Chapter –III

INDIA AND THE DETERMINANTS OF SOUTH ASIAN NUCLEAR POLITICS

South Asia has many things in common, culturally, geographically, socially and economically but, unfortunately, not politically. Regional cooperation has, however, been a welcome sign for an enduring peace and prosperity. South Asia has been one of the greatest cradles of human civilization.

The post-independent political history of South Asia has been full of vicissitudes that have ranged from problems relating to demarcation of boundaries, disputed lands and waters, illegal immigration to persistent fears of hegemony by core nations towards the peripheral states.

India stands at the center of the South Asian region with its heaviest population and largest area. In addition to that, one can not forget the geographical position of India when one considers any question relating to Middle East or South East Asia, India inevitably comes into the picture. In addition to this, there are some other countries whose military postures and buildups could impinge on India’s security concerns, notably South Africa and Australia.

Extra-regional involvement in nuclearisation of South Asian Politics

The extra-regional powers that greatly influence the South Asian politics are United States of America, USSR, France and China. Ignoring the Arab world can be an utter ignorance as it plays a significant role in the nuclearisation of South Asian politics. No doubt, the substantial military presence of USA plays a more significant role in the region.

Existence of China and Russia close to South Asia, proximity of American naval facilities at Diego-Garcia and the significant change in the
strategic environment brought about by the implosion of the Soviet Union and the end of the cold war invest this region with a new salience.

Given the existential reality, it is tempting to hypotheses that a geo-strategic construct, “South Asia” is inherently flawed. Being the major player in South Asian region, India’s relations with other five SAARC countries excluding Pakistan are fairly normal apart from a few disputes and problems which are not of so high sensitivity as with the other major player in South Asia, Pakistan.

It is a fact that the creation of Pakistan was strongly supported by the West with the conviction that, “a muslim majority state in North-west India would serve to check Soviet (Russia) expansion in the oil rich West Asian region, so critical for meeting its rising energy and security needs”.¹

South Asia like many other developing regions, is experiencing an explosion of awareness, aspirations and identities. This is the result of shrinking global distances, expanding communication networks and advancing frontiers of technology in almost all the fields that affect human life.²

The explosion of awareness, aspirations and identities in South Asia have also created new and intensified social tensions which have taken the forms of agitations and protest movements on the one hand and violent conflicts and organised insurgencies on the other, along religious political and ethnic lines.³

There is no state in South Asia, perhaps with the exception of Maldives, which is free from such violent conflicts. India and Pakistan, the largest of the South Asian states have the largest number of such conflicts, concomitant to this has been an increasing use of violence in the articulation of demands, political bargaining, territorial secessions and even to capture state power. Increasingly, armed struggle has become a dominant mode of political action.
The influence of superpowers in the South Asian politics has been in evidence since the dawn of bipolarism and rivalarism. The US interests in South Asia are based on three basic considerations. First, to prevent the absorption of the area in Russian influence. Second, USA wanted the maintenance of regional stability by preventing the nuclear proliferation and the third consideration is to contain Indian power in South Asia. The USA seems to have consistently tried to prevent India from emerging as an independent power center.

The USA tried to contain and counter balance Indian power through the instrumentality of Pakistan thereby keeping alive the bitterness, hatred and confrontation originally sown by the Britishers. USA created and strengthened the military machine of Pakistan seeking to establish an artificial parity between India and Pakistan.

The unending contentious issues between India and Pakistan in particular and their other neighbours in general have not helped the matters as far as security in South Asia is concerned. This situation prompted the countries, particularly India and Pakistan, to indulge in an arms build-up, even the very thought of going nuclear, which they ultimately achieved in 1998.4

The United States entered the subcontinent principally through the Middle East. There was a vague but general feeling that by extending military assistance, Pakistan’s friendship could be won and its opposition to the communist nations strengthened.5

While Washington was moving ahead slowly, Pakistan was becoming increasingly anxious to obtain US military and economic assistance. After Prime Minister Liaquat Ali’s death, Pakistan went under the control of men aptly labeled the ‘hierarchs’ the senior military officers and civil servants. In the ‘hierarchs’ the most prominent of whom were Governor General, Ghulam Mohammad, Defence Secretary, Sikandar Mirza
and Army Commander-in-Chief, General Ayoub Khan, had initiated the earlier attempts to secure military assistance from the United States.\textsuperscript{6}

Indian government soon learned about the prospective programme and privately made its objections known. The then Ambassador Bowels of USA in New Delhi also strongly opposed any arms aid for Pakistan. Non-alignment, he was convinced, was a firmly established Indian policy and not \textit{incompatible with US needs in Asia}.\textsuperscript{7} If the United States extend military assistance to Pakistan, it would be exacerbating the tense relations between India and Pakistan, partly by upsetting the established balance of power and partly by adding differences over their approaches to the cold war to their already formidable antagonism. The then Indian Prime Minister Nehru warned that the US-Pakistani alliance would bring the cold war to India's borders with far reaching consequences in South Asia. Determined to protect his domestic position, Nehru directed the Indian congress party to mount public protest and demonstrations against the military assistance program. India tried to dissuade Pakistan by warning that a military pact would damage the chances of reaching a settlement on Kashmir, and to get the United States to hold back by hinting that arms aid might cause India to move closer to the USSR. The Soviets and the Chinese also denounced the proposed programme. In response American News paper, \textit{New York Times}, denounced the Indian government for \textit{"playing with fire"} by the manner in which it opposed the programme. The arms agreement was approved on February 8, 1954 by the National Security Council. The decision was generally accepted by the USA.

While United States went ahead with its plans to aid Pakistan over Indian objections, it was at the same time anxious to limit the damage to US Indian relations. The then President of US, Eisenhower wrote to Prime Minister Nehru, stressing that military aid for Pakistan was not directed against India, assuring him that the United States would come to India's aid,
if Pakistan were ever to use the arms for aggression against India, and offering to give sympathetic consideration to any Indian request for arms. The latter had the opposite effect what he intended. Nehru regarded such assurances as meaningless.

The impact of the US Pakistani arms agreement and alliance on the international relations of South Asia raises a number of questions and reflections on what led each country to enter the relationship.

The primary goal of Pakistan was to obtain military equipment to modernize the armed forces. Pakistani leaders apparently also believed that being an ally of the west would afford them some military security against India.

In return for these benefits Pakistan was willing to abandon its policy of non-alignment or its policy of friendship for all, as it had been called by Pakistani leaders at that time.

The various explanations offered for Pakistani alliance with the United States, leading to her membership of a chain of western – sponsored military alliances against communism could be summed up as, 'Pakistani disillusionment with Britain, the commonwealth and still-born Islamic Bloc, as effective levers against India' and her desire to ensure western support in the United Nations on the Kashmir dispute against India.

Among more persuasive arguments explaining the motivations for Pakistani military alliance, have been those in terms of her need for aid, both economic and military. In fact, Pakistan’s defence outlay increased after her military alliance. In 1954, the first year after the formation of the South East Asian Treaty Organisation (SEATO) of the $ 71.36 million was given to Pakistan, out of which $ 65.31 million were for defence support.

The United States economic aid to Pakistan increased substantially after their military alliance and that the factors determining the aid have
essentially been political. A comparative analysis of United States aid to India and Pakistan suggests that the latter received twice as much per capita aid as India. There are many other evidences to prove these conclusions. Hence, in anticipation of larger amount of American economic aid—both in absolute terms as also in comparison with India—as a possible motivating factor for Pakistan’s military alliance, cannot altogether be ruled out.

The Chinese and American overtures in 1971 to establish a new relationship provide further uncertainties regarding US relations with Asia and with the USSR. Moreover, the Soviet desire to contain China and vice-versa could have some beneficial effects for the United states.

A certain de facto downgrading of American involvement has occurred. The United States did not provide significant amounts of military equipment to either country between 1965-70 despite the willingness of USSR to send arms to both, Pakistan and India and China’s willingness to exclusively supply armament to Pakistan.

Probably nothing has been as important in determining international political relationships in South Asia as the regional conflicts involving the subcontinent itself. These conflicts have created both opportunities and dilemmas for India and Pakistan and for outside powers attempting to advance their own interests and gain influence in South Asia. While anti-colonialism, the desire for close relations with other Asian countries and the need for economic and military assistance have been and will remain important concerns for India and Pakistan, their mutual hostility and Sino-Indian dispute have played crucial roles in the evolution of their foreign policies.

Even if the temporary crisis can be resolved India and Pakistan will still be confronted with the Kashmir dispute. There has always been considerable disagreement among Indian, Pakistani and outside observers on
the importance of the Kashmir issue. There are some other domestic considerations behind India's stand too.

From the signing of the US-Pakistani military aid agreement in 1954 until the Indo-Pakistani war in 1965 the United States supplied its ally with arms worth between $700 and $800 million.\textsuperscript{18} It sold India a modest amount of military equipment before 1962 conflict with China and the 1965 war with Pakistan. To preclude the Soviet Union and China from becoming major arms suppliers seemed both impossible and unnecessary, for the American experience demonstrated the limits of the influence that could be obtained by such means.

As far the support of the West Asian nations to Pakistan's position on Kashmir, countries like Iran, Jordan, Turkey and Indonesia did support Pakistan, especially during the Indo-Pak war of 1965.

Pakistan's politico-military linkages with western powers, especially its bilateral/multilateral defence arrangements with the United States and the forging of a strategic relationship with China since 1963 were perceived by India as constituting major challenge to its national security.

The power struggle between India and Pakistan explains clearly the reasons behind the two countries constituting a significant factor in the foreign policies of each other.\textsuperscript{19}

Civilian and military leaders of Pakistan have repeatedly linked their country's nuclear weapons programme with what they maintain is the core issue of Jammu and Kashmir. This linkage with a territorial dispute distinguishes Pakistan from all other nuclear weapon states. The United States, the Soviet Union, Britain and France had no territorial disputes to settle among themselves. China and Soviet Union did have a border dispute which, in late 1960s even led to border skirmishes. Neither country, however, produced nuclear weapons in order to settle the dispute.
Cognizant of his country’s low scientific industrial level, Bhutto, the then Prime Minister of Pakistan, later entered into a secret understanding with China whereby Chinese assistance in the Pakistani effort was ensured. In his last testament, “If I am Assassinated” he claimed that this agreement was an achievement for which he would be remembered. China assisted Pakistan in the pursuit of the enrichment and the plutonium routes to the bomb, it provide the delivery system well. Unlike the Anglo-American nuclear collaboration that was rudely interrupted for many years before it was restored, and the Soviet nuclear assistance to China that was for a short duration, the Sino-Pakistani nuclear axis is the most enduring of the nuclear age.

Soviet invasion of Afghanistan in 1979 made Pakistan a front line state in the American crusade against what President Reagan calls the ‘evil empire’. Billions of dollars were poured into this crusade. It also opened a new chapter in the Pakistani quest for nuclear weapons. American intelligence sources discovered in 1983 that China has supplied to Pakistan, the complete design of the nuclear device carried by a ballistic missile in its fourth test in 1966.

