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PROBLEMS OF STRATEGIC STABILITY IN INDIA-PAKISTAN NUCLEAR ARMS RACE: RELEVANCE OF WESTERN THEORIES

Abstract

The article examines the problem of strategic stability in India-Pakistan nuclear arms race in the light of theories that evolved in the West in the context of US-Soviet nuclear competition and its regulation. The paper reveals a difference in the behaviour of the two regional rivals between pre-1998 and post-1998, the year when they conducted nuclear tests. Relationship in the post-1998 period is more crisis-prone in comparison to that of pre-1998. The paper argues that risk of escalation from a crisis situation is high in the absence of a MAD variant of deterrence. It also discusses threats to strategic stability in the context of a potential introduction of new weapons technologies by India and Pakistan. While examining the foundation of strategic stability, the paper reveals that the application of a MAD variant of deterrence in South Asia is problematic. However, the theory that fits best is détente that may seek reconciliation between India and Pakistan on Kashmir issue. It has been argued that détente, as a basic foundation of strategic stability, is very relevant to provide the diplomatic atmosphere for the proper functioning of existing CBMs and for undertaking new CBMs aimed at avoiding nuclear escalation.

INTRODUCTION

India and Pakistan gave up long-drawn ambivalence on their nuclear capability in May 1998. Post-1998 period witnessed an accelerated nuclear arms race between the two countries. While there is the lack of official data on their capability related to nuclear warheads, other available sources indicate their capability in accelerating the development of nuclear warheads with the fissile materials at their possessions (Table 1). Simultaneously, an action-reaction cycle in the development of missiles has become an overt phenomenon. Changing global security scenario in the wake of US abrogation of 1972 ABM (Anti-Ballistic Missile) treaty is likely to be deterministic factor for a new phase of arms race between the two South Asian giants. On the other hand, post-1998 bilateral relations is characterised by frequent crises and confrontations. Kashmir in bilateral relations still remains as the flashpoint of military conflict. At the same time, there is an emerging scenario of nuclear deployment leading to a likely hair trigger alert situation. All these factors potentially threaten to escalate to a nuclear war. In other words, nuclear environment is yet to be conducive to strategic stability between India and Pakistan.

In the academic arena, South Asian as well as Western scholars have done a lot of research works regarding Indo-Pak nuclear arms race and the problem of strategic stability and measures that may be undertaken to stabilise strategic situation. However, there is the lack of research works in the understanding of these problems in the light of theories and concepts that evolved in the West in the context of US-Soviet nuclear competition and its regulation. It may be mentioned that Soviet rejection of Western theories was more influenced by ideological factors than by military ones. The theories, in fact, functioned with Soviets' entering into politico-military arrangements sponsored by the US aimed at achieving strategic stability. The paper attempts to examine the problems of strategic

stability in India-Pakistan nuclear arms race in the light of related Western theories and concepts that are more politico-military in nature and useful in the primary understanding of the strategic problems. The paper is divided into six sections including this introductory one. The second section is a theoretical one that attempts to conceptualise the problems. The applicability of the theories is examined in the third, fourth and fifth sections with focus on India-Pakistan arms race and the problem of strategic stability. The third section explains the politico-strategic factors that evolved in the past rendering to the rationalisation for going nuclear by India and Pakistan and the current and potential phase of arms race between them. The fourth section examines the fall out of arms race on strategic stability. The fifth section examines to what extent basic foundations of strategic stability can be relevant in the security relationship between India and Pakistan. The sixth section attempts to draw some concluding remarks.

CONCEPTUALISING THE PROBLEMS OF ARMS RACE AND STRATEGIC STABILITY: WESTERN PERSPECTIVE

Understanding Arms Race

Arms race may be said to be the extension of political conflicts. In fact, it is political conflicts that fuel arms race between rival states. However, it gets momentum for several other factors that may be understood under two important theories: action-reaction model, and organisational process model.¹

Action-reaction model

Action-reaction model argues that build up and deployment of weapons by a party vis-à-vis its perceived threat induces the same reaction from the latter. And this action-reaction cycle occurs

¹. See for example, Jerome H. Kahan, "Arms Interaction and Arms Control", in John E. Endicott and Roy W. Stafford (eds.), *American Defense Policy*, Johns Hopkins University Press, London, 1977, p.104.

because each party hopes to gain from military superiority and fears loss from inferiority. This is also because each party is uncertain about its rival's present and future military capabilities, as well as the potential military and political intentions. It may be partly determined by the feeling of insecurity in response to adversary's armament programmes and partly by the demonstration effect rather than actual security needs.

Organisational process model

This model argues that the action-reaction model is inadequate to explain the factors behind specific military programmes of rival parties. It believes that weapons programmes and foreign policies are often decided primarily by internal bureaucratic concessions, organisational pressures, or technological momentum. Thus, this theory is of the view that weapons programmes of a party have little reactive impact on the present or projected ones of the other.

The organisational process may be more useful than the action-reaction model. But without the action-reaction model, the follow up of events and the grounds of justification in favour of undertaking certain armament programmes involving procurement, production or research and development by concerned scientific-bureaucratic establishments cannot be understood. That is why, the paper attempts to apply both the models in the understanding of India-Pakistan nuclear arms race.

Strategic Stability: Context, Concept and Foundations

Since arms race is a competitive relationship between two (or more nations), each side attempts to match the opponent's weapons systems both in quantity and quality. This is also what happened in case of former Soviet Union. Before 1970, the balance between the

US and the Soviet Union was asymmetric in favour of the US. However, Soviet struggle since the mid-1960s to achieve strategic parity with the US shifted the strategic balance. By 1970, the balance became symmetrical when Soviet strategic capability caught up with that of the US. According to the US perception, the balance was detrimental to the security of the US and its allies making their population vulnerable to Soviet strategic reach. It was indicated, according to Harold Brown, by the willingness of the Soviet "to indulge in expansionary policies along their borders and in the Third World."² As for reasons behind this Soviet behaviour, he holds that the shifting strategic balance affected the perceptions of the Soviet leaders. He further maintains,

The perception of military strength can be a critical element in the outcome of a military conflict. The *perception* of military strength can be a critical element in a political confrontation. Perceptions of a military advantage, or even of a trend in relative military capability that reflects a likely future balance, affect the political behaviour of potential adversaries...³

In view of the above, the term *strategic stability* came into usage in American defence and arms control debates to neutralise the *perception* of military advantage. It was feared that unending arms race would place one strategically in a relative advantageous or superior position leading to the perception of having the capability to launch a pre-emptive strike to change the *status quo* by eliminating the retaliatory capability of the other. Rapid changes in military technology like the innovation of antiballistic missile (ABM) system and Multiple Independent Reentry Vehicle (MIRV) generated this fear. While the ABM system was capable of intercepting incoming missile, MIRV was capable of carrying multiple warheads that could

². Harold Brown, *Thinking About National Security: Defense and Foreign Policy in a Dangerous World*, Westview Press, Boulder, 1983, p.83.

³. *Ibid.*

separate in flight, change trajectory, and fly independently to assigned and dispersed targets by penetrating even an ABM defence. Technology, thus, threatened another phase of defensive and offensive missile race that could increasingly expand a disarming first strike capacity. A disarming first strike capacity, as far as technology was concerned, meant an initiator's capability to eliminate the retaliatory capability (second strike capability) of the adversary in two ways: one, that the initiator's ABM defence would intercept incoming missile launched by the adversary in retaliation; and second, that the initiator's MIRVs would eliminate the land-based ICBM systems of the adversary denying the survivability of its retaliatory forces. These defensive and offensive technologies that threatened to constitute a disarming first strike capacity on both sides in an unending arms race could 'make both jittery, possibly precipitating a nuclear war.'⁴ It is in this context that *strategic stability* came into usage in American defence and arms control debates. About the definition of strategic stability, Harold Brown maintains that,

it is a situation in which neither side can achieve significant gains by a preemptive attack and in which deployment of particular new technologies or weapons systems will not substantially alter the relative strategic positions ... In such a situation, each side would have the strategic forces that is regarded as adequate to deter the other, but it would lack the forces that might make it think it could coerce the other.⁵

⁴. See: John Spanier, *American Foreign Policy Since World War II*, Holt, Rinehart and Winston, New York, 1980, pp.190-191; Phil Williams, 'Deterrence' in John Baylis, Ken Booth, John Garnett and Phil Williams (eds.), *Contemporary Strategy: Theories and Policies*, Croom Helm, London, 1984, pp.77-78; Leon Fuerth, "Return of the Nuclear Debate", *The Washington Quarterly*, Volume 24, Number 4, Autumn 2001, pp.101-102.

⁵. Harold Brown, *op. cit.*, p.84.

