are constantly evolved.[120] In the context of South Asia, obviously, the militaries on both sides are expected to consolidate their control over the nuclear weapons in view of frequent military crises on the subcontinent.[121] It would not only destabilise the nuclear deterrence between the two countries, but could also lead to formulation of SOP to prime the nuclear weapons on the delivery vehicles in a crisis situation.[122] More alarmingly, during the Pakistan-India military standoff in 2001-2002, reportedly Vajpayee had

authorised the Indian forces to use the short-range nuclear capable Prithvi missiles.[123] This indicates the predominance of an organisational bias, and the fixed SOPs (although they may be eventually changed and refined with the passage of time) in the military planning, instead of critically analysing the situation, and exploring all available alternatives with a view to find a solution for the problem.[124]

It is argued that frequent military crises between the nuclear capable states with a high degree of mistrust, misperception, would not only dilute the effectiveness of deterrence in the region, but could also accelerate miscalculations leading to an accidental nuclear holocaust. According to Brajesh Mishra, former National Security Advisor to the former Indian Premier, between January and May 2002, India and Pakistan were "pretty close" to a war, in spite of their realisation of mutual assured destruction in New Delhi and Islamabad.[125] Therefore, the flaws in the Indian Draft Nuclear Doctrine, NCA's complex hierarchical tiers, and its apparent preparedness to have a LOW doctrine, as argued, could escalate tension between India and Pakistan in future in spite of their claim to mutual nuclear deterrence and the viability of their command and control mechanisms. Militaries in both the countries would tend to have their nuclear weapons deployed, especially during the crises,[126] and therefore, even a limited or a low-intensity conflict, could easily escalate into an open war. As has been noted by V. R. Raghavan, the "Indian plans are firmly based on taking a future war into all Pakistani territory, even if the conflict commences in Jammu and Kashmir."[127] Therefore, the risk of a LOW would always be there, which could be further exacerbated due to "the proclivity for decisive operations and taking the initiative is likely to encourage military officers to advocate…the development of launch-on-warning options if technically feasible."[128] As a result, it would intensify the "fog of war" thereby increasing the prospects of miscalculation, "bureaucratic momentum," and chaos in any future crises on the subcontinent.[129]

At face value, India's Draft Nuclear Doctrine, the establishment of a two-tier NCA, and the 'no first-use' (NFU) of nuclear weapons policy, indicates that New Delhi has an effective C^4I^2 system in place under the proper civilian control (Rational Actor). In contrast, India could project that in Pakistan, the C^4I^2 being under the Army's control could be susceptible to use by the diehard 'Jihadi' elements in the defence establishment. India would exploit, and illustrate that the 'Islamic' elements within the Pakistan's defence institutions could handover nuclear weapons to non-state actors in turn

threatening the international peace and security.[130] India would galvanise the international public opinion, non-proliferation regimes, and the existing anti-terrorism clauses of the different UN Resolutions, passed after the 9/11, to disable Pakistan's nuclear assets through pre-emptive strikes, or to disarm Pakistan through sanctions and coercive diplomacy.[131] At the same time, India could continue to project to the world that it is a responsible nuclear power that has chiselled-out a policy of NFU of nuclear weapons vis-à-vis Pakistan, in spite of latter's strategy to keep its nuclear option open (in order to deter India from amassing its superior conventional forces on its borders). India still retains the option of use of nuclear weapons against Pakistan, by giving its own interpretation of the Draft Nuclear Doctrine's clause of 'no-first use' of nuclear weapons.[132] In reality, India's decision to counter chemical and biological weapons attack anywhere on its combatants with nuclear weapons, has already in a way made its officially stated policy of 'no first-use' redundant.[133]

As argued in the preceding pages that India's 'no first-use' strategy is a carefully calibrated strategy to exploit its superiority in the conventional forces, which New Delhi intends to use to establish its hegemony in the region. However, as has been elaborated earlier, faced with a desperate situation, India would still retain its option of the first-use of its nuclear weapons. On the other hand, Pakistan's nuclear capability is a security-centric - designed to protect its strategic nuclear forces, sovereignty and independence that was repeatedly threatened by India since the partition of British India in 1947. It is imperative for Pakistan to retain a potent conventional force to sustain a conventional deterrence. However, since the 1998 nuclear tests by both India and Pakistan, according to the Stockholm International Peace Research Institute's (SIPRI) annual report concerning the worldwide military spending in the year 2002, India and Pakistan's security situation had considerably aggravated. Both were engaged in an arms race, including "a gradual consolidation of nuclear weapon infrastructure." The report noted that, both countries have sufficient fissile materials that could enable them to produce between 100 to 400 nuclear weapons. In addition, they were also developing ballistic missiles of different ranges as a mode of delivery for nuclear weapons, which would only aggravate the future situation of the subcontinent when both states deploy nuclear weapons, concludes the SIPRI.[134] The US authorisation to Israel to sell its Phalcon airborne early warning radar system to India would further increase the imbalance of offensive military capability in India's favour. As a result, it would compel Pakistan to augment its conventional and strategic force balance vis-à-vis India in order to sustain a credible nuclear deterrence on the subcontinent.

Pakistan's Nuclear Doctrine

The Pakistani nuclear weapons policy has been India-centric, premised on the perception that the dominant security threat emanates from India's nuclear programme. Pakistan's nuclear potential is fundamentally designed to establish a credible deterrent against aggression and to safeguard the country's independence and sovereignty, and not to use nuclear weapons, or to threaten to employ them, against any Non-nuclear Weapon States (NNWS). Secondly, Pakistan had built nuclear weapons to overcome the shortfalls in its conventional asymmetry vis-à-vis India and to remove its 'insecurity syndrome'.[135] Therefore, Pakistan's nuclear programme was principally influenced by the "security model" in reaction to the development of the Indian nuclear and security policy.[136] However, the study of India-Pakistan nuclearisation supports the assumption that whenever any country develops nuclear weapons for one reason or the other, including balancing against its main competitor, in reaction it also creates nuclear threat perceptions among the other countries in the region. The regional states then also attempt to establish nuclear deterrence to deter their adversary if it is in their power to do so.[137] Pakistan's nuclear doctrine is primarily premised on security-considerations, and with a view to establish a credible minimum deterrence. While on the other hand, India for over a decade constantly refused to hold a dialogue with Pakistan on the nuclear issue.[138] This had further compounded the security situation of South Asia and, it was one of the contributory factors behind India's amassing of forces on Pakistan's borders in the wake of attack on its Parliament in December 2001.[139] The military standoff of 2001-2002 clearly indicates that the Indian leadership had ignored the basic principles of deterrence – that in a nuclearised situation the superiority of conventional and, even the nuclear weapons, is "meaningless."[140]

Pakistan has not announced any nuclear doctrine except that its strategy remained premised on basic security-considerations – to construct a credible nuclear deterrence, preserve its strategic forces, and its sovereign existence. Therefore, the calculus of Pakistan's nuclear threshold has been deliberately shrouded in vagueness with a view to sustain a viable deterrent vis-à-vis India's much larger conventional and strategic forces. On May 30, 2002, Pakistan's Ambassador to the United Nations (UN), Munir Akram defended Islamabad's right to "rely on means to deter Indian aggression." The Ambassador further reiterated that Pakistan possessed the "means and we will not neutralise it by any doctrine of no first-use." He also stated that:

"If India reserves the right to use conventional weapons, how can Pakistan, a weaker power, be expected to rule out all means of deterrence." Adding that India had an advantage over Pakistan in the conventional forces, Munir Akram further elaborated Pakistan's nuclear policy by saying that: "We have not said we will use nuclear weapons. We have not said we will not use nuclear weapons. We possess nuclear weapons. So does India."[141] This statement of Pakistani Ambassador to the UN clearly spells out Islamabad's determination to defend its independence and sovereignty at all cost, and to hold India's much superior conventional force at bay. Munir Akram's statement was issued at the time when the Indian and Pakistani armed forces were fully deployed on the borders. On the other hand, Brajesh Mishra, former National Security Adviser to the former Indian Prime Minister, while accepting the existence of deterrence precept between India and Pakistan, stated that India was "too large to be destroyed" by Pakistan's nuclear capability.[142] This indicates an existence of a serious misperception in the minds of the Indian policymakers regarding the nuclear weapons' utility as the weapons of war (and India's illusion to survive a nuclear attack) - instead of using them as the weapons of mass destruction and the weapons to establish deterrence. Because, in South Asia, the prospects of "misreading," and "misperceptions" are fairly high, writes Michael Krepon. According to Krepon: "In all of their wars, they have tended toward misreading," which could obviously forebode horrendous consequences for the entire South Asia. [143]

In an interview given to two Italian scholars, the Director General of Pakistan's Strategic Plans Division, Lt. General Khalid Kidwai, stated that Pakistan's nuclear threshold is premised on four benchmarks. One, that the use of nuclear weapons by Pakistan would only be contemplated if India attacks and occupies a large part of Pakistan. Two, India manages to destroy a large part of Pakistan's army or air force. Three, if India economically strangulates Pakistan. Four, if India foments any political and internal unrest in Pakistan through subversive measures.[144] However, even if the nuclear parity between India and Pakistan is acknowledged, but, still the growing asymmetry in air power in the favour of India, could encourage New Delhi to use military force in the future crises vis-à-vis Pakistan.[145]

More alarmingly, New Delhi while escalating a dangerous military brinkmanship in 2001-2002 prima facie had overlooked the fundamental rule of the MAD. Because, in the precept of MAD, writes Robert Jervis, "trying to protect yourself is destabilizing because it threatens the other side." He further states that the 2001-2002 military standoff had indicated that in a case of India responding "with nuclear weapons, but this threat might not be

sufficiently credible to deter Pakistan in what would be a desperate situation." In a nutshell, Jervis says that in such a situation the "MAD may then be in the dustbin of history, but states that employ nuclear weapons or force their adversaries to do so may find themselves there as well."[146] Interestingly, a study of the 'Origin of the Pacific War' by Scott Sagan also suggests a similar findings, that if a nation is "provoked sufficiently can launch a dangerous, even disastrous war, out of desperation." He remarks that ignoring this cardinal principle by the future strategists would be risky and the "only path by which a nuclear war could begin."[147] Moreover, on the 40th anniversary of the Cuban Missile Crisis, the US, Russian and the Cuban officials held a conference in Havana on October 11-13, 2002, and disclosed that the US and the Soviet Union were close to a nuclear war in 1962. "Now, we started from the assumption that if there was an invasion of Cuba," remarked President Castro of Cuba, "nuclear war would erupt. We were certain of that…we would be forced to pay the price, that we would disappear…" Castro had expressed his determination by saying that: "Yes, I would have agreed to the use of nuclear weapons…."[148] Another important aspect that the conference had clarified was the factor of luck. According to Robert McNamara: "We were lucky, but not only lucky. I believe we would not have survived those 13 days had not the president shaped and directed the ways in which his senior advisers confronted the crisis." Because, the majority of President Kennedy's advisers had favoured an immediate air strike on all the Soviet missiles on the mainland Cuba. It was after General Walter-Sweeney, head of the US Air Force Tactical Air Command, presentation that: "We have the finest air force in the world. If we can't do the job, nobody can." General Sweeney further stated that there is all the likelihood that "one or two missiles and nuclear warheads might still be operational, and can still be fired, after the attack?" This had enabled President Kennedy to straightaway rule out any probability of an attack on the Soviet missile sites in Cuba.[149] This indicates two very important aspects of the deterrence theory: one, the role of a 'rational actor';[150] and two, "attacking the vital interests of a country having nuclear weapons may bring the attacker untold losses."[151]

In the presence of misperceptions and a culture of a tit-for-tat escalation of diplomatic and military tensions, a dispute such as over Kashmir, could lead to an uncontrollable situation, for both countries. This could be the likely trigger for a nuclear holocaust on the subcontinent. In South Asia, the key regarding the nuclear weapons, writes Ambassador Teresita C. Schaffer of the Center for Strategic and International Studies, is so intricate that, "No one can be certain what would trigger a nuclear response, and the world

needs to take the risk seriously even if the chances are less than half."[152] Therefore, there is an urgent need that both India and Pakistan resume a dialogue in consonance with the Lahore Declaration to take measures "aimed at prevention of conflict," including the "bilateral consultations on security concepts, and nuclear doctrines, with a view to developing measures for confidence-building in the nuclear and conventional fields…."[153] In thisconnection, the establishment of C^4I^2 systems would go long way in minimising the possibility of an inadvertent and unauthorised nuclear escalation. Because, a lack of early warning system that could indicate an imminent enemy attack, and the satellite intelligence-apparatus to assist the policymakers to come to a rational decision in the crisis, the prospects of "misreading" would multiply, especially during a crisis. In this regard, it must be noted that Pakistan had institutionalised its command and control mechanism consistent with country's obligations as a declared nuclear weapon state by establishing the National Command Authority (NCA) on February 3, 2000, almost three years ahead of India's NCA formation. India announced the setting up of Nuclear Command Authority on January 4, 2003.

C^4I^2 Systems

After the establishment of the respective national command authorities in Pakistan and India respectively, it draws attention on the necessity of fully functional C^4I^2 systems in both the countries, inclusive of the entire necessary infrastructure to prevent the false alarms. Obviously, the formation of a C^4I^2 system is vital in order to minimise the possibility of inadvertent and unauthorised nuclear escalation, especially during crises. Absence of C^4I^2 system can bring horrendous consequences. For example, as President Zia remarked that during the 1987 'Brasstacks' exercise held by India: "Neither India nor Pakistan wanted to go to war, but we could have easily gone to war,"[154] due to a lack of early warning system that could indicate an impending enemy attack, and the satellite-apparatus to assist the policymakers to come to a rational decision in crisis. In addition, it requires an understanding of the basics of the C^4I^2 systems by the policymakers at the helms of affairs.

Since the end of the World War II in 1945, the US has spent $937 billion on the development of C^4I^2 systems for its strategic defence. But in spite of this enormous investment, it was unable to protect the US from the threat of a nuclear destruction by Soviet missiles and bombers.[155] The Cold War history is testimony to the fact that the tit-for-tat escalation, crises and

threats between the US and the Soviet Union, and also between India and Pakistan, could not be prevented. Therefore, to establish an effective C^4I^2 system requires an enormous amount of capital investment, which even then cannot make C^4I^2 system a fool-proof, or a nuclear arsenal invulnerable to attacks "set on a hair trigger…false alarms…dubious measures of control such as pre-delegating of nuclear launch authority" to the military commanders and policymakers.[156] According to Blair, in spite of US expenditure of $270 billion on the C^4I^2 system, $1 billion on intelligence-related activities, and another $270 billion on the satellites monitoring the Soviet Union, even then, the US could not entirely establish a stable deterrence through its nuclear forces during the Cold War.[157] To develop even the bare-minimum levels of the C^4I^2 systems cannot be sustained by the economies of India and Pakistan given their poverty levels. Hence, the best available option for both the countries would be, not to escalate the nuclear and conventional arms race, to sustain their respective nuclear deterrence, to avoid conventional and nuclear crises by not assembling and deploying the warheads on nuclear-capable ballistic missiles and aircraft. It is in the long-term interests of India and Pakistan to avoid an irrational nuclear arms rivalry and tensions like the military standoff of 2001-2002, because neither do they have the resource to sustain prolonged confrontations, nor does their geographical contiguity permit them any reaction time in case of a nuclear or conventional crisis.[158] Hence, it is imperative not to chisel-out a LOW-type doctrine, which would prove catastrophic for the regional and international peace and security.[159]

In South Asia, the political leaderships of the two countries have occasionally threatened each other with the use of nuclear weapons, which has undermined the concept of deterrence, as well as emitted negative signals to the world regarding the security capabilities of both countries over an accidental use of nuclear weapons. Moreover, the acquisition and deployment of nuclear weapons in the absence of robust C^4I^2 systems and confidence and security building-measures (CSBMs) would only enhance the probability of a LOW-type of catastrophic doctrines in India and Pakistan, which may multiply the risk of accidental nuclear war. Therefore, the only logical way out is to give effect to CSBMs, and not to have the LOW doctrines. Similarly, if Pakistan adopts a LOW doctrinal strategy, then it would also compel India to do the same. In this connection, the NWS can play an important role in stabilising India-Pakistan nuclear deterrence by providing them with safety procedures and the related-technologies. Stephen P. Cohen commenting about prevention of a nuclear accident and

supporting US policy change concerning the provision of safety devices to both India and Pakistan writes:

> …neither would want a foreign government to have access to its designs, and such assistance could be construed as a violation of the Non-Proliferation Treaty, which bans the transfer of such technology. However, it is not a violation of the treaty to take steps that would reduce the risk of war triggered by an accidental detonation, a false radar signal, or bad intelligence.
>
> To address this problem, the United States should offer to provide hitherto unavailable information to India and Pakistan if they took steps to control or restrain their nuclear deployments, and to make such deployments as non-provocative as possible.
>
> Under such an agreement, the principle of proportionality should apply: America should assist India and Pakistan in developing secure communications systems and verifying accidental nuclear detonations or unannounced missile launches only to the degree that each country cooperated and made their respective systems more reliable and stable.[160]

The past crises between India and Pakistan had primarily stemmed from a variety of factors, including from misperceptions and lack of sufficient intelligence, due to an absence of a robust communication network, and flawed analyses. The faulty analyses and misreading of each other's designs, especially relating to "misjudging each other's thresholds for escalation," could be disastrous for the entire region's peace and stability.[161] Moreover, during the time of crises even conducting conventional military exercises around the border areas could heighten tensions thereby leading to nuclear posturing.[162] According to some analysts, the phase of posturing could dilute the fabric of deterrence that would be further eroded especially in the presence of misperceptions and misreading.[163] In particular, the mating of nuclear weapons with the delivery systems would further exacerbate the already fragile security situation of the region. The deployment of nuclear weapons by either country would only result in lowering the nuclear threshold.[164] Rahul Bedi, an Indian analyst who writes for the *Jane's Defence Weekly*, quoting an official of the Indian Government stated that during the Kargil conflict, India had deployed a "basic nuclear weapons systems" with a view to "retaliate with nuclear weapons if the need arose."[165] It seriously undermined the credibility of

India's stated policy of 'no first-use' of nuclear weapons. India's loosely integrated command and control structure, and the non-consultation of the political leadership with the top brass of the armed forces, while formulating national security strategy, further complicates the problem. This in the views of the former Indian Army Chief during the 2001-2002 crisis, General Ved Prakash Malik, would seriously "risk deterrence credibility."[166] General Malik has also spoken of the huge communication gap between the political and military leadership in terms of "what is politically desirable and what is actually being planned by the military" hierarchy. He concedes that such dichotomy of approach is particularly prevalent in the nuclear planning affairs of India.[167] In such a situation, the Pakistani policymakers' position would be more problematic against India's paradoxical nuclear strategy as well as its non-integrated command and control structure. In addition, it is also not clear that at present what is the status of the C^4I^2 systems in both India and Pakistan, and how they compare with each other, and whether they reduce or eliminate completely the prospects of accidental nuclear strikes? Therefore, apparently subcontinent's peace and security, and the viability of deterrence in the presence of the key instability factor – Kashmir, would continue to remain attached with the luck factor.[168]

Impact Areas: Contributory Factors

The widening gulf of misperception over the instability factor of Kashmir between the two nuclear rivals, could bring the security of the subcontinent perilously close to hair-trigger type scenarios, and immune to threats, which could easily spiral out of control thereby leading to an inadvertent use of nuclear weapons. As it was argued in the preceding paragraphs that the prospects of misperceptions can originate both from the strong as well as from the weak states. The former can initiate a limited war on one pretext or the other, with a view to establish its hegemony on the weaker state – thereby compelling the latter to launch a dangerous war due to sheer desperation.[169] "It is rational to start a war one does not expect to win…if it is believed that the likely consequences of not fighting are even worse," writes Robert Jervis. Secondly, in Jarvis' calculus: "War could also come through inadvertence, loss of control, or irrationality."[170] In the South Asian context, although the policymakers in India and Pakistan are cautious concerning the nuclear weapons, but the frequent outbreaks of crises, brinkmanship, and nuclear rhetoric emanating both from New Delhi and Islamabad, only heightens perceptions of a destabilised deterrence, and leads to fears of the possibility of accidental use of nukes on the subcontinent.[171] This indicates that both India and Pakistan, either have to stabilise the

precept of nuclear deterrence by avoiding crises and effecting more CSBMs; cease issuing threats of use of nuclear weapons against each other; or permit other countries to intervene in their bilateral dispute with a view to minimise, if not eliminate entirely, the possibility of inadvertent use of nuclear weapons.[172] Since, a perpetual state of confusion between the nuclear-armed states not only produces uncertainty, but also broadens the scope of miscalculation.[173] Since one country's endeavour to establish a stable security system in the presence of nuclear competition is expected to create a sense of insecurity and instability in the other.[174]

Impact of Developments of Conventional Forces

Other factors contributory to growing instability between India and Pakistan is the widening disparity in their conventional military balance. This disparity has markedly intensified between 1995 and 1999, especially in the favour of India, which increased its military expenditures substantially.[175] In the view of some defence analysts, this disparity could facilitate India to exert a military-based coercive policy against Pakistan in future conflicts.[176] According to the Stockholm International Peace Research Institute, between 1993 and 2002, India received licenses to produce the following aircraft that has further improved the air force asymmetry vis-à-vis Pakistan markedly in India's favour:

- Ten Mirage-2000s.
- Ten MiG-21s.
- Ten MiG-29s.
- 190 SU-30s.
- Fifty-four MiG-27s.
- Four TU-22s.
- Two Harriers.

[177]

- Fifty-two Jaguars.

On the other hand, in the same period, Pakistan Air Force (PAF) could only manage to place orders for the procurement of following aircraft:

- Ninety-seven F-7s.
- Forty Mirage-5s.
- Ten Mirage-3s.[178]

Michael Krepon writes that the growing disparity between the Indian and Pakistani air forces holds ramifications for escalation and on the stability of nuclear deterrence in at least two ways. One, the attrition capabilities of the PAF in any future air-to-air combat, in a conflict could be a "red line" of threshold. Two, Pakistan would consider Indian air power, especially its capacity to strike deep against its nuclear and the key conventional military targets, as seriously destabilising for the country.[179] Krepon has suggested ten key commandments to reduce the risks of nuclear escalation:

- "Don't change the territorial status quo in sensitive areas by use of force."
- "Avoid nuclear brinkmanship."
- "Avoid dangerous military practices."
- "Put in place special reassurance measures for ballistic missiles and other nuclear forces."
- "Implement properly treaty obligations, risk-reduction, and confidence-building measures."
- "Agree on verification arrangements, including intrusive monitoring."
- "Establish reliable lines of communication, between political leaders and between military leaders."
- "Establish redundant and reliable command and control arrangements as well as intelligence-gathering capabilities to know what the other side is up to, especially in a crisis."
- "Keep working hard on these arrangements. Improve them. Don't

take anything for granted."

· "Hope for plan dumb luck or divine intervention."[180]

Krepon further states that all these key principles of nuclear risk reduction and CSBMs, with the exception of luck, are non-existent in South Asia.[181] This is a serious observation by a leading South Asian observer and, it is this paranoia of the West that has led to depiction of different war scenarios between the two South Asian nuclear-armed rivals. As Krepon states, "Nuclear capabilities that are in a high state of readiness or are in motion to reduce their vulnerability." This "could become more susceptible to accidents or misuse," adds Krepon. In his view, "In the event of another major crisis, the increased readiness of nuclear capabilities can be expected, including the movement of missiles to complicate targeting and to signal resolve,"[182] thereby escalating the risks of LOW. The war scenario between India and Pakistan is further complicated due to India's ambivalent policy of 'no first-use' of nuclear weapons on the one hand, and on the other its resolve to resort to a punitive retaliation using nuclear weapons, in the case of failure of deterrence. Moreover, India's strategy to use nuclear weapons in the event of a major attack against India or on the Indian armed forces anywhere, with nuclear, biological or chemical weapons, is another significant factor that could affect the bilateral deterrence between the two archrivals.

Nuclear War Scenarios

Many Western experts during the Pakistan-India military standoff of 2001-2002 had depicted two nuclear scenarios, based on assumptions that both states had a total of 50 to 75 fission weapons, with estimated yields between 5 to 25 kilotons. According to these assumptions, Pakistan's weapons are mounted on missiles; India's gravity bombs are deployed on the fighter aircraft.[183] The Natural Resources Defense Council (NRDC) in a study had concluded that a nuclear war between India and Pakistan could result in twelve million deaths (which had motivated the US government to send its Secretary of Defense, Donald Rumsfeld, to New Delhi and Islamabad to avert a potential conflict).[184] These war scenarios were premised on the following hypothetical situations: -

1. ***Scenario-1***. Ten nuclear weapons of 15 kilotons if dropped over ten major cities: five in India and five in Pakistan, would cause estimated deaths of 1,690,702 (and 2,021,106 injuries) in India, and 1,171,879 (and 1,361,872

injuries) in Pakistan. In case these bombs explode in the air, then a huge fireball would maximise the collateral damage.[185]

2. ***Scenario-2***. Twenty-four nuclear explosions (of 25 kilotons each) on the ground on the same number of cities in India and Pakistan, would release maximum radioactive particles within a short time after the detonation and produce lethal levels of nuclear fallout even at a distance of hundreds of kilometres away from the ground zero. It would cause horrific levels of collateral devastation and deaths, and expose 60.1 million people to lethal radiation doses, which could cause certain deaths. According to NRDC's estimates, 8.1 million people would be instantaneously exposed to such lethal radiation.[186]

The NRDC study concludes that as a result from the fallout the devastation would exceed that of caused by the blast and fireball of an explosion. And, that the majority of the Indians (99 per cent) and Pakistanis (93 per cent) would survive the second war scenario, which means that the armed forces of two countries would still remain intact to continue the conflict.[187] One thing is quite clear from the NRDC's simulation research that it was designed on the premise of counter-value instead of a counter-force strategy. As a result, its findings cannot be classified as objective. It did not take into account the other factors contributory to India-Pakistan deterrence framework. Such as, India's declared policy of 'no first-use' of nuclear weapons, and its strategy of resorting to a punitive retaliation with nuclear weapons, should deterrence fail. This Indian policy in the Pakistani perspective is New Delhi's ploy to gain a moral high-ground vis-à-vis Pakistan's nuclear policy, in which the first-use option is retained but in extreme circumstances. Because, Pakistan's concept of deterrence is premised on averting an external aggression, endangering its national security. Therefore, while analysing the security paradigm of both the countries, it is imperative to appreciate the distinct security dynamics of India and Pakistan.

Prime Minister Vajpayee, while turning down President Musharraf's proposal for a nuclear-free subcontinent in the Lok Sabha on May 8, 2002, stated that, "Pakistan's nuclear programme is India-specific, but our own nuclear programme goes beyond that." He added that India had to cater for the "other nations as well…" While commenting on the distinct natures of both countries' nuclear doctrines, he further remarked that India's "nuclear doctrine is of no first-use while Pakistan has no such provision but they call for a no-war pact."[188] As argued in this paper, the fundamental principle of India's nuclear weapons policy was to exploit this power-source to project

itself at par with the five NWS, which could enable New Delhi to further assume a hegemonic role in the region as well as in the world politics. While on the other hand, Pakistan's incessant endeavours ever since its inception as a nation-state has been to protect its independence and sovereignty from the Indian threat – in 1947-48, 1965, 1971 - and to keep intact the fragile nature of deterrence during the crises of 1986-87, 1990, 1999, and 2001-2002, in view of India's hazardous misperceptions concerning the concept of a limited war between the two nuclear-armed rivals.[189] Therefore, logically, Pakistan's nuclear strategy had to be "India-specific" as an obvious security rationale. In the case of Pakistan's assurance of 'no first-use' of nuclear weapons to India, it would certainly erode the credibility of Pakistan's deterrent posture vis-à-vis India, due to the then absence of compelling threat that puts in motion the credibility factor.[190]

The deep-rooted rivalry between India and Pakistan is characterized by a high degree of hatred and mistrust. Besides, both countries presently do not possess the level of mutual assured destruction (MAD) potentials, which US and the former Soviet Union possessed during the Cold War; and that had finally maintained the critical deterrent from the 1940s down to the 1990s. Michael Krepon writes:

> The United States and the Soviet Union managed to avoid nuclear and conventional warfare during the Cold War, while jockeying for advantage in myriad of ways, including proxy wars and a succession of crises that became surrogates for direct conflict… The stability-instability paradox was embedded in the enormity of the stakes involved in crossing the nuclear threshold. As posited by Western deterrence theorists, offsetting nuclear capabilities and secure, second-strike capabilities would induce special caution, providing the basis for war prevention and escalation control. Offsetting nuclear deterrents channelled the superpowers competition into "safer" pursuits, the object of which would be to impose penalties on an adversary without inducing direct conflict.[191]

At the present juncture, India and Pakistan are primarily aiming their nuclear deterrence as based on counter-value instead of counter-force targets. The subsequent advancement of their nuclear and defence related technologies, which of course includes the second-strike capabilities, both countries would then be able to plan to attack the counter-force targets as well. Therefore, even in the foreseeable future, superiority in the nuclear weapons would not be of great consequence. "What in the name of God is strategic superiority," Kissinger had commented during the heydays of the Cold War concerning the

US-Soviet Union's strategic arsenals, which to most of the policymakers was nothing but "mutual assured destruction."[192] The same principle could also apparently be applied to South Asia as well. However, there is a hazard of a "stronger state" (India) versus "a weaker state" (Pakistan) contemplating to launch a "preventive war" in order to check the latter from gaining strength.[193] For instance, after the US attack on Iraq, India's External Affairs Minister, Yashwant Sinha, drew a parallel between Iraq and the Kashmir situation, to justify the possibility of a pre-emptive attack on Pakistan. US Secretary of State, Colin Powell, vehemently rebutted this comparison by saying "I don't think there is a direct parallel between the two situations." Moreover, Powell also termed the India-Pakistan standoff difficult and risky.[194] Irresponsible statements emanating from a responsible policymaker regarding launching a pre-emptive strikes against a nuclear-armed rival, is not only a source of concern for Pakistan, but is also a threat to international peace and security as well. More alarmingly, it would compel the weaker state to formulate a counter-strategy in order to deter the adversary from attempting a counter-force or counter-value strategy against its strategic assets, population and industrial targets. One, by effectively securing its strategic assets from such debilitating attacks. Two, threaten a nuclear retaliation in case such a strategy could not hold its adversary at bay. This would generate a dangerous instability situation. Therefore, the leadership of two countries' apparent desire to establish stability with the induction of nuclear arsenals would definitely go down the drain. According to Krepon, "One central tenet of the stability-instability paradox – that offsetting nuclear capabilities will increase tensions between adversaries – has already been amply demonstrated in South Asia."[195] This assessment of Krepon indicates a serious concern regarding the stability-instability inconsistency of India and Pakistan. Krepon further states that:

> So far, India and Pakistan, like the Soviet Union and the United States, have been fortunate to avoid a nuclear exchange. It is possible that this luck will hold and that New Delhi and Islamabad will make concerted, joint efforts to avoid crossing the nuclear threshold.[196]

Therefore, India and Pakistan should not formulate strategies that subject their security, or even their survival, hostage to the luck factor, which could possibly spiral out of control in crises. Krepon's prescription of concerted, joint efforts is in the larger interests of the two countries.