While relying on India as its main ally in the area, it avoided alienating Pakistan despite the latter’s participation in the US alliance system. The 1960s altered the situations in the aftermath of the Sino-India war (1962), changing US policies towards the region, and a perceived fear of joint US and USSR encirclement, China came to look upon Pakistan as the only reliable partner in South Asian region. According to US reports, Pakistan remains one of the major importers of Chinese weapons. Beijing has reportedly supplied Pakistan with missile related technologies required for missile manufacturing. There have also been reports that China has supplied Pakistan some naval surface-to-air missile systems (CSA-N-2). Pakistan is to receive F-22 frigates from China. And more importantly, the
two countries have signed a Memorandum of Understanding to institutionalise their annual defence and security talks. Judged on this criterion, China continues to be perceived as a reliable ally by the Pakistan government. This view emanates from a history of Chinese political and military support for Pakistan during and after the Indo-Pakistan wars of 1965 and 1971. That China choose to extend military assistance to Pakistan in the 1960s and the 1970s remains part of the “historical memory” Islamabad draws upon for its view of China as a reliable patron state.

This extreme indulgence has to be understood in terms of Beijing’s strategic vision of emerging as the Asian leader that has a direct bearing on the South Asian security environment. To give one example, during November 1985, China’s 3,000 ton guided Missile Destroyer had paid a “friendly visit” to Karachi and Colombo and it completely omitted ports of the largest littoral state, India. This was despite the fact that by this time the Sino Indian ties had overcome their post 1962 problems.

During the 1965, Indo-Pak war, China not only supplied Pakistan military equipment and provided indications of intervening in case India extended war to East Pakistan, but the Chinese media clearly condemned India as the aggressor. The 1971 Indo-Pak war had come at the time when China was obliged to Pakistan. Pakistan’s defeat in 1971 strengthened Bhutto’s conviction. He took the decision that Pakistan should have nuclear weapons capacity two years before India’s 1974 tests in Pokhran.

Pakistan consistently increased its nuclear weapons and missile capacities from 1972, onwards. During 1987 and 1988, Pakistan improved its military missile arsenal, with Chinese help, culminating in a situation where, between 1996 and 1997, Senior Pakistani political and military figures asserted that they were capable of adopting a nuclear and missile posture against India. The firing of the potential IRBM missile, Ghauri in April 1998 and the claims of the creator of the Pakistani nuclear weapons
programme Dr. Abdul Qadir Khan, that, Pakistan had an effective military arsenal, could not be ignored by India.\textsuperscript{26}

Pakistan today has 14 laboratories and nuclear facilities in the Chagai Hills, Kundian, Chashma, Lakki, Isakhel, Wah, Golra Sharief, Rawalpindi, Sihala, Kahuta, Khushab, Lahore, Multan and Dehra Ghazi Khan.\textsuperscript{27}

In May, 1974, when India exploded an atomic device for peaceful purposes. Pakistan made it an object of malicious propaganda against India. On August 20, 1974, Pakistan asked the UN for inclusion of an item entitled. Declaration and Establishment of Nuclear Weapons Free Zone in South Asia. On September 6, 1975 when ‘Defence Day’ was celebrated in Pakistan, leaders stressed the need to have “our own nuclear deterrent”\textsuperscript{28}

The great powers found the South Asian conflict an essential regional component of their own conflict as signified in the cold war, the Sino-Soviet rivalry and the redefined cold war, that exists as a part of the complex process of superpower détente.

Thus the two superpowers in their mutual rivalry came to select one of the two South Asian adversaries as their local favourites. These linkages have since then been fairly consistent in character.\textsuperscript{29}

The Nuclear Curtain in South Asia has finally lifted following multiple nuclear tests conducted by India in May 1998, chased immediately by Pakistan. In an euphoria, both the countries have proudly declared themselves as “Nuclear Weapon States”\textsuperscript{30} but the P-5 (Permanent members of the Security Council and nuclear weapon states) have refused to give them entry into privileged nuclear club, arguing that post-NPT nuclear states are legally debarred from joining it.

The nuclearisation of South Asia caused a great anxiety to the entire world community staunchly condemning the nuclear tests conducted by
India and Pakistan. Like the age-old game of politics, nuclear weapons in South Asia are the off-spring of nuclear politics played by India and Pakistan with the back up of external nuclear powers, particularly USA, UK, China and erstwhile Soviet Union. Moscow’s policy towards South Asia always accorded, and continues to do so to this day, priority to India. Pakistan, the second most important South Asian State, joined the western military alliance system and became one of the staunchest ally of the West, which naturally aroused Soviet hostility and ire. However, even when Soviet relations with Pakistan were at their lowest, the former did not completely shut doors on Pakistan.31

The politico-strategic cold war against the West and on rivalry with the communist China, Soviet Union began to appreciate India’s policy of non-alignment and established itself as an important player in the region. Efforts to wean Pakistan away from the West-and subsequently from China also with offers of trade and aid continued Moscow’s Tashkent diplomacy in January 1966 was the epitome of Soviet effort to take both the South Asian countries with it and play the role of neutral peacemaker between the two. In December 1971 Indo-Pak war which led to the liberation of Bangladesh, Moscow reverted back to a pro-India policy. Earlier, on 9 August 1971, India and the Soviet Union signed a 20 year Treaty of Peace, Friendship and Cooperation that further cemented their ties.32

America jettisoned its non-proliferation policy and turned a blind eye to Pakistan’s nuclear weapon programme. Ishfaq Ahmad, who was chairman of Pakistan Atomic Energy Commission (PAEC) at the time of the tests, had selected Chagai for the tests. Work on building the tunnel at Chagai started as early as 1976. According to Brigadier Mohammad Sarfaraz who led the Special Development Work that built it, the job was completed in 1980. It was 3,325 feet in length and 8 to 9 feet in diameter, and was designed to be self seeking. At least two dozen ‘cold tests’ were
conducted between 1983-1986. KRL (Khan Research Laboratories) conducted its cold test in March 1984, a year after 'PAEC' test. Hafeez Qureshi headed the team that conducted more than a dozen cold tests. A.Q.Khan has claimed that Pakistan achieved the capability to explode a nuclear device in 1984.\textsuperscript{33}

It manifested itself with an announcement made in April 1988 that Pakistan had flight tested two ground to ground missiles, code-named Hatf I and Hatf II with payloads of 500 kg each and ranges of 80 km and 300 km, respectively.\textsuperscript{34}

In the light of what is known about Pakistan's general technological base, it is unlikely that these missiles were indigenously designed as claimed. Active Chinese assistance is therefore, suspected.\textsuperscript{35}

**US, China and Nuclear Pakistan**

A decisive factor in Pakistan's Nuclear Policy is that many aspects of this policy are linked with what happens in India.\textsuperscript{36} After Chinese nuclear test, Pakistan was apprehensive that India would go nuclear. Thus Bhutto, who was the member in Ayoub's Cabinet stated, "If India developed an atomic bomb we too will develop one even if we have to eat grass or leaves or to remain hungry" because there is no conventional alternative to the atomic bomb".\textsuperscript{37}

Pakistan needs US support for its security in view of the changed geo-political situation in the region and also its requirements of a massive arms supply for expansion and modernization of its armed forces.

It is also claimed that the United States helped Pakistan to launch its nuclear programme way back in 1955. According to *Times Magazine*, about 40 Pakistani Scientists who had been trained at atomic facilities in the United States became the leading figures in the field of nuclear physics in Pakistan. America also supplied Pakistan with its first nuclear reactor which began operating in 1965.\textsuperscript{38}
During the early conflict of 1971, American support to Pakistan was amply proved by Nixon’s notorious tilt against India, his ganging up with China with a view to humiliate India, and in the final stage his resorting to gunboat diplomacy by despatching the “Warship Enterprise” towards Bay of Bengal to intimidate India. In the United Nations, the USA and Maoist China did there utmost to block the entry of independent Bangladesh to this world body. It was Pakistan which arranged the Kissinger trip to Beijing which developed ultimately into US-China axis. It is to be noted here that, indeed Zia-ul-Haq, then president of Pakistan got all his nuclear technology and components from Canada, USA, and in later stages from China with the full knowledge and support of America.

Pakistani attempts to develop fission materials date back to 1961 when it entered into agreement with a Belgian Company, Belgo Nuclearire, to set up a hot cell to handle highly toxic radio active materials like Plutonium at the Pakistani Institute of Science and Technology (PINSTECH). Between then and 1976, it set up a 5 MW research reactor at PINSTECH with the US assistance, a 137 MW nuclear power plant at Multan with Belgian/West German collaboration and a fuel fabrication plant at Hyderabad. In 1976 Pakistan concluded an agreement with France for another nuclear power plant at Chashma and also a plutonium processing plant.

Reports about a Sino-Pak nuclear deal appeared as early as June 1976 following an important visit by Bhutto to China. However it was only when US began negotiating a civil nuclear agreement with China, that China’s clandestine nuclear assistance to Pakistan became a controversial issue between the two.

On 19 September 1982, the New York Times reported that the suspension of talks on the proposed US-China nuclear cooperation agreement was because of American suspicion of Chinese nuclear help to
Pakistan and that it was related to nuclear enrichment. Subsequently, the President of Washington’s Nuclear Control Institute, Dr. Paul Leventhal Stated before Congress that, “China had transferred sensitive’ nuclear weapon design information to Pakistan”.43

Pakistan's participation in aggressive alignments caused serious imbalance in its economy. The growing military expenditure made Pakistan more and more dependent on America.44 Pakistan’s overwhelming capacity in receiving nuclear programme construction materials from various quarters other than US had made Washington somehow tough towards Pakistan.

In a trip to China, Z.A. Bhutto publicly announced that he made such an agreement that will decide in the great deal for the Pakistani people. The all weather friendship between the two countries strikingly manifested itself in the critical assistance that China provided to Pakistan in the design and fabrication of nuclear weapon and missile.45

The border war of 1962, between India and China and Indo-pak war of 1965 and the Kashmir question are some reasons that lead China to give more interest in the Pakistan’s nuclear potential. The border agreement and Korakarm Highway buildup are the major prizes that pay Pakistan to China in return of nuclear technology.

A Pakistani nuclear device was reportedly tested at the Chinese testing site at Lop Nor in Xingiang in 1987. By 1992 both Abdul Qadir Khan and then Foreign Secretary of Pakistan had confirmed that Pakistan was a nuclear capable state.46 It was also China which supplied Pakistan with ring magnets, drawings and designs for the manufacture of nuclear bombs. Chinese high temperature furnaces facilitated Pakistan manufacture of tritium moulds for the nose cones of the missiles that would carry warheads. The US has been the source of material such as Zirconium and Krypton electric Triggers for nuclear bombs.47
If one reads between the lines, it becomes clear that Sino-US intentions of permitting Pakistan to become a nuclear power are a part of the geo-political strategy of initiating a nuclear arms race in this region.\textsuperscript{48} There are excellent studies carrying documentary evidence of the nature of Chinese assistance in developing Pakistan's nuclear and missile capability.\textsuperscript{49}

China's selective proliferation despite her stamp of approval to the indefinite extension of the NPT in May 1995 and the CTBT in September 1996 remain, while it continues to regard Pakistan an important diplomatic asset for its commercial interests involved in the sensitive export deals.\textsuperscript{50}

**Sino-Pak collaboration and its impact on Indian Security**

The Indian nuclear test in 1974 made Pak authorities frantic to have nuclear weapon capability and the required R & D effort under the able scientist Dr. A.Q. Khan was intensified.\textsuperscript{51}

The Chinese rationale to support Pakistani nuclear capability must consider the implications on India. A nuclear Pakistan compel India to become a full-fledged nuclear weapon state, a development China would never encourage.\textsuperscript{52} So from a Sino-centric view, Sino-Pak nuclear cooperation had considerations other than India too. But from the Pakistani angle the Islamic Bomb eliminated the nuclear element in Indo-Pak relations.