Harold Brown's above definition is based on the condition of the mutually agreed conditions of strategic military parity. However, his emphasis on two approaches – arms control and diplomatic posture – encompassed in national security programme as its goal of strategic stability, does not exclude the political elements laying the foundation of the situation. In his conceptualisation, the approach of diplomatic posture, in fact, among others, refers to political elements although he does not name those elements. The definition by Mikhail Milstein may complement this vacuum. Mikhail Milstein defines strategic stability as

the state of politico-military relations and conditions which create mutual interest in peaceful co-existence between the two sides: settling disputes and managing crises in a peaceful way, so that the use of force shall be excluded or restrained in settling disputes, preventing them from going into military conflicts.⁶

Mikhail Milstein maintains that the common condition for strategic stability must involve better political climate, relaxation of tension and measures capable of lessening mistrust. In this regard, he names a number of politico-military measures (subject to extension), the interaction of which may lay the foundation for strategic stability: i) renunciation of the policy of negotiating from a position of strength; ii) undertaking mutually acceptable and negotiated commitment of no-first-use of either nuclear or conventional forces, that is no-first-use of military force as a whole against each other; iii) renunciation of the attempts to achieve military superiority; iv) strict adherence to the principle of equality and equal security of both sides; v) lowering the levels of military confrontation; and vi) devising negotiated norms of behaviour in the interests of averting nuclear war.⁷

⁶. Mikhail Milstein, "The Problem of Strategic Stability" in Joseph Rotblat & Sven Hellman (eds.), *Nuclear Strategy and World Security*, The Macmillan Press Ltd, London, 1985, p.14.

⁷. *Ibid.* p. 14-15.

The definitions and foundations of strategic stability, the way Harold Brown and Mikhail Milstein viewed, almost reflected in the two fundamental approaches to strategic stability in practice: arms control approach and political accommodation. In military context, *strategic stability* became closely related to the doctrine of *Mutual Assured Destruction* (MAD) and arms control approach. MAD reflected the idea that strategic stability could best be achieved and maintained by leaving one's population vulnerable so long as other side faced comparable vulnerabilities. In another word, in such situation neither side would resort to a nuclear war because neither side would be able to gain from it since mutual extermination was the only consequence. MAD emerged at the end of Kennedy Administration. It was subject to criticisms in subsequent years and was refined but not replaced by *counter force strategy* and *countervailing strategy*. In fact, *counter force* and *countervailing* strategies sought to address the psychological dilemma in the MAD on moral ground on the one hand, and they were war fighting targeting doctrines, on the other⁸. But MAD as deterrence was a foundation to strategic stability between the superpowers. US-Soviet arms control arrangements initiated in the 1970s -- Strategic Arms Limitation Talks (SALT-1) and Anti Ballistic Missile (ABM) both limiting offensive and defensive weapons – were, in fact, recognition of mutual vulnerability as the essence of MAD variant of deterrence.⁹ MAD, in another words, was interrelated to parity or

⁸. See for details: Marek Thee, *Military Technology, Military Strategy and the Arms Race*, Croom Helm, London, 1986, pp.61-70; Henry Kissinger, *White House Years*, Little, Brown & Company, Boston, 1979, pp.215-218; Phil Williams, *op. cit.*, pp.78-79.

⁹. The fact that MAD was a foundation to strategic stability between the superpowers throughout the Cold War and that Arms control approach played the key role in this regard is also recognised well in post-Cold War literatures based in the United States. For example, see Steven A. Hildreth, "National Missile Defense: The Current Debate" (CRS Report for Congress, Congressional Research Service, The Library of Congress, 1996) in *Federation of American Scientists*, Washington, (online), available at

equality and arms control theories. Arms control approach sanctified the concept of strategic parity. While pre-arms control parity referred to the matching of strategic capabilities by the opposing parties in a competitive way, post-arms control parity referred to the kind of parity that sought to renounce the policy of achieving superiority and emphasised on equality¹⁰, the condition that also reflects well on Harold Brown's definition of strategic stability. Thus, MAD, in fact, encompassing the theories of equality and arms control, was the recognition of the reciprocity of deterrence in which opposing parties would have immediate retaliatory capability after surviving a nuclear pre-emptive strike.¹¹ In short, whoever strikes first, faces unacceptable damages in retaliation by the adversary. MAD was, thus, a dissuasion to a nuclear war, a foundation of strategic stability between the US and the erstwhile Soviet Union.

In Western perspective, another basic foundation to strategic stability is détente. Détente does not mean ideological compromise, i.e., not compromise on respective position but the kind of political (ideological) accommodation in mutual relationship that primarily lays foundation for managing adversary relationship at a lower level of tension. Primarily, mutual trust and confidence at the political level helps exercise restraint in mutual relations, negotiate and settle differences by peaceful means in order to avoid military confrontations and to prevent the outbreak of nuclear war. It provides the diplomatic atmosphere that enables the opposing parties to adopt various kinds of confidence building measures at technical

http://www.fas.org/spp/starwars/congress/1996_r/crs96441.htm, [accessed on 14 July 2002].

¹⁰. John Spanier, *op. cit.*, pp.190-192.

¹¹. David B. Rivkin, Jr., Lee A. Casey and Darin R. Bartram, "The Collapse of the Soviet Union and the End of the 1972 Anti-Ballistic Missile Treaty: A Memorandum of Law", in *The Heritage Foundation*, Washington, (online), available at <http://www.heritage.org/library/keyissues/missiledefense/legalbrief.html>, [accessed on 14 July 2002].

and military levels directed at reaching strategic stability. The success of the US and the Soviet Union in building mutual trust and confidence at technical and military levels for nuclear risk reduction is attributed to détente. Needless to mention, the diplomatic atmosphere in favour of US-Soviet arms control agreements that were founded during Nixon Administration in the early 1970s, was provided by détente.¹²

The applicability of the theories elaborated in this section is examined in the third, fourth and fifth sections with focus on India-Pakistan arms race and the problem of strategic stability.

NUCLEAR ARMS RACE BETWEEN INDIA AND PAKISTAN

Nuclear arms race between India and Pakistan is the extension of their mutual distrust and acrimony. It is religion, the line of separation of two countries as two independent states in 1947, that had been the original source of acrimony. But dispute on the status of Kashmir has been dominating the overall political relationship triggering two wars, one in 1947 and the other in 1965, the former leading to the division of Kashmir between the two countries and a *de facto* border on the actual line of control. But mutual distrust is too high to be favourable to mutual accommodation making dispute settlement mechanisms almost ineffective and, thereof, leading to frequent crises and stand off over the years.

The familiar perception of Pakistani side is that India will never reconcile itself with the existence of Pakistan as a sovereign entity and will try its best to destroy it. India's involvement in the 1971 liberation war of Bangladesh, the then East Pakistan, is often cited as the evidence of India's aggressive designs. The experience of 1971 is a lesson to them that Pakistan cannot maintain its position on Kashmir due to India's decisive superiority in conventional fields.

¹². John Spanier, *op. cit.*, pp.177-196.

Conversely, India continues to accuse Pakistan of promoting insurgency and terrorism in Kashmir and that her conventional superiority vis-à-vis Pakistan can be decisive in a conventional war but this conventional strength cannot be decisive in meeting extra-regional threats. The debacle of Indian army during 1962 war with China and US intimidation in 1971 are often cited as relevant evidences.

Nuclear dimension in the Evolution of Strategic Thinking

Pakistan

Given its historical conflictual relationship with India, the root of Pakistan's insecurity vis-à-vis India has been the latter's superiority in conventional forces. With a view to counterbalancing India's conventional forces, Pakistan attempted to exploit the Cold War environment. It entered into bilateral alliance with the US and joined the regional military alliances backed by the latter. In addition, it also fostered relations with China in an atmosphere of Sino-Indian conflictual relationship. However, the US was cautious in its arms transfer policy to Pakistan, so as not to push India too close to the Soviet Union. Despite being more liberal than the US in arms transfer, China had limitations in influencing the balance in South Asia in favour of Pakistan. As a result, for Pakistan, counterbalancing India's conventional forces was not materialised.

India's involvement in the secession of East Pakistan, now Bangladesh, from Pakistan in 1971 was the most important decisive factor behind Pakistan's rationale of going nuclear. While the war with India over Kashmir during 1947-48 and 1965 ended with 'no win no defeat' result, Pakistan's sense of insecurity vis-à-vis India's conventional might revealed practical manifestation in 1971 which was later reinforced by India's test of a nuclear device in 1974. According to Abdul Sattar, Former Foreign Minister of Pakistan,

...In 1971, India exploited power disparity for aggression and military intervention to the detriment of Pakistan's integrity. Neither alliances proved reliable nor the Security Council acted to fulfil the pledge in the UN Charter of collective measures for the prevention and removal of threats to peace...Pakistan had to develop the capacity to deter another adventure against our country. In the absence of alternatives, acquisition of the nuclear option was conceived as a means of deterrence of aggression and prevention of war. Safeguarding the peace and security of our country was the sole objective. Pakistan entertains no ambition to great power status or regional domination.¹³

In fact, to Pakistan, it is only India, which has been a real threat instead of a perceived one. And its rationale of going nuclear that was initiated in the 1970s may be understood in the context of this real threat.