Stability of Nuclear Deterrence

During the India-Pakistan military standoff of 2001-2002, some western scholars, including Rodney W. Jones, while citing Ejaz Haider's article, remarked that Pakistan's deterrence had failed to prevent India from coercing Islamabad primarily due to Islamabad's "flawed nuclear strategy." According to Haider, it was flawed, because, India was prepared to use force, and Pakistan had to succumb to New Delhi's pressure, which had the backing of Washington.[197]

The success or failure of deterrence cannot be determined from a single episode, but it should be evaluated on the cumulative outcome of a crisis. Haider writes that the crisis of 2001-2002 had escalated as a result of Pakistan's "forward strategy" to change the status quo over Kashmir, whereas in comparison to NATO's strategy during the Cold War was to maintain the status quo. Therefore, in his viewpoint, this flawed strategy destabilised the deterrence, which Pakistan had attained with intent to gain a strategic parity vis-à-vis India's conventional asymmetry.[198]

A stable mutual nuclear deterrence would only be realised between the two countries once they attain a second-strike nuclear capability. Only then, Pakistan would be able to have a 'no-first use' nuclear policy, and prevent India from threatening the former with its conventional military superiority. *[199]* Other reasons attributable to lack of Pakistan's conventional deterrence against India, that Islamabad lags behind in its modernisation programme for conventional forces, for instance, the state-of-the-art aircraft, air defence, naval capabilities, and in the early warning systems, which it does not possess against India.[200] Moreover, given Pakistan's geographical constraint vis-à-vis India in the opinion of Western analysts like Rodney Jones, it in the face of growing imbalance in conventional forces is making limited conflict between India and Pakistan a real and a dangerous possibility.[201] Hence, conventional military superiority would continue to accord India an opportunity to exploit conventional asymmetry, politically and diplomatically, in order to coerce Pakistan to follow New Delhi's diktat. [202] On the other hand, Pakistan's short-term strategy is visibly premised on a quick-fix policy pattern, which is obviously undermining the country's formulation of a long-term foreign and security policy. Therefore, it is imperative that Pakistan restructures its foreign and security policy on more sophisticated and far-reaching principles, to secure for itself a honourable future in the 21st century. Commenting on the prospects of Indo-Pakistan nuclear stability, Jones writes:

> Just as the extremist attack on India's parliament on December 13

> aroused India to concentrate forces on Pakistan's border, another such extremist Muslim attack – especially one that slays prominent Indian officials in Delhi – would almost certainly ignite war at some level. An Indian origin rogue operation in Islamabad could achieve a similar but reciprocal effect. If that war escalated uncontrollably due to an outpouring of popular rage or to gross operational miscalculations and crossed Pakistan's red lines, the odds of the conflict ending in a nuclear exchange would be high – far higher, needless to say, than anywhere else in the world today.[203]

Similar views were also projected by a documentary-drama titled: *The Situation Room*, telecasted by the BBC-4 channel, which was set on a hypothetical scenario somewhere in 2004 - when an Indian Defence Minister's assassination by a Pakistan-based terrorist organisation escalates crisis that increase the prospects of a nuclear war.[204] (This hypothetical documentary caught public attention.) A group of Pakistani scholars participating in a discussion on BBC's documentary expressed mixed viewpoints concerning the prospects of a future India-Pakistan military crisis spiralling out of control. However, some of the discussants accorded importance to the mediating role of extra-regional powers in defusing India-Pakistan military tensions. According to Pervez Hoodbhoy, a nuclear war between the two countries in the past was averted due to US intervention.[205] Therefore, a multilateral mediation in India-Pakistan's bilateral disputes would be an important factor in maintaining peace and stability on the subcontinent. Nuclear capabilities can only assist in providing a general framework on building a mutual trust for the collective security of the two countries. Otherwise, recurring military tensions would only increase the prospects of misreading and misperceptions that could inadvertently lead them to a situation where escalating tensions lead to an outright war of mutual destruction. Neither Pakistan's nuclear deterrent is vibrant enough to deter the Indian policymakers from launching brinkmanship, nor New Delhi has the operational capability to pre-empt or neutralise Islamabad's nuclear arsenal through a sheer strength of its conventional superiority.[206] Consequently, the stalemate is perilously destabilising, especially when both countries have a high-degree of mistrust and misperceptions about each other's capabilities.

A leading Pakistani defence analyst, Lt. Gen Talat Masood, writes that, "Constant violence along the LoC in Kashmir and the semi-mobilized state of the armed forces continues to fuel militancy and religious extremism in both countries, pushing them into a narrow lane. There is always the lurking danger that extremist organizations could set off a chain of events that may

ultimately lead to a catastrophic nuclear exchange" on the subcontinent. The US-inspired pre-emptive strategy could also motivate India to "launch its own nuclear war."[207] Therefore, it is imperative that Pakistan and India reaffirm a political route for the resolution of all disputes. In this context, a structured dialogue on Kashmir and nuclear rivalry could provide an impetus to both the countries to interact on all other political issues, including CSBMs on conventional forces, establishment of "nuclear hotlines" and "crisis management centres," in a bid to stabilise the strategic milieu of South Asia.[208] However, after the incident of September 11, 2001, terrorist attacks on the US, the biggest casualty of the subsequent US war on terror was the degradation of Indo-Pakistan ties, which were further galvanized by terrorist attacks on the Srinagar Assembly on October 1, 2001, and on the Indian Parliament on December 13, 2001.[209] In spite of both countries' retreat from the brink of a war in 2002, they still have not established a strategic restraint regime concerning the nuclear and conventional weapons.[210] The Kashmir issue would remain at the centre of any future dialogue designed to stabilise the bilateral relations of the two countries. Moreover, continuous Indian intransigence to address the issues of Kashmir and nuclear policies,[211] and the growing imbalance in their conventional strength, as has been argued in this paper, is likely to further destabilise the paradigm of deterrence in South Asia. Because, ever since the Peloponnesian War (431-404 BC), it has been the experiences of empires and nations that an imbalance in economic and political power between the states had frequently caused wars. "What made war inevitable was the growth of Athenian power," writes Thucydides about the Peloponnesian War, "and the fear which this caused in Sparta."[212] Such imbalances, writes von Clausewitz in the nineteenth century, leads to a continuation of politics through violent methods.[213] The resultant war invariably is a clash of interests for power and domination of some states over others.[214]

The conventional military imbalance and Pakistan's "Indocentric basis of… insecurity…India has never accepted the idea of Pakistan. India dismembered Pakistan in 1971" and became "a regional hegemon," which as a result motivated Islamabad to secure nuclear weapons to establish the "nuclear shield" vis-à-vis India.[215] Each time a tension escalates between India and Pakistan, both countries virtually become dependent upon the US to defuse the regional nuclear crisis, which is a sign of unstable mutual deterrence. Therefore, India-Pakistan rivalry demands a sustained US engagement to defuse tensions.[216] Additionally, India and Pakistan's nuclear deterrence becomes more risky in view of the practically non-existent and non-reliable

early warning systems. Therefore, both countries' endeavours to emulate the US-Soviet Cold War model are premised on a faulty assumptions and a dangerous strategy. Pervez Hoodbhoy argues:

> In the US-USSR deterrence system, a massive system of early warning systems, both space-and ground-based, was needed to detect missile launchers. In spite of a relatively long flight time of 20 to 25 minutes, the systems remained severely strained and are authoritatively known to have generated false messages of attacks. The existence of redundant and multiple safeguards prevented accidental war, but the margin was not comfortable.[217]

The ongoing arms race, and over-optimism regarding the C^4I^2 of India and Pakistan, could further lead to more dangerous crises in future. India's intransigence over Kashmir dispute – not to implement the UN Resolutions, and Pakistan's consistent attempt to liberate Kashmir with an armed struggle, could turn the situation more hazardous. Furthermore, the repeated nuclear rhetoric emanating from New Delhi and Islamabad has only destabilised the traditional concept of deterrence, which would also enhance the "fog of war" in any future crisis between the two countries.[218] Obviously, this "fog of war" is likely to generate miscalculation, and chaos in any future crises. According to Farhatullah Babar, the "nuclear weapons in the hands of India and Pakistan, instead of deterring each other and keeping peace has brought two countries closer to war." "If anything it has served," comments Babar, is that it has escalated the tensions in South Asia as the genuine independence struggle by the people of Kashmir, is now being perceived as an issue of "cross-border terrorism sponsored and sustained by Pakistan."[219] Babar argues that India's declaration that:

> …attack on Indians anywhere in the world would be taken as a nuclear attack on India itself. This declaration came within days of Pakistan flaunting its nuclear capability. General Pervez Musharraf publicly stated in Karachi on December 30 that at the height of the crisis with India he had warned Prime Minister Vajpayee that Pakistan could step beyond conventional warfare if it had to defend its territory….
>
> Pakistan's flaunting of nuclear weapons and India upgrading its nuclear arsenal are ominous developments indeed.
>
> The extremists' attack on the Indian Parliament on December 13 provoked New Delhi to amass troops along the Pakistan border and close all doors of dialogue and negotiations. It should not be surprising

if another such attack provoked even stronger reaction leading to war of some sort.[220]

In addition to India's superiority in the army and air force, its asymmetrical naval prowess vis-à-vis Pakistan would also impede the maritime confidence-building measures between the two countries.[221] Besides, India is endeavouring to develop a sea-based nuclear delivery system that would further shift the balance of power in its favour. Thereby further compounding the insecurity of Pakistan against India's growing military, air, naval, and nuclear power.[222] This would compel Pakistan to adopt a similar strategy to counter-balance India's growing strategic and conventional forces.[223] The emergence of nuclear asymmetry between India and Pakistan could result in nuclear instability,[224] which would generate more mistrust and misperceptions in their bilateral relations. In this regard, India's quest to procure missile defence systems from different countries would certainly undermine Pakistan's capacity to shield its strategic assets from Indian attacks, and as a consequence enhance Islamabad's quest to augment its ballistic missiles system. Thereby further lowering Pakistan's nuclear threshold.[225] The perceived insecurity from each other is compelling both the countries to frequently reiterate that their vital strategic assets are fully protected and secure.[226] For instance, after the NCA's meeting of January 2003, an official statement by the Government of Pakistan stated that: "The NCA approved to tighten security of different defensive layers, enhancing physical security and ensuring the effectiveness of watertight safety of materials, equipment and technology." It also reiterated Pakistan's resolve to sustain its missile development programme in order to maintain the strategic balance with India.[227] Because, the cornerstone of Pakistan's nuclear strategy is to maintain a minimum credible deterrence against India without indulging into an arms race.[228] Therefore, Pakistan's nuclear policy of a minimum credible deterrence appears to be the correct strategy to balance the prevalent unbalanced system of power in the region.[229] More significantly, "a 'no first use' policy does not reduce our inherent capacity or capability to strike first if so warranted," writes the former Air Officer Commanding-in-Chief of the Western Air Command of India, Air Marshal Vinod Patney. He argues that in spite of India's declared 'no first-use' policy it still retained the "option to hit first…if the circumstances have so altered as to force a major change in our nuclear policy."[230] Therefore, for a state like Pakistan it would be an eternal struggle for a security strategy that ensures its survivability. In international politics, security, power and the overwhelming power of a state

motivate the other states to "balance against it."[231] According to a leading proponent of neo-realism, Stephen Krasner, "The international system is anarchical. It is a self-help system." Thus, it is the responsibility of the individual states, writes Krasner, to safeguard their "security and well-being…their ability to mobilise their own resources against external threats."[232] Hence, Pakistan's security compulsion, and the nature of international political system warrant Islamabad to cater for its own specific security requirements, given its distinctive characteristics.

In spite of India-Pakistan military standoff in 2001-2002, both the countries still possess some excellent bilateral accords that can provide a framework to improve their ties. In addition, Track-II diplomacy and non-governmental type forums like the Pakistan-India Peoples Forum, think tanks, and other organisations can genuinely assist in improving their relations. But, in view of the astronomical defence expenditures, ongoing acts of terrorism, and the absence of a dialogue between India and Pakistan, are all factors that would continue to undermine the international community's engagement in the Indo-Pakistan crisis thereby further endangering the peace and security of the region. Because, the absence of dialogue tends to foster misperceptions, and enhance the mistrust, even if the leaderships in both the countries intended to avoid "unintended escalation."[233]

The Cold War Paradigm

Moreover, there are some interesting parallels embedded in the history of the Cold War period, which could give an insight to the South Asian leadership to pragmatically handle their nuclear arsenals. The Cold War nuclear rivalry between the US and the former Soviet Union concerning the varying nuclear doctrines; from the employment of nuclear weapons as battlefield weapons from the 1940s to 1960s, to the concepts of mutual assured destruction (MAD) and the "nuclear winter" scenarios, which had provided them a rationale to prevent potential crises. Because, a country's assured-destruction capacity could deter an adversary from a conflict as it would outweigh the gains in it. "If, therefore, a state's threat to impose these costs were sufficiently credible," writes Robert Powell, then the "adversary would prefer backing down." Powell argues that in the case of both states possessing second-strike capabilities, but "why would either state be any more able to exert coercive pressure on its adversary than its adversary would be able to exert on it?"[234] According to Thomas Schelling, the chance of escalation to MAD level is invariably present in most of the crises. In his viewpoint, "it is the essence of a crisis that the participants are

not fully in control of event."[235] Since the demonstration of nuclear weapons capabilities by India and Pakistan, had failed to prevent a series of crises on the subcontinent. The declared NWS like India and Pakistan, by indulging in potential conflicts are merely lowering the threshold and undermining the deterrence paradigm. Since in a crisis situation, in spite of mutual assured destruction potentials of the adversaries, the states may not encourage a state to deliberately launch a nuclear attack, but there is always a possibility that the fury of threats to each other may "leave something to chance."[236] Lately, the chance factor, and the role of US in diffusing India-Pakistan military tension, has become visibly significant. On the contrary, in the 1960s when the US-Soviet Union had attained a rough strategic nuclear parity, and a shared realisation of an inherent danger of escalation of tension after the Cuban Missile Crisis, fostered a high degree of caution in giving nuclear threats. More significantly, leaders of both the countries had avoided explicit threats, maintained a strict control over their nuclear forces, sustained direct communications in order to defuse tensions, which could possibly have escalated into a military confrontation that neither side wanted.[237] Therefore, it is imperative that both India and Pakistan, exercise great caution in respect to use of nuclear weapons and also in containing any moves that could escalate tension and create suspicions in another state, which is then tempted to use nukes.[238] Thus, it is in the common interest of both India and Pakistan, to think strategically while handling the vital interests of their states.[239] They should not let their political failure determine their collective future, because in a nuclear confrontation, the war could not be rationally classified as the "highest excellence," which the Chinese strategist, Sun-Tzu, had described some 2,300 years ago.[240] Rationally, both India and Pakistan can effectively use their nuclear power for bargaining purposes vis-à-vis each other with a view to exploit it to effect diplomatic thaw, and to bring about credible CSBMs in the interest of genuine international regime for collective security.[241] Otherwise, in the case of a crisis, then, both the countries would tend to remain dependent upon the US, the UK, and the Russians to pull them back from the brink of a "potential nuclear war," as Colin Powell had described the US role in defusing the India-Pakistan military standoff of 2001-2002.[242]

In addition, there is a need for more transparency to determine the reliability of their respective C^4I^2 systems, in order to prevent the conventional and nuclear confrontation that could trigger a chain-reaction, which would certainly be beyond the capacity of anyone to contain - once unleashed. More exactly, India and Pakistan should never confuse the

political negotiations relating to the territorial disputes, with technical dialogue on nuclear balance and security, which impedes the overall process of CSBMs.

In spite of the marked dissimilarities (and also some similarities) between the strategies of the Warsaw Pact-NATO countries during the Cold War era, India and Pakistan still have lot to learn from their mistakes. Therefore, both the countries should not be over-optimistic that they possess 'first-strike' nuclear capabilities. The NATO's 'first-strike' strategy against the Warsaw Pact countries never made sense to some experts. For instance, according to some viewpoints, a strategy to use the nuclear weapons by US, in response to a chemical and biological weapons use by any NNWS was absolutely illogical, morally and politically indefensible.[243] The use of nukes in retaliation to a conventional military attack did not make any sense at all, according to Robert McNamara.[244] The nuclear weapons could not bring any advantage to the initiator of a nuclear attack vis-à-vis a conventional attack. Some analysts are of the view that a continuing territorial dispute between India and Pakistan is increasing the prospects of a nuclear exchange due to the possibility that an escalation of crisis could quite easily spiral out of control primarily because of the greater degree of mistrust between New Delhi and Islamabad than between the superpowers during the Cold War period.[245] The NATO and the Warsaw Pact leaders, during the heydays of the Cold War, in number of strategic appreciations had assumed that the Soviets would never deliberately initiate a general war as long as NATO was prepared to retaliate with nuclear weapons. But, still both the rival blocs had an apprehension that:

> a danger of general war arising as a result of miscalculation on the part of the Soviets, a misconstruction of Western intentions, or as a result of military operations of a limited nature which the Soviets did not originally expect would lead to general war.[246]

In the perceptions of the West of that period, "If general war is deliberately undertaken by the USSR, it will probably be initiated by a massive nuclear offensive…."[247] Similarly, on the subcontinent, the strategic situation is also dramatically changing due to induction of nuclear-capable ballistic missiles by India and Pakistan, which would obviously shift their future nuclear posture to more hazardous relationship.[248] Hence, multiplying the chances of miscalculations due to variety of factors, including the ever-widening gulf of mistrust; lack of vibrant command and control mechanisms; and simmering territorial dispute over Kashmir. Albeit, the

Lahore Declaration and the Memorandum of Understanding signed in February 1999 - envisaged to "engage in bilateral consultations on security, disarmament and non-proliferation issues" with a view to evolve an appropriate "consultative mechanisms to monitor and ensure effective implementation" of confidence-building measures.[249]

