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We admire Henry L. Stimson's nonpartisan spirit, his sense of purpose, and his ability to steer a steady course toward clearly defined long-range national security goals. By establishing a research center in his name, we hope to call attention to the issues he cared about, as well as to his record of public service, and to propose, as Stimson did, pragmatic steps toward ideal objectives.

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Defense and Insecurity in Southern Asia: The Conventional and Nuclear Dimensions

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Pragmatic steps toward ideal objectives



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About the Project

The Henry L. Stimson Center is studying factors contributing to regional demand for advanced conventional weapons, on the assumption that the canonical principles of arms control (to reduce the likelihood of war, the costs of war preparation, and the destructiveness of conflict) cannot be applied effectively to regions of tension without addressing the sources of demand for armaments. Any efforts to prevent or to mitigate regional conflicts that address the tools of war must take demand factors explicitly into account, even if they seek primarily to constrain arms supplies, because unmodified demand will seek, and inevitably find, alternative channels of supply.

Some demand for arms is driven by perceptions of external threats and some by desires to *pose* external threats in the service of any number of personal, national, or ideological agendas. When those threats abate, demand can safely plummet and may well do so (as it has in Europe since 1989).

Where demand is internally-driven, by a quest for prestige or a struggle for power, the policies, perceptions, and circumstances that must change to mitigate conflict and encourage arms restraint are internal as well, but parties to civil war can and often do have outside support, and their struggles have regional consequences. External and internal motivations for arms both coexist and interact.

Their commingling is particularly complex in states that emerge from the wreckage of empires; states that must sort out the sometimes-violent claims to political power or self-determination of racial, religious, or ethnic groups. Nowhere do more old imperial paths cross than in the part of the world stretching from the Balkans through Southern Asia, encompassing, since late 1991, what were the southern republics of the former Soviet Union.

This part of the Stimson Center's project on conventional arms sales and proliferation examines the policies and perceptions of India, Pakistan, and China, three key states whose internal stability, arms programs, and mutual relations have considerable impact on the stability of Asia, and on the military policies and programs of many other states in the region.

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Introduction

by Michael Krepon

The essays that follow describe an unsettled security environment in southern Asia. Concerns about stability on the Subcontinent now focus primarily on Pakistan's internal troubles and future direction, as well as on India's missile programs, which appear to be driven more by political and bureaucratic imperatives than by military necessity. The possible deployment by New Delhi of the Prithvi missile and India's continued production of weapons-grade fissionable material makes restraint by Islamabad on these fronts difficult to sustain, both on political and strategic grounds.

Reactive steps by Pakistan, such as deploying new nuclear-capable missiles or uncapping its fissionable material production program, are likely to generate further estrangement from the United States. Many Indian strategic analysts appear not to be concerned by a further deterioration in US-Pakistani relations. This feeling is not widely shared by South Asian experts in the United States, who worry a great deal about where Pakistan is heading. Thus, with good reason, Shekhar Gupta concludes his essay by noting that the prognosis for progress on nuclear and missile proliferation issues between India and Pakistan "does not provide much scope for optimism."

Chris Smith's essay notes that Pakistan's continued support for the insurgency in Kashmir appears likely. Indeed, given the growing weakness of the central government, it is becoming increasingly unclear whether Islamabad could effectively curtail support for disaffected Kashmiri groups by various actors within the country, even if it wanted to. Continued support for the insurgency, however, is not cost free. To begin with, it heightens tensions that frame national decisions to proceed with nuclear programs and missile deployments. Nor is it clear that aid to disaffected groups can be limited to the Kashmir insurgency; Pakistan itself is now subject to growing internal strains, domestic violence, and severe centrifugal forces.

Thus, the nexus of strategic choice on the Subcontinent is inextricably linked to domestic politics and the destabilizing consequences of new missile deployments. In contrast, the essence of the competition between India and Pakistan is no longer a conventional arms race. As Smith notes, Pakistan is hard pressed economically to match a spurt in Indian procurement, and Islamabad's preferred source of military equipment, the United States, remains closed by the Pressler amendment. Nor is it currently likely that India will embark on a conventional arms buying spree, unless its relations with China cool perceptibly and its economy continues to improve markedly. Oft-repeated arguments linking the import of combat aircraft or other offensive arms to the stimulation of an arms race on the Subcontinent now lack credibility. Such transfers may well be objectionable on common sense or economic grounds, but not on the basis of arms race theories developed for other regions.

As William Durch notes in his essay, relations between China and India are clearly on the upswing, although long-term planning remains clouded by uncertainty. He observes that China's historical experience offers little evidence of cooperation on security issues with

its neighbors. Much hinges on Beijing's ability to chart a new course -- one of several compelling reasons for India to re-evaluate its long-standing opposition to the creation of a regional security forum.

The current warming trend between Beijing and New Delhi is symbolized by the thinning out of troops along their disputed border, high-level visits by senior political and military leaders, and the expansion of cross-border trade. If these positive trends continue, leading to the resolution of the border dispute and vastly expanded trade, both China and India will reap major dividends.

As is the case between India and Pakistan, New Delhi and Beijing have no apparent desire to fight another major war. And unlike the seemingly intractable dispute over Kashmir, the land dispute between India and China can be resolved with a modest investment of political capital. Indeed, the warming trend in bilateral relations has elicited no harsh reaction from a vocal Indian print media and opposition parties.

Still, India -- like the other states around China's periphery -- must hedge its bets against Beijing's uncertain course. There is no history of security cooperation between these two Asian giants. Despite the absence of pressing disputes and the geological buffer provided by the Himalayas and Tibetan plateau, China and India may find that competing regional ambitions foreclose significantly improved ties, including a final settlement of their border dispute. Are these two countries destined to maintain a wary distance or can they forge new ties of security cooperation? The answer to this question will tell us much about the future of Asian security relations.

Conventional Forces and Regional Stability

by Chris Smith

The Indian subcontinent ranks as one of the most unstable and insecure regions of the world. The starting point for understanding the variegated security issues in the subcontinent is the partition of India in 1947. Partition was a socially violent and politically destructive event that scarred the memories and clouded the vision of at least two generations of Indians and Pakistanis. Since 1947, South Asian decision makers never have been clear in their own minds whether the events of that year marked the end, or just the beginning, of partition. The Indo-Pakistan War of 1971, which brought independence to Bangladesh (the former East Pakistan), reconfirmed the salience of these dynamics. The further disintegration of South Asia is a major concern for the region.

Although India and Pakistan have narrowly avoided outright conflict for over twenty years, this does not mean that either side has constructed the political, intellectual or emotional capacity to decipher, absorb and understand the nature of the regional security threats they face or to frame appropriate responses. On the contrary, political institutions on both sides have progressively decayed in recent years, which has eroded significantly the capacity for rational and effective decision making on security issues, which in turn has important ramifications for the conventional armament process both within and between the two countries.

In addition to partition itself in 1947, 1962 and 1971 were fundamental turning points in the history of South Asia. In 1962, China inflicted an exceptionally swift and humiliating defeat on India following a dispute over the McMahon Line--the border drawn by the British and accepted by the governments of India and Tibet, but not China. When China decided to assert its authority over Tibet in the 1950s, it also reviewed the borders surreptitiously imposed by Britain during the 1913-1914 Simla conference.¹ The war that eventually followed in 1962 imposed an abrupt and crushing defeat on an ill-prepared India. Psychologically, the Sino-Indian war remains an important event, although like many traumatic experiences, the impact is diminishing over time and, currently, relations between the two countries are more cordial than perhaps either side is prepared to admit.

The war in 1971 was a very different affair. After a conclusive but short war in 1965, when India comfortably countered a Pakistani attack in first the Rann of Kutch and then Kashmir, the two countries fought again in 1971. Discontent in East Pakistan and the consequent flood of refugees into India gave Prime Minister Indira Gandhi a pretext to begin a conflict that led to the creation of Bangladesh.

It might be argued that Pakistan actually gained security as a result of partition by shedding a strategically, politically, and economically difficult province. Nevertheless, India's

¹For an overview of pre-independence Sino-Indian relations see Guy Arnold, *Wars in the Third World since 1945* (London: Cassell, 1991), pp. 246-251.

victory in 1971, coupled with such a fundamental defeat for Pakistan, gave India regional pre-eminence, even hegemony, in the views of other South Asian states.

Over the past twenty years, despite institutionalized skirmishing on the Siachin Glacier, traditional warfare has not recurred. Relations between India and Pakistan have slowly and gradually mutated to the point where the threat of war over outstanding territorial issues has abated, even though tensions remain considerable. However, Pakistan has beyond reasonable doubt provided support and arms for militant groups in India, especially those active in the Punjab and Kashmir, and India has meddled in Sindh.

The conflict over the valley of Kashmir is the most frequently-cited and likely reason for a deterioration in relations between India and Pakistan.² Both sides feel inordinately threatened by the current status quo in the area. Pakistan fears that India might seek to recapture the territory gained immediately after independence, so-called *Azad Kashmir*. India fears that Pakistan will seek either to take possession of the state by force or make common cause with militant groups within it who seek independence from India. The latter scenario has already in part unfolded.

Against a background of such concerns, India and Pakistan have built up their military capacities over the past two decades. This paper examines that buildup and the security programs and policies underlying it, with an emphasis on conventional forces. It concludes with an assessment of the two countries' future security dynamics.

Defense Procurement in India and Pakistan: The 1970s and 1980s

The 1970s were relatively quiet years on the conventional defense front, if less so in the nuclear domain. The major development concerned India's burgeoning linkage with the Soviet Union, a development not mirrored by a similar rapprochement between Pakistan and the United States. The 1980s saw a major Indian push for modernization that ultimately ran short of funds as substantial Soviet credits began to dry up. For Pakistan, the combination of Moscow's invasion of Afghanistan and Republicans back in the White House produced a new arms relationship with Washington in 1981 that lasted until mounting evidence of a Pakistani nuclear weapons program severed it once again.

India

During the 1970s, the Soviet Union became India's primary defense supplier, unequivocally displacing Britain and other Western suppliers. The relationship between India and the Soviet Union was in part facilitated by a number of loosely shared political positions, for example, anti-Americanism and a penchant for central planning. Geo-strategic exigencies also played an important role but, most of all, India's foreign exchange reserves were too weak to support any form of broad based defense modernization in hard currency markets.

²Although this is true at present, new security issues just beyond the horizon conceivably could become at least as intractable as the Kashmir dispute. Communal relations, population growth and migration, and environmental degradation are the most likely new sources of intra-regional conflict.

Indian equipment was, like that of many other peer states, worn and obsolete and in need of replacement, but inadequate foreign exchange reserves and aversion to dealing with international lending institutions precluded a full-scale modernization program. For example, interest in the Anglo-French Jaguar Deep Strike Penetration Aircraft as a replacement for the aging Canberra started as early as July 1968, following an offer by the British Aircraft Corporation during the design phase, which included license production rights to the system.³ Other systems, such as the Saab-37 Viggen and the French F-1 Mirage, were also considered but none were affordable.

During the 1980s, however, the fortunes of the armed forces were significantly improved. On most fronts, India faced a changed security scenario. The base race in the Indian Ocean placed US strategic forces on and around Diego Garcia. Pakistan had managed to effect a major procurement drive. Set against the backdrop of the new Cold War, there was little else required to justify the modernization program. Indira Gandhi, re-elected in 1980 after a three-year spell in the political wilderness following imposition of an unpopular national state of emergency, presided over the most far reaching defense program in the country's history.

The rearmament program was a salient part of India's post-1971 bid for great power status, to accompany the 1974 nuclear test. The rationale for the modernization program found expression in the so-called "Indira Doctrine." Since 1971, India had been the de facto regional power in South Asia but needed to demonstrate an ability to project power as much as consolidate it, and so served notice on other South Asian countries and their allies that India would henceforth claim a direct interest in instabilities within South Asia. Consequently, Mrs. Gandhi set out an agenda based upon the illegitimacy of foreign bases in South Asia, the "demilitarization" of the Indian Ocean (a thinly veiled attempt to eliminate superpower presence in the region) and, most important, regional bilateralism as a means of undercutting relations between hostile neighbors and extra-regional powers such as China and the US. At the same time, India also needed to drive a wedge between the US and Pakistan, lest the relationship both erode India's relative power and bring foreign troops into South Asia. Much the same was true of Sri Lanka, especially once the US began to cast an eye over Trincomalee, the region's largest oil tank farm and a potential naval base of considerable strategic significance.⁴

In May 1980, less than six months after regaining office as Prime Minister, Indira Gandhi secured an arms agreement with the USSR, completing a process started by the predecessor Janata Dal Party government. This agreement produced the almost immediate transfer of \$1.63 billion of defense equipment. On payment, Mrs Gandhi secured a two year grace period followed by fifteen years to repay (versus ten years offered by Western suppliers) and a mere 2.5 percent interest rate. Moreover, it was agreed that all repayments could be made in the form of local goods, whereas other suppliers required hard currency. The central

³"India Considering Jaguar Production," *Flight International*, 8 August 1968.

⁴Policy success came in 1987 when, during negotiations over the Indo-Sri Lanka Agreement to establish normalcy in Sri Lanka, India demanded--and Sri Lanka agreed--that neither Trincomalee nor any other Sri Lankan port would be made available for military uses by any country in a manner prejudicial to India's interests.

feature of the deal concerned the T-72 tank and the MiG-25 Foxbat interceptor. It was also one of the rare occasions when the Soviets seemed prepared to discuss technology transfer.

In a rare press conference following the agreement, the Prime Minister intimated that her Government was on the verge of a heavy defense procurement program. In the next budget, financed by increased taxation, Indian defense expenditure rose by 20 percent, and continued to rise throughout most of the decade.

In March 1982, Soviet Defense Minister Dmitri Ustinov visited India and brought with him the largest and most senior defense team ever to visit a country outside the Soviet bloc. The upshot of the visit was the promise of another arms package, this time to include the T-80 tank and the MiG-27 Flogger tactical strike aircraft. Then, just over a year later, Indian Defense Minister Venkataraman returned from Moscow with the most significant prize: the promised delivery of the MiG-29 fighter as soon as it entered service. Also included in this deal was an option to produce under license the T-80 tank and the MiG-31 Foxhound interceptor.⁵

Soviet largesse was borne undoubtedly of a perceived opportunity to draw India closer to the Soviet bloc. However, this was an impression India wished to dispel. Mrs. Gandhi had no intention of abandoning completely the central tenets of independence in a bipolar world, even though by necessity they had been compromised severely. Moscow had to take India's relatively cold shoulder in stride. In a tense period in US-Soviet relations, when the USSR had failed to secure anything comparable to US basing rights in the Indian Ocean, Moscow needed all the littoral friends it could muster. Moreover, there was always the chance of a leasing agreement at Vishakapatnam, the naval base the Soviets refurbished for India in the mid-1970s.

Therefore, in part as a clear signal to Moscow that too much should not be read into Indo-Soviet relations, Mrs. Gandhi permitted her procurement chiefs to diversify their search for defense equipment. During the early-1980s there was some speculation that India might purchase equipment from the US, but a well-publicized visit to Washington by a team of Indians in October 1980 was probably intended to worry the Soviets more than interest the United States. In any event, US arms export policy to a country such as India would have been too restrictive for New Delhi to accept.

As negotiations with the Soviet Union proceeded apace, New Delhi began to take more interest in relatively long-standing offers from Britain for the Jaguar and the Harrier jump-jet, and from France for the Mirage 2000 fighter-bomber. Both deals were eventually secured. Lines of communication were also opened with Spain and Italy.

In October 1984, Indira Gandhi was assassinated and her son, Rajiv, was reluctantly catapulted into the front-line of Indian politics where he succeeded in securing for the Congress(I) party a formidable landslide in late-1984. Overall, Rajiv made little effort to redirect Indian defense policy. However, one key difference soon became evident. Unlike

⁵"Major Indian arms contract goes to Soviets," *Defense Week* 5:8 (3 February 1984), p. 6.

his mother, Rajiv Gandhi was well-disposed toward the US and from the outset seemed keen to consider purchasing American arms.

In general, however, it was continuity rather than change that characterized the premiership of Rajiv Gandhi. Even if he had wanted to change the direction of defense procurement policy, he was unable to move too fast, too quickly. First, India had nothing like the economic base to disregard the financial benefits that came from buying Soviet. If anything, the quiet dependency on the Soviets looked set to increase, given the new Prime Minister's commitment to economic liberalization and the inevitable drain on foreign exchange this would engender. Second, given the nature of delivery lead times, many of the contracts had already been signed. Third, the inherent differences between Soviet and Western technology, and the doctrinal implications therein, made a radical shift difficult to execute in practice.

Indeed, diversification figured in Rajiv Gandhi's failure to win a second term in office. He lost the election on the strength of a growing body of evidence that pointed towards his personal involvement in massive commissions paid by the Swedish ordnance company, Bofors, in its bid to secure a lucrative order for towed artillery units.⁶

Overall, the 1980s were a good decade for the Indian armed forces. The Army fared less well than other services, partly because it received the bulk of its matériel from the Soviet Union and partly because much of India's indigenous production is traditionally supplied to the land forces. Nonetheless, the Army considerably modernized its tanks and artillery, and worked to shed its labor-intensive traditions and become a full-fledged modern fighting force. Under the direction of General Sundarji, two modernization programs were developed to mechanize the nation's land forces: the Reorganized Plains Infantry Divisions (RAPIDS) and the Reorganized Mountain Infantry Divisions (RAMIDS).

In the years immediately after independence, the architects of India's defense policy adopted an ambitious blue water naval strategy.⁷ India procured its first aircraft carrier, the *Vikrant*, in 1961, well before the defeat by China that led to such sharp hikes in defense expenditure. Plans and intentions to make the Indian Navy the senior service, however, were moderated by a combination of foreign exchange shortages and the reality of India's security needs on land and in the air. For nearly twenty years the Navy was the "forgotten service."

In the wake of the British withdrawal from East of Suez, however, there ensued a long debate over the future of the Navy. The upshot was a 1978 Government report that signalled the onset of a 20-year naval development program designed to give the country an undeniable blue water naval capability.⁸ In keeping with Indira Gandhi's views, naval

⁶Somewhat ironically, Bofors was never addressed as a defense procurement issue by the Indian public. It was always a political issue associated with corruption. Nobody actually questioned whether or not India could justify the acquisition, or afford the price.

⁷L. J. Kavic, *India's Quest for Security: Defense Policies, 1947-1965* (Berkeley, Calif.: University of California Press, 1967), p. 117.