India

Unlike Pakistan, India's rationale of going nuclear evolved of a number of complicated considerations. India's founding fathers like Mahatma Gandhi and Jawaharlal Nehru were in a dilemma between the country's advocacy for a nuclear weapons free world and the political value of nuclear deterrence. While their advocacy in favour of the former was based on moral principle, they could not abandon the idea of the use of force, particularly the value of nuclear deterrence, in national defence.¹⁴ The personal recollection of K. Subrahmanyam, India's prominent nuclear strategist, on 'Indian Nuclear Policy---1964-98' reveals this dilemma faced by the post-

¹³. Abdul Sattar, "Pakistan's Nuclear strategy", *Strategic Issues (The Nuclear Debate)*, The Institute of Strategic Studies, Islamabad, Number 3, March 2000, pp.2-3.

¹⁴. Rajesh M. Basrur, "Nuclear Weapons and Indian Strategic Culture", *Journal of Peace Research*, International Peace Research Institute, Oslo, Vol. 38, No. 2, March 2001, pp.181-182.

Nehru successive leaderships.¹⁵ As such, the achievement of nuclear capability has been rationalised to meet its security needs emerging from the dynamics of regional and extra-regional circumstances mentioned below.

One of those circumstances that provided momentum to India's acquisition of nuclear capability was the debacle of the Indian Army during the 1962 war with China. It was again reinforced by China's joining to the nuclear club in 1964. Another factor that provided momentum was Sino-US rapprochement in the 1970s and its impact on India's security. Sino-US role in favour of Pakistan against India during the Bangladesh liberation war in 1971, and particularly US nuclear intimidation during that crisis, as perceived by India, triggered Indian nuclear test in 1974 in Pokhran, popularly known as Pokhran I. Indian nuclear capability came into reality when Pakistan was yet to appear as a nuclear threat in the regional context. Given these circumstances, it appears that Pakistan factor had been important but not the central consideration behind India's primary purpose of going nuclear. This was because India's conventional superiority over a non-nuclear Pakistan had been enough to offset any Pakistani attempt to change the *status quo*. India's nuclear deterrence vis-à-vis a nuclear Pakistan can be said to have come as an extension of the value of its nuclear capability that was acquired before Pakistan was yet to appear as a nuclear threat.

Apart from the specific threats like Pakistan and China in regional and extra-regional contexts respectively, the nuclear dimension of Indian strategic thinking has been said to have other objectives. What is important in the context is the clause 1.4 of India's Draft Nuclear Doctrine that stipulates: "... India continuously aims at promoting an ever-expanding area of peace and stability

¹⁵. See for details, K. Subrahmanyam, "Indian Nuclear Policy--1964-98 (A Personal Recollection)", in Jasjit Singh (ed.), *Nuclear India*, Knowledge World, New Delhi, 1998, pp.26-53.

around it...". It is clear that India perceives the South Asian region as a whole as its security zone. And on the basis of its interests, this security zone is subject to continuous expansion beyond the region. India's efforts to secure a permanent seat in the United Nations Security Council imply that it aspires to play a role in the big club. Nuclear capability may be a crucial component of its regional and global aspirations.

Nuclear Tests of May 1998 and the Arms Race in the Aftermath

While the factors mentioned above dominated Indo-Pak strategic thinking based on nuclear option, the two countries followed ambivalent policies over respective nuclear weapons programmes. This ambivalence conformed to Israeli policy of building up all the requirements for possessing and delivering nuclear weapons without overtly going nuclear. It helped the two South Asian states avert international pressure. However, the conduct of five nuclear tests by India on 11 and 13 May 1998 and Pakistan's response by conducting six tests on 28th and 30th of the same month were demonstrations of the fact that they wanted to walk out of the shadow of *de facto* nuclear weapons states. A number of factors would explain the timing of the nuclear tests and those would be explained under the framework of organisational process. But the fact is that an action-reaction process has become obvious and the prospect of an end in the process is difficult to predict.

Information or data related to the size of India and Pakistan's nuclear arsenals are officially highly classified. However, while acknowledging this limitation, Western sources available on the online, for example, the Institute for Science and International Security (ISIS), Washington, attempts to provide data on estimated fissile material stocks and nuclear weapons potential of India and Pakistan. Particularly, David Albright of ISIS makes contribution in this regard. A survey of literatures contributed by him reflects India

and Pakistan's capacity in producing Weapon-Grade Plutonium (WGP) and Weapon-Grade Uranium (WGU) and, thereof, their capabilities to develop nuclear weapons. On the basis of some calculations, as of 13 May 1998 shown in Table 1, he assumed "although India is estimated, as of early 1998, to possess seven-times more nuclear weapons than Pakistan, ... Pakistan could reduce that margin to a factor of less than two over the next eight years. If India wanted to maintain a significant lead over Pakistan, it would be forced to dramatically increase its fissile material production. Pakistan, however, is capable of matching such an increase."¹⁶

The above-mentioned assumption by David Albright was based on the possible triggering of an all-out arms race between India and Pakistan as a follow up of May 1998 tests underlined by Pakistan's capacity to resume the production of Highly Enriched Uranium (HEU). His updates of October 1999 and October 2000 on India and Pakistan's Fissile Material and Nuclear Weapons Inventories show that at the end of 1998, India possessed 225-370 kg of WGP that could potentially be used to make 40-90 nuclear weapons while Pakistan possessed 425-680 kg of WGU potentially equivalent to 22-43 nuclear weapons.¹⁷ And at the end of 1999, India possessed 240-395 kg of WGP estimated to be equivalent to 45-95 nuclear weapons while estimated fissile material stockpile of Pakistan was 1.7-13 kg of WGP and 585-800 kg of WGU that could potentially be used to build 30-52 nuclear weapons.¹⁸ It is believed that India and Pakistan

¹⁶. David Albright, "Fact Sheet: India and Pakistan—Current and Potential Nuclear Arsenals", 13 May 1998, *Institute for Science and International Security* (online), available at <http://isis-online.org/publications/southasia/fs-pak598.html>, [accessed on 28 March 2002].

¹⁷. David Albright, "India and Pakistan's Fissile Material and Nuclear Weapons Inventory, End of 1998", 27 October 1999, *Institute for Science and International Security* (online), available at <http://isis-online.org/publications/southasia/stocks1099.html>, [accessed on 29 March 2002].

¹⁸. David Albright, "India's and Pakistan's Fissile Material and Nuclear Weapons Inventories, End of 1999", 11 October 2000, *Institute for Science and International*

are rapidly expanding the number of nuclear weapons as it is reflected in the assessments of David Albright and also of K. Alan Kronstadt.¹⁹ It remains a question whether this pace of expansion of nuclear arsenals, as it is believed, is leading to prove David Albright's predictive assumption of 1998. It may be mentioned that no clear change in David Albright's predictive assumption of 1998 is reflected in his updated assessment of 1999 and 2000 indicating that he still sticks to his assumption.

As far as delivery systems are concerned, a missile race has been a visible follow up since India and Pakistan left their nuclear ambivalence in May 1998. Indo-Pak geographical proximity does not make sense for Pakistan to develop strategic missiles of continental reach. However, India's plan to develop *Surya* missile of intercontinental reach may have strategic implication in global context, but the fact is that its missile programmes are currently concentrating on the development of Intermediate Range Ballistic Missile (IRBM) that best suits its strategic objectives vis-à-vis Pakistan and China. Hence, an action-reaction dynamic in IRBM race between India and Pakistan has been a visible factor.

India conducted 3 flight tests between 1989 and early 1994 of the *Agni I* (fire). But the programme had been on hold, largely due to outside pressure. However, India's nuclear weapons tests in May 1998 signalled a clear intent to begin warhead development for ballistic missiles and hence to resume the *Agni* programme. It is in this context that India conducted flight test of *Agni II* in April 1999. On 17 January 2001, India successfully test fired *Agni II* and said that it would induct it into the country's arsenal during 2001-2002.

Security (online), available at <http://isis-online.org/publications/southasia/stocks1000.html> [accessed on 29 March 2002].

¹⁹. K. Alan Kronstadt, "The Asian Way to Insecurity: India's Rise and the Meaning of Increased Power Projection Capabilities in South Asia" 21 February 2001, *International Studies Association*, (online), available at <http://www.isanet.org/archive/kronstadt.html>, [accessed on 27 March 2002].

Agni II, with a range of 2500 km, is seen as a key element of India's plan to build a credible minimum nuclear deterrent.

Pakistan has not been without tit for tat. The *Ghauri* missile is currently the only nuclear capable missile, although other missiles in the Pakistani armed forces may be configured to carry a nuclear warhead. *Ghauri I (Hatf 5)*, with a range between 1300-1500 km and which is thought to be a modified version of the North Korean Nodong missile, was first flight tested on 6 April 1998. The *Ghauri II (Hatf 6* called *Ghazni*), with a range between 2000-2300, was tested on 14 April 1999, three days after India conducted the flight test of *Agni II*. A third version of *Ghauri*, called *Ghauri III*, with an unconfirmed range of up to 3000 km, is under development and was test launched on 15 August 2000 (Table 2 shows Indo-Pak missile capability).