Both India and Pakistan have lot to learn from the earlier experiences of the US and the former Soviet Union concerning the protection of the physical infrastructure of nuclear materials and installations. India and Pakistan should emphasise on Track-II Diplomacy with a view to draw maximum lessons from the US-Soviet Union cooperation that had existed even during the Cold War; government-to-government interaction and exchanges between Pakistan and US – such as the Cooperative Monitoring Center at the Sandia National Laboratories, based in the US; and joint design and construction of a demonstration site for nuclear material and installation protections in US and Pakistan. The cooperation between laboratory-to-laboratory of India and the United States, and also between the latter with Pakistan, would foster confidence.[250] This would go long way in building the relationships required to enhance the physical security of the nuclear and radiological materials and the facilities.[251] Furthermore, interaction between the Indian, Pakistani and the US experts on issues ranging from protection of vital infrastructure from the threat of terrorist attacks to the introduction of projects relating to economic, humanitarian, scientific, and educational fields,[252] could also exert a positive influence on stabilising the deterrence paradigm of the subcontinent. Since the end of the Cold War and the end of bipolar international political system, has enhanced the inequalities between the states.[253] More so, the unbalanced strategic and military power in the favour of one state would not only continue to affect the future shape of the world politics, but it would also influence the future prospects of war and peace between the regional states like India and Pakistan.[254] A tripartite cooperation mechanism between the US, India, and Pakistan, with the former acting as a technological facilitator could assist both India and Pakistan in removing mutual mistrust regarding their nuclear, facilitating their C^4I^2 capabilities and, thus, stabilising the situation of peace in South Asia. Otherwise, both countries' nuclear-centric defence strategies [255] would continue to compel both countries to premise their military doctrines on hair-trigger type responses, and foster misconceptions that they could fight a nuclear war and win it too.[256]

The UK in a *Global Strategy Paper 1952*, and the Eisenhower Administration in the US of that period, had emphasised a massive nuclear retaliatory

strategy without even differentiating between the counter-value and counter-force targets.[257] This has a striking similarity with the India-Pakistan nuclear brinkmanship in the early period of their overt nuclearisation, particularly, during the military crisis of 2001-2002, and the heightened state of tension between the NATO-Warsaw Pact countries in the 1950s. Like the Soviets, the NATO countries too expected a victory in the case of a war with the Warsaw Pact states.[258] While the NATO's declared policy was to prevent the occupation of the Western Europe by the Soviet forces even if it had to resort to use of strategic and tactical nuclear weapons.[259] And in the case of India and Pakistan, the latter is endeavouring to balance the asymmetrical development of nuclear forces with the establishment of a credible nuclear deterrence and, at the same time New Delhi is attempting to threaten Pakistan with extinction if it used nuclear weapons to hold Indian might at bay.[260] This situation is further complicated by Pakistan's policy to employ nuclear weapons in order to deter India from using its conventional and nuclear capabilities to intimidate Islamabad. On the other hand, India is evidently deliberately following a policy of brinkmanship vis-à-vis Pakistan with a view to achieve its diplomatic and strategic objectives, and to test the resolve of Islamabad and to make the risk of use of nukes intolerably high on the latter. This indicates the existence of a balance of resolve between India and Pakistan.[261] In such situation, the dynamics of escalation would continue to rest on a complex state of interaction between the "states' level of resolve and their uncertainty about each other other's resolve."[262] This is another hazardous dimension of India-Pakistan nuclear rivalry, which is expected to persist due to both countries' pathological mistrust of each other, and the degree of uncertainty attached with their resolve concerning the nuclear weapons employment for the brinkmanship purposes with a view to achieve their strategic objectives. The "risk-maximizing approach"[263], both by India and Pakistan, is likely to influence their leadership to believe in the brinkmanship with a view to out bid the rival state, especially during the crises.[264]

The Impact of Post-9/11 on Security Perceptions

After the terrorist attacks on the US on September 11, 2001, the West has expressed serious apprehensions concerning the terrorist groups acquiring weapons of mass destruction and the nuclear-related materials, from the Indian and Pakistani nuclear facilities. But, the fact remains that the prospects of these non-state actors acquiring WMD materials from the Indian and Pakistani facilities is "extremely low since both countries keep their nuclear arsenals in an unassembled form, and because their components are

stored separately."[265] Therefore, the chances of terrorist groups acquiring nuclear-related materials from within India and Pakistan for terrorism are remote. However, according to Rizvi and Basrur, fears regarding four types of nuclear terrorism cannot be ruled out. These include the sabotage of nuclear facilities, use of a "dirty bomb" to disperse radiation, terrorist takeover of nuclear installations and a threat to blow them up, as well as clandestine transfer of nuclear material for use/assemblage somewhere else.[266] Rizvi and Basrur have suggested eight measures, which in their viewpoint could substantially enhance the safety and security of nuclear facilities in India and Pakistan:

1. Track-down the groups and the individuals engaged in violent activities and terrorism.

2. Extensive surveillance of the borders and coastlines to contain the movement of goods and people.

3. More use of modern technology to enhance the physical protection of nuclear weapons, material and installations.

4. Thorough scrutiny of the personnel handling the nuclear programmes of the two countries.

5. Acquisition of latest technologies for the transportation of fissile and radioactive materials.

6. Highly trained manpower may be employed for the protection of nuclear facilities.

7. Extensive coordination network amongst all the set-ups dealing with the nuclear infrastructure and, in addition, there should be an independent body to ensure an oversight and accountability.

8. Finally, a disaster management body may be established to handle a security alarm systems, and the actual nuclear-terrorist incidents and emergencies.[267]

Obviously, the US and the Western countries have a strong interest in preventing a nuclear war between India and Pakistan. The military standoff of 2001-2002 between the two countries had visibly brought the two countries much closer to a war, which then prompted the US and the

European Union countries to assist them in defusing the tension. Therefore, logically, in future, US and the EU countries should be keen to strengthen the safety and security mechanisms of India and Pakistan's nuclear weapons programmes, because the threat of nuclear-terrorism is global in range and its effects cannot be contained to a single geographical region alone.[268]

On September 17, 2002, the Bush Administration announced *National Security Strategy of the United States of America*, which laid-down a comprehensive policy to combat the WMD, and to defeat global terrorism.[269] This significant document envisaged a proactive counter-proliferation policy to deter, and to defend against the perceived threat of terrorism before it is let loose.[270] Secondly, to strengthen the non-proliferation regimes with a view to interdict the 'rogue states' and terrorist organisations from gaining the technologies, materials, and expertise to assemble the WMD. Thirdly, to effectively contain the effects of the WMD use, whether by the rogue states or by the terrorist networks.[271] The main thrust of this new policy is on pre-emptive actions even in an anticipatory self-defence against such states and the terrorist groups.[272] More significantly, this doctrine considers the Cold War era's deterrence principles (as a weapon of last resort and defence) as ineffective against the present-day deterrence postures, which is primarily premised on threat of retaliation that is not expected to work against the rogue states, and the terrorist organisations, which would tend to risk the lives of their nations.[273] Interestingly, this strategy has an inherent flaw because it would tend to lead to more reliance on pre-emption that would "turn force from an instrument of last resort into one of first resort," comment Ivo H. Daalder, James M. Lindsay, and James B. Steinberg.[274] Moreover, it will accord an opportunity to other states to formulate principles and strategies in accordance with their narrow national interests to have "an unfettered right of pre-emption against its own definition of threats to its security" to act unilaterally.[275] This doctrine instead of rooting-out the scourge of terrorism is likely to widen the gulf of alienation between the friends and allies and, at the same time fails to address the question of threat to security.[276]

It would be appropriate to make a distinction between the state and the non-state actors' acquisition and potential to use the nuclear weapons. Since the break-up of the former Soviet Union, the West became apprehensive regarding the proliferation of nuclear materials, equipment, technology, and personnel to the 'rogue states' and terrorist outfits. In 1992, US and Russia, to ensure that nuclear weapons and materials do not fall in the hands of the undesirable elements, established the Nunn-Lugar Cooperative Threat

Reduction (CTR) programme.[277] Additionally, in 1999, the Clinton Administration announced a policy to expand the work of CTR by the Expanded Threat Reduction Initiative (ETRI) plan to ensure that WMD-related technologies did not reach the wrong hands, including to the states sponsoring terrorism.[278] But, since the tragic terrorist incidents of September 11, 2001, the US perspective concerning the possibility of nuclear terrorism has undergone marked transformation. Robert Kagan, a leading scholar of US foreign policy, writes,

> Europe is turning away from power, to put it a little differently, it is moving beyond power into a self-contained world of laws and rules and transnational negotiation and cooperation. It is entering a post-historical paradise of peace and relative prosperity, the realization of Immanuel Kant's "perpetual peace." Meanwhile, the United States remains mired in history, exercising power in an anarchic Hobbesian world where international laws and rules are unreliable, and where true security and the defence and promotion of a liberal order still depend on the possession and use of military might…. Americans generally see the world divided between good and evil, between friends and enemies, while Europeans see a more complex picture. When confronting real or potential adversaries, Americans generally favour policies of coercion rather than persuasion, emphasizing punitive sanctions over inducements to better behaviour, the stick over the carrot. Americans tend to seek finality in international affairs: they want problems solved, threats eliminated. And, of course, Americans increasingly tend toward unilateralism in international affairs.[279]

Kagan's perspective is widely shared in the United States, including by the Bush Administration, that Washington should pursue a more proactive, rather unilaterally coercive diplomacy, to finally eliminate the scourge of terrorism and to solve the other problems of the world. But, the fact remains that US nuclear non-proliferation policy, and international non-proliferation regimes, still form an integral part of Washington's security architecture to deal with the potential threats of WMD-related terrorism. Therefore, in the foreseeable future, US would be less inclined on the international institutions like the United Nations in order to achieve its national objectives.[280] In this context, the US National Security Strategy and the National Strategy to Combat Weapons of Mass Destruction (NSCWMD) would continue to guide a new strategy for the US Homeland Security, and a fundamental diversion from the traditional concept of deterrence with a view to combat the WMD

threats.[281] Because, Bush Administration perceives that its enemies were seeking the WMD, and that the NSCWMD would proactively bolster, interdiction-oriented approach to mitigate the WMD threats.[282] Prima facie, the document is intended to target the 'rogue states,' but it also does not rule out action against the other states as well who sponsor or harbour terrorism.[283]

The NSCWMD also envisages bolstering of US conventional, nuclear, intelligence/surveillance, interdiction, and domestic law enforcement capabilities to improve its overall deterrent posture vis-à-vis the WMD threats. This includes capabilities to detect and destroy adversary's WMD arsenals before their use. Therefore, US would consistently endeavour to formalise new agreements, which could cater for its non-proliferation objectives. In addition, strengthen the existing non-proliferation regimes to promote its security interests. Moreover, in parallel conceive a comprehensive sanctions policy as a tool of diplomacy to support its overall strategy of NSCWMD.[284] But rightly in the view of some experts, the question of nuclear terrorism by states is fundamentally different from the issue of the "acquisitions and use of such weapons by non-state actors."[285] Thomas Badey writes,

> It is highly unlikely that countries with a desire to acquire nuclear weapons, such as Iran, Iraq, Libya, Sudan and North Korea, would spend millions of dollars and years of research to acquire nuclear weapons, only to sell or hand them over to non-state actors, knowing that they might be held accountable for the actions of potential clients…. It is much more likely that states, particularly those targeted by export controls and economic sanctions, may use non-state actors to acquire nuclear materials for them rather than the other way around. [286]

The use of nuclear weapons by the 'rogue states' with an inadequate backing and accompanying capabilities would be counter-productive rather than proving of any strategic gain. Because, in the case of use of nuclear weapons by the 'rogue states' and their sponsored non-state actors, it would certainly eclipse the potential benefits and, the consequences would be more horrendous to contemplate.[287] Besides, it is highly improbable that any single individual could equip a group to have an access to fissionable material [288] or even to crude a form of nuclear device without the assistance of a reliable delivery system, which is otherwise only feasible with the

collaboration of a major industrial enterprise.[289] In the views of the former head of nuclear weapons development programme at the Los Alamos, J. Carson Mark, it requires a team of a mechanical engineer, nuclear physicist, a chemist, and explosive expert, a mathematician, and along with other auxiliary staff, and at least a year to develop a nuclear device.[290] Besides, it would be highly unlikely for the non-state actors to hire the services of highly qualified and experienced scientists; the requisite industrial infrastructure; the financial resources; weapons-grade uranium or plutonium; and an access to clandestine transport or to a delivery system, that too, for terrorism, appears to be incredibly implausible.[291] However, the security of nuclear installations, personnel, and the fissionable and radiological materials in possession of the *de jure* and the *de facto* NWS, should be made foolproof. Secondly, the existing non-proliferation regimes can be made vibrant to ensure that nuclear technology and material does not pilfer into the possession of non-state actors and the 'rogue states,' which could jeopardise the stability of international peace and security. Though, the non-state actors can easily assemble the chemical and biological elements for terrorist attacks,[292] therefore, rationally the emphasis should be to check the proliferation of chemical, radiological and biological agents, which the terrorist organisations may acquire from the international black-market, and then convert the same into a 'dirty bomb'. In this connection, US President Bush in a statement on May 31, 2003, during his visit to Poland, referred to the Proliferation Security Initiative (PSI) of the US in collaboration with ten other countries, including its allies, to employ all the legal, diplomatic, economic, military channels, including searching planes and cargo ships, to interdict illegal weapons, nuclear, missiles, and radiological materials.[293] Such measures would go long way in deterring the terrorist organisations from implementing their nefarious designs, provided PSI is reconciled within the parameters of the international law. In addition, the nuclear-related CSBMs between the *de jure* and the *de facto* NWS, and other developed countries, could also collectively evolve a strategy to seize the transfer of sensitive technologies to 'rogue states' in order to minimise, if not exclude completely, the possibility of such technologies, nuclear and radiological materials falling in the wrong hands.

Unfortunately, in the South Asian context, since the Lahore Declaration of February 1999, both India and Pakistan have not been able to start talks on nuclear-related CSBMs. In August 2003, Pakistan had offered India the resumption of a dialogue on nuclear-related CSBMs that were agreed in principle in the Memorandum of Understanding (MoU) signed by them at the time of Lahore Declaration, in order to establish the strategic restraint

regime.[294] India instead of responding positively to the Pakistani proposal accused it of foot-dragging on resumption of a dialogue and other diplomatic and peace initiatives between the two countries.[295] In this connection, again on December 18, 2003, President Pervez Musharraf, repeated the offer to India for improving bilateral relations by resolving the Kashmir dispute:

> We are for United Nations Security Council Resolutions…now we have left that aside. If we want to resolve this issue, both sides need to talk to each other with flexibility, coming beyond stated positions, meeting halfway somewhere…. We are prepared to rise to the occasion; India has to be flexible also…. We have come to a stage where there is a thaw in relations, where there is expectation on both sides in the people…. If the leadership doesn't rise to the occasion, it is a pity and I think we'll disappoint our public again…. Unfortunately, magnanimity has to come from the bigger and the stronger.[296]

President Musharraf's realpolitik and rational diplomatic proposal placed the ball squarely in India's court. It was up to India to capitalise on Pakistan's constructive initiative to resolve the neuralgic dispute over Kashmir, and to set in motion the process of improvement of bilateral relations. During the three-day 12th South Asian Association for Regional Cooperation (SAARC) Summit in Islamabad (January 4-6, 2004), the Indian Prime Minister, A. B. Vajpayee, urged the member states for "bold transition" from mistrust to trust, discord to concord, and tension to peace in the region.[297] Moreover, Indian External Affairs Minister, Yashwant Sinha, in a statement also "expressed satisfaction on the progress in bilateral relations and discussed various ways to increase this momentum." While Pakistan's Foreign Minister, Khurshid Mahmud Kasuri, too, reiterated that, "We have developed a good relationship, which is good for the people of both countries. Our relations with India have improved. We will continue to improve our relations."[298] Musharraf and Vajpayee in a bilateral meeting on January 5, further agreed to "maintain the momentum" generated by the confidence-building measures and diplomacy on the sidelines of the SAARC Summit.[299] Therefore, in the second phase, if the proposed CSBMs can take a concrete shape once both countries resume a comprehensive dialogue and initiate further confidence-building measures process with a view to ensuring peace and security of the region, it could help lay the basis to eliminate the probability of terrorists' access to their nuclear, missile, chemical, biological, and radiological materials and facilities. If the momentum resulting out of the thaw in bilateral relations is sustained, it could enable them to find a mutually acceptable solution to all their outstanding disputes, including over Kashmir.

Conclusion

For a moment, consider the following quotes of the eminent scholars about the concept and definition of deterrence, victory, and the effects of the nuclear war. According to Lt. Gen. N. Hanning:

> The political power of nuclear weapons is based on:

- the yield
- the number available
- the number of launch vehicles and the certainty of their availability
- hit and kill probabilities
- the credibility of their use.