⁸A. Tellis, "India's naval expansion: reflections on history and strategy," *Comparative Strategy* 6:2 (1987), p. 193.

modernization was designed to support power projection. The proposed role for the Navy went beyond sea denial to encompass both control of regional sea lines of communication and the ability to come to the aid of small developing countries within the region.⁹ The primary naval missions developed during this period included:

- protection of India's water frontiers and sea approaches to the country;
- protection of India's natural resources in the waters contiguous to the Arabian Sea and Bay of Bengal;
- protection of the country's foreign maritime traffic; and
- use of the Navy to promote Indian political and national goals throughout the Indian Ocean and in the Middle East.

Naval planners hoped to move away from the USSR as a sole source of supply. Consequently, aging Soviet *Foxtrot*-class submarines were replaced with Type-209 submarines of West German design (although this deal was cancelled in mid-flow after it became known that the West German company Howaldswerke-Deutsche Werft had sold similar design plans to South Africa).

The submarine deal was followed by a rush of other agreements, involving both the USSR and West European suppliers. The key beneficiary was the Fleet Air Arm following the modernization of the *Vikrant* to include a ski ramp. This allowed the procurement of the Harrier jump-jet. In 1986, India announced plans to purchase HMS *Hermes* (renamed the *Viraat*) for a sum of \$94 million, which included the costs for dry-docking, refit, spares, and support. The acquisition of the *Viraat* prompted further orders for more Harriers and for Sea King helicopters. Immediately after these deals had been secured, the Chief of Naval Staff, Admiral R.H. Tahiliani, announced that a third and possibly fourth aircraft carrier to replace the aging *Vikrant* would be required, but that in future the vessels would be produced indigenously.¹⁰

India's increasing interest in buying Western arms brought several offers from the USSR, some of which bore fruit. In 1986, India announced that it would replace its *Petya*-type anti-submarine corvettes with *Nanuchkas* or newer types. At the same time, the acquisition of the fourth *Rajput*- (Soviet *Kashin*-) class guided missile destroyer from the Soviet Union was announced.¹¹ This was swiftly followed by purchase of the first of six *Kilo*-class submarines to augment the Type-209s.¹² All in all, the naval equipment purchased from the USSR during this period cost India \$750 million and formed a significant part of the \$1.6 billion 1980 weapons deal.

For the Navy, and for the rest of the world, the most significant agreement was reached in late 1987 when India announced that it would receive shortly a nuclear powered

⁹G. Jacobs, "India's navy and the Soviet Union," *Jane's Defence Review*, August 1983, p. 886.

¹⁰"Indian naval construction set for major expansion," *International Defense Review* 19:3 (March 1986), p. 369.

¹¹Jacobs, "India's Navy," p. 888.

¹²"India receives first 'Kilo' class submarine," *Jane's Defence Weekly*, 27 September 1986, p. 670.

submarine from the USSR, soon after identified as a *Charlie* I-class cruise missile carrier equipped with eight launcher tubes.¹³ Although the transfer was mooted as early as 1984, the deal was a great surprise to the West. This was the first time that a nuclear-powered submarine had sailed under the flag of a non-builder and it took awhile to exonerate the Soviet Union from potentially contravening the terms of the Nuclear Non-Proliferation Treaty. At the time, it was thought that this deal might be followed by another four or five systems, a package worth some Rs.30 billion to the vendor. In the event, the submarine was returned to the Soviet Union with India either dissatisfied with its performance or uncertain as to whether this type of naval capability was politically or financially affordable.

The 1980s procurement program substantially increased India's ability to patrol the farther reaches of the Indian Ocean. In 1987, Indian frigates were seen off the coast of Mozambique, although for what purpose is not clear. In 1988, the Commonwealth sanctioned Indian intervention in the Maldives to prevent a *coup d'état*. Perhaps even more indicative, in April 1989 an Indian naval vessel made an appearance on the cover of *Time* magazine (international) in an article entitled "Super India: The Next Military Power."

The Indian Air Force (IAF) fared equally as well as the Indian Navy, and again, the modernization program appeared to be a judicious mix of cheap and plentiful technology from the Soviet Union and parallel efforts to diversify through deals with West European suppliers. By the early-1980s, it appeared that India would deploy the Jaguar and the Mirage 2000 fighter-bomber together with the MiG-23, -25, and -29. In August 1984, an Indo-Soviet agreement for supply of the MiG-29 Fulcrum was announced, complete with manufacturing rights.¹⁴ Thus, the key elements of the modernization program were firmly in place by the mid-1980s. Thereafter, India did little more than dabble in the international market. Expressions of interest in the Tornado strike aircraft and the Nimrod airborne early warning system came to nothing.

Overall, during the 1980s India engaged in the most significant conventional defense build-up in its history, rivalled elsewhere in the Third World only by the profligate expansion programs of the Persian Gulf oil producers in the 1970s. In 1987, for example, approximately 20 percent of all the arms exported to Third World countries were sold to India. Over a five year period, 1982-87, Indian defense expenditure rose by 50 percent. The 1987/88 budget alone increased by 23 percent from the previous year.

Somewhat predictably, this momentum could not be sustained. The defense modernization program was paced by some profound changes in the Indian economy. The first election of Rajiv Gandhi sparked an interest in change, not least in economic affairs. In government, Rajiv surrounded himself with technocrats and set India on a course of economic modernization and liberalization. Through economic reform it was hoped that the

¹³"India's SSGN identified," *Jane's Defence Weekly*, 6 February 1988, p. 199.

¹⁴Not only was India to receive state-of-the-art technology, with which the Soviets were traditionally loath to part, but the IAF also deployed the MiG-29 before any Soviet allies in the Warsaw Pact. While the political importance of the MiG-29 was quickly recognized, the military significance was forced to wait until its sensational debut at the Farnborough Air Show in 1988.

barriers to dynamic economic growth would be removed. At last, the "license raj," India's version of the command economy, seemed to be under threat; technology would flow into India, high-class manufactured goods would flow out, the rupee would eventually become convertible internationally, and the power brokers would be replaced by economic, not political, entrepreneurs.

Introducing a liberalization program was more difficult than Rajiv imagined. He underestimated the degree of powerful domestic opposition to his plans. Congress(I) politicians were unhappy to see a decline in this influence over producers and consumers, and the bureaucrats, feeling threatened by the market changes, also dragged their collective feet.¹⁵

While the liberalization program stuttered, the Indian balance of payments fell into disarray. Although signs of economic growth were obvious, there was also real competition from the Asia-Pacific region and the unrestricted import of capital goods and foreign technology was not matched by export expansion. Indian products tended to be over-priced and of poor quality, and too few exports contained added value; with an import boom and sluggish exports, India faced a growing foreign exchange crisis, compounded by several years of drought that boosted food imports, and the crisis in the Persian Gulf, which deprived the country of expatriate earnings of some Rs.6 billion per annum.

The result was near-ruinous external debt and an economy in virtual free-fall. Consequently, the value of the rupee fell dramatically. By mid-1991, India had a debt service ratio (the ratio of interest payments due on foreign loans to export earnings) of 30 percent, a \$7.5 billion government deficit and a staggering \$80 billion in foreign debts.¹⁶

The first real signal that defense expenditures were under threat came in late-1987 when Rs.2.5 billion was taken directly from the defense budget to boost the drought relief program. In the 1988-89 budget, expenditures were increased by only Rs.10 billion, to Rs.130 billion, despite continuing clashes on the Siachin glacier and the commitment of troops in Sri Lanka, which alone cost India an estimated Rs.3 billion. The allocations voted clearly would not cover existing or planned defense commitments.¹⁷

By 1989, the overall scale of the problems facing the defense sector was clear. The artificially low figure presented in the 1988-89 budget was beginning to take effect on the day-to-day running of the defense forces. The declining exchange value of the rupee inflated scheduled payments for imports in 1988 by Rs.14 billion (roughly \$1 billion) and the armed forces had to lodge several requests for deferments, even in payments to the Soviet Union that offered the option to pay in rupees rather than hard currency.¹⁸ In December 1988, the

¹⁵J. Manor, "Tried, then abandoned: economic liberalization in India," *IDS Bulletin* 18:4 (October 1987), p. 41.

¹⁶"Who will pick up the tab?" *Time*, 8 April 1991, p. 33.

¹⁷P. Chandra, "India plans super military machine," *The Sentinel* (Guwahati), 26 August 1989.

¹⁸Shekhar Gupta and P. G. Thakurta, "Defence forces: Heading for a Crisis," *India Today* XIV:4 (February 1989), p. 43.

services had difficulty paying salaries, the rental for communications systems went unpaid and new contracts for food supply had not been granted.¹⁹ The programs to make the Army "leaner and meaner" through mechanization (RAPIDS and RAMIDS) ground to a halt.

In addition, it seemed that much of the weaponry received by the Indian armed forces was less serviceable than it should have been. Many of the new weapons platforms inducted into the IAF and the Navy during the 1980s were practically unarmed, as funding had dried up before sufficient ammunition and missiles could be procured. In May 1990, the Comptroller and Auditor-General revealed that the Mirage 2000 had been put into squadron service without its principal weapons, long-range missiles and runway penetration bombs. Conceivably, when the Mirage escorted the air drop over Jaffna during the peacekeeping mission in Sri Lanka in 1987, it was armed with little more than its integral cannon.²⁰

During periods of economic constraint, India relied upon the Soviet Union for an enlarged proportion of defense imports. In general, the armed forces are less enamored with Soviet equipment and prefer instead state-of-the-art materiel from the West, a preference that fits India's policy of emphasizing its independence vis à vis the Soviet Union. Yet military sales have been a hallmark of Soviet-Indian relations, partly because of Soviet willingness to float substantial soft loans to finance the exchange.²¹ For their part, Indian negotiators managed to strike an optimum balance between threats to diversify arms imports and camaraderie for a beleaguered superpower, which resulted in the granting of a military wish-list beyond what most would have speculated.

During the mid-1980s, the relationship began to change. Gorbachev visited India, and beneath the blaze of publicity there were clear warnings to New Delhi on the sensitive subjects of nuclear proliferation, the economic effects of high defense expenditure, and relations with China.²² Moreover, it became increasingly clear that the Soviet Union would eventually want to shift the defense trade with India, for years a loss-leader for Moscow with soft loans and low interest, to a hard currency basis once the ruble became convertible.²³ Contrary to expectations, however, it also became clear how much India was disadvantaged by the trading arrangements between the two countries. India needed Soviet trade for defense equipment, petroleum, non-ferrous metals, and fertilizers. In return, the Soviets imported Indian tea, technology, clothing, consumer electronics, and spices. The whole process was conducted in rupees and Indian exports to the USSR habitually outpaced Soviet exports to India, by Rs.26 billion in 1990-91. In effect, this forced the Indian government to grant loans to Moscow in the form of "technical credit." At the same time, however, India had separate loans from the Soviet Union to pay for defense equipment.

¹⁹"Resource crunch stalls Defence Plan," *The Hindu*, 2 January 1989.

²⁰"Mirages came without missile system: CAG," *The Hindu*, 11 May 1990.

²¹In India's case, a soft loan is one that can be repaid in rupees.

²²Gregory Austin, "Soviet Perspectives on India's Developing Security Posture," in *India's Strategic Posture: Regional State or Global Power?*, ed. Ross Babbage and Sandy Gordon (New York: St. Martin's Press, 1992), p. 144.

²³"India: Old friends out of kilter," *The Economist*, 14 September 1991, p. 72.

In addition, India faced three more distinct disadvantages. First, several of the items traded by India, consumer electronics for example, contained imported components that were purchased on the open market with hard currency--as much as 80 percent on some items. Second, the rupee had been massively undervalued against the ruble. Third, the Soviets were prone to resell Indian goods into economies that could purchase them using hard currency, such as dollars or marks, and thus often flooded markets in Europe with Indian-source goods, driving down the price of India's own exports.²⁴ This amounted to a considerable loss of hard currency for India--but it was a cost that never was linked directly to the cost of defense imports from the Soviet Union.

Where India's relationship with the former Soviet Union will go in the future depends upon an array of complex issues. The potential for discord over the rupee-ruble trade is considerable in itself. In addition, both sides have seen considerable political change recently, which will introduce new actors and new priorities. Certainly, India did not get off to a good start with Boris Yeltsin (witness Narasimha Rao's clumsy endorsement of the Soviet coup in August 1991). Nevertheless, because both sides produce manufactured goods that invariably fail to reach world standards, a mutually supportive relationship will probably continue, with Russia at least. Much will depend, however, upon how the newly independent states south of Russia fare in the future: India's fear of isolation amidst unstable Muslim states must be considerable.

Future relations also will turn on how complex bilateral defense issues are sorted out. Recently, there has been speculation that Russia has offered a \$850 million credit for India to purchase redundant Soviet equipment, together with a parallel offer of the Yak-141 jump-jet and the Su-27 fighter. Other members of the post-Soviet Commonwealth of Independent States (CIS) are also short of foreign exchange and their need for arms exports is certain to be seen as something that India can exploit. The An-32 transport aircraft, for example, was produced in Ukraine and India is keen to acquire spare parts for its squadrons. The East European states might also enter the market. But the ties that once bound India and the Soviet Union no longer exist, and the country is still coming to terms with the implications of a unipolar world. If, therefore, any state in the CIS seeks to sell arms to Pakistan or Sri Lanka, for example, New Delhi will be powerless to intervene, witness Pakistan's trawl among the states of Eastern Europe for T-72 tanks.²⁵

Some of the speculation ended in July 1994 following Narasimha Rao's visit to Moscow, during which relations were re-established. The high point of the visit, which returned two declarations and nine agreements, was a Rs.400 million venture between Hindustan Aeronautics Ltd (HAL) and the Industrial Credit and Investment Corporation of India on the one hand and several Russian agencies on the other, including the Mikoyan Design Bureau. Russia, in line with its more commercially orientated arms trade policy, has proved much more flexible than the old Soviet Union with regard to the transfer of defense technology. The latest agreement is a case in point. India now has the green light to overhaul

²⁴N. Kaushal, "For a Few Dollars More: India and the USSR question the basis of their trade relationship," *India Today* XVI:14 (31 July 1991), p. 78.

²⁵"T-72 tanks for Pakistan: how it affects India," *Amrita Bazar Patrika* (Calcutta), 11 July 1990.

the RD.33 engines that power the MiG-29, and to develop an upgrade program for the T-72, as well as a host of good offers for air defense equipment and major weapons systems.²⁶

While Pakistan scratches around the margins of the international arms market, India has been more dynamic and ambitious. Since the early 1990s, the Indian economy has picked up momentum and, close behind, the modernization program is on the point of being resumed. Though still sluggish, Indian arms imports in 1991 amounted to \$800 million. Among developing country importers only Saudi Arabia (at \$7.1 billion), Afghanistan (\$1.9 billion) and Iran (\$1.5 billion) imported more, which indicates well the extent of the modernization program that came before.²⁷

Overall, India's defense expenditures grew slowly in the early 1990s, failing by a wide mark to match the level of inflation. In 1993, defense allocations began to rise, increasing by \$500 million over the previous year but still leaving too little space to rekindle modernization programs demanded by the service chiefs.²⁸

Although major deals for weapons platforms were few and far between, the armed forces did appear to be filling the technology gaps that opened up in the late 1980s when the modernization program ground to a premature halt. Procurement deals agreed to in 1993 included a 5.56mm standardization program for assault rifles, light machine guns and sub-machine guns; simulation technology; tank fire control systems; and armored recovery vehicles.²⁹

Eventually, in 1994, defense expenditures rose in real terms for the first time in seven years to Rs.230 billion (\$7.41 billion), a 20 percent increase over the previous year.³⁰ Though justified in terms of the rising level of insurgency in Kashmir and the associated effect on Indo-Pakistan relations, the rising cost of internal security operations told only a fraction of the story. In fact, much of that cost was charged to other budgets, notably the cost of the Border Security Force.³¹

In effect, the Indian armed forces were seeking to attend to the unfinished business of the 1980s and, in addition, to ensure that existing front-line equipment received adequate maintenance and attention. The IAF maintained its search for roughly 100 advanced jet trainers, a major remaining program gap given the quality of operational aircraft brought into operation in previous years. The IAF also needed to redress one of the worst accident rates

²⁶S. Chakravarti, and S. Dasgupta, "Indo-Russian Relations: Looking Ahead, Finally," *India Today* XIX:14 (31 July 1994), p. 31.

²⁷"India imported arms worth \$800m in 1991," *Economic Times*, 3 August 1992.

²⁸V. Raghuvanshi, "India Defense Budget Slows Modernization," *Defense News*, 19-25 April 1993.

²⁹Rahul Bedi, "Indian arms buys defy cash shortfall," *Jane's Defence Weekly*, 8 May 1993, p. 29.

³⁰Rahul Bedi, "India stems the fall in its defence spending," *Jane's Defence Weekly*, 12 March 1994, p. 3.

³¹R. Rikhye, "Slight of hand," *Illustrated Weekly of India*, 4 December 1988.

in the world, due mainly to pilot error, recklessness and a deficiency in trained technicians.³² The IAF also set out to acquire upgrade packages for the MiG-21. (The future of the indigenous Light Combat Aircraft (LCA) and Advanced Light Helicopter (ALH) continued to be somewhat enigmatic, the only certainty being that progress has been slow and operational capability appears as far away as ever.)

The Army pursued a similar strategy. Although the wish-list is undoubtedly less ambitious than in previous years, it is real enough in procurement terms. With the Arjun main battle tank program stalled and with production of the T-72M1 tank at the Avadi plant also slowing, thoughts have turned to the Russian T-80U, effectively as a stop-gap measure.³³ However, the most significant purchase on the horizon involves 120 self-propelled 152mm or 155mm guns and the conversion of 500 existing towed weapons from 130mm to 155mm ordnance. The source of these weapons has not yet been decided but the likely contenders are Britain, France, South Africa and Russia, and some \$2.55 billion has been earmarked for the purchase.³⁴ The Army is also trying to revive its aviation wing to replace aging Cheetah helicopters.³⁵ The Army Aviation Corps was one of the first major casualties of the resource crunch of the late 1980s; in the 1988-89 defense budget allocations were a mere \$154,000.³⁶

The Indian Navy is also in line for new equipment. Under consideration are upgrade plans for many of the Navy's warships and a new class of frigates. At least twenty-five of the Navy's forty-one warships are to receive improved radar, missile and anti-submarine warfare systems.³⁷ Also under consideration is a replacement for the *Vikrant*, probably in the form of an indigenously designed 17,000-ton Air Defense Ship, and six British *Upholder*-class submarines, placed on the market due to defense cuts in the UK.³⁸

One of the different features of the most recent modernization plans is the ability to exploit Russia's weakness in the international market. India can now confidently demand that old Soviet systems be upgraded using technology from other countries. The sharp division that used to exist between Soviet and non-Soviet equipment no longer obtains. This change, if handled properly, means that over time India may be able to take the best from both categories and produce hybrid systems, with the distinct potential for technology transfer. So far, however, India's attempts to enter the defense export market have not been too successful.