In September 1985, after the *Washington Post* in February, 1983 cited Chinese assistance to Pakistan, the Indian Chief of Army Staff General Vaidya referred to the threat arising from China-Pak nuclear collaboration.\textsuperscript{53}

It is not the Chinese threat or territorial dispute between India and China *per se* as the only concern of India but it is Sino-Pakistan collaboration in the nuclear and missile field that has caused serious anxiety among the policy makers in India. To that extent Pakistan is seen as an extension of Chinese threat.\textsuperscript{54}
The creation of Bangladesh and the PNE of India in 1974 made Beijing to enhance its commitment towards Pakistan and to accept latter's persistent request to assist it in building its independent nuclear posture which was finally agreed to in the Sino-Pak agreement of September 1974.55

China has continued to be a major influence in determining the nature and profile of South Asian security environment which has seen its own ups and downs, thus, accordingly affecting China's leverage vis-à-vis South Asian Countries.

As a result of India's PNE strategic development on the sub-continent, China expressed a desire to provide Pakistan protection against "nuclear threats and nuclear black mail".56 Also it appears that Pakistan formulated a response to the Indian nuclear explosion through the proposal for a "nuclear weapon free zone in South Asia."

The Chinese Vice-Premier supported Pakistan's proposal for zonal non-proliferation, but India did not favour the suggestion due to its disagreement with her disarmament philosophy. Therefore, Chinese insensitivity towards India needs to be viewed in the broader framework of China-Pakistan nuclear relations.

The then prime minister, Z.A. Bhutto visited Beijing in May 1976 with his Scientific Advisor Dr. Abdus Salam. The Two governments concluded two agreement relating to scientific and military cooperation between them. When General Zia-ul-Haque took over from Bhutto, the proposed nuclear project was put on the backburner. But General Zia too continued with the same stand.

Subsequently a crucial consideration that enabled the resurgence in Sino-Pakistan nuclear relations was the convergence of US, Chinese and Pakistani interests due to Soviet presence in Afghanistan since April 1978.57

The United States government and many western analysts believe that China assisted Pakistan in developing nuclear explosives prior to its
accession to the NPT in 1992. In 1983, US intelligence agencies reported that China had transferred a complete nuclear weapon design to Pakistan along with enough weapons-grade uranium for two nuclear weapons. China also reportedly helped Pakistan operate Kahuta Uranium Enrichment Plant. On December 31, 1991, China signed a contract to build the Chashma 300 MV nuclear power reactor for Pakistan.

China insisted that "the cooperation between China and Pakistan in the sphere of nuclear energy is entirely for peaceful purposes. In 1993 China and the International Atomic Energy Agency (IAEA) signed an agreement to apply IAEA safeguards to a Chinese nuclear power station sold to Pakistan (INFCIRC/418). In 1994, China reportedly turned down a Pakistani request to "correct" Pakistan's nuclear weapons and to use the Chinese Lop Nor testing range. Despite these developments, China was still providing equipment and technology to Pakistan including its assistance in the construction of a 40 MW reactor and plutonium for its weapons program. A major proliferation controversy regarding Chinese nuclear trade with Pakistan includes the late 1995 export of about 5,000 specially designed ring magnets from the China Nuclear Industry Corporation (CNEIC) to an unsafeguarded Pakistani nuclear laboratory, which was allegedly involved in nuclear weapons work. China initially denied that the sale had taken place. However, in talks with US officials, China eventually privately admitted that the sale had taken place.

A 1997 report by the Director of Central Intelligence Agency stated that China "was the primary source of nuclear related equipment and technology to Pakistan" during the second half of 1996, since then, the United States has argued China to end its nuclear cooperation with Pakistan entirely.

The US Arms Control and Disarmament Agency (ACDA), in its 1997 and 1998 annual reports on arms control compliance, stated that, based
on Beijing’s long standing nuclear ties with Islamabad, it was unclear whether Beijing had broken off its contacts with elements associated with Pakistan’s nuclear weapons program. China and Pakistan have continued to argue that their nuclear cooperation is entirely legitimate and for peaceful purposes. Nevertheless, US concerns about Sino-Pakistani nuclear cooperation have persisted through out 1998 and into the new millennium.

New insights into the level of Chinese assistance to Pakistan came about in early 2004 as a result of on-site investigations into Libya’s nuclear weapons program, following Muaammar al Qadhafi’s dramatic reversal on WMD programs in late 2003.

Chinese nuclear exports and assistance to Pakistan was a contentious issue in Sino-US relations over the years. There were significant differences between Washington and Beijing regarding nuclear proliferation and peaceful use of nuclear energy. US-post cold war foreign policy has focused on proliferation of WMD as a major threat to US interests. China criticized the policies of industrialized countries that restrict and deny the legitimate demands of developing countries for peaceful use of nuclear energy and technology transfers for economic development under the pretext of preventing nuclear proliferation.

Following the India and Pakistan nuclear tests in 1998, new signs emerged that China had permanently curtailed its military nuclear cooperation with Pakistan. In remarks to a seminar in New Delhi on Sino-Indian relations, China’s ambassador to India Zhou Gang reiterated that China had not assisted Pakistan’s nuclear program, stating “non-existent is the issue of China’s nuclear and missile proliferation to Pakistan” and that “all cooperation between China and Pakistan in the field of nuclear energy is under International Atomic Energy Agency safeguards.” Zhou acknowledged that China was aware of India’s concerns regarding China’s nuclear assistance to Pakistan and that Beijing had taken a positive, flexible and
pragmatic approach and made proper adjustment of certain policies concerned.\textsuperscript{61}

Since the terrorist attacks of 2001, and the subsequent war in Afghanistan, Pakistan has been viewed by the United States as a strategic ally in the region. Most of China’s current assistance to Pakistan appears to only cover civilian facilities that are under IAEA safeguards. Since 2001 and the change in U S – Pakistan relations, reactions in Washington of China’s assistance to Islamabad have been muted – although the discovery of Chinese nuclear weapons designs in Libya in 2004 cast an embarrassing shadow on the administration’s selective non-proliferation efforts.

**Nuclear Pakistan and Muslim World**

Z.A. Bhutto took over the reins of Pakistan in the last days of 1971 in the midst of turbulence following separation of its eastern wing. In his first address to the nation he argued for Pakistan to build a new identity based on closer association with Islamic Countries in the West Asia. As a Shrewd Statesman he believed that Pakistan with its abundant skilled manpower and industrial infrastructure could play a leading role in the affairs of Muslim world. Bhutto was quoted as saying:

“"There was a Christian bomb, A Jewish bomb, and now a Hindu bomb, why not an Islamic bomb""\textsuperscript{69}

Bhutto travelled extensively to several Arab countries to mobilize the resources for his ambitious plan and found an enthusiastic partner in Libya. The Libyan leader used both his wealth and influence in helping Pakistan’s nuclear procurement operations in Europe during 1975-77. According to Khalid Hassan, a close associate of Bhutto, special courier services were established to transport Libyan hard cash to Pakistan. The Economist of London reported Libyan pressure on some of the European industries to comply with Pakistani orders for nuclear equipment.\textsuperscript{63}
1972 and 1974 Pakistan had persuaded Libya, Saudi Arabia and to some extent Iraq to fund its nuclear weapon programme.\textsuperscript{64}

To quote Bhuto again: "We know that Israel and South Africa have full nuclear capability. The Christian, Jewish and Hindu civilizations have this capability. The communist powers also possess it. Only the Islamic civilization was without it, but that position was about to change" (with the advent of Pak nuclear programme).\textsuperscript{65}

After the 1973 oil crisis, the Arab countries had suddenly turned rich and influential. Libya’s patronage however, ended with General Zia’s take over in Islamabad in July 1977. Instead, Saudi-Arabia became Pakistan’s new financial patron. In January 1981, the Sunday Times reported about a secret agreement for Saudi gift of $800 million to Pakistan “to help it (Pakistan) make a hydrogen bomb”. The report added that Libya, which had fallen out after Bhuto’s ouster, had insisted that Libyan scientists be given access to Pak nuclear research laboratories. General Zia promptly rejected the demand.\textsuperscript{66}

UAE and Nigeria were also closely involved in different ways. While UAE provided funds for Pak venture, Nigeria supplied uranium to Pakistan. The \textit{New York Magazine}, quoting US intelligence reported in May 1981 that Pakistan and Turkey had agreed to conduct a nuclear Test in the latter’s soil to avoid detection.

In July that year reports appeared saying that Turkey was acting as a conduit between western firms and Pakistan for electronic gears.

Malaysia also was sympathetic to Pak plans and also extended some indirect help in routing nuclear items to Pakistan. There is an extensive nuclear cooperation between the two countries.\textsuperscript{67}

\textbf{Determinants of India’s Nuclear Policy}

India’s nuclear programme has to be understood in the light of India’s defeat at the hands of Chinese in 1962, and particularly the Chinese
nuclear test on October 16, 1964. In a similar view Pakistan’s nuclear programme was a reaction to India’s peaceful explosion of 1974 and desire to neutralise India’s conventional weapon superiority which was clearly demonstrated in 1971 war.

India’s peaceful nuclear programme began soon after her independence. At that time the focus was to use available nuclear energy for the development of the nation. But the Sino-Indian border war and the Chinese nuclear explosion compelled Indian policy makers to reconsider their way of utilizing nuclear energy. India conducted the first nuclear test in 1974 at Pokhran on may 18. Exactly 24 years after on May 11, 1998, India again conducted the second nuclear test. India made it clear that it would use its nuclear energy only in self defence.

In fact, the Indian nuclear programme began even before India achieved its independence largely through the efforts of Homi-J. Bhabha. The Indian Atomic Energy Commission (IAEC) was created shortly after independence, about the same time that India opted for a strategy of self reliance in producing military equipment with Bhabha as its first Chairman. India embarked upon an extensive programme of civilian research.

The Government of India after conducting 1998 tests made it clear that it would use its nuclear capabilities only in self defence. The government of India further pointed that the tests were not directed against any country. The Prime Minister of India on May, 15, 1998, declared that India is a nuclear state. Thus in view of the Government of India, India had to place the security scenario in a global perspective and not just an unseemly arms race with neighbouring Pakistan.

The South Asian region has been and still remains – an area of actual and potential conflicts. Relations among states in the region suffer from mutual distrust and suspicion. Knowing the ground realities and low per capita income and economic backwardness of the region the extra-
regional powers possess great threat to the security and stability of the region. India alone has common frontiers with all other South Asian countries, and lies in the middle of the US, China and Russian foreign policies.

The determinants of India’s nuclear policy can be viewed in the broad context under certain subheadings:

**Impact of China’s military modernization and nuclear capability**

China exploded a nuclear device at the Lop Nor test site in Sinkiang on October 16, 1964. The causes of conflict between India and China were many. They ranged from easily discernible disputes over territory and threats to security, through more complex questions of national ideology, to abstract considerations on status in the international hierarchy of power.