> As long as *superiority* really exists in all the parameters, the risk for the user is a small and the *deterrent* concept is credible, as was demonstrated with Hiroshima and Nagasaki.[300]

McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith in an article on 'Nuclear Weapons and the Atlantic Alliance,' in the *Foreign Affairs* journal wrote:

> It is time to recognize that no one has ever succeeded in advancing any persuasive reason to believe that any use of nuclear weapons, even on the smallest scale, could reliably be expected to remain limited. Every serious analysis and every military exercise, for over 25 years, has demonstrated that even the most restrained battlefield use would be enormously destructive to civilian life and property. There is no way for anyone to have any confidence that such a nuclear action will not lead to further and more devastating exchanges. Any use of nuclear weapons in Europe, by the Alliance or against it, carries with it a high and inescapable risk of escalation into the general nuclear war which would bring ruin to all and victory to none.[301]

Bernard Brodie writes:

> The first and most vital step in any American security program for the age of atomic bombs is to take measures to guarantee to ourselves in case of attack the possibility of retaliation in kind…. Thus far 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.[302]

In April 1980, Physicians for Social Responsibility in 'An Open Letter to President Carter and Chairman Brezhnev,' wrote:

> As Physicians, scientists, and concerned citizens, alarmed by an international political climate that increasingly presents nuclear war as a "rational" possibility, we are impelled to renew a warning, based on medical and scientific analyses, that:

1. Nuclear war, even a "limited" one, would result in death, injury and disease on a scale that has no precedent in the history of human existence;

2. Medical "disaster planning" for a nuclear war is meaningless. There is no possible effective medical response. Most hospitals would be destroyed, most medical personnel dead or injured, most supplies unavailable. Most "survivors" would die;

3. There is no effective civil defense. The blast, thermal and radiation effects would kill even those in shelters, and the fallout would reach those who had been evacuated;

4. Recovery from nuclear war would be impossible. The economic, ecologic, and social fabric on which human life depends would be destroyed in the US, the USSR, and much of the rest of the world;

5. In sum, there can be no winners in a nuclear war. Worldwide fallout would contaminate much of the globe for generations and atmospheric effects would severely damage all living things.[303]

These quotes vividly reflect that in a nuclear conflict there would be no victors. Therefore, the mutual deterrence would be in the bilateral interests of both the adversaries. Secondly, India and Pakistan, whether they stick to the offensive and defensive deterrent strategies, but, in the absence of

robust CSBMs and a nuclear restraint regime, it would be impossible for either of them to achieve any real political gains by allowing unnecessary crises to escalate in the subcontinent.[304] An effective nuclear CSBMs regime and a limited level of nuclear transparency between India and Pakistan would go a long way in stabilising their relationship, and assisting them in averting a catastrophe. Otherwise, like the India and Pakistan crisis of 2001-2002, the first casualty would be the official channel of communication, threats and counter-threats, widening gulf of misperceptions and increased dependence on the other states to defuse tensions. For example, during the heydays of the Cold War, the US in spite of being a superpower and technological advancement was not sufficiently convinced, that in an event of Soviet Union's first strike, its nuclear command structure and the potential to retaliate back would be sustainable under the momentum of a first strike. Still, the US and the former Soviet Union had not severed their official channel of communication.

Similarly, in the context of India and Pakistan, the US-Soviet Union paradigm has a direct relevance, because, India too has a declared policy of 'no first-use' of nuclear weapons, though it is accompanied with another clause that employment of chemical or biological weapons on its forces anywhere in the world, would give the Indian leadership the right to retaliate with the nuclear weapons. Since the Indian Defence Minister, Pranab Mukherjee's statement of September 13, 2004, in which he spelled out that India, will not hesitate to use nuclear weapons in the event of collapse of deterrence. And on the other hand, Pakistan being a weaker power in comparison to India; and its policy of a nuclear ambiguity for the obvious deterrent purposes against a much stronger entity, India; in addition, it would be a contributory factor in generating a dangerous misperception motivating the Indian policymakers to adopt a LOW policy vis-à-vis Pakistan. In South Asia, where the C^4I^2 systems are still in an embryonic stage, mutual misperceptions are high, and the balance of conventional and strategic forces are quite uneven. Therefore, logically, the prospects of adherence to a launch on warning type SOPs – both in India and Pakistan, would be there, which is a sure recipe for using nuclear warheads due to false alarms. Thus, leading both the countries to an accidental nuclear Armageddon. For that reason, it is imperative that both the countries should realise the need of arriving at nuclear CSBMs and display a reasonable degree of nuclear transparency with a view to removing the perpetual state of ambivalent relationship.

As argued in this paper that the entire concept of security of South Asia is based on the principles of "security," "fear," and "hegemony." Both India and Pakistan have entangled themselves in a perpetual-cobweb of "offensive" and "defensive" types of situations respectively. As a result,

India has sought to prevent the emergence of "peer" competitor on the subcontinent, Pakistan, to challenge its supremacy. This "peer" competition between India and Pakistan took a turning point in 1974, when India conducted its first nuclear test, which then started a new period of nuclear arms race in South Asia.

As it was true during the time of Thucydides, who had expressed apprehensions concerning the role and dynamics of an outbreak of accidental war even at the time of the *Great War* between the Spartans and the Athenians. The war once initiated, writes Thucydides, let loose forces that are completely unanticipated by the adversaries. Even a limited conflict between India and Pakistan would set in motion the developments over which they would have virtually no control. Therefore, in such a situation even a minor misperception concerning the concept of a limited war could certainly intensify the "fog of war" thereby reluctantly leading the states to a full-scale war. As Robert Jervis has rightly pointed out that, then, the rest would "be in the dustbin of history."[305] It is certainly in the interests of both India and Pakistan to fine-tune their bilateral perceptions, remove misperceptions, and realistically formulate their nuclear and conventional strategies with a view to stabilise the concept of mutual deterrence without ever resorting to threats of mutual annihilation. Because, the significance of deterrence lies in preventing the adversary from initiating a war for which it could be punished with a devastating retaliation. The "violence is most purposive and most successful," writes Thomas Schelling, only "when it is threatened and not used."[306] Therefore, there is no "rational"[307] rationale to formulate flawed strategies and to harbour wrong concepts regarding an all-out war or a limited conflict,[308] because even a limited conventional conflict – either by India or Pakistan would surely lead to non-winnable situation.[309]

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[1] Robert Gilpin, 'The Theory of Hegemonic War,' in Robert I. Rotberg and Theodore K. Rabb (eds.), *The Origin And Prevention Of Major Wars* (Cambridge: Cambridge University Press, 1998), pp. 15-16.

[2] Ibid, p. 17.

[3] According to Robert Jervis, "Although war can occur even when both sides see each other accurately, misperception often plays a large role. Particularly interesting are judgments and misjudgements of another state's intentions. Both overestimates and underestimates of hostility have led to war in the past…" See, Robert Jervis, 'War and Misperception,' in Robert I. Rotberg and Theodore K. Rabb (eds.), *The Origin And Prevention Of Major Wars* (Cambridge: Cambridge University Press, 1998), p. 101.

[4] Robert Gilpin, op. cit., p. 16.

[5] Ibid, p. 15.

[6] Ibid, pp. 16-18. For the study of Peloponnesian War, see, Thucydides (translated by Johan H. Finley, Jr.), *The Peloponnesian War* (New York, 1951).

[7] George K. Tanham, 'Indian Strategy In Flux,' in Kanti P. Bajpai and Amitabh Mattoo (eds.), *Securing India: Strategic Thought And Practice* (New Delhi: Manohar Publishers, 1996), p. 55.

[8] Ibid, pp 48 and 51.

[9] Kenneth N. Waltz, 'Thoughts About Virtual Nuclear Arsenals,' *The Washington Quarterly*, Vol. 20, No. 3 (Summer 1997), p. 161.

[10] Ibid, p. 153.

[11] Kenneth N. Waltz, 'The Spread Of Nuclear Weapons: More May Be Better,' *Adelphi Paper 171* (London: The International Institute for Strategic Studies, 1981), p. 15.

[12] Ibid, p. 14.

[13] Kenneth N. Waltz, 'Nuclear Myths And Political Realities,' *American Political Science Review*, Vol. 84, No. 3 (September 1990), pp. 731 and 734.

[14] For more details, see, Kenneth N. Waltz, *Theory of International Politics* (Reading, Mass.: Addison-Wesley, 1979); and Hans. J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace* (New York: Alfred A. Knopf, 1948 and later editions).

[15] The "structural realism" is attached with Kenneth N. Waltz's theory.

[16] This school of thought is led by John J. Mearsheimer, 'Back to the Future: Instability in Europe after the Cold War,' *International Security*, Vol. 15, No. 1 (Summer 1990), pp. 5-57; Eric J. Labs, 'Beyond Victory: Offensive Realism and the Expansion of War Aims,' *Security Studies*, Vol. 6, No. 4 (December 1997), pp. 1-49; Fareed Zakaria, *From Wealth to Power: The Unusual Origins of America's World Role* (Princeton, N.J.: Princeton University Press, 1998); and Robert Gilpin, *War and Change in World Politics* (Cambridge: Cambridge University Press, 1981).

[17] In addition to Kenneth N. Waltz, prominent defensive realism's exponents are: Robert Jervis, 'Cooperation under the Security Dilemma,' *World Politics,* Vol. 30, No. 2 (January 1978), pp. 167-214; Jack Snyder, *Myths of Empire: Domestic Politics and International Ambition* (Ithaca, N. York: Cornell University Press, 1991); Sean M. Lynn-Jones, 'Realism and

America's Rise: A Review Essay,' *International Security*, Vol. 23, No. 2 (Fall 1998), pp. 157-183; and Colin Elman, 'Horses for Courses: Why Not Neorealist Theories of Foreign Policy?,' *Security Studies,* Vol. 6, No. 1 (Autumn 1996), pp. 7-53.

[18] The term: "neoclassical realism" was coined by Gideon Rose in 'Neoclassical Realism and Theories of Foreign Policy,' *World Politics*, Vol. 51, No. 1 (October 1998), pp. 144-172.

[19] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W. Norton, 2001), p. 21.

[20] Hans. J. Morgenthau, op. cit., chapter 1.

[21] John J. Mearsheimer, op. cit., p. 21.

[22] Ibid.

[23] Kenneth N. Waltz, fn (footnote) 14, op. cit., p. 126.

[24] John J. Mearsheimer, op. cit., p. 145.

[25] The theory of "peer competitor" was used by planning document of the US Department of Defense in 1992, see, 'Excerpts from the Pentagon's Plan: Prevent the Re-emergence of a New Rival,' *New York Times*, March 8, 1992, p. A14.

[26] Robert Gilpin, op. cit., p. 35. For more details regarding the 2002 India-Pakistan military standoff, nuclear deterrence of South Asia, and the possibility of a limited war, see, Zulfqar Khan, 'Pakistan-India Military Standoff: A Nuclear Dimension,' *IPRI Journal*, Vol. III, No. 1 (Winter 2003), 99-125.

[27] Robert Gilpin, op. cit., p. 35.

[28] See, Thucydides, op. cit.

[29] Robert Gilpin, op. cit., p. 36.

[30] Zulfqar Khan, op. cit., p. 124. Different definitions of 'perceptions' have evolved since the ancient times. Ancient Greek philosopher, Theaetetus, defined perception as "It seems to me that one who knows something is perceiving the thing that he knows, and, so far as I can see at present, knowledge is nothing but perception." While Socrates reflected that any object, "is to me such as it appears to me, and is to you such as it appears to you…. Perception, then, is always something that *is*, and, as being knowledge, it is infallible." A leading philosopher of the twentieth century, Bertrand Russell, says, "Perception and thought are physical processes. Perception is of two sorts, one of the senses, one of the understanding. Perceptions of the latter sort depend only on the things perceived, while those of the former sort depend also on our senses, and are therefore apt to be deceptive." Bertrand Russell, *History Of Western Philosophy* (London: Routledge of the Taylor & Francis Group, 2001), pp. 163 and 89.

[31] See, P. R. Chari, 'Nuclear Restraint, Nuclear Risk Reduction, and the Security-Insecurity Paradox in South Asia,' in Michael Krepon and Chris Gagne (eds.), *The Stability-Instability Paradox: Nuclear Weapons and Brinkmanship in South Asia*, Report No. 38 (Washington DC: The Stimson Center, 2001). Michael Krepon writes that, "The most dangerous time to control escalation usually comes in the years immediately after both adversaries initially possess nuclear capabilities. During this awkward period, tolerance levels or 'red lines' have not been clarified, the nuclear balance is unclear, and risk-reduction arrangements have not been implemented. At the earliest stages of offsetting nuclear capabilities, new weapon developments add to threat perceptions and uncertainties. India and Pakistan are now proceeding through this difficult passage." See, Michael Krepon, *Cooperative Threat Reduction, Missile Defense, And The*

Nuclear Future (New York: Palgrave Macmillan, A Henry L. Stimson Center Book, 2003), p. 136.

[32] *Pakistan Times* (Islamabad), July 11, 1974.

[33] Lt. Gen (retired) Kamal Matinuddin, 'Pakistan-India Relations: A Historical Perspective,' *Regional Studies*, Vo. XII, No. 1 (Winter 1993/94), p. 38.

[34] Shirin Tahir-Kheli, *The United States And Pakistan: The Evolution Of An Influence Relationship* (New York: Praeger Publishers, 1982), pp. 62-63.

[35] Surendra Chopra, *Post-Simla Indo-Pakistan Relations – Confrontation To De-escalation* (New Delhi: Deep & Deep Publications, 1988), p. 135.

[36] Stephen Philip Cohen and Richard L. Park, *India: Emergent Power?* Strategy Paper 33 (New York: Crane, Russak & Co., 1978), pp. XXI and 91.

[37] Neil Joeck, 'Nuclear Development In India And Pakistan,' *Access Asia Review*, Vol. 2 (1999), http://www.nbr.org/publications/review/vol2/essay.html (March 10, 2000), p. 4.

[38] Tim Weiner, 'US Suspects India Prepares To Conduct Nuclear Test,' *New York Times*, December 15, 1995; and Johan F. Burns, 'India Denies Atom Test But Then Turns Ambiguous,' *New York Times*, December 16, 1995.

[39] For Indo-US scientific cooperation, see Waheguru Pal Singh Sidhu, 'Enchanting Indo-US Strategic Cooperation,' *Adelphi Paper 313* (London: Oxford University Press for The International Institute for Strategic Affairs, September 1997).

[40] Strobe Talbott, 'Dealing With The Bomb In South Asia,' *Foreign Affairs*, Vol. 78, No. 2 (March/April 1999), p. 111.

[41] 'Pakistan Reiterates Offer Of 'No War Pact' With India,' *Daily Times* (Lahore), June 13, 2004. Before Pakistan's proposal of 'No War Pact' to India, the Indian External Affairs Minister, Natwar Singh, had proposed a joint nuclear doctrine between India, Pakistan and China. Natwar Singh's proposal was not only criticised in Pakistan, but India's opposition parties had also termed it as preposterous; see 'First Steps Of A Nuclear Doctrine,' *Daily Times* (Lahore), June 7, 2004.

[42] Niaz A. Naik, 'Towards A Nuclear-Safe South Asia,' in Colonel David O. Smith (ed.), *From Containment To Stability: Pakistan-United States Relations In The Post-Cold War Era* (Washington DC: National Defence University, November 1993), pp. 45-46.

[43] Prime Minister Nawaz Sharif's address to the National Defence College, Rawalpindi, on June 6, 1992, quoted in Farhatullah Babar, 'Nuclear Debate In S. Asia: A Plea For Sanity,' *Regional Studies*, Vol. X, No. 4 (Autumn 1992), p. 59; and also see statement by Munir Akram, *Ambassador/Permanent Representative Of Pakistan To The United Nations Conference On Disarmament, on May 14, 1998, at the Plenary of the Second Session of the Conference on Disarmament*, <http://cns.miis.edu> (March 1, 2000), p. 3. Also see Kamal Matinuddin, *The Nuclearisation Of South Asia* (Karachi: Oxford University Press, 2002), pp. 307-308.

[44] John J. Mearsheimer, op. cit., p. 36; and also see, John H. Herz, 'Idealist Internationalism And The Security Dilemma,' *World Politics*, Vol. 2, No. 2 (January 1950), pp. 157-180.

[45] Joyce Battle, 'Bureau Of Intelligence and Research Intelligence Note, 'India: Uncertainty Over Nuclear Policy,' June 13, 1974, *National Security Archive Electronic Briefing Book No. 6*, (Washington DC: The National Security Archive, The Gelman Library, George Washington

University), <nsarchiv@gwu.edu> (March 1, 2000), p. 9.

[46] Quoted in, V. K. Nair, 'The Coming Decade: India's Security Environment,' *Link* (New Delhi), September 29, 1991.

[47] Chris Smith, 'Conventional Forces And Regional Stability,' in 'Defense And Insecurity In The Southern Asia,' *The Henry L. Stimson Center Occasional Paper No. 21* (May 1995), p. 3.

[48] Ibid.

[49] For more details concerning the attitude of Pakistani elite, see, Zulfqar Khan, *The Development Of Overt Nuclear Weapon States In South Asia* (Bradford: unpublished doctoral thesis, Department of Peace Studies, University of Bradford, 2000).

[50] T. T. Poulouse, 'The Politics Of Nuclear Free Zones And South Asia,' *Pacific Community*, Vol. 8, No. 3 (April 1977), p. 556.