Since independence, Indian leaders have consistently stressed the need for independence and self-sufficiency in defense production. Yet, despite considerable

³²MILAVNEWS, October 1985, p. 18.

³³Vivek Raghuvanshi, "India Weighs Purchase of New Russian Tank," *Defense News*, 7-13 June 1993.

³⁴"India plans major artillery procurement," *International Defense Review* 27:5 (May 1994), pp. 13-14.

³⁵"New Delhi Shops for Choppers," *Defense News*, 20-26 June 1994, p. 18.

³⁶MILAVNEWS, August 1988, p. 17.

³⁷Vivek Raghuvanshi, "India Plans Upgrades, New Ships," *Defense News*, 13-19 September 1993.

³⁸Vivek Raghuvanshi, "Indian Navy Prepares Modernization Plans," *Defense News*, 14-20 March 1994, p. 6.

investment over the years, there has been a certain over-optimism within India concerning the country's ability to produce major weapons systems. All the flagship projects developed in the 1980s have largely failed, especially the Arjun and the LCA.

The usual sequence for the majority of India's large scale indigenous defense programs begins with an ambitious project that largely excludes the possibility of foreign collaboration. The degree to which foreign partnership is excluded can be estimated by the amount of foreign exchange that is allocated from the defense budget. Delays and slippage--customary enough in most countries' defense projects--are extremely common in India, rising sometimes to more than a decade. Over time, foreign involvement increases, which pushes up costs and reduces indigenous content, often by a considerable margin.

The apparent inability of the defense industry to move beyond licensed production inevitably holds ramifications for external procurement. If indigenous projects fail to bear fruit, stop gap or replacement systems are required--the T-80 in the case of the Arjun, and the proposal to use the General Electric F404 engine for the LCA, pending successful development of the indigenous GTX engine.³⁹

Pakistan

Following both Indo-Pakistani wars of 1965 and 1971, the United States embargoed arms sales to Pakistan. Between the two wars, successive US administrations made it extremely difficult for Pakistan to buy American defense equipment. The exception was a sizeable deal agreed in 1970, after Pakistan played a crucial role in establishing communication links that facilitated President Nixon's visit to China. After the 1971 war, the US linked future arms sales to Pakistan to progress on bilateral talks, which kept the embargo fully in place for another two years. It was lifted in March 1973, allowing for the sale of non-lethal items and spare parts, and for the completion of the deal signed in 1970 but suspended at the outbreak of war. Although conditions continued to relax through the 1970s, it was not long before US concern over nuclear proliferation in South Asia began to make its presence felt in conventional defense negotiations.⁴⁰

US procrastination encouraged Pakistan to look elsewhere in the West for arms supplies. In Western Europe and Canada, however, Pakistan faced further difficulties; in 1965 the UK refused new arms contracts and in 1971 Canada and France did the same, leaving Pakistan to pick up ad hoc contracts with Turkey, Iran, Portugal and Jordan. Even defense procurement funds proved difficult to acquire. In 1976, Pakistan was compelled to solicit a grant of \$1.1 billion from Saudi Arabia, of which \$550 million was earmarked for

³⁹For a more comprehensive overview of the Indian defense program, see Eric Arnett, "Military technology: the case of India," *World Armaments and Disarmament: SIPRI Yearbook 1994* (New York: Oxford University Press, 1994), pp. 343-365.

⁴⁰For an excellent analysis of the politics of US arms sales and transfers to Pakistan, see Ian Anthony, *The Arms Trade and Medium Powers: Case Studies of India and Pakistan, 1947-1990* (Hemel Hempstead, UK: Harvester Wheatsheaf, 1992), p. 216.

defense supplies.⁴¹ Consequently, Pakistan came to rely upon China in the same way as India was to rely, somewhat reluctantly, upon the Soviet Union.

In 1980, Pakistan was for all intents and purposes a free floating country capable of gravitating further towards China, the Soviet Union or the United States. The Soviet invasion of Afghanistan and the US response turned South West Asia into a revitalized forward defense area for Washington. In June 1981, the Reagan Administration agreed to a five year military and economic assistance program worth a total of \$3.2 billion. For the first time in nearly a quarter of a century, US military and economic assistance flowed into Pakistan, followed in short order by the quid pro quo: the creation of an arms pipeline that flowed through Pakistan into Afghanistan.⁴² The military assistance program was used primarily to procure equipment for the Army.⁴³ A separate deal involving the transfer of two squadrons of F-16 fighters accounted for another \$1.1 billion.

The renewed relationship between Islamabad and Washington brought fresh interest from Beijing, concerned not only about the future of the coalition against India, but about the Soviet presence in Afghanistan. In one of the early campaigns of the invasion, Soviet troops entered and depopulated the Wakhan corridor, which threatened to create an additional front between China and the Soviet Union. Consequently, weaponry to Pakistan followed in the form of F-6 fighter-bombers, mobile and fixed air defense systems, and 142 A-5 ground attack aircraft over the course of the mid-1980s. In addition, China provided infrastructural support in the form of the Karakorum Highway and a new runway at Gilgit.⁴⁴

Pakistani strategic analysts were probably somewhat ambivalent about the prospect of a Soviet invasion. After all, it was Afghanistan, not Pakistan, that was strategically important to the Soviet Union, and Moscow was unlikely to take such a massive risk for territory it really did not want. The presence of Soviet ground forces across the border, coupled with the partial anarchy that existed in the tribal areas of northern Pakistan, raised very real concerns in Islamabad, but even so, what most concerned Pakistan was redressing the conventional military and regional imbalance against India, which had grown steadily worse throughout the 1970s. The resumption of arms supplies from the United States in the 1980s did provide a brief opportunity to reduce that imbalance, as well as an opportunity for a long overdue doctrinal overhaul, planned since the 1970s and designed to provide greater potential for mobilization and flexibility. However, on account of India's massive rearmament program during the 1980s, the conventional balance remained at least 2:1 in favor of the emerging regional superpower.

Moreover, decision makers in Islamabad in the late 1980s were unable to capitalize upon growing evidence that India's modernization program was faltering. In early 1990, under

⁴¹ R. G. Sawney, "Pakistan's Military Capability," *IDSA Journal* XVI:3 (January-March 1984), p. 197.

⁴²For an excellent history of the US-Pakistan relationship, see Shirin Tahir-Kheli, *The United States and Pakistan: The Evolution of an Influence Relationship* (New York: Praeger, 1982).

⁴³For details of the US transfers to Pakistan see Anthony, *The Arms Trade and Medium Powers*, p. 143.

⁴⁴*Ibid.*, p. 139.

the direction of General Beg, Pakistan appeared overtly to cross the nuclear threshold.⁴⁵ Although the US was keen to be seen as promoting good relations following the election of Benazir Bhutto, President Bush had little option but to cut economic and military aid to Pakistan under the conditions laid down by the Pressler Amendment. Many Pakistanis, however, prefer to understand the logic behind the Pressler Amendment in a different way: When it became clear that the Soviet Union would withdraw from Afghanistan, and when US foreign policy interests began to change as the Soviet Union started to crumble, Pakistan slipped rapidly down Washington's strategic agenda, to a place where 1980s-style US largesse could no longer be justified.

Both politically and militarily, the Pressler Amendment came as a heavy blow to Pakistan. In defense terms, the major setback was the refusal by the US to proceed with delivery of the 71 F-16s that had been bought and paid for.⁴⁶ In addition, under US foreign military sales conditions, Pakistan had been able to purchase spare parts for US defense equipment at extremely low prices. After Pressler, however, commercial rates applied. Pakistan also was forced to return the eight *Brooke*- and *Garcia*-class frigates that had been leased from the United States in 1988, which decreased the country's naval capability to a considerable degree.

Equally significant, the application of the Pressler Amendment created the worst possible response from some of the other major bilateral aid donors. In 1992, Germany reduced aid to Pakistan by 25 percent because of "excessive armament."⁴⁷ In the following year, Japan opted to link future bilateral aid to concern over the nuclear program, which deprived Pakistan of a \$400 million aid package.⁴⁸

To a certain extent, both sides have managed to stem the decline in their respective fortunes. Pakistan has embarked upon a tentative program to recover from the damage inflicted by the loss of US military aid. Attempts to secure the release of the F-16s, however, have almost certainly failed following a somewhat curious statement in August 1994 by the US ambassador to India, Frank Wisner--rather than the US ambassador in Islamabad--that no further F-16s would be supplied to Pakistan.⁴⁹ For some time it has been rumored that Pakistan has shown interest in the Mirage 2000 fighter-bomber but it seems inconceivable that the country can afford one of the most expensive aircraft currently on the market. Pakistan has, however, recently agreed to purchase three French Agosta 90 submarines, at a cost of

⁴⁵Recently, Beg himself has stated that the requisite nuclear capability was acquired much earlier. In a signed article in *The Pakistan Times* (11 December 1993), Beg stated that Pakistan's nuclear program was frozen in January 1989, after a small group of decision makers had agreed that Pakistan had acquired the requisite nuclear capability.

⁴⁶Eleven F-16s had already been completed and paid for, but instead of being transferred to Pakistan they were placed in storage at Lockheed's Fort Worth division, where they remain with little chance of ever reaching Pakistan.

⁴⁷H. McDonald, "Arms Audit: Germany, Soviet Union deliver double shock," *Far Eastern Economic Review*, 28 November 1992, p. 20.

⁴⁸Interestingly, this affair was sparked by an NBC TV documentary aired in early 1993 that was, in many ways, an extremely biased and poorly researched program.

⁴⁹"No more F-16s for Pakistan," *Jane's Defence Weekly*, 20 August 1994, p. 14.

\$1 billion.⁵⁰ At the time of writing, Pakistan is considering the possible purchase of 320 T-72 tanks from Poland or some other suitable East European supplier.⁵¹ Also under consideration is a package to upgrade its Chieftain tanks to the standard of the Chieftain 2000 in an effort to match India's license-produced T-72M1.⁵²

Equally, Pakistan is also pursuing a package of co-operative projects with China. Although China has now stopped the practice of providing military aid to countries such as Pakistan, considerable tact has been shown on price and China remains a trustworthy source of technology. Pakistani sources have talked about the "purchase" of M-11 missiles, but Pakistan is most unlikely to have been asked to pay the retail cost; yet, where aid stops and sale begins is unclear. Co-operative ventures in recent years include tank production at the Heavy Rebuild Factory at Taxila, overhaul facilities for the MI-8 helicopter, and licensed production of anti-tank missiles and K-8 basic jet trainers.⁵³ In late 1993, a deal was signed with FIAR, an Italian defense electronics company, for the supply of 100 radar systems to upgrade Pakistan's Chinese-built F-7 fighters.⁵⁴

Pakistan's options at the conventional defense level are extremely limited. The task of developing a defense capability that would bring some form of parity with India would be difficult at best. Although India may be less well defended than it might otherwise have been had the modernization program been better planned, Pakistan's conventional inferiority persists and the gap grows wider as India begins once again to procure weaponry, and as Pakistan suffers from a net loss in defense capability. Moreover, any attempt to redress the imbalance, even with the assistance of China, would be an expensive task.

As a result, Pakistan seems destined to live with a conventional imbalance vis à vis India for several years to come. Given Pakistan's parlous economic situation, as compared with India's new-found investment and growth, both of which seem likely to persist, the conventional defense imbalance may even grow considerably worse—a prospect that the non-proliferation community should be encouraged to consider.

Internal Dimensions of Indian Defense Procurement

In principle at least, India has been a secular democracy since independence in 1947. Following the transition from colony to independent state, India retained many, if not most, of the bureaucratic structures imposed by the British; the independent constitution adopted by India after independence was, in effect, a modified version of the Government of India Act of 1935. The parliamentary system of democracy was maintained and with it a process for organizing and understanding defense and security issues.

⁵⁰"Pakistan Buys 3 French Submarines." *Kyodo News Service*, 22 September 1994, cited in DFAX, *Military and Arms Transfer News*, 94:10 (7 October 1994), p. 6.

⁵¹*Jane's Defence Weekly*, 16 January 1993.

⁵²"Britain woos Pakistan with tank upgrades," *International Defense Review* 26:11 (November 1993), p. 849.

⁵³M. Hussain, "Pakistan-China defense co-operation," *International Defense Review* 26:2 (February 1993), p. 111.

⁵⁴"FIAR Signs Deal to Upgrade Pakistani F-7s," *Defense News*, 18 October 1993.

Although India inherited and maintained political and bureaucratic institutions initially crafted by the British, the role of these organizations differed somewhat in Indian practice. What evolved was a three-cornered but unequal relationship among the armed forces, the bureaucracy and Parliament. A series of administrative and organizational changes were introduced immediately after independence, designed to reduce the role of the military in both decision making and, potentially, in politics. The abolition of the post of Commander-in-Chief was a significant and early decision on the part of Nehru together with several other changes to the Warrant of Precedence.⁵⁵

The Role of Parliament

Independent India vested the control of decision making on defense and security issues in Parliament—the state legislatures have no role. In principle, control by Parliament is exercised, as it is in Britain, by parliamentary debate and by a batch of standing committees, such as the Estimates Committee, the Public Accounts Committee and the Committee on Public Undertakings.⁵⁶ While Parliament as a whole does not make policy (this is done by the ruling party) both houses should help to guide and direct policy on national security issues.

The ability of Parliament to interpret national interest and bring influence to bear upon defense procurement issues has been circumscribed seriously, however, by several factors. First, very few individual parliamentarians are especially interested in defense issues. Although defense capability overall and individual procurement decisions are often endorsed enthusiastically, the reasons are invariably related to ideas about nation-building and regional hegemony rather than to the fit between defense and security. There is a defense debate in Parliament every April, after the budget has been presented. However, the quality of debate is consistently poor with a propensity to generate "heat but never light," according to one pundit.⁵⁷ Another has remarked how often the defense debate fails to muster a quorum—at times the number present does not exceed twenty MPs.⁵⁸

Second, the committees designed to play a watchdog role have fared little better. Although the Comptroller and Auditor General frequently call upon these committees to investigate defense-related issues, and there have been some damning reports in recent years, the committees are powerless to affect policy, unlike their congressional counterparts in the United States, for example.

⁵⁵For a discussion of the role of the Indian Army immediately following independence see Stephen P. Cohen, *The Indian Army: Its Contribution to the Development of a Nation* (Bombay: Oxford University Press, 1971), Chapter 7.

⁵⁶The EC examines organizational effectiveness, the PAC examines financial administration and the CPU examines defense production.

⁵⁷P. R. Chari, "The policy process," in *Defence Policy Formation: Towards Comparative Analysis*, ed. James Michael Roherty, (Durham, North Carolina: Carolina Academic Press, 1980), p. 143.

⁵⁸I. Malhotra, "Defence debate paradox: confidence and apathy co-exist," *Times of India*, 7 April 1983.

Third, democratic processes have had far less effect on defense issues than they appear to have on paper because India has been largely governed by a single party, namely, Congress/Congress(I). The strength of the Congress "system" permits very little meaningful debate on defense and security issues outside the confines of the ruling party and, even here, policy is directed by a small élite and barely discussed at party *tamashas*. To a great extent, defense policy directives emanate from the leader of the Congress Party--witness the number of times Nehru, Indira and Rajiv Gandhi took over the defense portfolio. When the lobby in favor of the LCA acquired momentum, its influence was directed towards Mrs. Gandhi and her 1 Safdarjang Road advisors, not toward Parliament.

The personalized style of defense decision making is important in another way. For as long as decisions are taken by a small coterie, they can be challenged only at great political risk to the individual in a political culture that is intensely hierarchical. Obversely, to endorse existing policy in the name of national security--a frequent refrain from the Lok Sabha--or to accuse dissenters of anti-national sentiment is always an option for those who wish to display loyalty to leader and nation simultaneously.

Over the past decade, India's political commitment to secularism has been conspicuously eroded. Politically, chauvinistic Hinduism has made significant gains at the expense of Sikhs and, especially, Muslims. While the prospect of the avowedly Hindu Bharatiya Janata Party (BJP) being elected to power in the near future has abated, there are clear ramifications for both internal and external defense policy. Rising chauvinism has greatly exacerbated the centrifugal forces at work within the country, which has in turn energized ethnic and religious groups who now feel that the Indian Union is increasingly working against rather than for their interests. Inevitably, this has had a profound impact upon the Army and its growing involvement in internal security operations. While this has not led directly to an increase in the procurement of major weapons systems, the drain on the defense budget to cover operational costs and low-level procurement (light weapons and surveillance equipment) has been considerable. In addition, the erosion of secularism has greatly diminished the prospect of a solution to the Kashmir imbroglio, which has had a discernible and worrying effect on Indo-Pakistan relations that will inevitably justify increased procurement in the future.

Nevertheless, a BJP government (or BJP-dominated coalition) would not necessarily champion a more hawkish defense policy than exists already, contrary to received wisdom. Within the BJP, there is a commitment to a fundamental defense review aimed at attaining greater defense self-sufficiency, and the party's commitment to overt nuclearization is almost certainly more vote-oriented than is popularly assumed.

The Role of the Armed Forces

The constitutional process that downgraded the armed forces in the Warrant of Precedence was an important statement in the wake of the British departure. Although India has a discernible warrior culture, the social importance of the military was minimal, as

reflected, for example, in the modest importance of a military career in the marriage market.⁵⁹ In addition, the close links between the Indian Army and the British--which may also account for the relatively low social status--would have encouraged this action by India's founding fathers, who were also mindful of the prospect of a militarist threat to the newly formed state. (The Indian National Army had displayed totalitarian tendencies prior to independence, and it was the Army that stood between the new state and chaos during the partition process.) Nonetheless, the institutional organization of the armed forces remains of far greater significance in the framing of defense procurement policy than are the inputs and awareness of Parliament. The lack of a Chief of Defense Staff (CDS) is particularly significant, and the absence of military personnel in the Ministry of Defense is only somewhat less so.