Domestic policies in India were affected by the clash, especially policies concerning minorities, communities, dissidents on the far left and tribal peoples in north-east.

Indian and Chinese interests first clashed when Chinese forces occupied Tibet during the 1950s with the failure of Indian and Chinese officials to resolve the Indo-Tibet border problems, through lengthy negotiations in 1960. Forceful assertions of claims by both sides followed by the border war of 1962.

The emergence of a border dispute between the two countries involving about 125,000 sq.km. of territory in about 400 km of border, eroded peaceful co-existence, China occupied approximately 33,000 sq.km. of territory in the area inside Indian territory.

There is little doubt that Chinese nuclear capabilities are significant. Beijing already possesses a rudimentary strategic triad consisting of long range bombers, one nuclear ballistic missile submarine and several classes of nuclear armed ballistic missiles ranging from short range to
intercontinental systems. The bombers and the sea based nuclear force, however, represent capabilities that should be of minimal concern to India.

As early as 1988 a senior Indian military officer analysed in some detail how the Chinese missile deployments supposedly occurring in Tibet could undercut larger Indian defence strategies in the region. The following year, the then Indian defence minister K.C. Pant affirmed that China had in fact deployed missiles in Tibet oriented primarily against India.

The Chinese have a full spectrum of rockets and missiles as given in the Table.

Table: Nuclear weapons of China

<table>
<thead>
<tr>
<th>Designation</th>
<th>Missiles</th>
<th>Propulsion</th>
<th>Range (km)</th>
<th>Pay load</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dong Feng-2 (CSS-1)</td>
<td>1000</td>
<td>Liquid</td>
<td>1,2000</td>
<td>Single war H</td>
<td>1964</td>
</tr>
<tr>
<td>Dong Feng-3 (CSS-2)</td>
<td>150</td>
<td>Liquid</td>
<td>2000-3000</td>
<td>1-3 Re-entry vehicle</td>
<td>1969</td>
</tr>
<tr>
<td>Dong Feng-4 (CSS-3)</td>
<td>30</td>
<td>Liquid</td>
<td>5000-7000</td>
<td>Single war H</td>
<td>-</td>
</tr>
<tr>
<td>Dong Feng-5 (CSS-4)</td>
<td>20 Launchers 10</td>
<td>Liquid</td>
<td>11,000</td>
<td>Single War H</td>
<td>1979</td>
</tr>
</tbody>
</table>


Pakistan’s Nuclear Potential

From near the tomb of Ghauri in Malhot, in Pakistan’s Jhelum district, rose missile named after him on April 6, 1998 symbolising the triumphant spirit of the warlord who had defeated Prithviraj Chauhan in the last decade of the twelfth century. The President of Pakistan, Mohammad Rafiq Tarar proclaimed it to be a prelude to Ghaznavi, Babri and Abdali missiles, all named after warriors of the past who had intruded into India from the north-
west to wreak havoc on unsuspecting Indian rulers. Ghaznavi was an invader who destroyed the Somnath Temple. Babar was the founder of the Mughal dynasty in India, which ruled large parts of the country for nearly three centuries, while Abdali had defeated the Marathas in the third battle of Panipat in 1761.81

According to Professor Zafar Iqbal Cheema of Qaid-e-Azam University, Islamabad, Pakistan's nuclear history began with Gen. Ayub Khan's take-over of the government in 1958. Z.A. Bhutto and his supporters were in favour of developing nuclear capability with its potential for an eventual nuclear weapons option.82

It appears that Pakistan's introduction to nuclear technology had begun even earlier because, when in Dec. 1953 president Eisenhower made the "Atoms for Peace" proposal encouraging the use of nuclear energy for peaceful purposes, the proposal was received in Pakistan with enthusiasm.83

US influence on nuclear developments in Pakistan was evident. Between 1954 and 1956 the US sponsored Atoms for Peace Exhibition toured Pakistani cities commending the uses of atomic energy and provided Pakistan about 70,000 items of information on the subject; thereby boosting the atomic energy constituency in Pakistan.84 Between 1955 and 1965, several hundred Pakistanis were reported to have been trained in foreign research institutions including Argonne, Oak Ridge and Brookhaven laboratories in USA and also Maxwell in U.K. Leonard Spector, a well known expert on South Asian affairs, has reported that amongst these were thirty seven nuclear scientists, the number went up to 120 by 1974.85

Pakistan's policy on international issues related to arms control and disarmament during 1960s and 70s was still under formulation. Pakistan signed the Partial Test Ban Treaty in 1963, but did not ratify it. The reasons offered pointed to the flaws in the treaty saying that it prohibited nuclear weapon tests in the atmosphere, outer space and under water only. It did not
prevent the nuclear powers as parties to the treaty from further developing and refining their nuclear arsenals. These were valid reasons which enabled Pakistan to retain its option. India, which had been in the forefront during the negotiations, had signed and also ratified the treaty.\(^\text{86}\)

According to an American news agency, some US intelligence officials assessed that, Pak nuclear arsenal was vastly superior to India’s. They had estimated that Pakistan had more than a hundred warheads while India’s number was around 25. Pakistan had also more missiles to deliver nuclear payloads than India\(^\text{87}\), they said.

Naturally Indian authorities and scientists dismissed the news as fabricated by Pak supporters in USA. The US officials could have invented this to coerce India into signing the CTBT, they argued.

Actually, the Pak nuclear weapon programme is handled by two parallel outfits. The Pakistan Atomic Energy Commission (PAEC) and the Kahuta Research Laboratories (KRL). Cold tests of nuclear devices (working without an explosion) by PAEC under the leadership of Dr. Mubarakmand and by KRL led by Dr. A.Q. Khan were successfully conducted as far back as 1983 and 1984 respectively.\(^\text{88}\) The Pak armed forces have been fully involved with the countries nuclear programme where as in India the scientists monopolise the programme while the prime minister and his office take all the decisions.

Many Indian strategists and scientists have long held Pakistan’s nuclear programme in a low esteem and thus were surprised by its claim to have tested six nuclear devices between 28 and 30 May 1998.\(^\text{89}\) Records assiduously maintained and collected by Centre for Non-proliferation studies in the Monterey Institute of International Studies, California, indicate that Pakistan went into the high gear to become a nuclear weapons state from 1977 onwards after having collected the basic material necessary to launch its tests of 28 and 30 May 1998.\(^\text{90}\)
Pakistan poses a considerable threat in the short haul. This is due to the expectations entertained in the country of the moral impact of her acquisition of nuclear weapons and the resultant exuberance in fostering and supporting terrorism and insurgency in Kashmir, Punjab, and other parts of India. An estimated account of nuclear warheads and missiles by Pakistan is shown in the following table.

**Table : Nuclear Weapons – Pakistan⁹¹**

<table>
<thead>
<tr>
<th>Designation</th>
<th>Propulsion</th>
<th>Range (km)</th>
<th>Payload (kg)</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haft I</td>
<td>Solid</td>
<td>80</td>
<td>500</td>
<td>1987</td>
</tr>
<tr>
<td>Haft II</td>
<td>Solid</td>
<td>280-300</td>
<td>500</td>
<td>1988</td>
</tr>
<tr>
<td>Haft III</td>
<td>-</td>
<td>1000</td>
<td>-</td>
<td>R &amp; D</td>
</tr>
<tr>
<td>M-II (Import China)</td>
<td>Solid</td>
<td>300</td>
<td>500</td>
<td>1991</td>
</tr>
</tbody>
</table>

Pak nuclear weapon programme has been a do or die venture of beg, borrow or steel. The China and North Korea helped Pakistan with equipments and knowhow. Pakistan surrendered territory in Pak-occupied Kashmir to China to build the Karakoram highway between the two countries which facilitated transport of arms and equipments by road. Though China helped Pakistan in its nuclear weapon endeavors, the assistance was covert and seemingly within the limits of NPT.

Of course, Pakistan's nuclear weapon programme is India centric. Pakistan has not only declared that its nuclear weapon programme is a reaction to India, but also has expressed its readiness to dismantle its weapon capabilities if India is also willing to do so.

The 'insecurity syndrome' in Pakistan’s policy has been prominent from the very beginning as Ayoub Khan said:
"We have our security problem with India since partition. India’s foreign policy and its policy towards Pakistan has been offensive and non-cooperative".  

Bhutto’s dream of attaining parity with India in nuclear field has fructified. His statement of eating grass for a thousand years but getting a Islamic Bomb became a reality in May 1998, when in response to India’s five detonations of nuclear devices, Pakistan answered by exploding six. General Pervez Musharraf, on January 4, 2000 stated that Pakistan would not hesitate to use nuclear weapons if its security was threatened. In his words, “If the security of Pakistan is threatened, surely we would not allow Pakistan to die. That will not be allowed”. “Surely Pakistan’s security will never be compromised.”  

After December ‘13, 2001 attack by terrorists on Indian Parliament things reached a flashpoint. India deployed its forces along the borders with Pakistan. Pakistan too responded immediately. Reports from Pakistan indicated that by early January missiles directed against India were put in place. M-11 and M-9 missiles with strike range varying from 600-750 km, Ghauri I and Ghauri II with a range of 1150-1500 Km and Shaheen II with a range of 2500 km were ready for action. India’s missile system too was placed in strategic positions. The Indian Defence Minister George Fernandez said, “At the movement we are concentrating on Agni II missile with a range of 2500 km. We do not have any plans now for a longer range missiles.”  

History proves that Indo-Pak decision making is heavily influenced by the past experience of two nations dating back mainly to pre-independence period. The ideological differences between the majority communities of Pakistan and India have been exploited by fundamentalist elements in both the countries to create malice and hatred which has etched stereotyped images to be exploited at will by the political leaders.
Nuclear cooperation between Pakistan and North Korea

The North Korean-Pakistan nuclear link has all but played out since it first surfaced after Pakistan's nuclear weapon tests at Chagai, near the Afghan border in, May 1998, many Pakistani sources claimed that one of the nuclear devices tested was of N. Korean origin and that N. Korean nuclear scientists were present during the testing. As this information was not corroborated by independent sources. It is to be placed under way for confirmation.

In an article on Pakistani Inter-Services Intelligence (ISI) disseminated on August 1, 2001 it was reported: Joint Intelligence Miscellaneous: Responsible for covert actions in other parts of the world and for the clandestine procurement of nuclear and missile technologies. Major General (retired) Sultan Habib, an operative of this division who had distinguished himself in the clandestine procurement and theft of nuclear material while posted as the defence attache in the Pakistan embassy in Moscow from 1991-1993, with concurrent accreditation to the central Asian Republics (CARs), Poland and Czechoslovakia has recently been posted to N. Korea as ambassador to oversee the clandestine nuclear and missile cooperation between N. Korea and Pakistan. After completing his tenure in Moscow, he had coordinated the clandestine shipping of missiles from N. Korea, the training of Pakistani experts in the missile production and testing facilities of N. Korea and the training of N. Korean scientists in the nuclear establishments of Pakistan through Captain (retired) Shafqat Cheema, third Secretary and acting head of Mission in the Pakistan embassy in N. Korea from 1992-1996.95

Before Major General Sultan Habib's transfer to ISI headquarters from Moscow, the N. Korean missile and nuclear cooperation project was handled by Major General Shujjat from the Baluch Regiment Division of the ISI for five years. On Capitan Cheema's return to headquarters in 1996,
the ISI discovered that in addition to acting as the liaison officer of the ISI with nuclear and missile establishments in N. Korea, he was also earning money from the Iranian and Iraqi intelligence by helping them in their clandestine nuclear and missile technology and material procurement not only from N. Korea but also from Russia and Central Asian Republics. On coming to know of the ISI inquiry into his clandestine assistance to Iran and Iraq he fled to Xingjiang and sought political asylum there but China arrested him and handed him over to the ISI. What happened to him subsequently is not known.96

Pakistan continued to buy missiles from N. Korea using nuclear technology as payment until as late as autumn 2002, resulting in sanctions against a nuclear laboratory, but not the Pakistani government. According to CIA reports from 2002, Pakistan has continued to buy short and intermediate – range ballistic missiles from N. Korea that are capable of reaching every major city in India. In exchange, Pakistan is providing N. Korea with technology and machinery to make highly enriched uranium usable in nuclear weapons. In March 2003, Washington imposed new sanctions on N. Korea for the clandestine missile supply relationship, but none on Pakistan.