[51] See chapter seven, Zulfqar Khan, op. cit., fn 49, op. cit.

[52] Ibid, see chapter eight.

[53] Zalmay Khalilzad, 'Pakistan, The Making Of A Nuclear Weapon Power,' *Asian Survey*, Vol. 16, No. 6 (June 1976), pp. 110-111.

[54] Stephen Philip Cohen, 'Nuclear Neighbours,' in Stephen Philip Cohen (ed.), *Nuclear Proliferation In South Asia: The Prospects For Arms Control* (Bouldor, Colorado: Westview Press, 1991), pp. 8-9.

[55] 'South Asia Nuclear-Weapon-Free Zone,' *The Arms Control Reporter*, 1-93 (Cambridge, Massachusetts: 1993), pp. 454.A.3-454.A.4.

[56] Ibid, p. 454.A.4.

[57] Ibid.

[58] Ibid, pp. 454.A.2-454.A.3; and for more details see, D. Shyam Babu, *Nuclear Non-Proliferation: Towards A Universal NPT Regime* (New Delhi: Konark Publishers Pvt. Ltd., 1992).

[59] Samina Yasmeen, 'Pakistan's Cautious Foreign Policy,' *Survival* (Summer 1994), pp. 115-116.

[60] *The Arms Control Reporter*, 1-93, op. cit., p. 454.A.4.

[61] Agha Shahi, 'Nuclear Non-Proliferation And Pakistan,' *Strategic Studies*, Vol. XIV, No. 3 (Spring 1991), pp. 9-10.

[62] 'Pakistan's Nuclear Chief Says It Could Build The Bomb,' *The Washington Post*, February 10, 1984.

[63] Samina Ahmed, 'Pakistan's Nuclear Weapons Program: Turning Points And Nuclear Choices,' *International Security*, Vol. 23, No. 4 (Spring 1999), p. 188.

[64] See, Bob Woodward, 'Pakistan Reported Near Atom-Arms Production,' *The Washington Post*, November 4, 1986.

[65] Ashok Kapur, *Pakistan's Nuclear Development* (London: Croom Helm Ltd., 1987), p. 206.

[66] Samina Ahmed, op. cit., p. 188.

[67] *IDSA News Review*, Vol. 18, No. 8 (August 1985), p. 597.

[68] *IDSA News Review*, Vol. 18, No. 11 (November 1985), p. 870.

[69] Lt. Gen. Kamal Matinuddin, op. cit., p. 25.

[70] 'An Explosion Of Indian Self-Esteem,' *Newsweek*, May 25, 1998, p. 25.

[71] 'Ground Zero,' *Newsweek*, May 25, 1998, p. 25.

[72] Ibid, p. 26.

[73] Ibid, p. 27.

[74] Ibid.

[75] Ibid.

[76] Ibid, pp. 27-28.

[77] Kenneth N. Waltz, 'The Origin Of War In Neorealist Theory,' in Robert I. Rotberg and Theodore K. Rabb (eds.), *The Origin And Prevention Of Major Wars* (Cambridge: Cambridge University Press, 1998), p. 43.

[78] For Pakistani perspective, see, Zulfqar Khan, fn 49, op. cit., chapter seven.

[79] 'Vajpayee Threatens To Use Nuclear Bomb,' *The Statesman* (New Delhi), May 13, 1998.

[80] Ibid.

[81] Munir Ahmed Khan, 'Nuclearisation Of South Asia And Its Regional And Global Implications,' *Regional Studies*, Vol. XVI, No. 4 (Autumn 1998), p. 29.

[82] Samina Ahmed, op. cit., pp. 194-195.

[83] Zulfqar Khan, fn 49, op. cit., chapters seven and eight.

[84] *Asian Age*, May 19, 1998.

[85] See statement by Munir Akram, *Ambassador/Permanent Representative of Pakistan to the United Nations Conference on Disarmament, on May 14, 1998, at the Plenary of the Second Session of the Conference on Disarmament*, <http://cns.miis.edu> (March 1, 2000), p. 5.

[86] Neil Joeck, op. cit., pp. 14 and 20.

[87] Munir Akram, op. cit., pp. 5-6.

[88] Lt. Gen. Kamal Matinuddin, op. cit., p. 31.

[89] For a complete study of three theoretical models of "security," "domestic politics," and "norms," and comparative analysis of Indo-Pakistani overt nuclearisation, see, Zulfqar Khan, fn 49, op. cit.; and Scott D. Sagan, 'Why Do States Build Nuclear Weapons?: Three Models In Search Of A Bomb,' *International Security*, Vol. 21, No. 3 (Winter 1996/97), p. 55.

[90] Neil Joeck, op. cit., p. 23.

[91] Graham T. Allison, *Essence Of Decision: Explaining The Cuban Missile Crisis* (Boston: Little, Brown and Company, 1971), pp. 34-35. The majority of respondents of the survey also supported the overt

nuclearisation of Pakistan for deterrence purposes. They linked Pakistan's abdication of nuclear weapons capability with the Indian weaponisation plan, and adherence to the NPT. In their viewpoint, Pakistan's unilateral adherence to the NPT, and relinquishment of a *de facto* NWS status, would undermine its prestige and vital national security interests; see, Zulfqar Khan, fn 49, op. cit., chapter seven.

[92] See, Karl F. Inderfurth, 'Inderfurth: Update On Efforts To Stabilize South Asia,' *Testimony before the Subcommittee on Near East and South Asia of the Senate Foreign Relations Committee, June 3, 1998*, <http://www.state.gov/www/policy-remarks/1998/980603-inderfurth-efforts.html> (March 10, 2000), p. 1.

[93] Jon B. Wolfsthal, 'Asia's Nuclear Dominos? *Current History*, (April 2003), pp. 170-171.

[94] Ibid, p. 171.

[95] Ibid, p. 172.

[96] Ibid. Regarding India's great power status, in 1949, Nehru in a statement said: "In regard to any major problem of a country or group of countries of Asia, India has to be considered. Whether it is a problem of defence or trade or industry or economic policy, India cannot be ignored. She cannot be ignored, because…her geographic position is a compelling reason. She cannot be ignored also, because of her actual or potential power resources." See, Jawaharlal Nehru, *Independence and After: A Collection Of Speeches, 1946-1949* (New York: John Day, 1950), p. 248.

[97] The former Foreign Minister Jaswant Singh gave this statement soon after the nuclear tests of May 1998. Quoted in Jon B. Wolfsthal, op. cit., p. 172.

[98] Ibid.

[99] According to George Quester, that states that desire to dominate a region would

tend to develop nuclear weapons for hegemonic purposes. See, George Quester, *The Politics of Nuclear Proliferation* (Baltimore: Johns Hopkins University Press, 1973),

p. 18; and Stephen M. Meyer, *The Dynamics of Nuclear Proliferation* (Chicago: University of Chicago Press, 1984), p. 50.

[100] See, Lloyd Jensen, *Return from the Nuclear Brink: National Interest and the Nuclear Non*

-proliferation Treaty (Lexington, Mass: Lexington Books, 1974), p. 37.

[101] Sumit Ganguly, 'Review Essay, Behind India's Bomb: The Politics and Strategy of

Nuclear Deterrence,' *Foreign Affairs* (September/October 2001), p. 139.

[102] M. V. Ramana, 'Nuclear Notebook: Risks Of A LOW Doctrine,' *Economic and*

Political Weekly, March 1, 2003, p. 860.

[103] *India Today*, May 25, 1987, p. 77.

[104] Ravi Kaul, *India's Strategic Spectrum* (New Delhi: Chanakya Publishing House, 1969),

p. 200.

[105] M. V. Ramana, op. cit., p. 860; and 'Israel Gets US Nod For AWACS Sale To

India,' *Daily Times* (Lahore), May 23, 2003.

[106] Ibid. The issue of sale and release of PAC-3 system to India was discussed during the visit of US Assistant Secretary of State for Arms Control, Stephen G. Rademaker, to New Delhi. See, Shishir Gupta, 'US To Release PAC-3 For India In June,' *Daily Times* (Lahore), May 24, 2003.

[107] Moreover, it would be difficult for the developing economies of both the countries to sustain huge expenses incurring on C^4I^2 systems. For more details see, John E. Pike et al.,
'Defending Against The Bomb,' in Stephen I. Schwartz et al. (Eds.), *Atomic Audit* (Washington: Brookings Institution Press, 1998), pp. 269-270.

[108] Praful Bidwai, who maintains that the recommendations of the DND were considered too ambitious by the US. The US disapproval of triadic arsenal for the Indian forces, had motivated the Vajpayee government to "simply put the DND in abeyance." See, Praful Bidwai, 'Nuclear South Asia: Still On The Edge,' *Frontline*, January 31, 2003, pp. 116-117.

[109] Ibid, p. 117. According to John Cherian, India's decision to counter the chemical and biological weapons attacks with nuclear weapons indicates that New Delhi's "stated official policy of 'no first-use' becomes irrelevant." See, John Cherian, 'India's Paradoxical 'no first-use,' *Daily Times* (Lahore), January 20, 2003.

[110] See, 'Facing the WMD Threat: New US Strategy,' *Jane's Terrorism & Security Monitory*, January 2003, pp. 1-2.

[111] Vishal Thapar and Jay Raina, 'India's N-Command In Place,' *Hindustan Times*, January 5, 2003.

[112] Ibid.

[113] Ibid.

[114] Praful Bidwai, op. cit., p. 117.

[115] John Cherian, op. cit.

[116] Graham T. Allison, op. cit., pp. 29-30, 32-33, 67-77, 144 and 246-247. Also see, Zulfqar Khan, fn 49, op. cit., pp. 11-12.

[117] John E. Pike et al., op. cit., pp. 269-270.

[118] Cited in, Paul Richter and Thomas H. Maugh II, 'One Step Away From Nuclear War,' *Los Angeles Times*, June 2, 2002.

[119] Scott D. Sagan, 'Nuclear Alerts And Crisis Management,' *International Security*, Vol. 9, No. 4 (Spring 1985), pp. 99-139, and 135. Alan F. Phillips writes that he had collected twenty incidents of accidents and mishaps that might have triggered a nuclear war between the US and the former Soviet Union during the Cold War. Alan F. Phillips, '20 Mishaps That Might Have Started Accidental Nuclear War' (Toronto: Defence Research and Education Centre, 1998) cited in, Alan F. Phillips, M. D., 'No Launch On Warning,' *Ploughshares Working Paper 02-1*, <http://www.wagingpeace.org/articles/02.05/0506phillipsnolaunch.htm> (October 21, 2003), p. 4.

[120] For more details regarding the limitations of civilian leadership see, Scott D. Sagan, *The Limits Of Safety: Organizations, Accidents And Nuclear Weapons* (Princeton: Princeton University Press, 1993).

[121] M. V. Ramana, op. cit., p. 861.

[122] See, Raj Chengappa, *The Secret Story Of India's Quest To Be A Nuclear Power* (New Delhi: Harper Collins, 2000), p. 437.

[123] Praful Bidwai, 'Our Mutual Nuclear Death Wish,' *The News* (Islamabad), February 7, 2003.

[124] See, Graham T. Allison, op. cit.

[125] See Brajesh Mishra's interview to *The Indian Express*' Editor-in-Chief, Shekhar Gupta. 'India-Pakistan Were At The Brink Of War Twice Last Year,' *Daily Times* (Lahore), May 24, 2003.

[126] M. V. Ramana, op. cit., p. 861.

[127] See, V. R. Raghavan, 'Limited War And Nuclear Escalation In South Asia,' *Nonproliferation Review* (Fall-Winter 2001), pp. 82-98 and 90.

[128] Scott Sagan quoted in M. V. Ramana, op. cit., pp. 861-862.

[129] Graham T. Allison, op. cit., p. 17.

[130] According to Thomas J. Badey, the threat of nuclear terrorism by non-state actors through the so-called state-sponsors, are apparently low. See, Thomas J. Badey, 'Nuclear Terrorism: Actor-Based Threat Assessment,' *Intelligence and National Security*, Vol. 16, No. 2, Summer 2001, p. 44.

[131] The Bush Administration's National Strategy to Combat Weapons of Mass Destruction (USCWMD), which was published in December 2002, is clearly designed to bolster Washington's proactive and interdiction-oriented policy towards the WMD, materials and technology proliferation to states and terrorist groups. The USCWMD emphasis is on counter-proliferation with right to employ "overwhelming force" and "all options," including "pre-emptive measures," to neutralize a perceived threat to US security and interests. This strategy also unequivocally outlines that "countries will be held responsible for complying with their (non-proliferation) commitments," which does not explain the mechanism that would induce the other states to comply with this doctrine. Hence, there would be a sufficient room for the US policymakers to interpret this policy in accordance with its global interests. See, 'Facing The WMD Threat: New US Strategy,' *Jane's Terrorism & Security Monitory* (January 2003), pp. 1-2.

[132] On December 20, 2002, the National Security Advisory Board (NSAB) in its final report urged the Government of India to review its ' no first-use' policy. See, 'India Not To Review No-First-Use Policy,' *The Hindu*, January 1, 2003.

[133] John Cherian, op. cit. Commenting on India's 'no-first use' of nuclear weapons, Michael Krepon writes: "The Indian government has officially adopted a 'no-first-use' doctrine, while issuing an unofficial, draft nuclear posture that undercuts this core principle by embracing the western requirement of prompt nuclear retaliation. This is not at all helpful, since nuclear forces truly configured to retaliate quickly look indistinguishable from those postured to strike first…. Declarations of good intentions are

clearly insufficient in Asia. Meanwhile, calculations of deterrence acquire a momentum of their own." Michael Krepon, *Cooperative Threat Reduction, Missile Defense, And The Nuclear Future* (New York: Palgrave Macmillan, A Henry L. Stimson Center Book, 2003), p. 190.

[134] SIPRI's report cited in, 'India's Arms Imports Up 72% In 2002,' *Daily Times* (Lahore), June 18, 2003.

[135] See, Zulfqar Khan, fn 49, op. cit., chapter eight.

[136] Scott D. Sagan, fn 89, op. cit., p. 55.

[137] See, Zulfqar Khan, fn 49, op. cit., chapter eight.

[138] See, Praful Bidwai, 'India Should Rethink It Policy On Pakistan,' *Daily Times* (Lahore), May 17, 2003.

[139] See, Zulfqar Khan, fn 26, op. cit.

[140] Robert Jervis, 'Mutual Assured Destruction,' *Foreign Policy*, November/December 2002, p. 40.

[141] 'Pakistan Firm On First-Strike Nuclear Policy,' <http://headlines.sify.com/915news5.html> (May 5, 2002).

[142] See Brajesh Mishra's interview to *The Indian Express*, fn 125, op. cit.

[143] Cited in, Paul Richter and Thomas H. Maugh II, 'One Step Away From Nuclear War,' *Los Angeles Times*, June 2, 2002.

[144] Cited in, Khalid Hasan, 'Nuclear Dangers Remain High In South Asia,' *Daily Times* (Lahore), May 4, 2003.

[145]. Robert Jervis, op. cit., pp. 41-42.

[146] Robert Jervis, op. cit., p.42.

[147] Scott D. Sagan, 'Origin Of The Pacific War,' in Robert I. Rotberg and Theodore K. Rabb (eds.), *The Origin And Prevention Of Major Wars* (Cambridge: Cambridge University Press, 1998), p. 352.

[148] Robert S. McNamara, 'Forty Years After 13 Days,' *Arms Control Today* (November 2002), pp. 3 and 8.

[149] Ibid, pp. 4-5.

[150] Graham T. Allison, op. cit., pp. 29-30, 32-33, 67-77, 144, and 246-247.

[151] Kenneth N. Waltz, fn 11, op. cit., p. 23. According to Michael Krepon, "The last fifteen years of the Cold War produced extraordinary accomplishments in reducing dangers associated with weapons of mass destruction. These breakthroughs began with Presidents Ronald Reagan and Mikhail Gorbachev who pledged that a nuclear war must never be fought and could not be won. Subsequently, they lent credence to this proclamation by concluding the 1987 Intermediate-Range Nuclear Forces (INF) Treaty, which eliminated entire classes of nuclear weapon-launchers from Europe." Michael Krepon, fn 133, op. cit., pp. 26-27.

[152] Cited in, Paul Richter and Thomas H. Maugh II, op. cit.

[153] Praful Bidwai, 'Shooting Ourselves In The Foot,' *The News* (Islamabad), May 15, 2003.

[154] Pervez Hoodbhoy, 'Nuclear Issues Between India And Pakistan: Myths And Realities,' *The Henry L. Stimson Center, Occasional Paper No. 18* (Washington DC: July 1994), p. 12.

[155] For more details see, John E. Pike et. al., 'Defending Against The Bomb,' in Stephen I. Schwartz (et. al., Eds.), *Atomic Audit* (Washington: Brookings Institution Press, 1998), pp. 269-270.