Whether or not the lack of a CDS makes good bureaucratic and managerial sense is a well-visited defense-related debate in India, second only perhaps to the nuclear issue. In bureaucratic political terms, the absence is significant: although the Defense Minister has taken the place of a CDS, the bureaucracy lacks the sort of authoritative figure who can manage rivalry between the services. Because the defense portfolio is often one of the many charges of the Prime Minister, and because the portfolio is an unpopular Cabinet post, the result is frequently a bureaucratic free-for-all.

The lack of defense personnel and, by implication, a certain type of defense expertise in the Ministry of Defense was most important during the initial formulation of defense policy, between 1947 and the outbreak of the Sino-Indian War in 1962. Although received wisdom maintains that during this period economic development overrode defense, and that defense policy was low key, this is not strictly the case. During this period, the service chiefs of staff were able to exert undue influence upon defense strategy. The adoption of a blue-water strategy and a long-range bombing role date from this period. Both were to result in significant procurement in later years. For the most part, the foundations of India's defense policy were laid in a period when the political élite was distracted and when the MoD was technically incapable of challenging the chiefs of staffs' interpretation of the relationship between defense and security.⁶⁰

Ever since President Eisenhower warned American voters about the corrosive effect of the military-industrial complex (MIC), this mutation of the "power élite" entered the arms control lexicon, from the left. Throughout the 1970s, understanding the triangular alliance that linked politicians, the military and industry was considered essential to acquire a grasp of the arcane world of defense. Despite the competing theories for understanding arms racing (bureaucratic politics, action-reaction, technological imperative), the MIC theory sustained its dominance for many years and, to some extent, proved transportable, because it was so direct and relatively simplistic and, as a result, travelled well across continents. Unfettered by the particularities of regional security conditions or differing political and bureaucratic countries, the MIC theory could be applied to any country with a discernible

⁵⁹Kavic, *India's Quest for Security: Defence policies, 1947-1965*, p. 143.

⁶⁰I have discussed this period in considerable detail in *India's Ad Hoc Arsenal* (Oxford: Oxford University Press for the Stockholm International Peace Research Institute, 1994), Chapter 3.

defense industry on the one hand and a defense force on the other, which included other NATO countries, the Soviet Union and, by implication, states such as India or Brazil.

In the case of India, it would seem fair to suggest that a country with an extremely large army and a considerable interest and investment in defense production would show evidence of MIC tendencies. Interestingly, both for India and the theory, nothing could be further from the truth. In the defense sector, there is little or no evidence of pork barrel politics; politicians and state governors do not seem to vie for defense projects to be located in their own states. On the contrary, strategic decisions tend to prevail. The defense industry, aerospace especially, is mainly located in and around Bangalore because that was where Walchand Hirachand set up Hindustan Aircraft to repair and overhaul foreign aircraft. Bangalore is also well beyond the reach of Pakistani, or Chinese, aircraft. The fact that state legislatures have little to do with defense and security decision making also helps to account for the absence of pork barrel politics in the defense sector.

MIC theory also assumes the existence of a mutually rewarding relationship between the armed forces and industry, whereby industry will provide "solutions" for which the armed forces will, eventually, provide the "problem," to the benefit of each. Thus, the neutron bomb began life as a warhead for a US Anti-Ballistic Missile program that was sidetracked by arms control legislation in the form of the ABM Treaty. Yet, it re-emerged a few years later as a battlefield nuclear weapon. For many years the cruise missile was also something of an institutional orphan until adopted as a theater nuclear weapon.

In India, there is no evidence for any semblance of collusion between the armed forces and the defense industry. In fact, the complete reverse is more often the case. There have been a great many occasions when the armed forces, and especially the air force, have actively participated in *undermining* the growth and development of the defense industry. The critical difference between the situation in the West and that in India concerns the availability of better, cheaper and more acceptable weapons systems on the international market.⁶¹ Overall, the armed forces prefer to acquire imported, foreign equipment, preferably from the West. Under sufferance they will accept Soviet/Russian equipment and only under even greater sufferance will they accept indigenous equipment.

Slippage and delays are endemic to the Indian defense industry, in large part because of the changing specifications and shifting demands of the armed forces. Often, however, delays go far beyond what the armed forces are prepared to accept; a decade or more is not uncommon. By playing the national security card, the services can arrange for such indigenous projects to be overridden by imports. Consequently, the unique relationship between the Indian armed forces and the Indian defense industry actually *increases* the demand for imported weapons.⁶²

⁶¹Many countries opt to develop a defense production base to save on the high cost of importing weapons systems. In India, the cost of producing a Gnat fighter in India was 190% greater than the cost of import; the same figure for the MiG-21 was 180%. In the short run, at least, imports are cheaper. SIPRI, *Arms Trade with the Third World* (Stockholm: Almqvist and Wiksell, 1971), p. 738, Table 22.9.

⁶²I have explored this theme in more detail in Chapter 7 of *India's Ad Hoc Arsenal*.

India as Arms Exporter

The majority of major arms producers are also active in the international arms market. Even for the superpowers, the motivation is now primarily economic and industrial. Essentially, the cost of military technology limits domestic demand. Governments generally can only purchase a fraction of what industry is capable of producing. The benefits of exports, particularly when sales are made to countries with no export policy of their own, are economies of scale, export earnings, longer production runs and the phased introduction of new weapons systems.

Despite a considerable defense production base, India has not so far exported any significant quantities of defense equipment, for three reasons. First, India has experienced too many problems with the production of indigenous equipment to consider defense exports across the board. Second, domestic demand has been relatively high. The armed forces generally absorb what the defense industries produce, their reluctance to do so notwithstanding. Third, as a leading member of the non-aligned community, India would be forced to conduct a considerable internal debate over the rights and wrongs of selling arms for commercial ends, if only for the sake of its credibility in the South. However, this would only be necessary politically if India stood poised to make a major sale of potentially lethal defense equipment for economic gain alone.

Despite these problems, India is no stranger to the export market. Over the past two decades it has dabbled on many occasions but without the benefit of clear policy guidelines. In April 1972, the government announced that henceforth it would enter the arms export market with a view to becoming a major actor. Until then, exports had been negligible and mainly concerned with non-lethal supplies, such as the \$370,000 of boots, uniforms and helmets exported to Nigeria, Lebanon, Jordan and Saudi Arabia.⁶³ However, little or nothing emerged in the aftermath, although the government was extremely embarrassed when it became clear that ex-Indian Army Centurion tanks had arrived in South Africa, in 1978, via arms dealers in Jordan and Spain. Later, in 1980, Sanjay Gandhi was at the center of a scheme to export Centurion spare parts to Israel, via Canada, and was also in discussion with the same arms dealer who had managed the shipment of Centurions to South Africa, about the sale of another 200 units.⁶⁴

These incidents, as much as anything else, hitherto persuaded many in politics that India should not involve itself in the international arms bazaar. Nevertheless, there were minor low key sales of patrol boats to Bangladesh and Mauritius; Alouette helicopters to Bangladesh, Ethiopia, Liberia, Nepal and the Seychelles; second-hand An-12, Otter and Caribou aircraft to Bangladesh; HJT-16 Kiran trainers to Liberia; HTT-34 trainers to Ghana;

⁶³J. Sarkar, "India: Arms for sale," *Far Eastern Economic Review*, 19 August 1972.

⁶⁴P. Niesewand, "India in secret tank deals," *Guardian Weekly*, 31 September 1980.

second-hand 105mm guns to Bangladesh; and ammunition, small arms and transport vehicles to Jordan, Lebanon, Malaysia, Nigeria and Oman.⁶⁵

Through the early 1980s, reports on Indian defense sales were infrequent; a Defense Export Promotion Council was set up in 1984 but had little impact. The Soviet Union was reported to be interested in the Chetak helicopter but there were no subsequent reports to indicate whether or not a sale had been made.⁶⁶ During the same year, HAL stated its intention to commence exports, in the form of the Kiran jet trainer and the Marut fight/attack aircraft, but omitted to mention any orders.⁶⁷ Also, HAL's sanguine approach to the export potential for the ALH in 1986 was rather premature.⁶⁸

Toward the end of the decade, government policy changed dramatically in direct response to the growing anticipation of a debilitating defense funding gap. In October 1988, Defense Minister K.C. Pant, the architect of the new policy, stated that the government was receiving an increasing number of requests from foreign sources for spare parts and other types of equipment, such as clothing. In January 1989, Defense Secretary T.N. Seshan explained the policy:

... we are reviewing how we can export Indian defense items, without compromising on certain basic principles.... We don't want to add to local conflicts and so on. At the same time, industry, public and private sector, can benefit from exports.... But I don't think we'll ever achieve the kind of aggressive marketing practices which some other countries have achieved.⁶⁹

To add to this, K.C. Pant announced the creation of a task force to be headed by a senior officer and mooted several potential defense markets, such as Libya, Malaysia, Iran, Iraq and Vietnam.⁷⁰

Although it is probably correct to state that the breakthrough on arms exports never occurred, nor is it likely in the foreseeable future (with the possible exception of joint production and export ventures with Russia), the new policy did return some success. HAL came close to reaching an agreement over the sale of the Dornier 228 executive jet to Nepal, not a military system but useful for the balance of payments nevertheless.⁷¹ In June 1989,

⁶⁵Michael Brzoska and Thomas Ohlson, *Arms Transfers to the Third World* (Oxford: Oxford University Press for SIPRI, 1987), Appendix 3, p. 298.

⁶⁶M. Ved, "USSR likely to buy Chetak copters," *Hindustan Times*, 11 January 1984.

⁶⁷"Indian Firm to Enter Export Market," *Aviation Week & Space Technology*, 24 September 1984, p. 24.

⁶⁸D. A. Brown, "India Identifies Large Market For Advanced Light Helicopter," *Aviation Week & Space Technology*, 19 May 1986, p. 69.

⁶⁹N. V. Rao, "Ambivalence on arms exports," *Indian Express*, 27 January 1989.

⁷⁰M. Ved, "Task force for Defence export," *Hindustan Times*, 2 February 1989.

⁷¹"HAL to sell aircraft to Nepal," *The Hindustan Times*, 10 March 1989.

a Saudi defense team visited India to discuss an officer training scheme.⁷² In a similar vein, India was contracted to help Tanzania establish its first military college in Fort Ikoma.⁷³ It has also been rumored that the members of the military wing of the African National Congress at one point received training in India.

In late 1989, Zambia was poised to become the first serious customer. A military adviser's post had been set up in the Indian High Commission in Lusaka and on the agenda were transfers of APCs, artillery, rifles, semi-automatic weapons and MiG-21 aircraft. However, because of Zambia's foreign exchange crisis, any deal was unlikely to involve hard currency.⁷⁴

In 1990, there were similar export opportunities. Several public sector units participated in the Aerospace 1990 Exhibition in Singapore. Mauritius bought the Dornier 228. Vietnam opted to purchase the production lines for the MiG-27 ground attack aircraft, the T-55 and armored personnel carriers.⁷⁵ In the fiscal year 1990-91, defense exports totalled Rs.800 million.⁷⁶

In 1991, Bharat Electronics returned good results for the export of high technology communications equipment, totalling about \$14 million.⁷⁷ Bangladesh was offered Indian services to improve and modernize its defense forces, following a visit by the Chief of the Army Staff.⁷⁸ India was invited to tender an offer to meet Mauritius' requirement for a single medium off-shore patrol vessel.⁷⁹ In 1992, the MoD announced that it was considering selling off 1,500 pieces of artillery, worth about Rs.8 billion, together with scrap and ammunition worth another Rs.2 billion.⁸⁰

It seems unlikely that India will succeed in becoming a major exporter of defense equipment, for several reasons. First, the international market is saturated, a situation that looks likely to continue. The international arms market is in a considerable slump, which ironically dates from around the time when the Indian government decided upon the shift in policy. Particularly hard hit have been sales of major weapons systems, the very sales that India wants and needs to earn necessary foreign exchange. Moreover, the market is now much more geared toward technology that India would find difficult to supply.

⁷²F. J. Khergmvala, "Saudi team visiting military facilities in India," *The Hindu*, 24 June 1989.

⁷³"Tanzanian War College Established," *Jane's Defence Weekly*, 12 August 1989.

⁷⁴S. Mukherjee, "India set to sign Zambia in sales push," *Jane's Defence Weekly*, 16 September 1989, p. 536.

⁷⁵"India to transfer technology with friendly countries," *Amrita Bazar Patrika* (Calcutta), 27 February 1990. On Mauritius, see "New feather in HAL's cap," *The Statesman*, 5 March 1990. See also, "Retired Indian Defense Production Units for Vietnam," *Strategic Digest* (IDSA) 20:6 (June 1990), p. 2530.

⁷⁶"Bid to shore up defence exports," *The Times of India*, 6 July 1991.

⁷⁷"Export successes for Bharat Electronics," *International Defense Review* 24:1 (January 1991), p. 77.

⁷⁸H. Habib, "India to help modernize Bangladesh's defence forces," *The Hindu*, 23 July 1991.

⁷⁹"Mauritius seeks OPV supplier," *Jane's Defence Weekly*, 10 August 1991, p. 222.

⁸⁰A. Nigudker, "India Puts Surplus Weapons Up For Sale," *Defence* (March 1992), p. 7.

Second, India lacks the experience and the staying power of its competitors. For example, attendance at the Asia Exhibition has been patchy, which suggests poor marketing at the outset. By definition, because the majority of the Indian defense sector is publicly owned, although this is changing, the sales pitch and the decision making process both are bureaucratized and might lack the flair and innovation of competitors from the private sector.

Third, it is difficult to imagine a foreign country buying equipment that the Indian armed forces are so patently reluctant to absorb themselves. Fourth, the equipment is--by global standards--not that good. If a market niche does exist, it is among the poor countries of, say, Africa and Central America, but even there, competition from Brazil and China is stiff, and there is counter-pressure from the World Bank and the IMF.

Finally, India does not really have that much to sell that is indigenous, and thus independently exportable. Foreign technology is present in many of the systems that Indian industry builds. Thus, although export prospects are often used as one justification for the LCA, there will be several foreign governments to persuade before a sale can be approved, not least the United States if India fails to develop an indigenous engine. (Indians now joke that by the time the LCA enters production the only indigenous aspect will be the pilot.) Where the opposite is true is in systems that India produces under license but are no longer in production elsewhere. The MiG-21 and MiG-27 are examples from the Soviet Union. Britain has recently stopped Jaguar production, which leaves HAL with the only production line in operation. However, HAL is currently holding back on the delivery of fifteen Jaguar aircraft to the IAF for lack of foreign exchange needed to buy key components. This makes the prospect for sales or supplies to other Jaguar operators--Ecuador, Nigeria and Oman--somewhat unlikely.⁸¹

India certainly would like to export defense equipment and technology for the economic benefits therein. Spreading research and development costs and drawing in foreign exchange would most certainly justify and facilitate a further expansion of the defense production base. It might also lead to greater confidence on the part of the armed forces in indigenous equipment. Also, if India could establish itself as a major exporter of defense technology, it could add another important claim to great power status. However, India is a long way from developing an orientation towards arms exports and, at present, under no circumstances does the export market represent a salient dynamic within the Indian armament process.

Internal Dimensions of Pakistani Defense Procurement

In Pakistan, the dynamics that drive the defense sector are less complex, even though Pakistan's relative defense burden is far greater than that of India. One of Pakistan's greatest problems is its basic insecurity. As such, the need to react to defense-related developments in India is paramount. Successive political generations in the US have generally tended to view Pakistan through the lens of global security, but Pakistan's real concerns are more

⁸¹"Jaguar Jumble," *Far Eastern Economic Review*, 11 July 1991, p. 9.

regional.⁸² Much of the justification for becoming allied to the United States and, duly, a member of CENTO and SEATO, was always linked to the prospect of security assistance and, therefore, the ability to counter India's conventional defense capability. Indeed, little had changed in the 1980s. Although passionately anti-Soviet, General Zia saw the threat from the south-east as more important than the prospect of invasion by the Soviet Union.

The nature of Pakistani politics, and especially the prevalence of non-democratic politics, offers few internal restraints to defense spending. Successive wars with India; geography that precludes defense in depth; the exposed position of its major cities, which lie close to the border with India; and persisting instability in Afghanistan and in its southernmost provinces provide the justification for defense spending. But political institutional factors are critically important to understanding the arms dynamic in Pakistan. These factors determine how Pakistan channels defense spending.

With a relatively small Gross Domestic Product (GDP), it is difficult for Pakistan to keep pace with Indian defense spending, and especially so since the early 1980s. Despite a considerable defense burden--most recently around six and one half percent of GDP⁸³--Pakistan's defense *procurement* dynamic is far from robust. The institutional role of the military has a good deal to do with this.

The Pakistani military is an exceptionally strong institution with an established history of Praetorian intervention in politics. In power, the Army is omnipotent and, when power is relinquished, Pakistan is effectively ruled by a triumvirate comprising the President, the Chief of Army Staff and the Prime Minister. The relative strength of each varies with the contemporary political dynamics.

Unlike India, the armed forces are highly regarded within Pakistan. Conversely, political institutions and the bureaucracy are less visible and less capable. Both of these observations are consistent with Pakistan's socio-political development and the durability of agrarian-feudal politics--fewer than fifty families control over seventy percent of the country's wealth. Consequently, levels of military expenditure reflect as much the role and position of the armed forces in society as they do the need for defense preparedness.

The Praetorian role of the Pakistani military is borne out by the way in which the defense budget is divided. In the 1960s, approximately ninety percent of the budget was habitually given over to operating costs--personnel, operations and maintenance--leaving derisory amounts for purchasing equipment.⁸⁴ That is, a large proportion of defense expenditure was, and is, directed towards maintaining the military as an institution rather than as a fighting unit. These latter bills are paid for by providers of concessional military

⁸²Geoffrey Kemp, "A Roller Coaster Relationship: United States-Pakistan Relations After the Cold War," in *From Containment to Stability: Pakistan-United States Relations in the Post-Cold War Era*, proceedings of the First Pakistan-United States Joint Symposium (Washington, D.C.: National Defense University, 1993), p. 52.

⁸³SIPRI, *World Armaments and Disarmament: SIPRI Yearbook 1992*, (Oxford: Oxford University Press, 1992), Table 7.A3, p. 264.

⁸⁴Nicole Ball, *Security and Economy in the Third World* (London: Adamantine Press, 1988), Appendix I, p. 396.

assistance.⁸⁵ This helps explain why Pakistan has for so long maintained a deeply ambivalent but nevertheless dependent relationship with the United States and a pragmatic relationship with China. But outside powers will contribute only when they see the geo-strategic need and, since the Soviet pullout from Afghanistan, the US has not seen such need.