Potentially, a significant aspect of militarisation is India's goal of achieving massive nuclear war fighting capabilities based on a triad of aircraft, mobile land-based missiles and sea-based assets, as envisaged in its 'Draft Nuclear Doctrine (DND)'.²⁰ Over these assets there would be the distribution of '350 to 400 nuclear weapons'.²¹ In Indian view, minimum deterrence cannot be quantified since this would depend on the prevailing environment at an appropriate moment. As the doctrine also stipulates that nuclear deterrence to be "a dynamic concept related to the strategic environment, technological imperatives and the needs of national security. The

²⁰. On 17 August 1999, just fifteen months after India conducted nuclear tests, it came out with a Draft Nuclear Doctrine (DND), ahead of its formal adoption. It was a consensus report of 27 member National Security Advisory Board (NSAB) under the chairmanship of K. Subrahmanyam. While releasing the DND, National Security Adviser Brajesh Mishra said that India was the only country to put its nuclear doctrine out for debate and discussion to the general public. It was said that the doctrine was not country specific, it is nonetheless clear the doctrine targets Pakistan and China.

²¹. *Regional Press Digest on Nuclearisation in South Asia*, BIISS, Dhaka, August 1999, p.4. (Source: *The Daily Star*, Dhaka, 23 August 1999).

actual size, components, deployment and employment of nuclear forces will be decided in the light of these factors." In this regard, the doctrine also emphasises on stepping up efforts in research and development to keep up with technological advances in this field. However, given its economic constraint, experts even in India question the credibility of the plan of triad-based massive militarisation as envisioned in the DND,²² while some even regard it to be no more than a rhetoric for public consumption.²³

Whatever may be the intention of India's DND, Pakistan's response has also been with similar commitment particularly with regard to the goal of achieving minimum deterrence. While the goal was reflected in the official reaction of Nawaz Shariff Government as an *indispensable part* of Islamabad's security doctrine²⁴, the assurance of former Foreign Minister Abdul Sattar reflects further elaboration,

Minimum nuclear deterrence will remain the guiding principle of our nuclear strategy. The minimum cannot be quantified in static numbers. The Indian build-up will necessitate review and reassessment. In order to ensure the survivability and credibility of the deterrent, Pakistan will have to maintain, preserve and upgrade its capability. But we shall not engage in any nuclear competition or arms race.²⁵

²². See, Institute of Peace and Conflict Studies, New Delhi, (online) available at <http://www.ipcs.org/issues/articles/255-ndi-mallika.htm> [accessed on 6 May 2002].

²³. M. Shahiduzzaman, Professor of International Security at the Department of International Relations, Dhaka University, tells this in a personal interview with the author on 11 July 2002.

²⁴. For example, On 25 August 1999, the Defence Committee of the Pakistani Cabinet, the country's highest policy making body on security affairs, expressed serious concern at, according to its view, India's "aggressive militarisation programme", particularly in the nuclear field as reflected in the draft nuclear doctrine announced by New Delhi. It said that the development of the country's nuclear programme will be determined by a "minimum deterrent capability", which formed an "indispensable part" of Islamabad's security doctrine. See for details, *Regional Press Digest on Nuclearisation in South Asia*, BISS, Dhaka, August 1999, p.44. (Source: *Dawn, Karachi*, 26 August 1999).

²⁵. Abdul Sattar, *op. cit.*, p.3.

The statement reveals that like India's, Pakistan's minimum deterrence is subject to change although unlike India's, Pakistan's build up would be specific to India while India's build up would depend on factors beyond the threat from Pakistan and China. Hypothetically, Pakistan's reaction would reveal an unending action-reaction process in Indo-Pak nuclear arms race. But then the logical question is: what does it mean when Pakistani officials claim that Pakistan shall not engage in any arms race with India? The claim has been reflected not only in the above-mentioned statement of former Foreign Minister Abdul Sattar, but also in the statements of the Chief Executive and President of Pakistan on some occasions. However, the meaning of such claim seems to well-reflect in the view of Pakistani analysts. They are aware that given its resource constraints, Pakistan cannot afford an expensive arms race with India. At the same time, as they argue, Pakistan must not be at a disadvantageous position vis-à-vis India. So, as they argue, Pakistan will have to develop, modernise and update its nuclear arsenal but it must be 'limited to a minimum sufficient level to meet the Indian threat' without going for a balancing policy of 'bomb for a bomb and missile for a missile'. In this regard, they ascribe on the absolute value of nuclear weapons as far as its destructive capability is concerned. Reference is also made regarding the potential vulnerability of Indian population centres should the potential targets like New Delhi, Bombay and all the nuclear installations of India remain within the range of Pakistan's shorter and intermediate range ballistic missiles.²⁶

Since Pakistan's nuclear armament is still at nascent stage, Pakistan will continue, as indicated by the above-mentioned views from Pakistan, to develop, modernise and upgrade its capability until

²⁶. For example, Shireen M Mazari, "From Non-proliferation to Nuclear Stability: The Case of South Asia", *Defence Journal*, Karachi, March 2000, (online) available at <http://www.defencejournal.com/2000/mar/south-asia.htm> [accessed on 4 April 2002].

it achieves the said minimum capability, but in the long term, it will be controlled. Such Pakistani views are based on the assumption that Pakistan's missile will be invulnerable in hitting the targets in India. And still the assumption may be true since no sound anti-ballistic missile system has been developed by India and, of course, by Pakistan. However, Pakistani analysts are worried of Indian effort for the acquisition SR 300 series anti-ballistic defence system from Russia and Arrow missile intercept systems from Israel.²⁷ Most importantly, the factor that potentially would make India take care of building anti-ballistic defence system is certainly US abrogation of 1972 ABM Treaty and its plan for building a National Missile Defence (NMD). Two factors may be decisive. One, it means that the whole world would remain unprotected except the US. This is likely to make India step up efforts to protect itself against this global insecurity. While taking this factor into account, one must bear in mind that India went for nuclear in the absence of global non-discriminatory disarmament. Second, potentially, China would renovate its strategic posture to neutralise US unilateral advantage. These two factors are likely to be compelling factors for India, as also indicated by the DND, to go for an unending armament. Obviously, a ballistic missile defence (BMD) by India would upset the invulnerability of Pakistani missiles, i.e., its capacity to launch a pre-emptive strike. Needless to mention, Pakistan is inferior to India in conventional forces. The vulnerability of Pakistan's missile vis-à-vis India's potential ABM defence will leave Pakistan in nuclear inferiority also. Theoretically, Pakistan will be in search of option(s) including its potential hunt for acquiring new weapons systems that can upset India's potential ABM defence. And then - Pakistan shall not 'engage in any nuclear competition or arms race' - as claimed by

²⁷. For Example, Ayaz Ahmed Khan, "Threat of Nuclear – Missile Shield" *Defence Journal*, Karachi, January 2002, (online) available at <http://www.defencejournal.com/2002/january/threat.htm> [accessed on 27 April 2002]

Pakistani officials, would be obsolete. Then the question that looms large is : would it be an unending arms race between India and Pakistan?

Factors Affecting Armament Decisions

Indo-Pak variant of action-reaction model

A series of follow up of events may be explained in the light of action-reaction model of arms race. For example, events of May 1998 nuclear tests may be mentioned. Action-reaction process in Indo-Pak nuclear tests of May 1998 is well-reflected in the analysis of Eric Arnett. In his analysis, he uses the term 'military reasons' behind the tests. Referring to some statements made by Indian experts and leaders, he finds that military considerations behind India's nuclear test were less important since India already had nuclear capability for deterrence against China or Pakistan. Nevertheless, he finds that the conduct of *Ghauri* missile test by Pakistan on 6 April 1998, with a range of 1500 km, generated a new feeling of vulnerability in India. Henceforth, a few kilometres along the border inside India remained vulnerable to Pakistan's Short-Range Ballistic Missiles (SRBM). Therefore, he observes that nuclear test by India was a reaction to Pakistan's *Ghauri* test, a way to reassure public opinion and convey message to Pakistan that India has nuclear deterrent.²⁸

Action-reaction model would again explain Pakistan's response to India's nuclear tests. Referring to some observations of Indian officials and experts, Eric Arnett finds that the Indians were doubtful whether Pakistan really had capability to produce nuclear bombs. Viewing Pakistan's said nuclear capability as a bluff, the Indians were continuing their emphasis on waging conventional war in

²⁸. Eric Arnett, "Nuclear Tests by India and Pakistan", *SIPRI Yearbook 1999: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, Stockholm, pp.376-377.

response to Pakistan's provocation in Kashmir. Eric Arnett argues that Pakistan "therefore saw nuclear tests as indispensable for making credible their nuclear deterrent, on which they based their claim to be able to keep the nation secure."²⁹ Fear of international sanction barred Pakistan to do so. Ultimately, Indian action made the ground for Pakistan to justify its nuclear tests.