[156] Ibid, p. 198.

[157] Ibid, pp. 198 and 261.

[158] K. Subrahmanyam, 'Nuclear India In Global Politics,' *Strategic Digest,* Vol. XXVII, No. 12 (December 1998), p. 2003. According to Michael Krepon, "New nuclear weapon states will certainly not emulate the size of Cold War arsenals, but their early moves have taken a familiar form. Even partial emulation creates special difficulties in Asia. China, India, and Pakistan have all declared that they will avoid the excesses of western nuclear theology, but they appear trapped in calculations where requirements are determined in relative, not absolute, terms…. Deterrence calculations will be of an entirely different (and wiser) scale in Asia, but MAD will also be harder to calibrate because the calculus of competition in southern Asia is triangular rather than bipolar. If nuclear capabilities grow on one leg of this triangle, pressures will also grow on the other two." Michael Krepon, fn 133, op. cit., p. 190.

[159] For more detail on LOW, see M. V. Ramana, fn 102, op. cit.

[160] Stephen P. Cohen, 'Moving Forward In South Asia,' *Policy Brief 81* (May 2001) of the Brookings Institution (Washington DC: 2001), p. 4.

[161] Andrew C. Winner and Toshi Yoshihara, 'India And Pakistan At The Edge,' *Survival*, Vol. 44, No. 3 (Autumn 2002), p. 79.

[162] Ibid, p. 71.

[163] According to Keith B. Payne and Colin S. Gray, the past crises between India and Pakistan had a persistent pattern of misinterpretations and misreading of political and military intelligence. See, Keith B. Payne and Colin S. Gray, *Deterrence In The Second Nuclear Age* (Lexington, KY: The University of Kentucky Press, 1996), p. 22.

[164] See, M. V. Ramana, 'Steps To Peace,' *Daily Times* (Lahore), May 22, 2003.

[165] Rahul Bedi, 'India's Nuclear Struggle,' *Jane's Defence Weekly*, February 5, 2003, p. 19.

[166] Ibid.

[167] Ibid.

[168] According to the former US Secretary of Defense, William Perry, the superpowers had avoided nuclear confrontation during the Cold War due to "good luck, I can only hope (India and Pakistan) will be as lucky as we were." Cited in, Ben Sheppard, 'Ballistic Missiles: Complicating The Nuclear Quagmire,' in D. R. SarDesai and Raju G. C. Thomas (Eds.), *Nuclear India In The Twenty-First Century* (N. York, Palgrave-MacMillan™, 2002), p. 200.

[169] Scott D. Sagan, fn 147, op. cit., pp. 323-352. For a limited war concept between India and Pakistan, see Zulfqar Khan, fn 26, op. cit.

[170] Robert Jervis, 'The Political Effects Of Nuclear Weapons,' in Sean M. Lynn-Jones, Steven E. Miller, and Stephen Van Evera (Eds.), *Nuclear Diplomacy And Crisis Management* (Cambridge, MA: The MIT Press, 1990), p. 29.

[171] See, Neil Joeck, 'Maintaining Nuclear Stability In South Asia,' *Adelphi Paper 312* (Oxford: The Oxford University Press, 1997), p. 12.

[172] Although India has always maintained a policy to resolve all the bilateral issues, including the Kashmir dispute, between the two countries bilaterally. But, the 2001-2002 military standoff is testimony to a horrendous fact that this tense situation was defused with the shuttle diplomacy of the Western and US leaders. See, Zulfqar Khan, fn 26, op. cit.

[173] See, Richard Betts, *Nuclear Blackmail And Nuclear Balance* (Washington: The Brookings Institution, 1987), p. 211.

[174] For more detail on stability and instability concept see, Michael Krepon, 'The Stability-Instability Paradox, Misperception, And Escalation Control In South Asia,' *The Henry L. Stimson Center* (May 2003), p. 8.

[175] US Department of State, Bureau of Verification And Compliance, *World Military Expenditures And Arms Transfer, 1999-2000* (Washington, DC: Library of Congress, 2002), pp. 2-3.

[176] Michael Krepon, fn 174, op. cit, pp. 8-9.

[177] *Stockholm International Peace Research Institute*, 'Transfers And Licensed Production Of Major Conventional Weapons: Exports to India,' 'Transfers And Licensed Production Of Major Conventional Weapons: Exports to India,' <http://projects.sipri.sc/armstrade/INDIA MPTS 93-02.PDF>.

[178] *Stockholm International Peace Research Institute*, 'Transfers And Licensed Production Of Major Conventional Weapons: Exports to India,' 'Transfers And Licensed Production Of Major Conventional Weapons: Exports To Pakistan,' <http://projects.sipri.sc/armstrade/PAK MPTS 93-02.PDF.>

[179] Michael Krepon, fn 174, op. cit, p. 9.

[180] Ibid. Alexander I. Nikitin, member of International Pugwash Council, Director, Center for Political and International Studies, Moscow, Russia, has also put forward Ten Commandments in this regard. See, Alexander I. Nikitin, 'Ten Commandments Originating From 50 Years Of Russian-American Nuclear History To Pakistani and Indian Nuclear Planners,' *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation, Lahore, Pakistan, March 11-12, 2003.*

[181] Michael Krepon, fn 174, op. cit, p. 10.

[182] Ibid, p. 14. Other nuclear deterrence theorists, including Bruce Blair and Scott Sagan maintain that the future nuclear threshold would be crossed due to organizational, bureaucratic and institutional bias or mishap instead of a calibrated national strategy. Because, of these factors, writes Bruce Blair, nuclear posturing could lead to "accidents waiting to happen." See, Bruce Blair, *The Logic Of Accidental Nuclear War* (Washington, DC: The Brookings Institution, 1993), p. 9. While Scott Sagan's study of the Cold War cases had led him to conclude that, "Nuclear weapons may have made *deliberate* war less likely, but the complex and tightly coupled nuclear arsenals we have constructed has simultaneously made *accidental* war more likely." See, Scott Sagan, *The Limits Of Safety: Organizations, Accidents, And Nuclear Weapons* (Princeton: Princeton University Press, 1993), p. 264, emphasis in the original.

[183] 'The Consequences Of Nuclear Conflict Between India And Pakistan: NRDC's Nuclear Experts Think About The Unthinkable, Using State-of-the-art Nuclear War Simulation Software To assess The Crisis In South Asia' *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation, Lahore, Pakistan, March 11-12, 2003*, p. 1.

[184] Ibid.

[185] Ibid, pp. 2-3.

[186] Ibid, pp. 3-4.

[187] Ibid, p. 4.

[188] 'Vajpayee Rules Out Scrapping Nukes,' *Daily Times* (Lahore), May 9, 2003.

[189] See, Zulfqar Khan, fn 26, op. cit.

[190] Thomas C. Schelling, 'Deterrence And Compellence' in the Purple Patch column of the *Daily Times (Lahore),* July 2, 2003. Commenting about the triangulation nature of Asian nuclear rivalry, Michael Krepon writes that, "Southern Asia presents a far more complex model. Leaders in Beijing, New Delhi, and Islamabad all say that minimum deterrence will serve as their guide, and that they will avoid the competitive drives leading to ever-larger nuclear arsenals. But national leaders in all three countries have also acknowledged that deterrence is not a static concept. The requirements of each state will depend, in some measure, on what the others are doing or might seek to do…. Beijing's calculations of nuclear sufficiency will reverberate in New Delhi, and India's recalibrated nuclear requirements will reverberate in Islamabad. At the top of this cascade, Beijing's calculations will be affected by US deployments of national and advanced theatre missile defences." See, Michael Krepon, fn 133, op. cit., pp. 133 and 138. On the issue of bilateral deterrence paradigm between India and Pakistan, on September 13, 2004, Indian Defence Minister, Pranab Mukerjee, in a major policy statement reiterated India's resolve to use nuclear weapons against Pakistan, if the "policy of deterrence" fails. See, Iftikhar Gilani, 'India Will Use Nukes If Deterrence Fails', *Daily Times* (Lahore), September 14, 2004.

[191] Michael Krepon, fn 174, op. cit, p. 1.

[192] Cited in Derek Leebaert, *The Fifty-Year Wound: The True Price Of America's Cold War Victory* (Boston: Little, Brown and Company, 2002), p. 389.

[193] Kenneth N. Waltz, fn. 11, op. cit, p. 14.

[194] 'Powell Snubs Sinha Over Pre-emptive Strike, To Visit Delhi,' *Political Events* (New Delhi), April 17, 2003, p. 15.

[195] See, Michael Krepon, fn 174, op. cit, p. 3. Bernard Brodie also observed that, "Stability is achieved when each nation believes that the strategic advantage of striking first is overshadowed by the tremendous cost of doing so." See, Bernard Brodie, *Strategy In The Missile Age* (Princeton: Princeton University Press, 1959), p. 303.

[196] Michael Krepon, fn 174, op. cit, p. 3. Maintaining the nuclear stability is absolutely imperative for both the countries, because, "No adequate defence against the bomb exists, and the possibilities of its existence in the future are exceedingly remote," writes Bernard Brodie, in his influential book, *The Absolute Weapons*. See, Bernard Brodie, *The Absolute Weapon* (New York: Harcourt, Brace, & Co., 1946), p. 28. While Albert Einstein in an interview to the *New York Times Magazine* had also concluded that, "Rifle bullets kill men, but atomic bombs kill cities. A tank is a defence against a bullet but there is no defence in science against a weapon which can destroy civilization." Cited in Michael Krepon, fn 133, op. cit, p. 85.

[197] Rodney W. Jones, 'Is Stable Nuclear Deterrence Feasible?,' *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation, Lahore, Pakistan, March 11-12, 2003*, pp. 1-2. Also see, Ejaz Haider, 'Stable Deterrence And Flawed Pakistani Nuclear Strategy', *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation, Lahore, Pakistan, March 11-12, 2003*, pp. 1-2.

[198] Ejaz Haider cited in ibid. India's then Army Chief, General S. Padmanabhan, had remarked that a limited military conflict with Pakistan was possible with a view to stop the alleged terrorist attacks without ever jeopardising mutual deterrent. See, "From One General To Another: We're Ready," *The Indian Express* (New Delhi), January 12, 2002. Robert Jervis commenting about the stability and instability inconsistency associated with the nuclear weapons, writes that, "To the extent that the military balance is stable at the level of all-out nuclear war, it will become less stable at lower levels of violence." See, Robert Jervis, *The Illogic Of American Nuclear Strategy* (Ithaca: Cornell University press, 1984), p. 31. Similar views were also expressed by B. H. Liddell Hart, who wrote that, "to the extent that the H(ydrogen)-bomb reduces the likelihood of full-scale war, it increases the

possibility of limited war pursued by widespread local aggression." See, B. H. Liddell Hart, *Deterrent Or Defence* (London: Stevens and Sons, 1960), p. 23. For further study, also see, Glenn Snyder, *Deterrence And Defense* (Princeton: Princeton University Press, 1961).

[199] Rodney W. Jones, op. cit., p. 3.

[200] Ibid, p. 4.

[201] Ibid.

[202] Ibid.

[203] Ibid.

[204] 'US, Not Nukes, Prevented War Between India And Pakistan,' *Daily Times* (Lahore), March 9, 2003.

[205] Ibid.

[206] Rodney W. Jones, op. cit, p. 4.

[207] Lt. Gen (retired) Talat Masood, 'The Indo-Pakistan Impasse,' *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation,* Lahore, Pakistan, March 11-12, 2003, p. 2.

[208] Ibid, p. 4. Michael Krepon writes that, "If New Delhi, Beijing, and Islamabad are to find nuclear safety, they are likely to do so through a combination of bilateral cooperation, unilateral preparation to reduce the risk of accident or miscalculation, as well as unilateral restraint. In the absence of verifiable treaty regimes, nuclear risk reduction is likely to be found – if at all – through an acceptance of bilateral asymmetries in force sizing and deployment readiness. Pakistan, the state with the weakest military posture and most vulnerable nuclear deterrent, would have to refrain from competing with India, while maintaining some nuclear capabilities in a survivable status. New Delhi would need to refrain from competing with China and from posturing its nuclear capabilities so as to threaten Pakistan…. The establishment of hierarchical and stable nuclear postures in southern Asia is an enormously difficult and ambitious agenda.

Successful nuclear risk reduction will require finding a unique mixture of transparency and survivability for nuclear capabilities, as well as creative monitoring arrangements that provide reassurance without increased vulnerability." See, Michael Krepon, fn 133, op. cit., pp. 163-164.

[209] Lt. Gen (retired) Talat Masood, op. cit., p. 2.

[210] Ibid, p. 4.

[211] Ibid, p. 4.

[212] Thucydides cited in, Alexander Nikitin, 'Analyzing The Causes Of War And Peace,' in Majid Tehranian and David W. Chappell (eds.), *Dialogue Of Civilizations: A New Agenda For A New Millennium* (London: I. B. Tauris & Co. Ltd in association with The Toda Institute for Global Peace and Policy Research, 2002), p. 163.

[213] Ibid.

[214] Ibid.

[215] Pervez Hoodbhoy, 'Pakistan's Nuclear Future,' in Samina Ahmed and David Cartright (eds.), *Pakistan And The Bomb: Public Opinion And Nuclear Options* (Karachi: Oxford University Press, 2001), p. 70.

[216] Andrew C. Winner and Toshi Yoshihara, op. cit, p. 73.

[217] Pervez Hoodbhoy cited in, Samina Ahmed and David Cartright (eds.), *Pakistan And The Bomb: Public Opinion And Nuclear Options* (Karachi: Oxford University Press, 2001), p. 94.

[218] Graham T. Allison, op. cit, p. 17.

[219] Farhatullah Babar, 'Avoiding Indo-Pak Nuclear Confrontation,' *The News* (Islamabad), March 10, 2003.

[220] Ibid.

[221] Commander Rajesh Pendharkar, 'The Lahore Declaration And Beyond: Maritime Confidence-Building Measures In South Asia,' *The Henry L. Stimson Center, Occasional Paper No. 51*, February 2003, p. 7.

[222] Ibid. Besides, India is also planning to buy Phalcon Airborne Early Warning and Control System (AWACS) worth US$ 1.2 billion from Israel, and the Patriot anti-missile system from US. This would seriously undermine Pakistan's deterrence credibility. See, Wajahat Ali, 'India And The Phalcon Sale,' *Daily Times* (Lahore), May 29, 2003. According to Shishir Gupta, "While India is still to develop the sea-based retaliatory capability, the exercise of modifying the Mirage-2000H…SU-30MKI for nuclear delivery has already begun…. The intermediate range Agni II and the long range Agni III missiles are scheduled to be inducted by the end of the current 10th five-year plan. Otherwise, as it happened during Operation Parakram, India will have to rely on the air force for its second strike capability." See, Shishir Gupta, 'Agni: Sharpening Our N-Point,' *Indian Express* (New Delhi), January 14, 2003.

[223] Ibid, pp. 7-8.

[224] Peter Slevin and Bradley Graham, 'Indian Arms Plan Worries State Department,' *The Washington Post* (Washington DC), July 23, 2002.

[225] Ibid.

[226] Douglas Frantz, 'US And Pakistan Discuss Nuclear Security,' *The New York Times* (New York), October 1, 2002. Also see, Ayesha Siddiqa-Agha, 'Is The US-Pakistan Honeymoon Over?,' *Jane's Defence Weekly*, January 15, 2003, p. 21.

[227] 'Pakistan To Further Tighten Security At Nuclear Facilities,' *Daily Times* (Lahore), January 23, 2003.

[228] See President Musharraf's statement regarding Pakistan's nuclear policy, *The Reuters*, March 6, 2003.

[229] For more details regarding the balance of power, see Kenneth Waltz, 'America As A Model For The World?,' *PS: Political Science and Politics*, Vol. 24, No. 4 (1991), p. 670.

[230] Vinod Patney, 'Cutting Through The Nuclear Fog,' *Indian Express* (New Delhi), January 13, 2003.

[231] Kenneth Waltz, fn 229, op. cit, p. 669.

[232] Stephen Krasner, 'Realism, Imperialism, And Democracy,' *Political Theory*, 20 (1992), p. 39. "The concept of cooperative threat reduction is far too important and useful to be confined to the former Soviet Union," writes Michael Krepon, "Instead, CTR-related activities can and should be employed in other troubled regions, wherever dangerous weapons and materials are being held by states that are willing to forgo them in return for economic or security assistance. The practical application of cooperative threat reduction to contain, reduce, and eliminate dangerous weapons and materials should extend as far as political adroitness and financial backing will allow…. The elevation of cooperative threat reduction to a central organizing principle for reducing dangers associated with weapons of mass destruction can also clarify missteps in the pursuit of deterrence." See, Michael Krepon, fn 133, op. cit., pp. 11-12.