The National Intelligence Estimate released to high level U.S. government officials in late 2002 revealed that Pakistan has been sharing sophisticated technology, warhead-design information and weapons testing data with Pyongyang beginning in 1997, under the then Prime Minister Nawaz Sharif. A relationship between the two countries has been in place since 1970s when then Pakistani leader Zia-ul-Haq began buying missiles from pyongyang. This relationship continued until the mid 1990s, when the Pakistani economy began to falter. Instead of discontinuing the purchase, Prime Minister Benazir Bhutto began to barter for the missiles, trading high speed centrifuge machines, blueprints for the production of nuclear weapons
and other materials for the manufacture of nuclear weaponry to the N. Korean government.

General Pervez Musharraf denies that any such trade has occurred since the overthrow of Bhutto government in 1998. Speaking to reporters in Paris, Musharraf said, “There is no relationship with N. Korea either on conventional or nonconventional level. We purchased surface to air missiles from N. Korea sometime back and now we are producing the same type of missiles at home. There is no conventional or unconventional agreement with pyongyang.” However in July 2002, U.S. intelligence tracked C-130 Cargo plane, that Washington had provided to Pakistan to help fight the al-Qaida terror organisation as it flew to N. Korea, where it picked up missile parts and returned to Pakistan. Trade with Pakistan may explain how a country as poor and isolated as N. Korea could produce nuclear weapons in such a short time span.97

Both countries have sought to develop long-range ballistic missiles to carry their warheads. Both have also ties with China – seen by many experts as a key exporter of nuclear & missile know-how. Suspicions are one thing but now the Americans seem to have concluded that they have hard evidence showing Pakistan’s support for North Korea’s nuclear weapons programme.

**Nuclear Strategy for India**

**India’s Nuclear Policy** : India started research in nuclear physic as early as 1944 and was on an upward trend in the 1950s. Soon after independence China at that time was neither a nuclear power nor seen as a threat to India. From neighbouring powers, the only problem was Pakistan’s sponsoring a tribal invasion’ of Jammu and Kashmir in 1947; and subsequently introducing their regular forces openly, and this did not dictate the acquisition of nuclear weapons for national security.
It can be said now that if a decision to become a nuclear weapon power had been taken in 1962 at the time of war with China, India could have become a legal nuclear weapon power before the arbitrary deadline imposed by the Nuclear Non-proliferation Treaty.

Notwithstanding the tactical military defeat of India, the policy of using nuclear technology only for peaceful purposes continued unquestioned, till 1964 when China carried its first nuclear test. Despite it, in the mid 1960s, during the early years of Indira Gandhi’s prime ministership, India tried hard at the meetings of the 18 Nations Disarmament Committee in Geneva to get an NPT that would safeguard its security from the nuclearized China. It wanted effective and credible measures included in the treaty that would insure non-nuclear powers against the threats or use of nuclear weapons (by nuclear powers). Finally, when the NPT took shape, India did not sign it for two reasons; first an imbalance of obligations between nuclear and non-nuclear powers, making the treaty unequal and discriminatory; and second, inadequate security guarantees to the non-nuclear powers.

China launched its first satellite in 1970 “The demand for India to go nuclear in its defence... found wide and persistent expression on more than one occasion”. A sample survey carried out by the Indian Institute of Public Opinion found that two thirds of the respondents across the board, wanted India to go in for nuclear weapons.98 In mid 1970s, the late Dr. Vikram Sarabhai who was then the Chairman of the Atomic Energy Commission (AEC) announced a 10 year profile for a balanced but modest nuclear and space programme. This included one or more underground 'peaceful nuclear explosions'.

The government adopted this profile in 1971. The political implications were taken note of and interpreted abroad. A British newspaper reported that India had “.....decided to start work on the development
of atomic explosives and could set off her first atomic bomb in less than two years.” In June 1971 the Indian PM said in Mauritius, “we have discussed this question deeply and rejected the idea of making the bomb”.

After the explosion at Pokhran in 1974, the Indian government continued to assert that it would use nuclear technology only for peaceful purposes. Pakistan the immediate neighbour doesn’t remain deaf. A memorandum of the US State Department of 1983 shows quite clearly, that as of 1983, there was unambiguous evidence that Pakistan was actively pursuing a nuclear weapon programme.

During the 1980s and into the 1990s the Indian approach was to hope for the USA to somehow stop the Pakistani nuclear programme. At the same time there was this strange reluctance to face up to both the evidences of the rapid progress made by the Pakistani programme as well as America’s turning a blind eye to it. The culmination was of course the non-articulation of a new policy by India, even after the US President refused to certify Pakistani nuclear virginity.

The Nuclear Threats to India: The nuclear threat to India has to be assessed to analyse the threats it faces. We have to classify the type of nuclear power that could pose the threat and the probability of such a threat being posed in the time period that is under consideration. To facilitate such an analysis, classification of nuclear powers is most essential.

Table: Classification of Nuclear Powers

<table>
<thead>
<tr>
<th>Large Nuclear Powers (LNP)</th>
<th>Medium Nuclear Power (MNP)</th>
<th>Small Nuclear Power (SNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>China</td>
<td>Israel</td>
</tr>
<tr>
<td>Russia</td>
<td>France</td>
<td>India</td>
</tr>
<tr>
<td>Ukraine</td>
<td>Britain</td>
<td>Pakistan</td>
</tr>
<tr>
<td></td>
<td>Kazakhstan*</td>
<td>Belarus*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South Africa*</td>
</tr>
</tbody>
</table>

*Likely to be included, excluding from the present analysis
Threat from the large Nuclear Powers: A few years ago, analysis of the nuclear threat from the super powers to regional, medium and small powers was comparatively a simple matter. Today, with the disappearance of the USSR, it has become quite complex. What is clear is, that for the present, there is only one pre-eminent military power in the world, the USA. It is a large nuclear power with world-wide strategic nuclear reach, which also has a global reach with conventional military power. However, there is no major nuclear threat from the USA to India as their clash of interests in the region is far from possible. If Russia becomes a powerful regional power, a clash of interests between it and India appears unlikely as their spheres of interests will not clash anywhere. On the other hand, there are chances of Russia soliciting India’s support if it has serious policy differences with either the USA or China in future.

The Threat from Medium Nuclear Powers (MNP): China has made a ‘No First Use’ declaration as far as nuclear weapons are concerned. The historical record from 1964 to date has also not shown a Chinese penchant for nuclear blackmail or coercive diplomacy. However, in extrapolating to the future, one must exercise caution.

With a border problem between India and China there could be a major conventional border war only due to miscalculation or some unforeseen reason. In such a case if the Chinese were to face a very adverse tactical situation, such as an Indian counter-offensive that has progressed beyond a national limit into Chinese territory there could be high probability of a nuclear threat to India. That too is only if the Chinese decide to go back on their ‘No First Use’ pledge.

The Threat from Small Nuclear Power: Pakistan poses a considerable threat to Indian security. Though India was the first to conduct a nuclear test, the country has not inducted weapons into its armed forces. A draft nuclear doctrine has been prepared by the National Security Advisory Board
(NSAB), but has not been approved by the cabinet as yet. In Pakistan, bombs have been designed to fit in F-16 fighter air crafts and since the military is in power, there is no need for elaborate discussions and political approval to take possession, deployment and even launching of the nuclear weapons.

All this shows that though the Pak weapon capability is comparatively smaller than India’s, the danger from it is formidable. If India is a nuclear elephant, Pakistan is a nuclear tiger.

With its democracy crushed by military dictatorship, its economy has become bankrupt and regional aspirations is pulling the country apart, Pakistan is a failed state. But all this actually makes Pakistan more dangerous, it is difficult to visualize as to what it would do with its nuclear weapons in its frustration. The Pak nuclear threat is very much there and can not be wished away by cold war comparisons of the balance of terror promoting peace.

India and the Super Powers : The Structure of the Nuclear Facilities

Indian attitudes and policies concerning science in general and nuclear science in particular originated in the 1930’s in the context of a changing state form, i.e., that is there was an expectation that British colonial rule in India was coming to an end and independent India was emerging.103

India’s scientific establishment has emerged as one of the largest pools of scientists in the world but, strictly speaking, it is not a scientific community with a shared set of common interests and a common approach to scientific questions.

Nehru and important scientists defined two relationships: (1) between science, technology and economic development; and (2) between peaceful development of Indian atomic energy and nuclear weapon capability, Nehru
was the sole formal decision maker in Indian foreign and scientific affairs upto 1962 because he directed the Foreign Office and held the atomic energy and planning portfolios simultaneously. He emphasized the importance of secrecy in atomic affairs, and thus immunized himself and his government from public scrutiny.\textsuperscript{104}

Despite the secrecy, the autonomy of the dominant scientist – state coalition of the Nehru era was fractured as a result of increasing political pressures in Indian politics and the rise of bureaucratic politics since 1960s. Two new elements added these confrontations, first, following the India-China war of 1962 and China’s nuclear test in 1964. Second, by mid-1960s, the US government was actively involved in internal bureaucratic battles in India pushing aggressively for Indian denuclearisation.\textsuperscript{105}

Between the early 1960s and mid 1990s, Indian governmental nuclear decision making and its posture in international conference diplomacy oscillated between the first and the second policy lines. Both lines coexisted inside the Indian government and in public debate.

India’s nuclear history has three interwoven strands that originated in the Nehru-Bhabha years. The first strand is diplomatic, the second strand is labelled ‘scientific/technological activity; both the strands took shape in 1947, and the third strand that arose because of the gap between scientific state ideologies, is of the crucial importance and is labelled as ‘Indian nuclear decision making about the role of nuclear armament. Unlike the first and the second strands, the third is reactive and heavily politicised with cross currents. The first and the second have developed in a non-crisis mode. ‘Crisis’ implies that ‘policy makers feel compelled to make policy choices under pressure and with deadlines’. The first strand is a necessary condition because it creates the legal and political foundations for Indian bomb activity. Indian attitudes and policies on other aspects of defence and foreign affairs crystallized by the waves of the time (for example; Kashmir
It was after the impulsion of 1974 that India developed a coherent nuclear doctrine to suit the fast changing circumstances. The 1974 test reflected Indira Gandhi’s familiarity with consequences due to the impact of sanctions. The existence of western sanctions and the threat of sanctioning meant that Indian Prime Ministers – Indira Gandhi, Rajive Gandhi, Narimsimha Rao, V.P. Singh, Deve Gondwa, I.K. Gujral did not want further trouble from the West. The 80s saw no major shift in India’s position on the nuclear policy. India had steadfastly resisted first US-sponsored and then Soviet sponsored proposals for the international control of nuclear energy, which was in practice, a control of the civil uses of nuclear energy.