Action-reaction model, in fact, would again explain post-tests developments. Of the developments, the follow up of missile tests is clear - an Indian test certainly invites Pakistani response with similar kind of action. The purpose is also clear - conveying the adversary the message that it has the capability so as to deter any misadventure. However, the application of the action-reaction model to Indo-Pak arms interaction has two major limitations. First, in the context of US-Soviet arms interaction, the model, more or less, rigidly involved two parties. But in case of South Asia, the interaction is flexible that involves China beyond India and Pakistan, i.e., India's response to China's militarisation affects Pakistan's armament decisions. Second, US-Soviet arms interaction until the arms control initiative in the early 1970s was aimed at achieving supremacy on each other and hence, it was uncontrolled while the chain reaction among China, India and Pakistan hardly falls into that category of interaction. Bruno Tertrais, a US analyst, nicely argues that unlike US-Soviet arms interaction, arms interaction between China and India and between India and Pakistan have records of slow pace with the objectives of achieving and maintaining minimum deterrence rather than achieving and maintaining superiority and sustaining war-fighting nuclear doctrines.³⁰

²⁹. *Ibid*, pp.379-380.

³⁰. Bruno Tertrais, "Do Arms Race Matter?", *The Washington Quarterly*, Volume 24, Number 4, Autumn 2001, pp.126-127.

Indo-Pak variant of organisational process model

While action-reaction model helps understand the sequence of developments, organisation model helps know how organisational pressure, bureaucratic concession and technological imperatives in India and Pakistan ignite arms race. However, there are some limitations in this regard. Such as the structures of higher defence organisation of India and Pakistan presented in Figures 1 and 2 respectively are reportedly changing or under debate to restructure them and they may not be updated ones. They have been presented here on the basis of information available. The second limitation is that there are other organisations or institutions that are involved with armament programme, but those have not been placed in the figures. This is because these institutions are not linked to higher defence organisation. But they have been discussed in this section because they also have role in armament decisions.

Organisational process in India

An analysis of Figure 1 reveals that civil bureaucrats play a dominant middle role. They insulate professional armed forces from political leadership. This derives from India's long tradition of civilian control of the military since independence. Despite this, organisational pressure of the military cannot be ignored with respect to acquiring better weapons systems, expansion and larger budgets.³¹

³¹. Till the 1962 Sino-Indian war, the extent of political control on defence affairs had been so much that military had not even any scope to be involved in tactical level of military decision-making. The entire defence planning was dominated by the political leadership. However, the debacle of the Indian military during the 1962 war with China brought significant changes to the strict political control of decision-making on defence affairs. The advice and views of service chiefs began to get serious consideration to the political leadership. The autonomy of the military in tactical decision-making during the 1965 war with Pakistan restored in some measure the confidence of the military in their political bosses and concurrently organisational pressure gained momentum. See for details, Kotera M. Bhimaya, *op. cit.*, pp.649-654. Also see, Sumit Ganguly, "From the Defense of the Nation to Aid to the Civil: The Army in Contemporary India", in Charles

But it must go to the political leadership through proper channel, i.e., through the civil bureaucrats. In fact, civilian supremacy would argue that consideration of political leadership would be the primary factor behind the country's armament programme. In that regard, interest of the political leadership must be taken into account. For example, the government of Bharatiya Janata Party (BJP) authorised the bureaucracy of India's nuclear establishment to conduct nuclear tests in May 1998. It is believed that the aim of the political leadership was to score popular mandate in favour of the party at a critical time when the party was leading a weak coalition government. Even about the timing of releasing the DND, it was believed that it was an election gimmick of Atal Bihari Vajpayee's caretaker government. It is also believed that nuclear demonstration was the result of the BJP perception of demonstrating Indian power with *Hindutva* flavour. In fact, leadership perception is also a factor behind armament programmes.

The dominant middle role of the civil bureaucrats may be considered also as another factor behind armament programme. Organisational interests of bureaucracy, as shown in the figure, of the Department of Defence Production & Supplies (DDP & S) and the Department of Defence Research & Development (DDR & D) in particular may be taken into consideration. It may be mentioned that the bureaucracy in the DDR & D formulates and executes programmes of scientific research, design and development in the fields of relevance to national security leading to the induction of new weapons, platforms and other equipments required by the Armed Forces. Of more particular importance may be the role of the scientific bureaucracy of the Defence Research Development Organisation (DRDO) involved in the development of missiles and

other defence technologies and that of the atomic energy establishment, known as the Department of Atomic Energy (DAE).

Credibility display of technocrats of big science establishment associated with nuclear weapons programme itself may be of most importance. Some examples may be cited here. Having feared that international pressure on India to enter non-proliferation regimes would close its nuclear option, bureaucracy of India's nuclear establishment, reportedly, had been seeking political authorisation to conduct nuclear test since late 1995. Despite national political consensus in India, which opposed the non-proliferation regimes, bureaucracy of nuclear establishment failed to gain authorisation to conduct nuclear test before 1998. Ultimately, political consideration of the BJP-led coalition government helped them bring their efforts into reality in May 1998. Another example of their credibility display is their claim that India has the capacity to build neutron bomb, as claimed by a top official of Atomic Energy Commission (AEC). According to a top official of the Bhabha Atomic Research Centre (BARC), India had not halted its nuclear research despite declaring a moratorium on further tests. It may be mentioned that BARC, which works under the aegis of the DAE, designed and built the nuclear devices tested in May 1998.³² Similarly, another example about the role of scientific bureaucracy of the DRDO may be cited. Abul Kalam, the architect of the country's guided missile technology and previously Director of Defence Research Development Laboratory (DRDL) and who later became Director of the DRDO, and became the President of India in 2002, announced on an occasion in August 1999, India's plan of starting mass production of missiles.³³ The reason behind citing these examples is to argue that technocrats of these institutions have a tendency to display the

³². *Regional Press Digest on Nuclear Issue in South Asia*, August 1999, BIISS, Dhaka (Source: AFP report published in *Dawn*, Karachi, 17 August 1999), p.1.

³³. *Ibid.* (Source: AFP report published in *The Daily Star*, 07 August 1999), p.21.

credibility of their newer innovations and that such tendency may be responsible in undertaking ambitious armament programme. In such case, national security consideration may have little impact in armament programme.

Organisational process in Pakistan

An analysis of Figure 2 reveals that unlike in India, professionals in uniform in Pakistan can directly give their views to political leadership. The composition of the Defence Committee of the Cabinet (DCC), the highest defence policy-making body of the country, would establish this fact. This is deeply rooted in Pakistan's long tradition of military rule that has led to the institutionalisation of military's political role in the country. An analysis by a Pakistani scholar well-reflects how military in Pakistan influences decision-making on key domestic, foreign policy and security issues through extra-constitutional arrangement. His analysis also reflects closed and preserved control of the country's nuclear policy by the military, military's pressure on the civilian control to pursue foreign policy on their dictation on matters related to overseas weapons and equipment procurement including budget allocation in defence sector.³⁴ Another example would also clarify military's influence in defence production. *Hatf* and *Shaheen* missiles are manufactured at the National Development Complex, an autonomous body but linked with the Ministry of Defence through its Defence Production Division. Interestingly, the forces have their representatives in this Division. In other words, the Division is under the control of the Secretary General of Defence of the Ministry of Defence. Notably, the Secretary General of Defence can be civil/military bureaucrat. Even, during non-military rule, a military person can be appointed as

³⁴. See for details, Hasan-Askari Rizvi, "Civil-Military Relations in Contemporary Pakistan", *Survival*, Vol. 40, No. 2, Summer 1998, pp.98-100. Also see, Kotera M. Bhimaya, "Nuclear Deterrence in South Asia: Civil-Military Relations and Decision-Making", *Asian Survey*, Vol.XXXIV, No.7, July 1994, PP.650-655.

Secretary General of Defence.³⁵ Organisational pressure of the military for better weapons procurement and production in general and for nuclear weapons in particular may be understood from this perspective of civil-military relations in Pakistan. Political consideration of civil authority, therefore, may have little impact on armament as long as political decision is subject to military's pressure.

Like India, nuclear armament in Pakistan is still at an early stage. Therefore, organisational pressure of civil bureaucracy as mentioned above may be not of larger extent in this regard, if not seen in the context of its nexus with the military. What may be of most importance in the context may be the role of technocrats of defence related technological research institutions. The prime institution is KRL i.e., 'Khan Research Laboratories' (Kahuta is the site of this KRL), named after Dr. Abdul Qader Khan who is said to be the architect of the country's uranium enriched nuclear weapons. In fact, it was enrichment of uranium in KRL that ultimately led to the successful detonation of Pakistan's first nuclear device on 28 May 1998. This nuclear weapons laboratory is also an emerging centre of Pakistan's missile development. The Kahuta laboratories have developed Pakistan's nuclear capable *Ghauri* missiles, tested so far. KRL co-operates with Pakistan Upper Space and Atmospheric Research Commission (SUPARCO) in this regard. SUPARCO is also an organisation that has developed short range *Hatf-1* and *Hatf-2* missiles. *Shaheen* series of missiles have been developed by Pakistan Atomic Energy Commission (PAEC) which is also responsible for Pakistan's plutonium bomb programme. Again, the point that the paper attempts to make here is that credibility display of the technocrats of these institutions is said to lead to undertake ambitious armament programme. In this regard, a claim by Dr. N. M.

³⁵. The author is grateful to Mr. Zafar Nawaz Jaspal, Research Fellow, Islamabad Policy Research Institute, Islamabad, for kindly bringing this point to author's notice.