Although Pakistan is attempting to increase its indigenous defense capability, progress has not and will not be significant in the future, for three fundamental reasons. First, Pakistan inherited little of the defense industrial base established by the British. India took control of all sixteen of the British-built ordnance factories as well as the nascent aircraft industry, which forced Pakistan to start from scratch.

Second, Pakistan cannot mobilize anything like the financial resources or the skills necessary to kick-start a broad-based defense production capability, especially in the field of aeronautics. The country is severely handicapped by an extremely diminutive science and technology base.

Third, past procurement practices have concentrated, where possible, on acquiring state-of-the-art defense technology to offset Indian conventional superiority, and defense doctrine has developed in a similar direction. Essentially, Pakistan relies upon superior generalship and the high performance of its weapons systems to balance Indian numbers. A glaring lack of fit between front-line requirements and indigenous capabilities is therefore inevitable. If Pakistan were to adopt a strategy based upon inferior weaponry, it would be necessary to outnumber the enemy by a factor of between two and four, using Lanchester's Law.⁸⁶ Given the current conventional imbalance, such a goal is almost as unreachable as a high technology offensive capability.

Pakistan has no discernible defense export capability, at least in the traditional sense. In some defense-related sectors, there is a potential for exports. Western analysts have long been concerned over Pakistan's capability to export non-conventional defense technologies and materials to other Islamic states, although there is no proof that this has happened. On the other hand, light weapons clearly are being exported, transferred from Pakistan in a clandestine fashion.⁸⁷ It is possible that Pakistan will seek to resell obsolete equipment and that it will also at some point be forced to find a purchaser for the F-16s currently withheld by the US, but there is no near- or medium-term prospect of a general export orientation.

⁸⁵The costs of the nuclear program by and large fall outside the defense budget. On the one hand, much of the research and development is and has been paid for by from energy and science and technology budgets. On the other, the covert nature of the nuclear program has required equally stealthy approaches to funding, such as allegations that the failed Bank of Credit and Commerce International gave secret donations to the nuclear program via a bogus scientific institute set up by A. Q. Khan.

⁸⁶Stephen P. Cohen, *The Pakistan Army* (Berkeley, Calif.: University of California Press, 1984), p. 142.

⁸⁷Chris Smith, "The Diffusion of Light Weapons in Northern South Asia," *London Defence Studies No 20* (London: Brassey's for the Center for Defence Studies, 1993).

The South Asian Security Complex - Future Dynamics

The central conflict in South Asia is focused upon Kashmir and involves India and Pakistan. There is no evidence that either side is prepared to consider innovative approaches to the resolution of this conflict, although India's recent statement, in September 1994, to the effect that it is prepared to consider state elections, is the most encouraging development for some time. On the contrary, relations between the two sides have grown steadily worse in recent months and, at the time of writing, looked set to bump along the bottom for many months to come.

The prevailing situation is enough to justify--in Indian eyes--a continuation of the Indian defense modernization program. As the economy improves, so economic exposure and the influence of external financial actors will decline. Although India's procurement program is only partly related to Kashmir and the threat of war with Pakistan, these sources of instability provide the necessary political justification.

In many ways, India's defense procurement program is driven by a wider and more subjective goal: the pursuit of great power status. The end of the Cold War and economic recovery provide tangible but narrow opportunities to pursue this goal. The superpower presence in the Indian Ocean is being quietly downsized, which will allow India's relative strength to increase, resources permitting. The scale and nature of India's defense build-up is related only in part to security against either Pakistan or China. It is also designed to create the sort of multi-dimensional defense capability that is the hallmark of any major power.

Pakistan's Strategic Options

The pursuit of great power status will certainly affect regional relations, insofar as Pakistan will not see further modernization on India's part through the same lens as India. Instead, acquisitions will be seen in the worst possible regional light, as they have been in the past. A mirror-image reaction by Pakistan, however, seems impossible. Pakistan cannot afford to match the rise in Indian procurement with a proportionate rise in its own purchases, and there will be at least a temporary lull in the traditional arms race between the two sides. Yet Pakistan will react to Indian actions, with potential ramifications for regional stability. Depending upon future political developments in Pakistan, it might choose to emphasize a strategy predicated on aiding and abetting militancy in northern India as a way of tying down, distracting, and frustrating the Indian Union.

Conceivably, therefore, the Pakistani military may be faced with a series of fundamental dilemmas. As the correlation of conventional forces and putative nuclear delivery systems (eg, ballistic missiles like the Prithvi), which India is able to afford and field, turns increasingly against Pakistan, and as Pakistan's procurement program stagnates or possibly declines, how will its armed forces respond? With the impending deployment of Prithvi (which Pakistani strategists understand would be used to destroy runways and therefore consider a pre-emptive weapon), and with the likely continuation of the Indian

modernization program, decisions on how to respond must be taken in the short- and medium-term. The options available, however, are hardly the most encouraging.

The most conventional response would be to race India towards a state of virtual parity. Clearly, Pakistan lacks the reserves and the credit to become involved in such an expensive process. Nawaz Sharif's recent outburst to the effect that Pakistan possessed nuclear weapons, as opposed to a nuclear capability, led to Japan withholding a 50 billion yen aid package until it received a satisfactory and official explanation from Prime Minister Bhutto.⁸⁸ Despite the very significant difference between non-conventional and conventional proliferation in South Asia, it is difficult to imagine Pakistan retaining credibility in the international aid community if it decided to embark upon an arms race with India; increasingly, little stands between aid remittances and economic collapse.

Much the same would be true of a crash program to develop the country's indigenous defense production capability. Although efforts to improve and modernize this sector are in hand, current horizons are somewhat limited. Quite apart from technological handicaps, Japan has legislation in place designed to prevent aid reaching countries which overstep the mark on defense production, defense expenditure and arms exports, as well as nuclear proliferation.

Nor would it seem feasible for the military to view narcotics production and trade as a way to finance conventional procurement, despite recent allegations that former Chief of Army Staff Beg was involved in the use of drug money to fund covert operations in Kashmir. Although the role of the Army in drug smuggling is accepted in many quarters, the extent of its involvement is less clear. Moreover, whether the Pakistani military or any other institution could mobilize enough drug dollars to fund all or part of a conventional defense modernization program is highly dubious, even far-fetched.

Unable therefore to compete with India to maintain a semblance of military balance, there are three possibilities open to the Pakistani military. The first would be a more open, articulated and purposeful pursuit of a nuclear option to serve notice on India as to the extent of Pakistan's deterrent capability. This would certainly require a considerable economic and political investment in the Chinese-supplied missile program, given the lack of available systems from elsewhere and the dubious nature of successive claims for the program that is supposed to be produce an indigenous ballistic missile, the Hatf.

The second option would be for Pakistan to pursue new forms of less conventional conflict capability, in which case the AK-47 and the Stinger missile, and not the F-16, will become a key focus, even though the former is unlikely to replace the latter entirely. This option may be taken up with or without the sanction of the Army or the government. At present, Pakistan is showing signs of serious political decay and a commensurate inability to confront pressing issues of national interest. In regional terms this looks unlikely to result in any type of foreign adventure in the conventional sense. However, as Pakistan the nation-state grows weaker, so the state will be less able and inclined to stem the flow of arms and

⁸⁸"Bhutto to Assure Japan that Pakistan Has No Nuclear Bomb," *Kyodo News Service*, 13 September 1994, cited in *Nuclear Proliferation News* 94:12 (30 September 1994), p. 7.

militants into Kashmir. This is perhaps the greatest security threat to South Asia. The capability of the Indian state is also important to the outcome of this scenario, both in terms of its ability to handle Kashmir with a great deal more sensitivity than hitherto, and in terms of its ability to prevent chauvinism at home from influencing unduly foreign and defense policy at the regional level.

Pakistan's third option would entail accepting India's regional pre-eminence and adjusting, both politically and militarily, to what is patently obvious. Pakistan cannot compete adequately at the conventional level and would surely lose, eventually, a full-fledged nuclear arms race with India. Politically, the task would be two-fold. First, opinion-shapers face the daunting task of reversing the inherent and manufactured paranoia that has shaped the country's understanding of India's intentions for close to half a century. Second, and no less daunting, the government would have to devise a clear political strategy for institutionalizing an accepted unequal relationship with India. Achieving the first political objective would be meaningless without tangible political dialogue with India, which would result in arms control and confidence-building measures. Militarily, Pakistan would need to instigate doctrinal changes that reflect political realities. In essence, this would be a strategy based upon recognition of inevitable defeat, or partial occupation at the very least, in the event of a conventional war with India.

Clearly, Pakistan is economically too weak to continue pursuing anything like military parity with India. Even if the resources could be mustered, the opportunity costs in terms of lost aid would be very high. Yet, no government can be expected at this point to plan for this type of political and military climb-down, nor might they ever.

The Chinese Factor

The action-reaction process is much weaker between India and China. Neither side bases specific defense acquisitions on the actions of the other. Thus the impact of defense procurement on Sino-Indian relations is both more difficult to fathom but potentially less destabilizing. The Indian and Chinese economies are currently growing at a considerable rate. Neither side would wish to upset their own economic potential for the sake of territorial disputes whose importance both sides seem prepared to minimize at present. Because the two sides have developed agendas that do not conflict with one another, the building of confidence will continue. However, the impending demise of Deng Xiaoping could easily be followed by social unrest, political uncertainty, and economic downturn in China. His successor is far from certain; he may even be replaced by a triumvirate. The role of the armed forces is indistinct, the economy seems locked into high-level inflation and high unemployment. There is even a small chance of Balkanization.

The post-Deng era might be the point where China looks for a foreign adventure, but whether an implicit arms race between India and China assumes a new and more direct momentum remains to be seen. While both countries could sustain a conventional arms race, the ability of each to engage in an attritious border war is dubious at best. The current spate of confidence building measures agreed between the two sides suggest, strongly, that there is a resolute belief on both sides of the need to avoid a future stand-off over a territorial

dispute--the McMahon Line--about which both capitals care little. Moreover, the two states are seeking power and influence in different directions. China seeks to consolidate its presence in the Asia-Pacific region, whereas New Delhi's sights are set on the Indian Ocean, the littoral states, and South Asia.

Concluding Thoughts

To a great extent, future stability in South Asia rests on the ability of India and Pakistan to rectify two separate problems. Pakistan must arrest and then reverse the decline in governance now occurring at an alarming rate and, in the process, stem the policies being pursued by sub-state actors. India must analyze and act upon the mismatch between its defense and foreign policies, on the one hand, and its security, on the other. Historically, India's defense policy has been led, to a great extent, by the demands of the military for high profile missions such as long-range bombing or a blue water navy, rather than by the real threats that have confronted India. However, this type of procurement resonated with the ambitions of successive Indian elites that reflected a strong desire to be acknowledged as a major power in South Asia and, over time, a contender on the international stage. The broad result was a procurement strategy that reflected mainly institutional and political ambitions. Over time, foreign policy caught up, primarily through the Indira Doctrine. Inevitably, India's neighbors, especially Pakistan, grew increasingly insecure as they tried to analyze India's military motivations.

A forthright resumption of India's modernization program seems likely and the ramifications for the country's security will be more negative than positive. If Pakistan feels it cannot compete in the traditional sense, it will look for alternative ways and means, based primarily upon destabilizing India via Kashmir. In this way, India will see a net loss of security, not a gain.

Here one sees signs that the worm is about to turn. Recently, the Estimates Committee in India published an attack upon defense management and policy that is without precedent.⁸⁹ Any resulting public debate on defense and security policy is unlikely to result in a more complacent approach to regional security issues. However, the very process of understanding existing anomalies could result in a more focused defense policy, including procurement, which would in turn reduce the level of conjecture about India's intentions, both in South Asia and beyond.

Although the Indian economy looks set for take-off, it remains to be seen whether or not the economy will become sufficiently robust to support far-reaching political-cum-military ambitions. The indigenous defense production base requires substantial and long term investment if it is to succeed in the future; the failure and cost of the Arjun and LCA programs testify to how much ground needs to be made up. Nevertheless, it will not take a great deal more for India to outpace Pakistan to such an extent that the concept of arms racing in the region becomes meaningless.

⁸⁹Ministry of Defence: Defence Force Levels, Manpower, Management and Policy," *Nineteenth Report of the Estimates Committee 1992-93* (New Delhi: Tenth Lok Sabha, 1992), p. 127.

Both India and Pakistan seem incapable of or uninterested in addressing either the regional or the internal driving forces behind their arms acquisitions. Although the Kashmir problem outshines all others as the key dispute in the region, increasingly, the idea of a conventional war either in or over Kashmir is becoming less convincing. Kashmir is already the most militarized region in the world in terms of the concentration of military and paramilitary forces. Arguably, there is little more that New Delhi can do to arrest the flow of arms and mujahideen into the state. Beyond this point, other policy options may come into play such as punitive surgical strikes or nuclear blackmail. However, this would further weaken political institutions in Pakistan and thereby create better opportunities for the militants and their supporters.

The chronic weakness of Pakistan must mean that much of the responsibility for developing confidence building measures and arms control regimes in South Asia lies squarely with New Delhi. At this point, India has a sufficiently high stock of security to afford a bold gesture. But since patterns of conflict between the two sides continue to mutate, this window of opportunity may not remain so fully open in the future.

Nuclear Weapons in the Subcontinent

by Shekhar Gupta

The Subcontinent has been enjoying its longest period of freedom from interstate warfare since the departure of the British and the Partition. Yet, there are reasons for intense international concern over the proliferation of nuclear weapons as well as missiles. India and Pakistan, the principal antagonists, are both acknowledged possessors of nuclear weapons capability. Both also have considerable capability in ballistic missiles, though India is decidedly further ahead in this field. However, despite the quarter century of uninterrupted peace since the 1971 war that dismembered Pakistan, and despite the initiation of some confidence-building measures (CBMs) between them, the two neighbors have failed to institute a measure of stability in their relationship that would reassure their own strategists, peoples and the international community at large. Since the mid-Eighties, this tenuous balance has been further strained by India's domestic crises in Punjab and Kashmir in which, as is now internationally recognized, Pakistan has intervened to a significant extent.¹

Tensions over these crises have had the potential of triggering another war in the subcontinent. Adventurist military maneuvers have done nothing to ease the delicate equation. At least twice in the last decade, these tensions have resulted in international alarms over a possible nuclear conflict. Not surprisingly, prominent Western analysts consider South Asia the most likely zone of a next nuclear conflict.² It is a measure of the differences in the two neighbors' perceptions and motivations on these issues that while Pakistan finds it expedient to agree with these rather alarming concerns, India considers them exaggerated.

With reasonable justification, both India and Pakistan claim to have entirely different compulsions for their respective nuclear and missile programs. The Pakistani position states that as long as India retains its own capabilities in these fields while simultaneously maintaining its conventional superiority, Pakistan has no option but to keep developing its own deterrent. The Pakistanis claim that their nuclear as well as missile programs are a direct consequence of similar Indian developments. India, on the other hand, claims a slightly more complex set of motivations. It sees its capabilities in both fields in ideological and geo-strategic terms.³ In essence, its nuclear program is claimed to be a deterrent against China.

¹Geoffrey Kemp and Selig Harrison, *India and America: After the Cold War* (Washington, D.C.: Carnegie Endowment for International Peace, 1993).

²Ibid. See also William Burrows and Robert Windrem, *Critical Mass* (New York: Simon & Schuster, 1994).

³In the Subcontinent, the word "ideology" is seen in varying contexts and has a different meaning from what it conventionally has in the West. In South Asia, ideology refers to aggressive developing world notions of sovereignty and equality in the comity of nations. During the 1970s and early 1980s, Mrs. Gandhi made this the main ideological underpinning of her foreign policy. This frequently found expression in her utterances at the Non-Aligned Movement (NAM) fora. Besides this Third World definition, "ideology" is also used in the Subcontinent to define the fundamental conflict in the rival Indian and Pakistani nationalisms. Pakistan was created through the Partition of India on the basis of the two-nation theory, which says that the Muslims of the Subcontinent constitute a separate nation. While reluctantly accepting the formation of Pakistan, India's founding fathers gave themselves a secular constitution, thus questioning the very basis of the "ideology" of the Partition.

According to this logic, the Indian nuclear program was initiated primarily as a response to Beijing's nuclear activism after its first test in 1964.

Western concerns over both programs are seen in ideological terms by South Asians, as an effort to create a discriminatory world order of nuclear haves and have-nots--hence the strident opposition to the Non-Proliferation Treaty (NPT), which is seen as unfair, even if India's regional security concerns were to be answered. In immediate terms, the crucial difference is that while Pakistan links its nuclear and missile plans directly with India's, the Indian approach has been to delink its programs from those of Pakistan, underlining its own insecurities vis-a-vis China.

It is no exaggeration to say that while Kashmir may be its most visible manifestation, the India-Pakistan problem is basically an issue of conflicting ideologies. The mutual distrust is rooted in the history of the Partition. When the founding fathers of modern India reluctantly accepted the Partition, they were never intellectually or ideologically convinced of Pakistan's *raison d'être* or its ability to survive as a political, territorial or economic entity. Similarly, the believers in the ideology of Pakistan, who came to be known in the subcontinent as the two-nation theorists, never thought that a secular India, with a sizeable Muslim population (now higher than Pakistan's total population) could be a viable national entity. This fundamental ideological conflict has dogged the region since the departure of the British. On the Pakistani side, the insecurities were only exacerbated by the 1971 war, which led to the vivisection of the country. The war confirmed, in Pakistani minds, the image of India as a regional hegemon intent upon destroying the weaker powers. Accordingly, weapons of mass destruction were seen as the only deterrent against a repeat of 1971. To many Indians, the secession of the more populous eastern wing of Pakistan (now Bangladesh) was a repudiation of the two-nation theory. How could the Muslims of the subcontinent constitute a distinct nationality if they were incapable of sinking their linguistic and ethnic differences?

On the Indian side, the defeat at the hands of the Chinese in the 1962 war compounded the uncertainties that stemmed from a perpetually belligerent Pakistan, aggressively armed by the US, with which it had a security alliance dating back to 1954.⁴ During the 1962 war with China, offers of Western military assistance, desperately needed by India, were loaded with clear pressures to make concessions to Pakistan on Kashmir.⁵ Barely

⁴In 1954, Pakistan began a process of joining US-led security alliances (Baghdad Pact, CENTO), under which it received massive infusions of US military aid to strengthen its forces, ostensibly to defend the region against the spread of communism. There was an implicit understanding that these weapons would not be used against non-communist states. The commitment was freely broken during the 22-day war in September 1965 that followed Operation Gibraltar, the unsuccessful Pakistani plan to capture Kashmir. Nearly 10,000 armed infiltrators (mainly serving soldiers) were sent into the Kashmir Valley in August 1965. Most of them were killed or captured. For the Pakistani view, see Air Marshal (Retired) Muhammad Asghar Khan *First Round: Indo-Pakistan War, 1965* (New Delhi: Vikas, 1979).