**India and the Big Five**: The nuclear blast in the deserts of Rajasthan on 18th May 1974 is a proud achievement of India’s nuclear scientists. Between 1974 and 1998 the internal dynamics defined the pattern and process of Indian nuclear decision making with regard to the military aspect of the nuclear question. This was an uncertain period and Indian decision-making oscillated because of the unstable economic and political conditions. Between 1974 and pre-May 1998, Indian nuclear and missile activity and decision making was shaped by a complex internal and international environment. Nuclear weapons still retain their magic charm as the big powers still rely on them. It is still the ultimate weapon the best man can have and without these weapons the ‘supreme national interest’ is said to be at stake.

Indian nuclear safeguards differences with the super-powers concern Indo-US relations more than Indo-Soviet relations, because Washington’s determination to stop the transfer of nuclear energy from civil to military purposes has been much greater than Moscow’s stand on this matter.
Between 1964 and 1968, the United States emphasized the immediate need to stop an increase of the number of nuclear weapon states and requested IAEA safeguards for the civil nuclear programmes of nuclear weapons threshold countries. India, on the other hand, emphasized that there must be a reciprocal commitment towards nuclear disarmament by the great powers, that the security of non-nuclear disarmament and IAEA safeguards were approvable if these concerned every reactor in all states.

Ever since the explosion of the first nuclear device by the United States, it has been the policy of the nuclear powers to preserve their nuclear monopoly. America did not like Britain going nuclear. They did everything in their power to prevent the Soviet Union from acquiring nuclear capability. They failed. In its turn Russia also tried to thwart the plans of the Chinese to develop and acquire nuclear weapons. The Russians could not succeed in this game either. France also acquired nuclear capability in defiance of the wishes of the United States. India is not a permanent member of the Security Council, nor does it wield the power of veto. Acquisition by India of nuclear capability has therefore upset the UN Applecart, and the balance of power has changed, if not in the world, at least in South Asia.

India and USA: Americans have recognised China as a global force throughout the postwar period because of its historical association with the United States, its proximity to the Soviet Union and its colossal size. In contrast, the United States has found it difficult to accommodate the changing global circumstances of India, the largest state in the region, after China, and most broadly industrialized of the third world countries, while India has become a middle power with respect to many issues of importance to United States.  

India's science and technology complex is immense. India is third among nations in the number of scientists and publications, though it may
rank lower in quality. The decision to join the nuclear club in May 1974 reflects only the tip of nuclear science capacity, let alone total science capability.

The United States has four major interests with respect to India. Each involves consideration of India as a major force interacting with other powers. First are ideological issues, second are interrelated global issues, including population growth, natural resources access, and environmental protection. Third is a set of commercial issues, including trade and capital flows. Fourth are issues directly related to preservation of power, including control of access to nuclear weaponry.\textsuperscript{114}

Policy differences and public pronouncements during the Nehru era made it difficult to maintain mutually beneficial bilateral relations, which fluctuated considerably.\textsuperscript{115} The 1951 Indian critical food shortage and assistance thereafter by both the superpowers (USSR & USA) got equal responses and publicity. Concerns over the security of Asia in the wake of the Korean war brought on America’s heavy involvement in South Asian affairs. From the signing of the US-Pakistani military aid agreement in 1954 until the Indo-Pakistani war in 1965, the United States supplied its ally with arms worth between $ 700 and $ 800 million.\textsuperscript{116} It sold India a modest amount of equipment before 1962, and gave India arms worth about $ 85 million, between 1962 conflict with China and the 1965 war with Pakistan.

The extent of Chinese nuclear threat to India, what India can and should do about it, and what policy the United States should pursue with respect to these matters forms one of the most complex military issues involving South Asia. In any case, India’s capabilities and security problems make it a prime candidate to join the nuclear club and thus is a matter of concern to the United States.\textsuperscript{117}

The United States has always opposed an Indian nuclear weapons programme as a part of its general policy towards nuclear proliferation.
"Monopoly of Big Five Broken" and "Indian Genius Triumph" were typical of the headlines in Indian newspapers after 1974 nuclear test at Pokhran.

Although the super power’s official posture was relatively calm, because they realized that there was not much they could immediately do to stop the progress of India’s nuclear conduct, actually they were not happy about it.

During the period between 1974 to pre-May 1998, Indian nuclear and missile activity and decision making was shaped by a complex international environment. The US and Canada have maintained a sanction policy against India because of Pokhran-I (1974) and Pokhran II (1998). The US did the same with People’s Republic of China (PRC) as a part of its policy to contain and isolate the communist regime. The sanctions policy, however, was relaxed when the PRC emerged as a strategic partner of the west from the 1970s onwards.

Arms control and disarmament arrangements and proposals are usually double games and with one set of rules for the US and its strategic partner(s); and another set of rules for others.

In the first week of September 1974 the United States halted the uranium assistance to India in the wake of its nuclear test. In January 1975, during an official visit to Tokyo, Mrs. Gandhi said that India would continue its peaceful nuclear tests, despite criticism from foreign sources. In fact no further nuclear tests were conducted up to May 1998.

Moreover, the conditions were linked to the shipment of enriched uranium from the United States to India in mid 1977 made it improbable that the latter would undertake a second nuclear explosion soon. The President of United States had declared that Washington would not provide nuclear cooperation to any state that explodes a nuclear device, enriched uranium is required to refuel India’s power station at Tarapur. The closure of which would have a disastrous impact upon this region.
In early 1978, new legislation in the United States provided for cutting off nuclear fuel supplies within eighteen months to all states like India that refused to sign the NPT or to open all its nuclear facilities to inspection. Prime Minister Desai reacted to this threat by instructing Indian scientists to proceed with their experiments to produce a substitute for the enriched uranium from the United States. Despite negotiations India consistently declined to meet either of those terms.

The relationship between India's nuclear weapons option and her non-alignment policy vis-à-vis the super-powers has been mutually reinforcing in nature. On the one hand, the nuclear tests of 1974 and 1998 symbolically stressed her non-alignment, as it represented an act of defiance vis-à-vis the super powers in the context of the NPT, on the other hand, it was the policy of non-alignment which had assisted India in securing the option by minimizing the counter measures of the super powers. K Subrahmaniam has described India's stance in the 1970s as one of 'nuclear non-alignment - neither with nuclear powers, nor with those who have renounced the acquisition of nuclear capability.'

The actual decision by premier Mrs. Gandhi was to secure a capability for different policy options. Mrs. Gandhi repeatedly announced that India supports the peaceful nuclear explosions, India fulfilled that aim without causing any basic damage to her relations with either of the super-powers. In the perceptions of Washington and Moscow, India does not, and will not during the foreseeable future, represent a real or potential military or political threat to national interests of the United States and the Soviet Union, respectively. India made it clear that it would use its nuclear capabilities only in self defence.

The current Indian defence posture has to cover all contingencies presented by Pakistan and China. Therefore, Indian security remains, to a large degree, dependent upon a skilful diplomatic effort directed towards the
Soviet Union and United States, and sensible but cool policy towards China. Pakistan remains a problem, not because of its intrinsic strength but because foreign powers acting through Pakistan have a heightened effect on India's vulnerability.125

In the view of the United States, India’s N-test of May 1998 could ignite an arms race with no visible finish line between India and Pakistan, who have fought three wars in the last 51 years and who remain bitterly divided over Kashmir and related issues. The US through its spokesperson called upon both India and Pakistan to sign CTBT. The immediate response of the US was to impose sanctions on India under a 1994 US non-proliferation law that mandates strict penalties for countries not recognised as a nuclear power that receive or detonate a nuclear device. The swift imposition of sanctions underscores the seriousness with which the US views the proliferation threat posed by the tests, and sets the stage for a long term rift between US and India.126 Japan, India’s biggest aid donor, also announced on May 13, 1998, tough economic sanctions against India for carrying out nuclear tests by freezing 3.5 billion yen ($26 million) annual grant aid. Sweden cut short a three year aid agreement with India worth 900 million kronor ($118 million) which began at the start of 1997. The EU condemned the series of underground tests of nuclear weapons carried out by India and strongly called upon her to cease further testing.127 In the view of Government of India the EU’s reaction did not take any note of India’s security environment nor did it contain any reference to India’s past experience with China or Pakistan or to China’s nuclear arms or missiles.

History is repeating itself in Indo-US relations after a gap of 27 years. In 1971, US president Richard Nixon had appointed a special action group under his National Security Adviser Henry S. Kissinger, to formulate policies against India that were meant to punish it for helping prevent genocide in Bangladesh. The year 1998 again saw a similar US response.128
India’s defence industry is seeking to acquire autonomous design and development capacities, expand defence industrial base, select thrust areas such as main battle tank, missile system, light combat aircraft, collaborative interdependence in defence technology and equipment design, development and production, and enter the arms bazaar as an exporter in a planned manner. The Defence Research and Development Organisation (DRDO) has formulated Plan 2005 for achieving self-reliance by the year 2005 (likely to be extended further). The thrust is on meeting 70 percent of the military hardware requirements indigenously as against 30 percent at present. The production of vital spares is high on the Plan 2005 agenda.129

Despite being one of the largest democracies in the world, Indian defence forces are among the least modernized. Less than 15 percent of India’s armaments are contemporary in nature, as against a world average of 30 percent.130 Nuclearisation and the Kargil conflict brought in the forefront the demand and need for acquiring critical technologies and modern equipment and armaments for defence forces. There is a need for making up the deficiencies which inhibit modernization.

India does not require nuclear weapons for prestige or status, although nuclear weapons have been seen as the currency of power since Hiroshima. Indian prestige will be governed by her ability to solve her problems successfully. The issue of national security in relation to nuclear weapons threat is one of those myriad problems. For a country pursuing an independent foreign and security policy, potential challenges posed by existential and specific nuclear weapons threat can be adequately addressed only; (i) through global abolition of nuclear weapons or (ii) by reliance on nuclear deterrence to ward off such challenges. The latter could be autonomous or provided by military alliances (as is the case of large number of countries).131
With the collapse of the USSR, USA has assumed the role of the guardian of the world as the sole super power left in the world. It possesses tremendous clout by way of its virtual control over a number of world bodies which are central to the survival, and development of weaker nations. Even the developed nations are susceptible to pressure by USA in order to protect their own interests. In such an environment, relations with USA require a careful and pragmatic review.