Butt, a leading Pakistani nuclear scientist of the Pakistan Institute of Nuclear Science and Technology (PINST), for example, may be cited: "The country ... has such well-trained specialised and capable nuclear scientists who can design and build a nuclear weapon of any type or size including a neutron bomb."³⁶ His claim came just two days after the Indian assertion that it had the capability to produce neutron bombs. This is an example that makes one understand how the interests of technocrats like India's may ignite an arms race.

THE PROBLEM OF STRATEGIC STABILITY

An Assessment of Behaviour in a Nuclear Environment

Until the May 1998 nuclear demonstration by India and Pakistan, the two countries fought three wars in an environment when they were yet to gain a *de facto* nuclear capability. There were arguments that their *de facto* nuclear capability until the May 1998 explosions prevented war between them in the subsequent years of 1971 despite the existence of a number of situations that could lead to the outbreak of wars. In the post-1971 period, one of the major restraints was the cooling of a potentially dangerous confrontation in 1987 during the *Brasstacks* crisis. Mutual restraint even continued since the emergence of insurgency in 1989 in Indian held Kashmir allegedly backed by Pakistan. In 1990, the exchange of rhetoric between the Prime Ministers of the two countries did not move into offensive positions. Even unlike now, the door of dialogue was also open, as indicated by the visit of the then Pakistan Foreign Minister to New Delhi during the course of tension. In fact, since 1989, although India accused Pakistan of sending many more armed and trained infiltrators intensifying what it says terrorism in the state, it responded with only deploying troops along the border while avoiding rhetoric of conducting hot-pursuit operations or eliminating

³⁶. *Regional Press Digest on Nuclear Issue in South Asia*, August 1999, BISS, Dhaka (Source: *The Hindu*, Madras, 20 August 1999), p.1.

insurgent training camps across the border. Restraint on Pakistan side was also noteworthy. Although Pakistan is accused of backing the Kashmiri insurgents, in 1992 it prevented the demonstrators on its side from their plan to cross LoC in support of the cause of Kashmiris on the Indian side. The intention might have been avoiding a direct confrontation with India that might be triggered by the actualisation of the demonstrators' plan.

The argument that their *de facto* nuclear capability compelled them to avoid war-triggering situations grew stronger following their declared nuclear capability in May 1998. It was expected that India and Pakistan would adopt a pattern of self-restraint similar to the US-Soviet model. The US-Soviet model sought the settlement of disputes and the management of crisis in a peaceful way imposing restraints on actions that could trigger military conflicts, as also argued by Rodney W. Jones, a western scholar. The Kargil episode during May-July 1999, hardly a year after the two countries demonstrated their nuclear capabilities, undermined this argument. The Kargil episode suggests that nuclearisation has not necessarily made compulsion for India and Pakistan to exclude the actions or policies that could trigger a war. And it would be safe to say, as also argued by him, that in the absence of an understanding to the Kashmir problem, it will continue to remain as the flash point of military conflicts.³⁷ The series of India-Pakistan stand off that erupted after 13 December 2001 terrorist attack on Indian parliament and the one that erupted after 14 May 2002 terrorist attack in Kashmir indicates the relevance of this contention.

An analysis of the behaviour pattern in a nuclear environment could be done in the light of the theory of *perception* of military advantage as built by Harold Brown. Arms race with India, as

³⁷. Rodney W. Jones, "Pakistan's Nuclear Posture: Quest for Assured Nuclear Deterrence – A Conjecture, *Regional Studies*, Institute of Regional Studies, Islamabad, Vol. XVIII, No. 2, Spring 2000, p.5-7.

Pakistan might have perceived, has brought it in a position of military strength in terms of nuclear capability so as to neutralise power disparity with India. Risk-taking at non-nuclear level during the Kargil operation is attributed to it. It emboldened the Pakistani planners to conduct a proxy war by backing the surrogate forces with the objective of changing the *status quo* along the Line of Control (LoC) while calculating the value of its perceived military strength at two levels. First, the first use option of nuclear weapons might have been perceived as a "shield" against India's conventional adventurism in response, as Rodney W. Jones argues.³⁸ Second, it might have been reckoned by Pakistani planners as a tool of inviting international intervention, as argued by a Pakistani scholar.³⁹ India's nuclear capability did not deter Pakistani venture. Similarly, Indian *perception* of military strength is attributed to its conventional superiority. While calculating its nuclear capability as deterrent to Pakistan's nuclear use, conventional superiority might have been seen as decisive to win a Low Intensity Conflict (LoC). The Kargil lesson, as Rodney W. Jones argued, "may increase the propensity of risk-taking at non-nuclear levels" that may not be necessarily deterred by the possession of nuclear weapons.⁴⁰ This is how the recent confrontational situations could be explained. The calculations of the two parties in recent confrontational situations under nuclear environment, perhaps, continue to remain the same as they were during the Kargil conflict.

Risk of Escalation

The paper argues that the balance between India and Pakistan is symmetrical in the context of nuclear capability. The missile range of

³⁸. *Ibid.*, p.4.

³⁹. Khalid Mahmud, "Pakistan-India Relations: Quest for a Meaningful Dialogue" *Regional Studies*, Institute of Regional Studies, Islamabad, Vol. XVII, No.1, Spring 2000, p.11.

⁴⁰. Rodney W. Jones, *op. cit.* p.7.

both countries are capable of making hostage each other's major population centres. This parity may conform to the situation when the Soviet Union caught up US strategic power by 1970. In simple terms, current strategic balance between India and Pakistan may conform, to some extent, to pre-MAD balance between the superpowers. A pre-MAD balance in the context of superpowers' strategic relationship, among others, refers to the condition in which a party, in a crisis situation, may pre-empt to a first strike with the hope of gaining from it. And such hope of gain would be based on the calculation that a pre-emptive strike would eliminate adversary's retaliatory capability or damages inflicted on its territory could be limited to an acceptable level. However, a difference remains between US-Soviet Model and Indo-Pak model with regard to pre-MAD balance situation. A pre-MAD balance in US-Soviet strategic relationship was seen as highly detrimental to strategic stability due to technological innovation in missiles leading to new defensive and offensive missile race of ABM and MIRV types. In South Asian context, missile race between India and Pakistan is there, but they are yet to reach to that highly defensive and offensive level. So the question is where does the danger lie?

Maybe, Indo-Pak missile race is yet to reach to the level of highly destabilising defensive and offensive missiles of ABM and MIRV types. But the question is whether India and Pakistan have retaliatory capability so as to discourage each other from the hope of gaining from a pre-emptive strike. It is argued that the existing nuclear parity between the two South Asian rivals is not a MAD situation. In another word, neither India nor Pakistan has second strike capability. Referring to India's no first use option, experts term it a rhetoric as India, given the status of its existing nuclear arsenal, would not be able to survive a nuclear first strike from Pakistan. It may be recalled that a superpower like the United States, despite having second strike capability, rejected Soviet's no first use option.

Like Mikhail Milstein, some American writers advocated that the United States should reciprocate Soviet's no first use option. Their advocacy came in the post-arms control era when strategic parity was stabilised, but it was never accepted by the US as a practical option, i.e., the strategic value of first use option was not abandoned. In case of South Asia, as far as India's no first use option is concerned, its calculation is based on the hypothesis that a pre-emptive first strike by Pakistan would be limited and in that case India would be able to retaliate. But will Pakistan be that irrational to allow India survives a pre-emptive strike? A Bangladeshi security expert argues that should India survive any potential pre-emptive nuclear first strike from Pakistan, it will erase Pakistan from the map in retaliation. In that case, Pakistan will not be that irrational to allow its self-erasing by letting India to retaliate. Therefore, as its IRBM can reach anywhere in India, a first use option of Pakistan is not only, in theory, to deter India's conventional adventurism but also make India too crippled to retaliate with nuclear weapons in a actual nuclear war. Ultimately, for India, any gain against Pakistan will not depend on its conventional superiority, but on pre-emptive use of nuclear weapons aimed at crippling Pakistan's first strike initiative. India's no first use option, as he argues is a tactical ploy for public consumption and for projecting itself as a peaceful country before the international community.⁴¹ The root of temptation for pre-emptive strike by both sides remain, i.e., gain is possible from a pre-emptive strike since the existing parity lacks second strike capability on both sides. While frequent crisis and confrontations are constantly present, an emerging scenario of nuclear deployment potentially makes a hair trigger alert situation. The likelihood of interaction between a hair trigger alert situation and the presence of frequent crises and confrontations may make them jittery, potentially precipitating a pre-emptive nuclear strike without the fear of being punished by the

⁴¹. M Shahiduzzaman, *op. cit.*

opponent. Reference may be made to Kargil war. Although intra-war escalation did not occur, as both sides were cautious in transcending the limits, the risk of escalation from Kargil like limited war(s) in future may be seen in the above contexts. What may be notable in the context is that during the Kargil crisis, there were no serious diplomatic efforts to avoid the threshold between war and peace. This kind of confrontation does not conform to the behaviour pattern of the US and the Soviet Union, which always sought to avoid direct confrontation.