[233] Michael Krepon, 'Those Fuzzy Red Lines,' *Daily Times* (Lahore), February 3, 2003.

[234] Robert Powell, 'Nuclear Deterrence Theory, Nuclear Proliferation, And National Missile Defense,' *International Security*, Vol. 27, No. 4 (Spring 2003), p. 89.

[235] Thomas C. Schelling, *Arms And Influence* (New Haven, Conn.: Yale University Press, 1966), p. 97.

[236] Ibid, p. 187.

[237] Scott. D. Sagan and Jeremi Suri, 'The Madman Nuclear Alert,' *International Security*, Vol. 27, No. 4 (Spring 2003), p.150.

[238] McGeorge Bundy, *Danger And Survival: Choices About The Bomb In The First Fifty Years* (New York: Random House, 1988), p. 542.

[239] Karl von Clausewitz cited in, Robert D. Kaplan, *Warrior Politics: Why Leadership Demands A Pagan Ethos* (New York: Vintage Books, 2002), p. 42.

[240] Ibid, pp. 41-42.

[241] Accord to Thomas Schelling, "The power to hurt is bargaining power. To exploit it is diplomacy." See, Thomas Schelling, fn. 235, op. cit.

[242] 'India And Pakistan Now Committed To Dialogue, Says Powell,' *Daily Times* (Lahore), July 25, 2003.

[243] Robert S. McNamara, fn 148, op. cit, pp. 4-8.

[244] Ibid.

[245] Ben Sheppard, op. cit, p. 201. The "symmetry of power" was a significant factor for the endurance of the mutual deterrence between the US and the Soviet Union, writes P. Terrence Hopmann. He elaborates that; "Furthermore, although there were some minor differences across various categories of strategic weapons, the overall strategic balance was one of "approximate parity." "This parity was most clearly reflected in the balance often described as "mutual assured destruction." That is, neither side had an ability to launch a disarming first strike against the other…. Of course, some individual analysts were sceptical of this overall strategic balance and focused on asymmetries of specific weapon systems…. Therefore, reliance on these weapons created "crisis instability," the possibility that in a crisis the Soviets might be tempted to launch these missiles before they could be attacked by an opposing force." P. Terrence Hopmann, 'Strategic Arms Control Negotiations: SALT And START,' in Rudolf Avenhaus et al. (Eds.), *Containing The Atom: International Negotiations On Nuclear Security And Safety* (Lanham, Maryland: Lexington Books, 2002), pp. 44-45.

[246] NATO Military Committee 14/2 (Revised) (Final Decision), p. 9 cited in, Beatrice Heuser, *NATO, Britain, France And The FRG: Nuclear Strategies And Forces For Europe, 1949-2000* (London: Macmillan Press Ltd, 1997), p. 10.

[247] Ibid.

[248] Ben Sheppard, op. cit, p. 201. India's Defence Minister, George Fernandes in a statement on July 30, 2003, in the Parliament stated that New Delhi had conducted 20 tests of seven missiles in the first half of 2003 (between January 1 to June 30). The two variants of the nuclear-capable

Agni missiles with a range of 700 (Agni-I) and 2000 (Agni-II) kilometres were being inducted into the Indian Army. Additionally, the Prithvi missile, which has a range of 200 kilometres, has already been inducted in the army.

[249] 'The Lahore Declaration,' *IPRI Factfile*, Vol. V, No. 6 (June 2003), p. 5. In 1998, India-Pakistan had concluded an agreement on the Non-Attack of Nuclear Facilities, which was brought into force in 1991. This accord obliges each state to provide a list of facilities in January of each year, but, with no mechanism to verify the completeness of the lists presented.

[250] Rose Gottemoeller and Rebecca Longsworth, 'Enhancing Nuclear Security In The Counter-Terrorism Struggle: India And Pakistan As A New Region For Cooperation,' *Non-Proliferation Project, Working Papers, No. 29* (August 2002), Carnegie Endowment For International Peace, p. 8.

[251] Ibid, p. 11.

[252] Rose Gottemoeller and Rebecca Longsworth have suggested 14 areas of potential cooperation, pp. 12-14.

[253] Kenneth N. Waltz, 'Globalization And American Power,' *The National Interest* (Spring 2000), p. 7.

[254] John J. Mearsheimer, 'Back to the Future: Instability in Europe after the Cold War,' *International Security*, Vol. 15, No. 1 (Summer 1990), p. 6.

[255] Derek Leebaert, op. cit., p. 149.

[256] According to William T. Lee, the Soviet Defence Minister, General Yazov, "Until Chernobyl, I was convinced that we could fight a nuclear war and prevail." See, William T. Lee, *CIA Estimates Of Former Soviet Union Military Expenditures: Errors And Waste* (Washington: American Enterprise Institute, 1997), p. 157. Similarly, the Indian leadership also frequently expressed a dangerous misperception regarding winning a nuclear war against Pakistan, especially during the military standoff of 2001-2002. For instance, Indian Defence Minister, George Fernandes in a statement stated that in the case of a nuclear conflict between India and Pakistan, the former would be able to survive a couple of nuclear attacks, but the latter would cease to exist. See, 'A Dangerous Verbal War,' *Daily Times* (Lahore), January 10, 2003. Irresponsible rhetoric and the deployment of nuclear weapons would

continue to heighten the state of alertness, especially during the crises, which could motivate the leadership of two countries to rely on the pre-emptive attack or the LOW strategies. For detail, see, M. V. Ramana, 'Military Planning And Nuclear Weapons,' *Daily Times* (Lahore), January 16, 2003.

[257] Beatrice Heuser, op. cit, p. 37. On January 12, 1954, the US Secretary of State, John Foster Dulles, in a statement also announced administration's determination to meet any eventuality through a policy of massive retaliation at the places and targets of their own choice. Cited in, Beatrice Heuser, p. 37.

[258] See NATO's strategy Military Committee Paper 48, cited in Beatrice Heuser, op. cit, p. 36.

[259] Ibid, p. 37.

[260] See, 'A Dangerous Verbal War,' *Daily Times* (Lahore), January 10, 2003. On September 13, 2004, the Indian Defence Minister, Pranab Mukherjee, in a statement reiterated India's resolve to use nuclear weapons if the "policy of deterrence" failed between India and Pakistan. See, 'India Will Use Nukes If Deterrence Fails,' *Daily Times* (Lahore), September 14, 2004.

[261] Robert Powell, op. cit, p. 91.

[262] Ibid.

[263] Richard K. Betts, op. cit, pp. 10-11.

[264] Regarding the role of the statesmen during crisis, see, Marc Trachtenberg, 'The Influence Of Nuclear Weapons In The Cuban Missile Crisis,' *International Security*, Vol. 10, No. 1 (Summer 1985), p. 146.

[265] Rizvi and Basrur, 'Nuclear Terrorism In South Asia,' *Pugwash Meeting No. 280, Pugwash Workshop On Avoiding An India-Pakistan Nuclear Confrontation,* Lahore, Pakistan, March 11-12, 2003, p. 1.

[266] Ibid. According to Joby Warrick, "There have been dozens of cases of

trafficking in radiological materials over the past three years, along with what some weapons experts describe as a disturbing new trend. While most sellers of such materials have traditionally been amateurs – opportunists and lone actors in search of easy profits – authorities now seeing a surge of interest among criminal groups. In a string of incidents from the Caucasus and Eastern Europe to West Africa and South America, gangs have stalked and stolen radiological devices to sell for profits or to use in crimes ranging from extortion to murder. The new interest in radiological material by smugglers and criminal networks complicates an already difficult task confronting governments: how to stop terrorists from obtaining any of the tens of thousands of powerful radiological sources around the world that are currently in private hands or have simply been discarded." See, Joby Warrick, 'Smugglers Enticed By Dirty Bomb Components,' *The Washington Post*, November 30, 2003.

[267] Ibid, pp. 1-2.

[268] Ibid, p. 4. According to US Secretary of State, Colin Powell, "During 2002, a major war between them – perhaps involving nuclear weapons – seemed distinctly possible. So, working with partners in Europe and Asia, we mobilized to help end the crisis. We have since been trying to turn our parallel improvement of relations with India and Pakistan into a triangle of conflict resolution. We do not impose ourselves as a mediator. But we do try to use the trust we have established with both sides to urge them toward conciliation by peaceful means." Cited in, 'Mr Powell's Useful *Mea Culpa*,' Editorial of the *Daily Times* (Lahore), January 2, 2004.

[269] *National Security Strategy of the United States of America*, The White House, Washington DC (September 2002), pp. 5-7, 13-16.

[270] Ibid, p. 14.

[271] Ibid.

[272] Ibid, pp. 6 and 15. Elaborating the concept of pre-emption, US Secretary of State Colin Powell's article –'A Strategy Of Partnerships' in the *Foreign Affairs* issue of January-February 2004, writes, "As to pre-emption's scope, it applies only to the undeterrable threats that come from non-state actors such as terrorist groups…. It was never meant to displace deterrence, only to supplement it…. Above all, the President's strategy is one of partnerships that strongly affirm the vital role of NATO and other US alliances – including the UN….The United States' National Security Strategy does

commit us to pre-emption under certain limited circumstances. We stand by that judgement, the novelty of which lies less in its substance than in its explicitness. But our strategy is not defined by pre-emption." Cited in, 'Powell Admits US Diplomatic Errors,' *Daily Times* (Lahore), January 1, 2004. Also see, 'Mr Powell's Useful *Mea Culpa*' (editorial), *Daily Times* (Lahore), January 2, 2004.

[273] *National Security Strategy of the United States of America*, op. cit., p. 15. According to M. V. Ramana, a physicist and research staff member at the Princeton University's Programme on Science and Global Security and co-editor of Prisoners of the Nuclear Dream, "Worse still, pro-nuclear advocates in the US have called for developing smaller yield nuclear weapons to use against 'regimes involved in international terrorism'. And instead of sending them to lunatic asylums, the US government is acting on their advice. Thus the nuclear terrorism bandwagon has become a convenient rationalisation for continued possession of nuclear arsenals by states. Finally, by emphasising that non-state actors are crazy and irresponsible, the discourse of nuclear terrorism allows the mindset of political elites, who are capable of far more death and destruction in the pursuit of grandiose aims ('vital national interests'), to go unchallenged." See, M. V. Ramana, 'Nuclear Terrorism – The Greater Dangers,' *Daily Times* (Lahore), December 18, 2003.

[274] Ivo H. Daalder, James M. Lindsay, and James B. Steinberg, 'The Choices: National Security And The War On Terrorism,' *Current History* (December 2002), p. 412.

[275] Henry Kissinger cited in ibid.

[276] Ivo H. Daalder, James M. Lindsay, and James B. Steinberg, op. cit., p. 413.

[277] Rose Gottemoeller and Rebecca Longsworth, op. cit., pp. 4-5.

[278] See the statement by Ambassador Stephen Sestanovich, US Department of State, 'New Independent States,' >http://www.state.gov/www/budget /fy 2001/fn 150/forops_full/150fy01_fo_nis.html<.

[279] Robert Kagan, *Of Paradise And Power: American And Europe In The New World Order* (New York: Alfred A. Knopf, 2003), pp. 3-4.

[280] Ibid, pp. 5-6.

[281] *National Security Strategy of the United States of America*, op. cit. pp. 13-16. Also see, 'Facing The WMD Threat: New US Strategy,' *Jane's Terrorism & Security Monitory* (January 2003), pp. 1-2. For more details regarding the US pre-emption policy, see, Colin Powell's article titled: 'A Strategy Of Partnerships' in the *Foreign Affairs* magazines of January-February 2004.

[282] *National Security Strategy of the United States of America*, ibid, p. 14.

[283] Ibid, pp. 5-7.

[284] Ibid, pp. 5-7, and 13-16.

[285] Thomas J. Badey, op. cit, pp.41-42.

[286] Ibid, pp. 41 and 44.

[287] Ibid, pp. 44-45.

[288] See Mark, Taylor Eyster, Maraman and Wechsler, *Can Terrorists Build Nuclear Weapons*? (Washington DC: Nuclear Control Institute) >http://www.nci.org/makeab.htm<.

[289] See, David Hughes, 'When Terrorists Go Nuclear,' *Popular Mechanics* (January 1996).

[290] Ibid.

[291] See Table 1: Threat Assessment Scale For Nuclear Terrorism, Thomas J. Badey, op. cit, p. 43.

[292] Barry R. Posen, 'The Struggle Against Terrorism,' *International Security*, Vol. 26, No. 3 (Winter 2001/02), pp.41-42.

[293] See, Wade Boese, 'US Pushes Initiative To Block Shipments Of WMD, Missiles,' *The Arms Control Today* (July/August 2003). On February 11, 2004, President Bush announced new measures to counter the WMD proliferation, see 'President Announces New Measures To Counter The Threat Of WMD,' <http://www.edu/info/whatsnew/PresBush-NDU.cfm> (March 7, 2004).

[294] See Masood Khan, Pakistan's Foreign Office spokesman statement of August 22, 2003, 'Pakistan Renews Talks Offer On Nuclear CBMs,' *Daily Times* (Lahore), August 23, 2003.

[295] Ibid.

[296] 'Pakistan To Forgo Kashmir Plebiscite,' *Daily Times* (Lahore), December 19, 2003.

[297] 'Vajpayee Wants Transition From Tension To Peace,' *Daily Times* (Lahore), January 5, 2004.

[298] 'Vajpayee Meets Musharraf Today,' *Daily Times* (Lahore), January 5, 2004.

[299] 'Musharraf-Vajpayee Meeting: Peace Momentum Will Continue,' *Daily Times* (Lahore), January 6, 2004. After Musharraf-Vajpayee meeting, in a joint statement issued by Pakistan and India on January 6, 2004, reiterated, "Both leaders welcomed the recent steps towards normalisation of relations between the two countries and expressed the hope that the positive trends set by the CBMs (confidence-building measures) would be consolidated. Prime Minister Vajpayee said that in order to take forward and sustain the dialogue process, violence, hostility and terrorism must be prevented. President Musharraf reassured Prime Minister Vajpayee that he would not permit any territory under Pakistan's control to be used to support terrorism in any manner. President Musharraf emphasised that a sustained and productive dialogue addressing all issues would lead to positive results. To carry the process of normalisation forward, the President of Pakistan and the Prime Minister of India agreed to commence the process of the composite dialogue in February 2004." See, 'Text Of Joint Statement,' *Daily Times* (Lahore), January 7, 2004

[300] Lt. Gen. N. Hanning (ret.), 'Essential Equivalence: The End Of The Nuclear Deterrent Myth,' *International Defense Review*, Vol. 12, No. 2 (April

4, 1979), p. 179.

[301] McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith, 'Nuclear Weapons And The Atlantic Alliance,' *Foreign Affairs*, (Spring 1982), p. 9.

[302] Bernard Brodie (ed.), *The Absolute Weapon* (New York: Harcourt, Brace, 1946), p. 76.

[303] 'An Open Letter To President Carter And Chairman Brezhnev,' Physicians For Social Responsibility, *PSR Newsletter*, Vol. 1, No. 2 (April 1980), p. 1.

[304] For more details on contradictions in a deterrent strategy, see Allan Krass, 'Deterrence And Its Contradictions,' in Burns H. Weston (ed.), *Toward Nuclear Disarmament And Global Security: A Search For Alternatives* (Boulder, Colorado: Westview Press Inc., 1984), pp. 209-244.

[305] Robert Jervis, op. cit., fn 140, p. 42.

[306] Thomas Schelling cited in, Allan Krass, op. cit., p. 209.

[307] 'An Open Letter To President Carter And Chairman Brezhnev,' op. cit., p. 1.

[308] During the North Atlantic Council meeting in May 1965, US Defence Secretary, Robert McNamara, stated that neither he expected an "all-out war" or a limited nuclear attack and neither a massive conventional conflict between the Warsaw Pace and NATO forces. Cited in, Beatrice Heuser, op. cit., p. 13. According to Raymond Aron, the most important French political commentator of the last century, "Wars are by nature unpredictable. But the wars of the twentieth century have been much more unpredictable than those of the past. And the way they unfold turns the situations that gave rise to them upside down." Raymond Aron (Translated by Barbara Bray, and Edited by Yair Reiner) , *The Dawn Of Universal History: Selected Essays From A Witness Of The Twentieth Century* (New York: Basic Books, 2002), p. 77.

[309] On June 20, 2004, India and Pakistan officials during talks on nuclear-related CBMs in New Delhi, had agreed to establish a dedicated secure

hotline to "prevent misunderstandings and reduce risks relevant to nuclear issues," and also reaffirmed to maintain moratorium on nuclear tests; see 'Pakistan, India To Set Up N-Hotline,' *The News* (Rawalpindi), June 21, 2004.