When USSR was a potent entity, India had the advantage of its support and she could afford to strike a path of her own, even if it ran counter to US interests. Despite being the world’s two largest democracies, i.e. India and USA, the relations between the two have been blowing hot and cold. The anomaly was only aggravated by USA by overt and covert support to Pakistan.\(^\text{132}\)

US, however, knows that India is a major and promising market for firms that originate from US. India is an important market for US power projects, like Enron. Besides power and energy projects, punitive measures against India could put at risk the infrastructure initiatives such as, building of roads, ports and bridges that involve US firms. The Government of India also knows that the economic development of India is dependent on import of technology and capital goods from the US. India depends upon engines from the US for the main battle tank (MBT) and equipment for the advanced light helicopter (A2H), besides other sophisticated items.\(^\text{133}\)

In the light of recent events, it is apparent that USA wishes to engage India as the premier ally in the region. Its support at a crucial juncture during Kargil war, a successful visit by the US President to India and his virtual admonition to Pakistan’s rulers, lifting of sanctions imposed post nuclear blasts, indication of support for India’s permanent membership in the UN Security Council etc are strong indications of long term US interests in India.\(^\text{134}\)
Nuclear India and Russia: The rise of the Soviet power is perhaps the most outstanding development of our times. In short, in a space of 30 years (1918-1948), the USSR became the most formidable challenger to the USA. In the next 12 years (1948-1960), it left the USA far behind in respect of space research and nuclear weaponry; and in the next 25 years (1960-1985) Moscow has become a factor, active or latent, in every international situation whether it is in Nicaragua or Cuba, South Africa or Ethiopia, Gibraltar or Cyprus, Iraq or Afghanistan, Japan or China, India or Pakistan, Australia or New Zealand, Kampuchea or New Caledonia.¹³⁵

The impact of the Soviet might is felt especially by the USA whose interests also reach out into every ocean and continent.

Thus, upto the end of the cold war and the disintegration of erstwhile Soviet Union, the whole world lives in a situation where irrespective of whether we love the one or the other, hate one or the other or both, no peace can endure, no world can survive, no international order can function, if these two superpowers drift into a state of active or incipient hostility towards each other.

The struggle of the great powers for influence in the former colonial territories is one of the striking phenomena of international politics since world war II. To be sure, India, Pakistan, the USA, the Soviet Union, Communist China, and their various national interests come into striking juncture in South Asia. In sheer numbers, they are the five most populous countries in the world, with China the largest, having roughly six times as many people as Pakistan. The tender relations between India and China after 1962 war and the unyielding hostility between India and Pakistan made South Asian security somehow threatening. India tries to use both US and Soviet support to deal with China and with Pakistan.¹³⁶

The Kingpin of India’s foreign policy has broadly been dictated by a principle of equidistance from the superpower rivalry until the dissolution
of the Soviet Union. In any assessment of India's role to ensure global peace, non-aligned movement played an important part. Consistent with our traditional values, Nehru ceaselessly promoted the universal cause of disarmament, racial equality, international cooperation for economic development and the peaceful resolution of disputes and gave India a conceptual framework.

In the contemporary situation of world politics, relations between states have three dimensions - one direct and two indirect namely; (a) correlative (or bilateral) (b) regional (or multilateral), and (c) global (or international). Quantitatively speaking, therefore, interstate relations are the sum total of the relations of the three dimensions: bilateral, regional and global, the sum total being the cumulative aggregate of the three dimensions. While it is true that the quantitative measures do not always reveal the quality of relationship, they are, nevertheless, a necessary theoretical corrective and a dependable basis for verification.

Closely examining the nature, expanse and the level of Indo-Soviet relationship with the framework of the theoretical perspective, it is quite evident that both in the pursuit of a new national identity and legitimization of the political system as well as in all three dimensions of interstate relationship – bilateral regional and global, Soviet Union not only stands but as the state that has acquired a place of primacy in friendship, but also, (and this is most significant) it is the only state in such an exalted category of closeness of relations with India based on the convergence of mutual trust, common interests and closely shared objectives of international development.

Third country relationships have influenced India–USSR relations significantly. The most important determinants of the shape of Indo-Soviet relations have been the India’s relations with Pakistan, China and the United States of America. Indo-Soviet relations grew at a more relaxed pace during
sixties, helped along by a deterioration of relations of both countries with China. South Asia has been the main target of opportunity for the Soviet Union for many years. In its quest for influence in Asia, Moscow has used all the tools of contemporary statecraft to gain and maintain its foothold in a region that became crucial to its interest.

Over the entire period, the central concern of Soviet international relations has been the United States, while Pakistan has been the Chief focus of Indian foreign policy. Once Pakistan became the funnel for supplying arms for the Afghan Mujahideen, it acquired an intrinsic importance for Soviet Union.

Pakistan was drawn into the western system of military alliances through bilateral treaties and multilateral pacts between 1956-9. The course of the alliance however proved rocky for the west, would not help Pakistan materially. Yet the Americans are felt to have let Pakistanis down in their rush to assist India against China in 1962, in their posture of equidistance between India and Pakistan in the 1965 war and finally in their inability to protect Pakistan from dismemberment at Indian hands in 1971.

Disappointed with the US, Pakistan looked northwards, president Ayoub Khan’s visit to the USSR in April 1965 suggested a new Soviet interest in Pakistan. The Soviet Union agreed to sell weapons to Pakistan in 1968. When Ayoub cancelled the lease on the US intelligence base in Peshawar and Pakistan, like India, abstained on the UN resolution condemning the Soviet invasion of Czechoslovakia of August 1968.

With reference the supply of weapons to Pakistan by the USSR, the then defence minister of India Swaran Singh admitted in Parliament on 9 April 1969 that India had failed to convince Moscow of the dangerous implications of supplying arms to Pakistan. Simultaneous good relations with India and Pakistan cannot survive a war between them neither can put a halt to the sinister designs put forth by the western powers especially, USA.
The twin developments of the Sino-Soviet split and the Sino-American rapprochement internationally coupled with the India-China conflict regionally, meant that in the 1970s Moscow and New Delhi came to have geostrategic community of interests. The proposed visit to Peking by President Richard Nixon, announced in July 1971, when the subcontinent was in the midst of the Pakistani civil war tension, shook both India and the USSR.

The strength of Indo-Soviet friendship and cooperation and its qualitative development to a higher plane resulted in the 20 year Treaty of Peace, Friendship and Cooperation signed on August 9, 1971, between India and Soviet Union Here again the Soviet policy was just the opposite of the power game and balance of power approach of Washington – Beijing axis which utilized Pakistan as a countervailing factor against India and threatened the peace of this subcontinent in 1971. The emerging Beijing-Washington axis towards which Islamabad also contributed its mite egged on the Pakistani rulers to continue their bloody reprisal against the freedom loving people of Bangladesh and to take a rigid posture of hostility towards India.\(^{147}\)

In the preamble of the 1971 Treaty the contracting parties reaffirmed their faith in the, “principles of peaceful co-existence and co-operation between states with different political and social systems” and their determination to abide by the purposes and principles of United Nations Charter.\(^{148}\) There were certain quarters that feel that this treaty is the sole reaction of President Nixon’s Beijing visit arranged through Islamabad’s good offices. If it would be seen in a broad vision, then it clear, it is was the logical outcome of a long and successful developing cooperation between India and the Soviet Union.

With the growing tensions in the Indo-Pak border in 1971 and mounting tension between the two countries the Soviet Union besides its concentration on the question of ensuring the return of the East Pakistan refugees as the core of the questions in the Indo-Pak relations also pleaded for avoidance of all border clashes between the two countries.
Today, reality of the disappearance of the Soviet Union and the abandoning of the socialist experiment, these can not obliterate the foundations on which Indio-Soviet and Indo-Russian relations developed in India’s pre-independence period, something which influenced the future course of those relations following India’s independence in 1947, and even after the USSR ceased to exist 45 years later.

The two major landmarks in the annals of Indo-Soviet friendship that lent particular impetus to the ties and endowed them with a new and special dimension (reflective of the type of model relationship, socialist states were capable of developing with third world nations which had freed themselves of colonial bondage) were the visits of Jawaharlal Nehru as the first Indian premier to the USSR in June 1955 and of Nikolai Bulgenin and Nikita Khrushehev as the Soviet premier and First Secretary of the Communist Party of Soviet Union to India in November – December of the same year. The bilateral trade grew from a mere 17 lakhs in 1953 to Rs. 5200 crores in 1988.\(^{149}\)

Besides the Soviet contribution towards India’s heavy industry, Bhilai Steel Plant in Madhya Pradesh and Bokaro and Vishakhapatnum Steel Plants, the Soviets supplied a whole range of military hardware thereby enhancing India’s defence capabilities. The Soviet defence supplies included, inter alia, nuclear powered and other submarines, a variety of missiles and rockets, a wide range of aircraft of the MiG series, the MiG in particular which, the Western experts conceded in amazement, can match or even excel the most sophisticated western fighters. A large number of Indian defence personnel were trained in the Soviet Union, and licensed production of Soviet aircraft and other equipment reinforced India’s indigenous defence prospects.

Furthermore, Soviet Union contributed to India’s space efforts and nuclear developments. Soviet Union supplied heavy water for the reactors of the Rana Pratap Sagar Nuclear Power Station in Rajasthan when Canadian assistance on this score was withdrawn as a token of protest against India’s
peaceful nuclear explosion at Pokhran in 1974, and having agreed to set up two nuclear reactors of 1000 MW each on a turnkey basis in Tamil Nadu extending the necessary financial assistance for their construction.¹⁵⁰

The Soviet Union did not mind the effort of third world countries to acquire nuclear capability.¹⁵¹ During the Reagan administration the US stuck to its policy of stopping nuclear cooperation with India. Rather, the USSR extended its help to third world countries to meet their requirements in the defence field.

It is noteworthy to mention that with Soviet Union assistance India has become a substantial military power. India turned to the Soviet Union for defence supplies only after its requests for assistance in developing a largely indigenous military capability were turned down by the West.¹⁵²

The 1962 war with China is a significant turning point in the history of Indo-Soviet military relationship. During and immediately after China-India hostilities, the Soviet Union provided no emergency military assistance. A little later, however, India rejected offers of an Anglo-American guarantee of air defence system. This the western powers were not willing to supply.¹⁵³

In December 1964, India's defence minister requested the loan of three fully operational daring - class destroyers from Britain, but was offered the loan of three very old weapon - class destroyers instead, an offer he could, and did refuse. The US proving equally unresponsive to requests of F 104 starfighters and C-130 transport aircrafts.¹⁵⁴ In 1965 India accepted the offer of Petya class frigates from the USSR. India's search for submarines in 1964 produced a British offer of an obsolete world war II model, which India rejected. An agreement for the purchase of four Soviet submarines was signed in 1965, and all were delivered by 1970.¹⁵⁵

For all the range and volume of Soviet military sales to India, the Moscow - New Delhi military relationship is a limited association rather than an alliance or a protector client bond. The very size, professionalism and
modernization of the Indian defence services makes it impossible to envisage India as a mere client of any external power.

The number and duration of Soviet military instructors in India is strictly controlled. Soviet officers do not attend Indian staff colleges, there are no Soviet military advisers in India; there are no Soviet military or naval base in India, although Indian facilities are available for Soviet use upon specific requests; and there does not appear to be any regular exchange of military intelligence.

India’s strategic doctrines are mostly indigenous, focusing upon perceptions of threats to Indian political – security interests rather than global quarrels. If imported, then they are more likely to be borrowed from American and British writings. Nonetheless, India’s defence doctrine has inevitably been shaped by Soviet strategic planning.