Threats to Strategic Stability from a New Phase of Arms Race

Indian attempt to acquire ABM defence system to be justified on the grounds mentioned earlier is potentially highly destabilising to strategic stability. An ABM defence system will establish India's superiority in both nuclear and conventional fields. If seen in the context of Western theories, it will frustrate the existing nuclear parity leaving India in an advantageous position to negotiate from a position of military superiority, and should negotiation fails, it will invite India's military intervention. Needless to mention, this will be inconsistent with the principle of equal security. Pakistani analysts are already aware of these potential developments. Potentially, a Pakistani response to Indian ABM defence system will be more destabilising to strategic situations. A counter ABM defence system by Pakistan may intercept incoming nuclear warheads from India, but India's conventional superiority will remain. So potentially Pakistan will attempt to introduce weapons with penetration aids to upset India's ABM defence. In other way, Pakistani action would potentially follow India's response to China's potential build up. China is believed, according to US analysts, not only to reorganise and upgrade its limited nuclear deterrent posture but also to acquire and incorporate MIRVs to its nuclear arsenal as a counter to America's NMD.⁴² Potential proliferation of America's destabilising

⁴². For example, Leon Fuerth, *op. cit.*, p.105.

weapons systems to India and Pakistan may be seen in the context of increasing India-Russia defence co-operation and traditional defence co-operation between Pakistan and China. Of course, economic constraint would be resistant to unending arms interaction between the two South Asian rivals. In other words, both may proceed to new phase of militarisation with the objective of traditional emphasis on maintaining minimum deterrence. But the danger is that even the acquisition of a limited number of destabilising weapons systems may make them jittery precipitating from a crisis situation.

FOUNDATION OF STRATEGIC STABILITY

Prospect of a MAD Variant of Deterrence

It has been discussed earlier that parity is one of the most important foundations of MAD, which in turn functions as the foundation of strategic stability. The existing strategic balance between India and Pakistan can be said to be the kind of parity with first strike capacity equation. Hence, this parity is not a MAD situation since both the parties still lacks retaliatory second-strike capability. In other words, parity in a MAD balance is a post-arms control phenomenon, which is still not relevant in the context of Indo-Pak strategic relationship.

Is there any potential of a MAD situation in South Asia? A MAD variant will require that India and Pakistan possess second strike capability. But will India and Pakistan be able to acquire second strike capability? Second strike capability is so far applicable to superpowers' strategic capability only encompassing sufficient triad capacity that is technologically accurate and reliable to survive a first strike and hit back. Can India and Pakistan acquire that standard? Most importantly, achieving a triad capacity requires huge investment. Can India and Pakistan afford such huge investment? By providing so, can they risk an unbearable economic hardship in the long run? In fact, one has to take cognisance into these factors while

arguing in favour a possible MAD variant of deterrence between India and Pakistan.

On the front of arms control, it may be noted that at this early stage of their nuclear and missile programmes, each views its missile programme as an important means of conferring prestige on its technical capabilities, enhancing its security, and gaining military leverage over the other side. And, therefore, no country is likely to take such efforts seriously until they acquire adequate nuclear forces. However, India and Pakistan may enter into agreement to avoid potential acquisition of defensive and offensive weapons of ABM and MIRV types, highly destabilising ones. But such effort will be complicated due to universality of the problem in general and China factor in particular.

Political Accommodation as a Variant of Détente

As discussed earlier, nuclearisation has not necessarily stabilised India-Pakistan relationship. It is more relevant that the two countries renounce those kinds of actions or policies that lead to frequent crises and confrontations. Needless to mention, all those would be fruitless attempts unless an understanding on Kashmir issue is reached. However, given the inflexible position and uncompromising stakes of the two countries on Kashmir, resolution of Kashmir dispute is unlikely in the near future. Therefore, a realistic and rational option may be political accommodation on Kashmir, i.e., the two countries may learn to live with Kashmir problem at a lower level of tension without necessarily compromising on, respective position on the issue. That is where lies the relevance of US-Soviet détente.

As a basic foundation to strategic stability, détente on Kashmir will not only impose restraint on actions that trigger crisis and confrontation but also may lay the foundation of confidence building measures (CBMs) on technical matters. In general, as for confidence

building measures on technical matters, *nuclear management* may be the most suitable term aimed at nuclear risk reduction. And those will involve negotiation or agreement on the mode of nuclear deployment, prevention of nuclear exchange by miscalculation, and devising other institutional frameworks for negotiated norms of behaviour should a crisis occurs.

It may be noted that a number of CBMs are existing between India and Pakistan and academics also have done a lot of research on CBMs, suggested to be undertaken to stabilise bilateral relations in general and address nuclear management in particular. Not to speak of CBMs suggested by the academics, even existing CBMs are not functioning well. Maybe, all the existing CBMs are not necessarily directed at addressing nuclear management but their proper functioning may help avoid tensions and confrontations. The Kargil war, just less than six months later of Lahore Summit, indicated how the spirit of nice words produced by the latter was undermined by mutual acrimony and mistrust. In fact, existing CBM cannot function well and no further CBM could be possible to be undertaken if they are not preceded, primarily, by *détente*. In fact, *détente*, as a basic foundation to strategic stability, is very relevant to provide the diplomatic atmosphere for the proper functioning of existing CBMs and for undertaking new more CBMs.

CONCLUDING REMARKS

The paper reveals a mixed relevance of Western theories in their application to the problem of strategic stability between India and Pakistan. In other words, the vocabularies that were used in the context of US-Soviet strategic relationship are not relevant in all the cases in South Asia. Some concepts like MAD, second strike capability and arms control either do not fit at all or are problematic to be applicable in case of South Asia. Some other like the theory of *perception of military advantage* fits while assessing the behaviour pattern of the two South Asian nations and, thereof, the problem of

strategic stability between them in a nuclear environment. While discussing the problem of strategic stability, a futuristic scenario has also been revealed on the basis of some potential developments like the possible introduction of destabilising technologies.

The theory that fits best as a basic foundation of strategic stability in case of India and Pakistan, as discussed earlier is *détente*. However, September 11 has made the way to possible *détente* a difficult process. In the post-1998 period, dialogues like the Lahore Summit (1999) and the Agra Summit (2001), arranged at their own initiative, generated hopes for the facilitation of undertaking CBMs not only at technical levels, but functioning of those CBMs aimed at the settlement of disputes. But in the aftermath of September 11, 2001, it is important to observe that India tends to exploit West's war against terrorism to clamp down on Pakistani militants and rules out Pakistan's offer for dialogue. It has brought India to a more assertive position rather than opting for dialogue with Pakistan. India's assertive position is believed to add intensity to the confrontations that may occur in future as long as America's 'war on terror' continues. And, therefore, the future of resumption of dialogue at bilateral initiatives may depend on the duration of America's anti-terror campaign.

Despite the above-mentioned bar to the resumption of dialogue at the own initiative of India and Pakistan, an active role of the US has been observed in defusing tension between them. Stability in South Asia is not only in the interest of the people of South Asia, but also in the interest of the US. American engagement in Central Asia after September 11 requires stability in the sub-continent so as to engage Pakistan in peace-building in Afghanistan smoothly. Therefore, the prospect of US role as a facilitator, not as mediator, may be higher than it was before. If so, it may be conducive to strategic stability in India-Pakistan security relationship in the long term.

Table 1: India's and Pakistan's Cumulative Projected Fissile Material Stocks and Nuclear Weapons Potential

End of	India		Pakistan	
	WGPu*	No. of weapons	WGUs**	No. of weapons
1995	330	66	210	10
1996	350	70	210	10
1997	370	74	210	10
1998	390	78	500	25***
1999	410	82	610	30***
2000	430	86	720	36***
2001	450	90	830	41***
2002	470	94	940	47***
2003	490	98	1,050	52***
2004	510	102	1,160	58***
2005	530	106	1,270	63***

* Weapons-grade plutonium, in kilograms.