⁵While Indian forces were retreating all along the Frontier in the face of the Chinese assault across the Himalayas in 1962, the US and Great Britain sent in considerable military aid. With Indian defense in total disarray, the US and Britain tried to extract a price for their help and for persuading Pakistan not to try and exploit India's crisis militarily. Under this pressure, India renewed talks with Pakistan over Kashmir and the then Indian External Affairs

was India out of that phase of extreme insecurity that it had to face an all-out attack by Pakistan in Kashmir in 1965--a war that inevitably spilled into the plains. Yet again India found itself isolated. The US showed an obvious tilt towards Pakistan, the Soviets were more or less neutral, and the Chinese made war-like noises demanding the return of a few scores of mountain goats and yaks that Indian troops were supposed to have stolen. In between the two insecure phases came the first Chinese nuclear test in May 1964. The need for a nuclear deterrent was already being felt and pressed for by Indian strategists. If any doubts remained, these were removed by the threatening maneuvers of the US Seventh Fleet Task Force in the Bay of Bengal during the 1971 war.⁶

In addition to these insecurities, the rival nuclear and missile programs are driven by a sense of prestige. In South Asia, as in many other parts of the developing world, such weapons technologies are seen as an index of a nation's scientific prowess. It is thus no surprise that scientists in India and Pakistan have invariably had direct access to the top leadership, short-circuiting parliamentary, budgetary, or even media control. In India, the prime minister has customarily kept direct charge of the atomic energy department and the level of parliamentary debate has been dismal. Over the past decades, the nuclear and space programs have been controlled by the top political leadership and the scientific community to the almost total exclusion of the military leadership. In Pakistan, however, given the army's dominance, the nuclear program has been controlled by the generals and scientists to the exclusion of the elected leadership--whenever it has been in place. It has been argued that, given its more restricted political system, the Pakistani nuclear program has been able to function with fewer controls than India's. India's greater controls are due not only to a more open political system and budgetary process, but also to an increasingly intrusive Indian media.

Pakistan's Quest for Nuclear Status

It is not an easy task to establish conclusively the prime motivating factor behind Pakistan's no-holds-barred quest for nuclear status. Some have argued that it was out of the desperation to find a deterrent against a militarily stronger neighbor, while others have argued it was to compete with India in terms of global status. The dominant view among Indian

Minister Swaran Singh visited Karachi. The talks were, however, inconclusive. For a more detailed account of the history of this vital period, please see B. N. Mullick, *The Chinese Betrayal* (New Delhi: Allied, 1971) and Kuldip Nayar, *India: The Critical Years* (New Delhi: Vikas, 1971). For the Pakistani view, refer to Field Marshall Ayub Khan *Friends, Not Masters: A Political Autobiography* (New Delhi: Oxford University Press, 1967). For an interesting analysis of the Pakistani nuclear command and control complex from the Indian point of view, see Savita Pande, "Pakistan's Nuclear Strategy," *Asian Strategic Survey*, IDSA, New Delhi, 1994, pp. 324-344.

⁶During the December 1971 India-Pakistan war that resulted in the vivisection of Pakistan and the creation of Bangladesh, US policy tilted clearly against India. The high-point of this Nixon-Kissinger tilt was the decision to send a powerful task force from the 7th Fleet led by the USS Enterprise. The precise mission of the task force is still not clear, but Indian analysts believe it was meant to be a signal to India that continuation of the war in Western Pakistan, after the East had been won, could invite US intervention. India, however, unilaterally offered a cease-fire the moment Dhaka fell and the 96,000-strong Pakistani forces in the East surrendered. The Indian Navy has since been talking of "raising the cost of intervention." This was best articulated by former Naval Chief Admiral J. G. Nadkarni in a speech to the United Services Institution, New Delhi, in 1993.

analysts is that Pakistan's nuclear ambitions and plans predate both the 1971 war and certainly India's Peaceful Nuclear Explosion (PNE) in 1974. Literature emanating from Pakistani think tanks and the media, however, suggests that it was a combination of both factors.⁷

Pakistan took its first step towards development of its nuclear technology base with the signing of a deal for the installation of a reprocessing plant with France during the late Prime Minister Zulfikar Ali Bhutto's Paris visit on March 16, 1976.⁸ According to the Pakistani media, the deal cost \$300 million. But inevitably, the dealings came under international pressure and were ultimately blocked. It was mainly because of this that Pakistan abandoned the reprocessing route to the production of fissile material.

Part of the reason why this shift was made in the mid-Seventies was also the arrival on the scene of Dr. Abdul Qadeer Khan, now known as the father of the Pakistani bomb project. Born in Bhopal in Central India, Khan had migrated to Pakistan in the wake of the Partition of the subcontinent in 1947. He studied at prominent metallurgy centers in Europe, mainly in West Germany and Holland, and worked in the mid-Seventies at URENCO research institute at Almelo in Holland. He moved to Pakistan in 1979 amid controversial circumstances and was tried by a Dutch court (ultimately acquitted) for stealing classified nuclear technologies. Khan set up the ambitious enrichment project based on a massive centrifuge plant at Kahuta, not far from Islamabad.

One striking feature of the Pakistani nuclear program is that from its very outset it had a clear weapons objective and orientation. This is in contrast with India where the nuclear program was a complex, inter-disciplinary thrust towards peaceful as well as weapons-oriented technologies, combining ambitious nuclear power generation plans with development along other axes. Also, unlike India, Pakistan had a clear and firm interface between the nuclear establishment, the military, the foreign service and the intelligence communities. It was by combining all these elements that Pakistan built a formidable acquisition network that, perhaps conscious of the rather strong restrictions in the US, concentrated its energies on Western Europe and achieved remarkable success. Several Pakistani officials, including diplomats and defense attaches, have at various times been caught for nuclear espionage or smuggling and have been expelled.

Unfazed by the embarrassment of frequent exposures of this kind, Pakistan pressed on in its quest for nuclear weapons. The latest such instance came to light in June 1994, when a German court charged a Stuttgart company with having supplied dual-use-technology items to Pakistan (reported to the customs office as ball-point pen refills). The German television network ARD reported that, in connection with this affair, two diplomats in

⁷Dawn, Karachi, 25 June 1977.

⁸For instance, the now famous statement by Z. A. Bhutto that if India produced a nuclear weapon, Pakistan would follow suit, even if its people had to "eat grass," dates back to 1966 (cited in G. W. Chowdhary, *India, Pakistan, Bangladesh and the Major Powers: Politics of a Divided Subcontinent* [New York: The Free Press, 1975].) Also see Z. A. Bhutto, *The Myth of Independence* (London: Oxford University Press, 1969).

Pakistan's Bonn mission had been told to go home.⁹ Pakistan's steadfastness in its quest is also evident from the fact that Lt. Gen. Asad Durrani, a former chief of the Inter Services Intelligence (ISI), the Pakistani intelligence agency, is now its ambassador to Bonn.¹⁰

Another distinctive feature of Pakistani policy is the regularity with which disclosures have been made by powerful figures within its nuclear establishment. On the surface, each one of these disclosures has seemed to hurt Pakistan's cause. Yet, the frequency and stridency of statements, as well as the variety of people who have made such claims, suggest that it is part of a conscious, if sometimes intriguing, policy. The first such media bombshell came in 1987 when Pakistan's top nuclear scientist, Abdul Qadeer Khan, made an aggressive claim of its nuclear capability in an interview with well-known Indian columnist Kuldip Nayar. This was followed by a series of revelations by other officials, serving or retired, including politicians. During his rule, the late General Ziaul Haq generally eschewed the temptation to make sensational claims. But his son Ejazul Haq, a key member of the opposition Pakistan Muslim League, claimed in London in August 1994 that at the height of the warlike crisis during India's Exercise Brasstacks, Zia had warned then Indian prime Minister Rajiv Gandhi that any Indian adventurism would provoke a nuclear response from Pakistan.

It is not always simple to sift political rhetoric from tactically deliberate leaks, particularly so in Pakistan's fractious and raucous internal politics. But some incidents stand out for their significance in strategic and policy terms. In January 1990, for example, the former Pakistan foreign secretary Shahryar Khan stated that Pakistan was a screwdriver's turn away from acquiring a nuclear weapon. After being deposed by the army, Pakistani Prime Minister Benazir Bhutto claimed in an interview with NBC that she had lost her job because she had asserted her authority as prime minister to be kept informed about nuclear developments.¹¹ Subsequently, on 14 November 1993, shortly after being sworn in as prime minister for the second time, Bhutto told the press in Karachi that though Pakistan's nuclear program had been capped and frozen in July 1990, there was no question of its being rolled back. These controversial statements were followed by repeated claims by the ambitious former army chief General Mirza Aslam Beg in various forums. And finally, a new turn was given to the controversy when former prime minister and now leader of the opposition, Mian Nawaz Sharif, made a firm claim that Pakistan had nuclear weapons.

While many Indian analysts see all these statements as part of a well-thought-out plot, it is unlikely that such a wide-ranging and long-term conspiracy could exist. Such a conspiracy could also not cut across party and institutional lines in such a manner when personal

⁹The revelations were made by the state-owned German television network ARD and reported by journalist Thomas Scheuer in May 1994. On television, there was also an Agence France Presse report, quoted in *Die Welt*, 13 June 1994, which also refers to the ARD report.

¹⁰In August 1994, German authorities made several seizures of fissile material of Russian origin. The public prosecutor's office in Berlin mentioned Pakistan as one of the likely recipients of the nuclear contraband. Higher German officials, however, refrained from confirming that charge and were non-committal. Refer to author's interview with German security Minister Schmidbauer, *India Today*, 15 September 1994.

¹¹NBC News interviews by Fred Frances with Robert Windrem, 11 September 1992; and by Fred Frances, 1-2 December 1992.

antagonism between many of these interlocutors is well-known. But there is no denying the fact that making frequent, if exaggerated, claims is a very logical part of Pakistani nuclear strategy.

A close study of the evolution of Pakistani nuclear thought reveals an interesting finding. While Pakistan began looking for weapons of mass destruction as an instrument of last defense against a conventionally superior enemy, the weapons program's objectives became more ambitious as it got closer to acquiring them. A thought did emerge around 1988-89 that the nuclear capability had provided Pakistan an unassailable deterrent against India. As a result, it could now use this as an instrument of aggressive policy rather than a defensive deterrent. It was from this belief that the new Pakistani adventurism in Indian-held Kashmir emerged. India's classical doctrine for the defense of Kashmir consists of a riposte in the plains if Pakistani pressure became too much in the Valley. Many within the Pakistani military establishment now conclude that the emergence of the nuclear deterrent has made this Indian doctrine obsolete.

The most fascinating aspect of the evolution of the rival nuclear states in the subcontinent is the nearly decade-long process through which the Pakistani approach changed from passive deterrence to active defiance. The three turning points in this process came in 1984, 1987 and 1990, and though there is still considerable controversy and debate about the sequence of events and the veracity of rival claims during these periods, there is no denying that it was in the course of these that a new nuclear strategy emerged in the subcontinent. Several writers, particularly US journalists, have claimed that it was during these years that India and Pakistan came close to nuclear conflict. Nineteen eighty four was a peculiar case since until then Pakistan had not acquired nuclear weapons. The claim is that Pakistan, suspecting that India was going to launch an air strike on its nuclear facilities at Kahuta, threatened to bomb the Indian reactor at Bombay.

In the summer of 1994, this claim was repeated by Air Commodore Shahid Javed, Pakistan's air attache in Washington, in an interview with NBC.¹² In a subsequent letter to NBC, he accused the network of using his claims out of context, but stated firmly that he stood by his statement. In 1987, while Indian analysts were skeptical of Pakistani claims that Zia had threatened Rajiv Gandhi with nuclear retaliation, the timing of the Abdul Qadeer Khan revelation and the quick reaction of the Indian political leadership in disengaging and redeploying the strike forces reinforced the belief among some Pakistani decision-makers that

¹²This is a contentious claim, even disputed by analysts close to the Indian establishment who see it as no more than Pakistani bluster. Air Commodore Jasjit Singh, Director of the New Delhi-based Institute of Defence Studies and Analyses, for example, argues that in 1984 Pakistan had no aircraft capable of reaching the nearest Indian nuclear facilities unscathed. To reach the major Indian nuclear installations at Trombay, near Bombay, he argues, the Pakistani F-16s would have had to fly at a high altitude for more than an hour, giving IAF sufficient interception time.

in the nuclear stand-off, India blinked. The events of 1990, too complicated to be analyzed in detail in this paper, also backed the same belief.¹³

Many analysts in India and Washington may still dispute both the claim that Pakistan threatened India with an aggressive and first use of nuclear weapons, and that this warning had been conveyed by Robert Gates, a special emissary of the US President. But there is reasonable evidence to suggest that Pakistan did use nuclear blackmail during this period of tension as the Kashmir insurgency peaked. I. K. Gujral, the then Indian foreign minister, recalls that his Pakistani counterpart, Sahibzada Yakub Khan, issued a threat to him in January 1990 that could be interpreted as a veiled warning of nuclear attack.¹⁴ In essence, this series of events over a decade did convince some key Pakistani policy-makers that as India was taking their nuclear status seriously, an adventurist new policy could be initiated in Kashmir without fear of retribution in the plains.

The timing was unfortunate, as it coincided with India's own mismanagement and cynically short-sighted meddling in Kashmiri politics, resulting in widespread anger, alienation and ultimately armed insurrection. Much insight into the evolution of this strategy has come from the statements and writings of General Aslam Beg. In 1990, he authored the concept of strategic defiance and, in the wake of the Gulf War, tried to jump onto the populist bandwagon by suggesting that the Islamic world's nuclear capabilities were an effective way of defying Western pressures of the kind Iraq was facing. More seriously, however, the nuclear policy had been shaped by the one man who had remained in control of it through a crucial five-year period of political turmoil in Pakistan. President Ghulam Ishaq Khan, enjoying sweeping powers constitutionally as well as through his close relations with the army, controlled the nuclear program from Zia's days until the summer of 1993, when he was deposed.¹⁵

Despite General Beg's ambitious attempts at pan-Islamic activism and periodic statements by other Pakistani politicians, it is this paper's argument that Pakistan's nuclear strategy and plans have had entirely indigenous motivations. These were first driven by a fear of India and then inspired by the possibility of using the nuclear deterrent as a shield for low intensity conflict with the ultimate objective of capturing all of Kashmir. The term Islamic Bomb was always a misnomer. Pakistan's nuclear motivations are almost nationalistic and not ideological in a religious sense. Pakistan may use its nuclear capability to acquire status within the Islamic world, and possibly of attracting financing from the wealthy oil states. But Pakistan is unlikely to share it with a fellow Muslim nation either for its defense or to further any pan-Islamic causes.

¹³For discussion, see Michael Krepon and Mishi Faruqee, eds., *Conflict Prevention and Confidence-Building Measures in South Asia: The 1990 Crisis*, Occasional Paper No. 17 (Washington, D.C.: The Henry L. Stimson Center, July 1994), and Pervez Hoodbhoy, *Nuclear Issues Between India and Pakistan: Myths and Realities*, Occasional Paper No. 18 (Washington, D.C.: The Henry L. Stimson Center, July 1994), pp. 2-4.

¹⁴Interview with the author, New Delhi, March 1994.

¹⁵Shortly after resigning as President in April 1993, Ghulam Ishaq Khan claimed in press interviews that he had played a key role in preventing an Indian air strike on Pakistani nuclear installations at Kahuta. *The Frontier Post*, Peshawar, 10 September 1994.

India's Two-Track Policy

In contrast to Pakistan, India's nuclear policy has followed a two-track approach. In essence, since India's nuclear program was initiated in the late Fifties, the effort has been to develop nuclear energy and other peaceful applications while continuing to work towards developing a weapons capability.¹⁶ Unlike the Pakistani program, where weapons seemed to be the main motivation, with economic and industrial uses no more than a collateral benefit, the non-military aspect in India had a very high priority. As a matter of fact, several autonomous public sector undertakings and corporations have spun off from the nuclear ones, such as the Nuclear Power Corporation, which even raised money from the public through interest-bearing bonds.

Accordingly, the extent of militarization of the nuclear program is minimal in India. From its very inception, high-profile technocrats have been in charge of the program, reporting directly to the prime minister. One of these, Dr. Raja Ramanna, who is a former chairman of the Atomic Energy Commission, has even held positions of minister of state for defense and science and technology at different points of time in the Union Cabinet.¹⁷ The military has traditionally been kept out of the equation. This, too, is in total contrast with Pakistan, where several army generals have been routinely seconded to work with the nuclear establishment.

In India, at least since the mid-Eighties, the defense-nuclear establishment interface has been indirect, through the scientific advisor to the defense minister. The job is held by the head of India's Defense Research and Development Organization (DRDO) who is a top level scientist, a civilian, and usually not connected with nuclear research. In the mid-Eighties, when the nuclear tensions came to the forefront, this job was held by Dr V. S. Arunachalam, a well-known metallurgist. Now, after Arunachalam left for Carnegie Mellon on an extended sabbatical, the post has been taken over by Dr A. P. J. Kalam. He was the guiding spirit and director of India's Integrated Guided Missile Development Program (IGMDP). Originally, Kalam served with the civilian Indian Space Research Organization (ISRO).

While the Indian government has kept the defense forces completely out of the loop on the nuclear program, playing down the military aspect and capabilities of the program in the public and media, the case of the missile program is a little different. As missiles per se are non-nuclear, and as there had to be a strong interface between space research and missile development, India set up a separate IGMDP. To run the program, a task force of scientists under Dr. Kalam was seconded to the DRDO from ISRO. The task force now works independently of ISRO at its own laboratory in Hyderabad in southern India.

¹⁶India set up its Atomic Energy Commission (AEC) in 1948, within a year of becoming independent. India's first reactor, Apsara, went critical in 1956. See J. Maddox and L. Beston, *The Spread of Nuclear Weapons* (London: Praeger Press for the Institute for Strategic Studies, 1962).

¹⁷Ramanna was among the three topmost scientists directly involved in the 1974 Indian "peaceful nuclear explosion."