In 1976, Moscow concluded an agreement with New Delhi for the supply of two hundred tons of heavy water, conditional on the latter concluding a safeguards agreement with IAEA, a concession that was made in September, 1977. Some sources allege that the agreement clearly prohibits New Delhi from carrying out peaceful nuclear explosion. Details of the agreement have not been revealed officially in India.

With the emerging reality of Indian ocean as a multipolar zone, India could not afford not to look to safeguarding its interests. India’s relations with the Soviet Union added a sharpness to anxieties among littoral states about its naval expansion. Yet the much stronger western presence in Indian ocean was ignored. It could also turn out to be the case that success in India’s pursuit to become a regional power could lead it into a degree of competition with the Soviet Union.

The Pakistan – China – US axis would on the face of it, suggest a geostrategic convergence of interests between India and Soviet Union even on the high seas.
The Indian ocean is important to Soviet strategists by virtue of being the only maritime route connecting the European and pre-Eastem regions of the USSR that is open all year.

Indian and Soviet interests in the Indian ocean are thus complementary vis-à-vis both the United States and China. Repeated and forcefully expressed Indian opposition to the development of the US naval base at Diego Garcia must be understood in the context of potential US-Pakistani collusion in the event of another Indo-Pak war.

Indian defence officials and analysts have consistently explained India’s defence build ups with reference to threats posed by military modernisation of Pakistan and China, arms acquisition by Pakistan in the wake of Soviet invasion of Afghanistan, the construction of Chinese military bases in Tibet which derogates India’s security on the rather large Indo-Tibetan border, and possible Chinese assistance to the Pakistani nuclear weapon programme.159

India’s “peaceful nuclear explosion (PNE) at Pokhran in the Rajasthan desert on 18 May 1974” jolted the suppliers into a show of action. Punitive economic and nuclear energy measures instituted by the US and Canada after 1974 test complicated and delayed India’s search for nuclear self sufficiency. By the 1980s India had developed an indigenous capability to produce its own uranium fuel.160

The pace of nuclear developments in the subcontinent quickened in 1987. International apprehensions about India’s nuclear ambitions stem from different factors particular among which is India had taken a militantly anti-Non-Proliferation Treaty (NPT) posture from the beginning.

INDIA-USSR Nuclear Energy Cooperation

Moscow has generally been supportive of India’s plans for the peaceful application of nuclear energy but unhappy with Indian opposition to the NPT. An agreement for nuclear research cooperation on a regular basis was signed
by India and Soviet Union as early as 6 October 1961, with an additional Protocol in 1968. They provided the framework for exchange of scientific – technical information and visits by groups of scientists. The Soviet Union transferred to India design plans and specifications, and production forms and records of the BN-50 (fast neutron) experimental and research reactor. A new agreement for scientific-technical cooperation in the peaceful uses of atomic energy was signed in January 1979, that is five years after the explosion of a nuclear device by India.\(^{161}\)

The USSR stepped into the breach created by the suspension of Canadian and US assistance to India’s civilian nuclear industry, supplying heavy water in 1978 under partial safeguards.\(^{162}\) Dr. Raja Ramanna, Chairman of India’s Atomic Energy Commission (AEC) led a five member delegation to Moscow in December 1983 for discussion on an offer to set up a giant nuclear power plant in India.

Moscow managed to convince Rajiv Gandhi during his May 1985 visit of the merits of building a 440 MW nuclear power plant in India, the first such Soviet plant in a non-socialist country.\(^{163}\) After Mikhail Gorbachev’s visit to India in 1986 the two countries were reported to be finalising a memorandum of understanding to cover the transfer of nuclear power technology.\(^{164}\)

In May 1988, India signed a Rs. 48 billion deal with Moscow for two 1000 MW pressurized water reactors to be installed on a turnkey bases by 1997-98, making this the largest single foreign purchase ever for India.\(^{165}\)

Gandhi and Gorbachev signed an agreement during the latter’s visit to India in November 1988 for the construction of two giant nuclear power plants of 1000 MW each in Koodankulam (in Tamil Nadu). The Soviet Union agreed to supply enriched uranium for the entire operational life of the reactors.\(^{166}\) After the end of cold war the long-term strategic interests of Russia and India coincide, both countries are interested in the multipolar structure of the world whose components would balance each other’s influence.\(^{167}\)
At the end of the twentieth century Russia’s firm resolve to stand by India through thick and thin – its unambiguous support to India’s endeavour to secure the permanent membership of UN Security Council is a case in point – has given a fresh thrust toward renewed efforts to democratize the international order.

The end of the Soviet era posed special difficulties for India, particularly in the military realm given its huge dependency on Soviet arms transfers for spare parts and equipment during this crunch, the India’s defence ministry was even forced to turn to Ukraine and East European states as a stop gap measure. As Indo-Soviet ties unraveled at a dizzying speed, India faced multiple crises in the security and economic sphere, with not only its strategic framework in shambles, but also in the financial sector, where the country was left with just enough foreign exchange to cover a fortnight’s worth of imports.168

The early years (1991-96) in which Russia’s policy towards India amounted at best to ‘benign neglect’ have left a deep mark on Indian policymakers, in particular providing a rude awakening for those who imagined that Indo-Russian relations were strong enough to whether any circumstances that might emerge.

The partial recovery of their ties since then is explained in large part by the techno-commercial arms trade which has proved to be the only real enduring aspect of their earlier ‘special’ bilateral relationship.169 The importance of India for the Russians may be gauged by the fact that the Indians buy more hardware from the Russian defense industry than do Russia’s own military forces.

The extensive trip to India by President Vladimir Putin in October 2000 served to reinforce this trend in important ways. For example, this slow but discernible shift has been mirrored in Russia’s more open acceptance of India’s declared nuclear status. In response to India’s nuclear tests in 1998, Russia had
joined the chorus of condemnation by the west, though in more muted tones. During Putin’s visit the bilateral defense relationship was taken much further than before.

It is precisely in the context of sanctions and other international regimes that Russia’s role in the nuclear field becomes critical for India. India has been looking towards other suppliers such as France but without immediate results. As a leading Indian strategic analyst commented, “The reality is that Russia today is the only great power which is ready to cooperate with India in the atomic energy sector.”

A critical testimony to the desire of the Russians to deepen future relations is the Memorandum of Understanding on peaceful nuclear energy uses signed along with the Declaration on Strategic Partnership during Putin’s visit to India. While the latter has been made public the former remains unpublished.

The position of Russia’s Minatom (Ministry of Atomic Energy) was that the new decree significantly expanded Russia’s nuclear export capability and that it was linked to Russia’s intent to assist the Indian program. Indeed Putin said as much when he noted in New Delhi that two more reactors in addition to Koodankulam were distinct possibilities. This was consistent with Adamov’s promise in The Hindu interview that ‘we will do our best to participate in India’s ambitious program to generate 20,000 MW of nuclear power by 2020.’

Yevgeny Adamov, viewed sanctions by the west on India ‘unconstructive’ in forcing India to forfeit its nuclear option, and pointed out that ‘we are against a policy of sanctions and did not impose them even when India conducted its nuclear tests. On the contrary, with three months of Pokhran-II, an agreement was signed to sell India $15 billion worth of Russian arms over 10 years.'
Socio-Economic Dimensions of India's Nuclear Policy

The understanding of the economic role of the atomic energy and the awareness of developments abroad in this field were helpful in defining the objectives of India's nuclear policy. India could hopefully aspire to employ this new source of power along with the conventional sources to solve its problems of backwardness and poverty. Science and technology, it was felt, would enable the country to get a larger output of commodities and services from its resources of men and material. The harnessing of vast natural resources and man power with the help of modern technology could not only restore the economic health of the country that had deteriorated as a result of colonial rule and the partition. It could also be instrumental in catching up with the advanced countries. In international forums India had all along advocated the elimination and the prohibition of the use of nuclear weapons and emphasized the need for peaceful uses of nuclear energy.

As early as 1948, speaking in the General Assembly, the Indian representative, Mrs. VijayaLakshmi Pandit, gave vent to these aspirations when she said that, "atomic energy could be expected to play an important role in the future economy of an underdeveloped and under powered country." A review of the post partition economy of India pointed to the necessity of urgently using modern scientific & technological tools to reconstruct the shattered Indian economy.

The country's industrial growth was in a depressing state. The unfavourable aspect of the industrial situation was the lack of emphasis on basic goods industries. It was therefore a gigantic problem to provide a vast population with the necessities of life such as food, clothing and housing. The position of power which could solve these problems, was very unsatisfactory. Cheap electric power, considered as the key to rapid industrialization and vital for irrigation and agricultural operations, was in short supply. Besides, there was the unbalanced development of power in various regions. About three
percent of the country’s population in six large cities got the benefit of 56% of the total public utility installation. Rural areas were particularly neglected so the highest priority was given to the generation of electric power to give a boost to the economy in urban as well as rural areas.

It was in the context of power generation that the taming of the atom was given the priority. Dr. Homi J. Bhaabha, realising the inadequacy of hydroelectric power and conventional fuels, stressed the need for developing the atom for this purpose. He was also alive to the potentiality of nuclear energy in other fields which were of at least equal importance in meeting the requirements of society. He visualised a network of atomic power industry that would produce that vast amounts of radio active materials useful in industry and food preservation. He also fore saw the possibility of the use of irradiation for artificial mutation of plants and crops and its allied applications in propulsion, biology and medicine.

Meanwhile, groups of Indian scientists and technicians were also sent to the USA, UK and France for further training in nuclear sciences. The prime minister referred briefly to these visits during the question time in the Lok Sabha on 9 February 1950; “we have been in touch with numerous scientists and atomic energy commissions in other countries. Some of our men have been sent for training there. I do not think it is desirable, normally speaking, for us to bring people for this kind of work from outside – but we are in touch”. Foreign collaboration was sought and received in building nuclear industrial technology.

The Atomic Energy Research Committee, founded in 1947, probably with Nehru’s encouragement, signaled the early determination of the Indian government to promote advanced research in nuclear energy. The determination was strengthened further with the establishment of the Atomic Energy Commission in 1948. The objectives of the Atomic Energy Act approved by the Indian Parliament in 1948, were two-fold. These were, to
allow for research and development in secrecy when necessary, along methodical lines, and to extend state ownership over atomic minerals, namely uranium and thorium.\textsuperscript{179}

India's reaction to the various versions of the Baruch Plan for the international ownership of atomic raw materials was inspired by the same desire. Referring to the economic role of the atomic energy, Mrs. Vijayalakshmi Pandit said that, the under developed countries, could not forego any opportunity to develop atomic energy for industrial purposes. They could not allow any international organisation, dominated by the industrially advanced counties, to control their activities in regard to the development of atomic energy.\textsuperscript{180} Thus, India opposed any form of international control of atomic energy which might in any way inhibit her independence to develop the atomic energy for peaceful purposes. India apprehended that an attempt was underway, through international control of atomic energy, to thwart the economic growth of the under-developed countries.

The government of India was aware of the important potential contribution which nuclear energy could make towards the country's economic progress. It, therefore, recognised the urgency to initiate the nuclear energy programme immediately. The complete understanding between prime minister Nehru and Homi J. Bhabha proved to be of immense value in the evolution and promotion of India's nuclear effort. The fact that the country was endowed by nature with atomic raw materials was helpful in launching the nuclear programme.
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