** WEAPONS-GRADE URANIUM, IN KILOGRAMS.

*** Assumes enriched uranium production resumes in 1998.

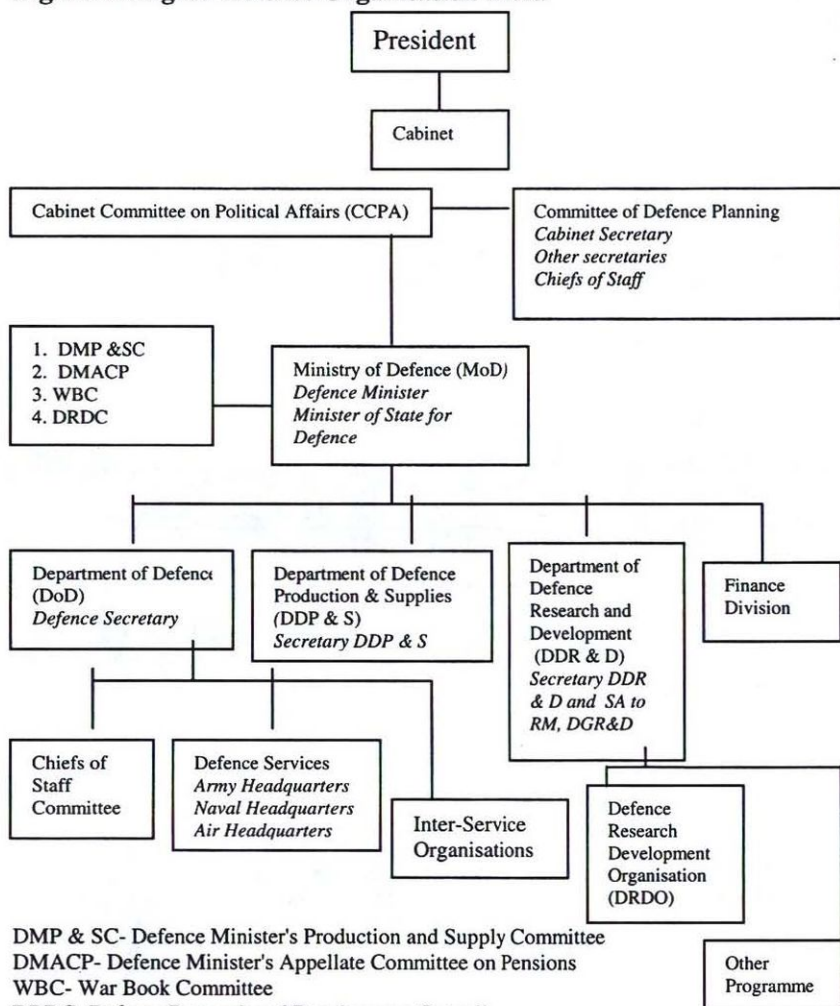
Source: David Albright, "Fact Sheet: India and Pakistan—Current and Potential Nuclear Arsenals", 13 May 1998, *Institute for Science and International Security* (online), available at <http://isis-online.org/publications/southasia/fs-pak598.html>, [accessed 28 March 2002].

Table 2: Indo-Pak Ballistic Missile Capability

India						
Designation	Type	Range (km)	Payload (kg)	Order Date	Delivery Date	Comment
Surya	ICBM	8000+		1983		Development
Dhanush	SLBM			1983	2003	Failed test firing April 2000
Agni 1	IRBM	1500	1000	1983	1998	Development completed 1998 after 3 flight tests between 1989 and 1994. Production 1998
Agni 2	IRBM	2000-2500	1000	1983	2000	Flight test held in April 1999. Test fire held in January 2001. To be inducted into arsenal during 2001-2002.
Agni 3	IRBM	3500	unknown	1983		Research and development
Prithvi 1	SRBM	150	800	1983	1995	Low-volume production continues. 75 delivered late 1996. In service with army
Prithvi 2	SRBM	250	500	1983	1995	25 ordered. In service with Air Force
Prithvi 3	SRBM	350	unknown	1983	1998	Land and naval variants in development
Pakistan						
Haft 1	SRBM	80	500			
Haft 2	SRBM	300	500	1994	1996	Development. Based on Chinese M-11
Haft 3	IRBM	600-800	500	1994	1999	In service. Based on Chinese M-9
Ghauri 1 (Haft 5)	IRBM	1300-1500	500-750	1993	1998	Modified version of the North Korean <i>Nodong</i> missile. First flight test in April 1998.
Ghauri 2 (Haft 6)	IRBM	2000-2300	750-1000	1993	1999	Development. Based on North Korean <i>Taepo-dong-1</i> . Test fired in April 1999
Ghauri 3	IRBM	3000	unknown	1993		Development. Based on North Korean <i>Taepo-dong-2</i> . Test launched in August 2000
Shaheen 1 (Eagle)	IRBM	750	unknown	1994	1999	Reverse-engineered from the Chinese M-9. Initial flight test in April 1999. Development work continuing and production reportedly began in mid-1999
Shaheen 2	IRBM	2000-2500	1000			Unveiled at the Pakistan Day parade on 23 March 2000.

Note: ICBM-Intercontinental Ballistic Missile, SLBM-Submarine Launched Ballistic Missile, IRBM-Intermediate Range Ballistic Missile, and SRBM-Short Range Ballistic Missile. The International Institute of Strategic Studies in London gives SRBM range as 500 km or less, treats IRBM range as 500-5,000 km, and treats ICBM range as anything above 5,000 km. Cited in, Dr. Rodney W. Jones, "Pakistan's Nuclear Posture: Quest for Assured Nuclear Deterrence — A Conjecture," *Regional Studies*, Institute of Regional Studies, Islamabad, Vol. XVIII, No. 2, Spring 2000. P13.

Sources: 1) *The Military Balance 1999-2000*, The International Institute for Strategic Studies, Oxford University Press, London, 1999, Table 19, pp.156-158, Table 53, pp.309-311. 2) *The Military Balance 2000-2001*, The International Institute for Strategic Studies, Oxford University Press, London, 2000, Table 22, pp.163-165. 3) Dr. Rodney W. Jones, "Pakistan's Nuclear Posture: Quest for Assured Nuclear Deterrence — A Conjecture," *Regional Studies*, Institute of Regional Studies, Islamabad, Vol. XVIII, No. 2, Spring 2000. P. 12. 4) *SIPRI Yearbook 2001: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, Stockholm, pp.479-483.

Figure 1: Higher Defence Organisation-India

DMP & SC- Defence Minister's Production and Supply Committee

DMACP- Defence Minister's Appellate Committee on Pensions

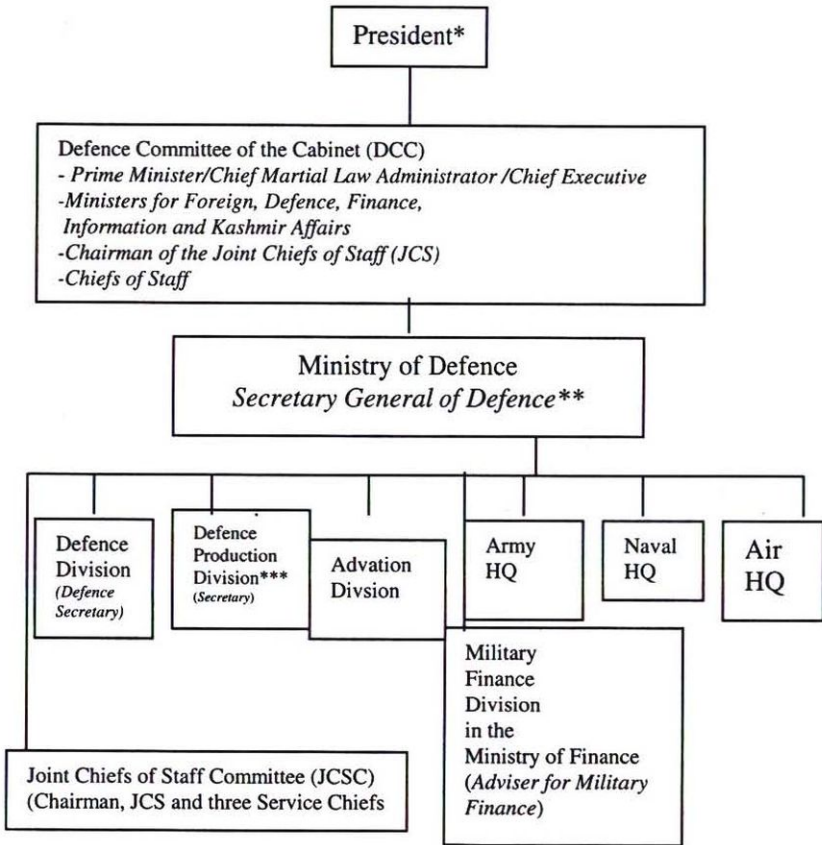
WBC- War Book Committee

DRDC- Defence Research and Development Council

SA-Scientific Advisor. RM-Raksha Mantri (RM), official designation of the Defence Minister
DGR& D- Director General of Research and Development.

Sources: 1) Kotera M. Bhimaya, "Nuclear deterrence in South Asia: Civil-Military Relations and Decision-making", *Asian Survey*, Vol. XXXIV, No. 7, July 1994, p.650. 2) Defence Research Development Organisation, Ministry of Defence, Government of India, (online) available at <http://www.drdo.org> [accessed on 19 June 2001]. 3) Ministry of Defence, Government of India, (online) available at <http://mod.nic.in> [accessed on 17 June 2001].

Figure 2: higher defence organisation-Pakistan



*Currently a military person who took over on 12 October 1999.

**May be military person even during non-military rule.

***The forces have their representatives in this division

Sources: 1) Kotera M. Bhimaya, "Nuclear deterrence in South Asia: Civil-Military Relations and Decision-making", *Asian Survey*, Vol. XXXIV, No. 7, July 1994, p.651. 2) Ministry of Defence, Federation of American Scientists, (online) available at <http://www.fas.org/nuke/guide/pakistan/agency/mod.htm> [accessed 17 June 2001]. 3) *Regional Press Digest on Nuclearisation in South Asia*, BISS, Dhaka, August 1999, p.44. (Source: *Dawn*, Karachi, 26 August 1999). 4) Information collected through e-mail contact with Mr. Zafar Nawaz Jaspal, Research Fellow, Islamabad Policy Research Institute (IPRI) on 27 November 2001.