As a matter of conscious strategy, India has therefore tried to minimize the military aspect of the nuclear program, while separating the missile project almost totally from the civilian space research organization. Philosophically, it is in keeping with the Indian belief that developing, non-aligned countries must continue to promote strategic technologies while continuing aggressively to support global disarmament. At the diplomatic end of the spectrum, this philosophy manifests itself in aggressive Indian opposition to international pressures for selective de-nuclearization and to the existing multilateral non-proliferation regimes, while at the same time passionately espousing total elimination of nuclear weapons.

It is evident that while the late Jawaharlal Nehru had his mind set upon developing nuclear technologies from the time India gained its independence on August 15, 1947, New Delhi had also supported total elimination of nuclear weapons at the United Nations Atomic Energy Commission in 1948. Mahatma Gandhi, too, had stated on September 29, 1946: "I regard the employment of the Atom Bomb... as the most diabolical use of science."

During the Fifties and Sixties, India supported several disarmament proposals from global fora. But the issue acquired a strategic dimension only in 1964 after the first Chinese nuclear test. This gave impetus to India's strong repudiation of NPT. India employed a similar logic to reject the concept of Nuclear Free Zones (NFZs). The approach was articulated by retired Air Commodore Jasjit Singh, who heads the New Delhi-based think tank Institute of Defence Studies and Analysis (IDSA), widely believed to have shaped, articulated and complemented India's nuclear strategy. He writes, "The problem with such concepts and measures (like NFZs) is that they legitimize the possession and development of nuclear weapons by some powers in territories of their choice."¹⁸

India's nuclear diplomacy has always had a strident moral tone, attempting to speak on behalf of the have-nots and questioning the policies and demands of the "haves." At the same time, there has always been a barely concealed desire to be among the "haves," or at least to project the impression that the gap, if any, is minor, self-imposed and bridgeable at short notice. Such a contradiction was bound to have confusing repercussions. And that is exactly what happened after India conducted the "peaceful nuclear explosion" (PNE) in 1974. While India did attempt to defend its action from a moral high ground, espousing the developing nation's right to develop nuclear technology for "peaceful purposes and economic development," the claim obviously rang hollow.

This was particularly so as the PNE was played very differently before the domestic audience. The message there was that Mrs. Indira Gandhi, still flush from her victory in the 1971 Bangladesh war and the Simla Accord thereafter, had now led India into the big league of world powers. While the implications of nuclear weapons development on domestic politics and the relationship between the two are discussed separately in this paper, one needs to underline the fact that the decision to go in for the PNE was determined more by domestic politics than by any pressing strategic concerns. It is true that the PNE did coincide with the peak of Mrs. Gandhi's socialist phase. She had just won a war against an unabashedly US-backed Pakistan, had signed a treaty with a clear security clause with the Soviets, and her

¹⁸Lecture given at Oxford University on India's Foreign Policy, 24 April 1989.

policy-making apparatus was dominated by pro-Soviet socialists, many of them also her close personal advisors. There is thus no denying a strong ideological motivation behind using the PNE as a demonstration of defiance of the West, particularly the US. But it is this paper's argument that this was at best the third most important factor: after Mrs Gandhi's quest for glory before the domestic constituency and her strategic considerations. In terms of diplomatic strategy, the PNE was a firm and final Indian repudiation of the NPT while also ending any ambiguity among India's neighbors about its nuclear weapons capability.

In the Seventies, the PNE took the moralistic sheen off India's espousal of global disarmament at multilateral fora. But the next decade marked yet another turning point in nuclear states and diplomacy. The most important factor behind the change was Pakistan's successful strides towards nuclear weapons capability and the big power detente which not only brought non-proliferation onto the front-burner of the global agenda but also gave the West, and the US, in particular, added muscle to try enforcing it.¹⁹

India's policy-makers were forced to respond to the changed situation just as the Pakistanis, too, made one diplomatic move after another. India's approach has been to ignore and reject all nuclear initiatives taken by Pakistan while at the same time trying to speak from the pulpit of global disarmament. India's primary policy is to keep the nuclear debate entirely in the global context while Pakistan has attempted to regionalize it. This has led to an interesting diplomatic chess-game between Islamabad and New Delhi. Pakistan wants a bilateral or regional solution to the nuclear issue, while seeking third party intervention on Kashmir. India, on the other hand, wishes to discuss the nuclear issue only globally while keeping Kashmir purely bilateral. Changing regional, global and domestic situations have, however, forced both sides to make crucial shifts from these old, rigid formulations. These are discussed elsewhere in this paper.

Rival Initiatives in the Eighties

India's first major move in the rapidly-changing Eighties came in the form of the Rajiv Gandhi-Mikhail Gorbachev New Delhi Declaration on Principles for a Nuclear Weapons Free and Non-Violent World. This was signed at New Delhi on November 7, 1986 and demanded that: "Pending the elimination of nuclear weapons, the Soviet Union and India propose that an international convention barring the use and threat of nuclear weapons should be concluding immediately. This would constitute a major step towards nuclear disarmament." This was followed up with an Indian Comprehensive Action Plan on the elimination of nuclear weapons at the UN Special Session on Disarmament in June 1988. On the global front, similar policies were articulated in repeat meetings between Gandhi and Gorbachev. Rajiv Gandhi also made a similar pitch on his two visits to Washington in 1985 and 1987.²⁰

¹⁹See David Albright and Mark Hibbs, "Pakistan's Bomb: out of the closet," *Bulletin of Atomic Scientists*, July/August 1992.

²⁰See Sandip Waslekar, "Abolishing Nuclear Weapons: Rajiv Gandhi Plan Revisited," ACDIS Occasional Paper (Urbana-Champaign: Program in Arms Control, Disarmament and International Security, University of Illinois, July 1994).

Pakistan had, meanwhile, been pressing on, in the final stages of its own nuclear programs, which expectedly came under US pressure. Pakistan responded with a series of deft political moves aimed, just like India's, not so much towards realistic de-nuclearization objectives as at appeasing an increasingly impatient international community.

Just as the foundation of Pakistan's nuclear program was laid by the late Z. A. Bhutto, its diplomatic strategy, too, was scripted by him. He unveiled its central thrust in 1972 while inaugurating the Karachi Nuclear Power Plant (KANUPP), where he suggested declaring South Asia a Nuclear Free Zone. India has been strongly opposed to this idea. In 1987, Mohammed Khan Junejo, Pakistan's then prime minister, elected in a non-party election, proposed a regional test ban treaty. The Indian response, or perhaps the lack of it at formal levels, was almost contemptuous, as if to question Junejo's credentials in making such proposals--India had never considered Junejo a real prime minister, with controls over levers of policymaking. The next significant Pakistani initiative was the proposal for a five-power conference from Nawaz Sharif, the then prime minister. India rejected this on the ground that its nuclear concerns were not confined to the subcontinent and, while China was to be a participant in the talks, it was not to put its own nuclear wares on the table. Basically, while Pakistan has attempted to build an impression internationally that it is willing to discuss the nuclear issue with India, and that the nuclear and Kashmir issues are inseparably linked, India has insisted that the Kashmir and nuclear issues be kept apart and the latter be treated in a global rather than regional context.

The Nuclear Factor in Internal Politics

There are remarkable similarities as well as sharp differences in the role the nuclear and missile issues play in the domestic politics of the two countries. Fundamentally, both have a fairly strong, multi-partisan consensus in favor of these weapons. This consensus cuts across party lines and also exists among a wide range of intellectuals, journalists and other opinion leaders. In India, despite the frequent change in governments, the nuclear and missile policies have had a remarkable continuity. Even in Pakistan, where governments or regimes have mostly changed either violently or through constitutional coups (as in 1993 when the army brokered the resignations of the incumbent, elected prime minister and president and facilitated fresh elections) there has been an impressive consistency on these issues. And both sides have groups on the right fringe that demand a more overt and aggressive nuclear policy and often accuse the centrist ruling parties of bending, before Western, mainly US, pressures.

In India, the right-wing Hindu nationalist party the Bharatiya Janata Party (BJP), which has now emerged as the main opposition in the national Parliament, has been demanding and promising overt nuclearization in its election manifesto. It sees the nuclear weapons issue both as a symbol of sovereign power as well as an insurance against "pan-Islamic designs" or Western pressures inimical to India. It is however, quite remarkable that whenever the BJP has come to power (by sharing it in a coalition in 1979) or close to it (by backing a ruling party, as in 1989) its stand on the nuclear issue has been strikingly muted. It has followed practically the same policy of ambiguity on weapons capabilities, that is, denial of a weapons-oriented program, but opposition to the NPT, as instituted by Mrs. Gandhi in

the early Seventies. Similarly, in Pakistan, the right-wing Jamaat-i-Islami has traditionally taken a hawkish line on the nuclear issue. But the one occasion it was in power, as part of the coalition called Islamic Jamhoori Ittehad (IJI, the Islamic Democratic Movement), led by Nawaz Sharif, it behaved reasonably. The situation changed the moment cracks developed in the coalition and the Jamaat began to drift away from Sharif. Finally, when it did break away, a "sell-out" on the nuclear issue was one of the allegations leveled against Sharif. At the same time, in India, as well as in Pakistan, there is hardly any anti-nuclear lobby. The green groups in India, though reasonably active, have only occasionally opposed nuclear power plants. But they have kept away from the strategic aspect and in terms of electoral politics, green parties are utterly insignificant. In Pakistan, green groups are negligible in strength and numbers.

The crucial difference between the Indian and the Pakistani situations is that the nuclear issue plays a much less significant role in domestic party politics in the former than in the latter. In no Indian election has the nuclear program been a major plank. Nor is it such a populist issue that a party would consider it worthwhile to make it one. It can still be argued that dominant political parties, or rather leaders, have tried to use the nuclear program as a vital constituent of their personality cults. This particularly came in handy during Mrs. Gandhi's anti-West phase when acquisition of modern technologies was projected as a vital element of national security. Nuclear technology had the added charm of indicating a defiance of the West. It is this paper's contention that while Mrs. Gandhi's decision to go in for the PNE was strongly motivated by strategic, geopolitical and ideological considerations, in that order, the strongest factor at that time was the PNE's value in internal politics when Mrs. Gandhi's popularity was slipping. After the victory in the Bangladesh war, even Mrs. Gandhi's political enemies hailed her as the Durga, the all-conquering Hindu Goddess. By showing such defiance of the world, she was building on that image just when the 1971 victory was being forgotten by an electorate distracted by rising prices, a stagnant economy still reeling from the costs of the war, and mounting charges of corruption and mismanagement against her government. In subsequent elections, her campaign managers did try to cash in on her nuclear and technological exploits and portray her as a defiant builder of a modern India. But the effort did not yield any results. Her son Rajiv Gandhi's attempts at similar image-building in the 1989 elections failed, too. His party even used a cover story from Time magazine, conferring an emerging superpower status on India, in its election commercials on national television. But he suffered a resounding defeat.

In Pakistan, however, the situation is quite different, partly because of popular sensitivities and partly because of the army's direct involvement in the nuclear program as well as the power politics of the country. In May 1990, the legitimately elected Government of Benazir Bhutto was dismissed by then president Ghulam Ishaq Khan, with the support of the army. Khan, who had been a close associate and confidant of the late dictator, General Ziaul Haq, was possibly the only civilian outside the scientific establishment fully informed about the nuclear issue. While Zia had held an election of sorts, and made a pretense of transferring power to Mohammed Khan Junejo, chosen in the party-less election of 1985, there was no question of the civilian cabinet being taken into confidence on the nuclear question. The post-Zia army was still struggling to adjust to the changed situation and was shy of sharing nuclear secrets with the prime minister. Accordingly, when tensions between India and Pakistan over Kashmir grew in the summer of 1990 and the US administration sent

warnings of a possible nuclear conflagration, according to some Western accounts, which Benazir Bhutto has encouraged through several interviews to Western media, then Prime Minister Bhutto wanted to be kept informed of what was going on. This resulted in her removal from power; Khan was explicit in charging her with jeopardizing crucial national security interests. One of the unstated charges against her was that she was planning to compromise on the nuclear issue. Some Western accounts have portrayed her as a victim of nuclear politics, a notion she, too, has encouraged by making it seem that the army and Khan dismissed her because she asked too many questions about the nuclear program.

It is clear that the nuclear issue is a crucial aspect of the tenuous mechanism of power-sharing between Pakistan's ruling troika, the army, the president and the elected prime minister. For instance, former prime minister Nawaz Sharif's claim at a political rally in August 1994, that Pakistan possessed nuclear weapons, was a carefully calculated move to build his country's nuclear weapons program into an election plank. Benazir and her supporters had to immediately join issue by calling him irresponsible and anti-national. But Sharif responded by claiming that the sole purpose of his revelation was to "save" the nuclear program from being rolled back under Western pressure.²¹ Whether or not the program was about to be sold out to Washington or not, as alleged by him, is an academic question. The point is, his outburst did cause problems for the government in its efforts to repair its relationship with the US, damaged primarily by the nuclear factor.

The Pakistani media and other analysts were quick to underline this as the first major rupture in the national nuclear consensus. As political instability continues in Pakistan and the country moves closer to another election, it would be interesting to see how this issue plays out. If Sharif persists, it would be the first time that a major contestant goes to the polls in the subcontinent on the strength of an ultra-hawkish nuclear agenda. In India, there is no likelihood of the nuclear issue emerging as a factor of any consequence on the domestic and particularly electoral agenda. Significantly, and rather paradoxically, it is the missile program that has acquired greater significance in India's domestic politics.

The Missile Factor

While today India is in the forefront of the emerging new missile race in the subcontinent, it is an interesting fact that it is the other antagonist, Pakistan, which has introduced almost all categories of guided weapons in the region. In the early Sixties it was the first to deploy air-to-air missiles (AAMs), the Sidewinders that came fitted to its F-104 Starfighters. India entered the missile age with its acquisition of a few launchers for Soviet SA-2 Guideline surface to air missiles (SAMs), but in the 1965 air war, the Indian Air Force fought a missile-equipped adversary with guns. Pakistan also deployed the first anti-tank missiles and also the first air-to-surface precision-guided munitions. But the Seventies saw India launch an ambitious thrust in this field. Initially, several different categories of missiles were imported--mainly from the Soviet Union but also from France (the Milan ATM). After a series of failures with reverse-engineered, modified versions of imported missiles, by the late Seventies, Indian strategic thought had crystallized on developing an entire range of missiles

²¹See *India Today*, 15 September 1994.

indigenously. A crucial factor influencing this thought was the emergence of a formidable scientific workforce and technological resources from the growing space research program. It was no surprise then that the core of the new missile research and development group came from the ISRO.

It is a measure of the prestige and importance India attaches to the IGMDP that budgetary cuts have still not affected it. In fact, in the 1994-95 budget, the Government has marginally raised the allocation for the program on which Rs 8,000 million (\$255 million) have so far been spent. The IGMDP consists of the development of *five* different kinds of guided missiles: Agni ("fire"), an intermediate-range ballistic missile (IRBM), Prithvi ("earth"), a tactical short- to medium-range ballistic missile, Akash ("sky"), a Patriot-type SAM system with phased-array radar, Trishul ("trident"), a short-range, fully autonomous SAM system akin to the Soviet SA-8, and Nag ("cobra"), a fire-and-forget anti-tank missile capable of being used from multiple platforms. The head of the program, Dr. Kalam, is now a national hero and scientific advisor to the defense minister. All five systems are in various stages of trial but only Prithvi can be considered anywhere close to being deployed. Agni, which has attracted the most international attention because of its IRBM capabilities, is still in early technology-demonstrator stage and the other three are far from production, although Nag and Trishul could be the next ones after Prithvi to be deployed.²²

As with its nuclear research, India attaches great importance to its missile program, which explains its aggressive budgetary support for the program and its obstinate refusal to bow to American pressure to suspend it or even slow it down. The missile program has now acquired the same kind of support across the political spectrum as the nuclear program. Indian Prime Minister P. V. Narasimha Rao did make a political gesture to the US by putting off a Prithvi test a week before his working visit to Washington in May 1994. But it resulted in a furor in Parliament and the media and, amid allegations of a sellout, the government had to hold not one but two tests a month later. Dr. Kalam was even quoted in early 1994 as saying that India had traveled so far in its missile development program that the government could now go ahead and sign the Missile Technology Control Regime (MTCR).²³

India's missile program has been hyped to a degree, so that both domestically and internationally it has become greatly exaggerated. It still suffers from paucity of crucial component supplies, technology and doctrinal problems and indeed budgetary constraints. It would be hasty to accept all the official claims about it and to ignore the utterly consistent record of the Indian defense research establishment's failure to put into production any significant weapons system developed by it. These factors, together with the MTCR, make it unlikely that any missile other than Prithvi will be deployed in any considerable strength by 1997. Even the Prithvi deployment will be small and symbolic (the army has ordered only 75 in the first lot) and Agni is unlikely to proceed beyond the prototype stage. A missile of Agni's range and capabilities can only be worthwhile if it carries a nuclear warhead, and unless India weaponizes its nuclear capability--a remote possibility--it will not see any sense

²²See the article on IGMDP by Indranil Banerjee, *Indian Defence Review*, New Delhi, July 1990.

²³See interview with Kalam by Raj Chengappa, *India Today*, 15 April 1994.

in deploying this system, given the expense and international pressures it will generate. This will, however, remain a point of contention in India-US relations.

Since there is a tradition of equipment-matching in the subcontinent, it is only to be expected that Pakistan would attempt to match India's ballistic missile developments. However, the expedients it used in the Seventies to match India's nuclear capability are not available now, given the MTCR and generally increased vigilance in the West on transfers of dual-use technology. It is, therefore, unlikely that Pakistan would be able to launch a new missile development program on its own successfully. But it has already acquired a small number of missiles, components and fuel production capability from China. There are still some doubts as to whether the Chinese have supplied Pakistan with M-11 missiles or technology, but Chinese input is evident in Pakistan's successful test of the nearly 100 km range and 500 kg payload Hatf-1 missile in February 1989, close to the Karachi coast. In the Pakistan Day Parade in April the same year, the Hatf-2 was displayed as well. It is, however, likely that Pakistani claims of range and payload on both these missiles are exaggerated and that the Hatf-2 program has run into serious obstacles because of non-availability of components and technologies. As confirmed by General Beg, Pakistan's nuclear delivery system remains the F-16. But given the mindset of equipment-matching in the subcontinent, Pakistan is likely to press on with its own quest for ballistic missiles.

Emerging Equations on The Nuclear Issue

On nuclear as well as missile issues, the US has now become a crucial interlocutor in the subcontinental debate. After a complicated series of sometimes impatient, if not bitter, exchanges between 1992 and 1994, when the US non-proliferation fundamentalism picked up, India now feels that it has been able to persuade Washington to appreciate the reasons behind its opposition to signing the NPT. As US officials lately have said quite openly--and as the State Department mentioned in its 1993-94 report to the Congress on nuclear proliferation--it would be politically suicidal for any Government in New Delhi to sign the NPT. The US effort now is to persuade, through the carrot and stick, both India and Pakistan to cap their nuclear and missile capabilities. India reacted strongly to suggestions in Washington for a one-time waiver of the Pressler Amendment (blocking the sale of armaments to Pakistan if it persisted with a nuclear weapons program) to supply Pakistan 38 F-16s in return for a verifiable guarantee on nuclear capping. The furor raised by the issue brought US Deputy Secretary of State Strobe Talbott to New Delhi and Rao's Washington visit followed shortly afterwards.

Through 1993, India and the US held several official-level meetings on the issue besides exchanging official notes and "non-papers." The US, knowing India's aversion to foreign intervention in what India sees as bilateral issues within the subcontinent, tried to broaden the nuclear debate by suggesting a meeting of a larger group of nations--the five nuclear powers, India, Pakistan, Germany and Japan. India opposed this as well, refusing to be drawn into any discussion where China, which India sees as a long-term nuclear threat, was not participating as an equal. In March 1994, on a visit to the UK, Rao added another dimension to the debate by seeking participation with similar status for other "regional nuclear powers" such as Russia. Indian officials later added Kazakhstan to the list.

While stalling US pressures for a multinational debate, India has been pushing its own formulation, topped by the suggestion of a non-first-use agreement with Pakistan, to be followed by the institution of confidence-building measures, again purely at a bilateral level. Rao articulated this approach clearly in his address to the joint session of the US Senate and Congress, underlining every nation's "sovereign right" to decide what it needs for its defense, the need for global disarmament and, for the moment, wherever fears of nuclear conflagration exist, a no-first-use agreement to "prevent accidental conflagration."²⁴

It would, however, be hasty to conclude that Indian nuclear policy in the Nineties will see no shift from the past. Fundamentally, it may remain similar to the old two-track policy of keeping the nuclear option open while negotiating for a universal, nondiscriminatory non-proliferation regime, on the lines of the chemical weapons convention rather than the NPT. But changes may take place in various aspects of this broad policy that will be tested in the coming years by, first of all, increased pressures from the US, coinciding with the build-up for the 1995 NPT renewal, and also the possible use of inducements such as permanent membership on the United Nations Security Council in return for Indian nuclear concessions. It is significant that the principal candidates for permanent membership on a restructured Security Council—Germany, Brazil, Japan and India—all may be considered near-nuclear powers.

At the same time, India's rather stubborn position, neither accepting the NPT, nor a regional non-proliferation regime as in Latin America, will come under increasing pressure. Some indication of how India might deal with these pressures and changes is discernible in its nuclear policy over the decades. India's nuclear policy has, by and large, been reactive. The impetus for an Indian "device" clearly came from its defeat by China in 1962, followed by the Chinese nuclear test in 1964. The view that India could not do without at least "recessed" deterrence was cemented during the Bangladesh war in 1971 when the US sent in the Seventh Fleet Task Force to the Bay of Bengal to pressure India into an early cease-fire.

The strategy of flaunting nuclear capability but stopping short of nuclearization makes India's motivations clear. While it was essential to signal to the world that India was nuclear-capable and willing to exercise the extreme option in case its security was gravely jeopardized, India was not willing to pay the price for full nuclearization in terms of international opprobrium and sanctions. The missile program is an extension of the same policy. It displays India's delivery capability, adding a logical new dimension to nuclear status, and yet India will stop short of deploying the most significant of these missiles.

India will continue to assert that it needs nuclear deterrence, primarily against China, but its strategists will increasingly be worried about Pakistan. Given the conventional force structures in the region and the unlikelihood of total air superiority, it is difficult to envisage India trying to take out Pakistani nuclear capability by conventional means in the foreseeable future. That capability is thus something India is learning to live with. But the missile

²⁴Address to a joint session of the Congress by Prime Minister Narasimha Rao, U. S. Congress, *Congressional Record* (Daily Edition), 18 May 1994.

program is also a message to Pakistan that India can still manage to stay ahead in the race. At another level, should a real phase of arms control negotiations begin, missiles will become a vital bargaining chip.

Future trends will be determined by the fact that in the subcontinent, the end of the Cold War has, if anything, provided an impetus to nuclear ambitions. India, more than Pakistan, has the fear and insecurities of a peripheral power in a unipolar world. Pakistan, more than India, has the fear of being isolated, without any superpower protection, in a future conflict with India. India's motives in challenging the traditional definition of the "region" and expanding the nuclear debate to include Central Asia and Russia in addition to China, are obvious. First, it wants to bide time, internationalize the proliferation debate on the eve of the NPT renewal and, in the unlikely scenario where it has to make nuclear trade-offs under international pressure, to extract as much denuclearization from as wide a region around its borders as possible.

At the domestic level, if the army top brass were to get more involved in shaping the strategy, India's nuclear stance could harden. The army has been consistently demanding nuclear weapons since the mid-Sixties, a view evident in the writings of successive retired chiefs of staff. So far, the brass have more or less been excluded from the nuclear program. But the pressure to take them into confidence, so that they can at least develop tactics and a doctrine, is bound to increase. India's conventional forces already have some capability to fight under NBC (nuclear, biological, chemical) conditions. But with the nuclear threat now becoming clearer, there will be pressure from the defense forces to improve on this and the BJP factor will complement these.

At the doctrinal level, there appears to be a subtle shift in the traditional Indian position. The articulation of a "no-first-use" clause, at least in the Pakistani case, seems to indicate that India may, in fact, be building a case and the potential for a second-strike capability. The most conservative estimate of India's stock of weapon grade fissile material indicates the country now has the capability to manufacture at least 60 bombs. This is about the number estimated by some military scholars to create a second-strike capability against Pakistan.²⁵

But, clearly, a serious public doctrinal debate on targeting strategy has yet to take place. For instance, despite three bitter wars, both India and Pakistan have diligently resisted (for a variety of reasons) targeting civilian centers. And, by and large, the fighting has been limited to the combatants. This is a striking difference between the military strategy on the Subcontinent and Western Europe where civilian centers have been considered legitimate military targets at least since the Second World War. Hence, the dilemma before Indian and Pakistani military planners is whether the accepted Western nuclear counter-city doctrine is to be adopted, or whether the two sides will evolve only a counterforce strategy. The Indian army, for example, is expected to use Prithvi only against military targets, such as airfields and

²⁵See David Albright, F. Berkovt and W. Walker, *World Inventory of Plutonium and Highly Enriched Uranium, 1992* (New York: Oxford University Press for SIPRI, 1993). See also Brigadier U. K. Nair, *Nuclear India* (New Delhi: Lancers Publications, 1992).

troop concentrations. The only public indication of this policy is the agreement between the two countries not to attack each other's nuclear capabilities, which, interestingly, are located right next to or in the middle of centers with large populations.

To sum up, while subtle shifts in policy will take place, as with the missile program, India will not give up the nuclear option, nor will it seem to be making any concessions under pressure. But it will use both to indulge in a little power game with Washington.

The Pakistani approach would be a mirror image of this as well. While recent unconfirmed reports of the construction of a plutonium reactor add a possible new dimension to Pakistani ambitions, fundamentally Pakistan would be satisfied with its own version of recessed deterrence--a capped nuclear program and a reasonable stockpile of fissile material along with all the components for a small stockpile that can be assembled at short notice. The crucial question is, would it persist with the policy of using this capability as an instrument of defiance--Indian analysts prefer the expression "blackmail"--to push through its objectives in Kashmir? It is in this miscalculation that seeds of a future conflict may lie.

Prospects for Peace and Confidence-Building Measures

The nuclearization of the subcontinent is now a fact of life that the world and the people of the region have to learn to live with. The challenge for the future is threefold: to prevent further increases in the range and capability of these arsenals; to encourage the institution of effective CBMs to prevent accidental wars--a possibility not too remote considering the near misses in 1987 and 1990--and to work toward removing the *casus belli* and thus eliminating the risk of conventional war.

The West in general, and the US in particular, have been involved in a strong effort toward the first objective. But how far this effort will reach depends on the kind of leverage the West has with each player in the region. On the face of it, the US leverage with Pakistan should be much greater because the country has historically been so dependent on its economic and military aid. Yet the US has succeeded only partly, and perhaps temporarily, in slowing down Pakistan's nuclear program by applying sanctions under the Pressler Amendment that deny Pakistan all military and economic aid. More pressure would be counter-productive as no Pakistani government would be in a position to roll back the program, or give up its nuclear capability, and live to tell the tale in view of the domestic politics and strategic compulsions discussed earlier in this paper. With India, the US leverage is lesser still, though at a time when the country is reforming its economy, it needs foreign investment and sympathy at multilateral trade and business fora. Coercion, economic or diplomatic, thus has its limitations. The key to initiating a move away from nuclear and missile competition in the subcontinent lies in a policy that lessens distrust and engages the old antagonists in the search for an effective regime of CBMs.

Since the mid-Eighties, India has initiated a CBM-based approach and despite the Pakistani suspicion that it is only a part of the Indian strategy of keeping the "core" issue of Kashmir out of the discussion, some constructive progress has been made. In January 1991, an Agreement on Prohibition of Attack on Nuclear Installations and Facilities came into force

between the two countries. In August 1992, the Instruments of Ratification relating to the Agreement on Advanced Notice of Military Exercises, Maneuvers, and Troop Movements, as well as an agreement on Prevention of Airspace Violations by Military Aircraft were exchanged. A Joint Declaration on Prohibition of Chemical Weapons was also issued simultaneously. All these arrangements have so far worked reasonably effectively. A mechanism has been instituted whereby the two countries exchange details, including map coordinates of their nuclear installations, every year. Since the agreements there has been no alarm caused by unexpected troop movements or exercises. In January 1994, India made another major move when it submitted six non-papers to Pakistan, including proposals for withdrawal of troops along the Siachen glacier and further strengthening of CBMs.

A key suggestion was the extension of the earlier agreement on not attacking nuclear installations "to include population centers and economic targets." The second suggestion was an agreement "according to which both countries shall undertake not to be the first to use or threaten to use its nuclear capability against each other." Although the non-papers contained other suggestions, such as strengthening communication links between the respective Directors-General of Military Operations (DGMOs), the nuclear aspect was the key. Pakistan obviously reacted with suspicion, sensing an Indian effort to deflect the Kashmir issue and responded that none of this was going to work unless the "core" issue was solved. It came up with a highly polemical agenda for India to hold an early plebiscite in Kashmir. This is where the discussions have stalled. There has been virtually no high-level contact between the two countries since the failed foreign secretary-level talks in January 1994. The state of the relationship is reflected by the fact that the India-Pakistan Joint Commission, established on 10 March 1983, to work towards strengthening cooperation in economic, trade, industrial, education, health, cultural, consular, travel and scientific fields, has not met since 19 July 1989.

The future trends in nuclear and missile acquisitions and rival strategies will be governed by this complex set of variables and forces, often working at cross-purposes. As with conventional weapons, both India and Pakistan will persist with their acquisitions and developments on the basis of what they can afford financially and what they can design technologically. It would be difficult to reverse that broad thrust. On the other hand, a process of reduction in tensions, improvement in the frequency and the level of dialogue, accompanied by the strengthening of existing CBMs and institution of new ones, is a realistic objective. Powerful pacifist constituencies for such measures exist in both countries--even if outside the government. This is also where the West can play a catalytic role.

Given the situation on the ground today, India, in the near future, would be more amenable to such a course of action than Pakistan. India has genuine worries about the situation in the Kashmir Valley. At a time when the country is involved in reforming its economy and has ambitious of emerging as the new growth powerhouse of Asia, Kashmir and accompanying tension with Pakistan, are unavoidable distractions. It has, therefore, been

pressing for increased CBMs and resolution of "less" complicated issues such as Siachen.²⁶ But it is precisely for these reasons that Pakistan would be in no hurry to follow this path. Pakistani policymakers feel that India has landed itself in an impossible mess in Kashmir and that there is no reason why it should help its arch enemy extricate itself from it. From Pakistan's point of view, any acceptance of India's propositions on Siachen, river water or maritime boundary disputes, on increasing trade and travel, cultural contacts, or even CBMs, would help sideline the "core" issue of Kashmir. Between India's strategy of delinking Kashmir from the proliferation issue and Pakistan's attempt to seek a favorable resolution on the Kashmir issue through international proliferation concerns, the prognosis on the nuclear and missile issues in the subcontinent does not provide much scope for optimism.

Research Note: Chinese Security Policies, Programs, and Perceptions

by William J. Durch

Future Chinese policy and behavior toward the states around its periphery are a matter of great uncertainty, and some concern, to those states. China's history contains little experience of cooperation with other states as equals, let alone as alliance partners. Instead, China's role with respect to the outside world has cycled from regional hegemon to victim of foreign invasion, interspersed with periods of internal chaos and subservience to foreign powers. This history leads Chinese leaders to distrust alliances, to emphasize active military defense of borders (moving cross-border when necessary), and to view national power growing out of a strong social and economic base and not, Mao Zedong notwithstanding, just out of the barrel of a gun.¹

Marxism did not qualify as a traditional foreign invader, but Mao's brand of communism left its mark on China during the last forty-five years in the form of deprivation, death and disorder. Although internal order improved thereafter under the pragmatic hand of Deng Hsiao-ping, not until the end of the Cold War and the dissolution of the Soviet Union did China find itself without "an identifiable and pressing external threat."²

For the first time since coming into contact with the West in the first half of the 19th century, China is now in a position to reassert itself regionally, although forces of economics and technology (both communications and weaponry), make it difficult for China to reassert its traditional regional suzerainty. Chinese distrust of interdependence and international cooperation imposes higher barriers to the resolution of regional security concerns, but most of those concerns are neither time-urgent nor directly threatening to Chinese security. China dislikes what its military leaders describe as "an Indian drive for... naval dominance of the Indian Ocean," and an American strategy of political "hegemony" in East Asia, these elements of its security environment are, by historical terms, annoyances rather than threats.³ How China adapts to this new external environment, and how it uses its new-found economic power and its steadily growing military potential will shape the future history of Asia.

Will a growing but unthreatened China hew to international norms and play by global (largely western) rules, or will it attempt to follow rules of its own choosing (for example, on nuclear testing, strategic arms, and conventional military power)? Will China demand deference of its neighbors, especially India, or will regional cooperation on security matters follow cooperation on trade? Will the economic and political forces now at work within it sunder the current political system, and if so, will the result be a state that contributes to regional stability, or one that makes its neighbors extremely uncomfortable?

¹David Shambaugh, "Growing Strong: China's Challenge to Asian Security," *Survival*, Summer 1994, pp. 44-45.

²Ibid., pp. 47-48.

³Ibid., pp. 49-50.

²⁶See, for example, A. G. Noorani, *Easing the Indo-Pakistani Dialogue on Kashmir: Confidence-Building Measures for the Siachen Glacier, Sir Creek, and the Wular Barrage Disputes*, Occasional Paper No. 16 (Washington, D.C.: The Henry L. Stimson Center, April 1994).

To glean hints of answers to these questions, this note reviews Chinese military policies and programs. It looks first at its nuclear weapon programs, then at its conventional defense programs, wrapping up with a few thoughts on the prospects for Chinese cooperation with regional security regimes.

Chinese Nuclear Weapons and Ballistic Missiles

India's drive for nuclear weapons is variously linked to actions by the United States, Pakistan, and China, as well as its right as a would-be great power. For the most part, however, Indian strategists link their nuclear weapons program to China's acquisition of these weapons and their means of delivery.⁴ The Chinese arsenal is projected to grow in ten years, but there is a wide band of uncertainty about its future size.⁵

China has a substantial program of ballistic missile development underway, although through 1994 its deployments of intercontinental ballistic missiles (ICBM) have been modest. Four storable-liquid-fueled DF-5s, with an estimated range of 12,000 km, are deployed in hardened and camouflaged silos increasingly vulnerable to pre-emption.⁶ A new generation of solid-fuel missiles is under development. The DF-41 is to replace the DF-5 by 2010, while the DF-31, with a range of 8,000 km, will be deployed by the turn of the century and then adapted to submarine deployment (as the JL-2). With such range, mobile-land-based DF-31s could reach all parts of India from mountainous central China, while the sea-based JL-2 could target New Delhi or Los Angeles equally well from a launch point a thousand kilometers east of Japan.⁷

China, however, has been able to target both cities with its current generation of ICBMs for some time, and its new generation of mobile missiles is not inconsistent with a strategy that emphasizes second-strike survivability and a policy of no-first-use of nuclear weapons. With relatively few weapons and a steep learning curve in the design and production of delivery systems, Beijing has had little choice, historically, but to adopt such a strategy. Recent assessments of Chinese nuclear modernization programs conclude, however, that China continues to emphasize quality (and survivability) over quantity in its strategic forces.⁸ Since neither India nor China is likely to acquire a nuclear warfighting capability

⁴See, elsewhere in this occasional paper, Shekhar Gupta, "Nuclear Weapons in the Subcontinent," pp. 40-42.

⁵A recent RAND Corporation study estimated that China had 500 nuclear weapons in 1993, and could have anywhere from 600 to 1,500 by 2003. Roger C. Molander and Peter A. Wilson, *The Nuclear Asymptote: On Containing Nuclear Proliferation* (Santa Monica, CA: RAND/UCLA Center for Soviet Studies, 1993), p. 78.

⁶John W. Lewis and Xue Litai, *China's Strategic Seapower: The Politics of Force Modernization in the Nuclear Age* (Stanford, Calif.: Stanford University Press, 1994), p. 326n48.

⁷Lewis and Xue, *China's Strategic Seapower*, p. 326n49. The US government maintains that China has sold the technology for 300km-range M-11 missiles to Pakistan, in contravention of the Missile Technology Control Regime (MTCR) that China has agreed to support. (Mushahid Hussain, "Pakistan-China defense cooperation: an enduring relationship," *International Defense Review* 2/1993, p. 110-111; Theresa Hitchens, "ACDA Promotes Worldwide Ban on Midrange Missiles," *Defense News*, July 4-10, 1994, p. 16.)

⁸Patrick Clawson, ed., *Strategic Assessment, 1995: US Security Challenges in Transition* (Washington, D.C.: Institute for National Security Studies, National Defense University, 1995), p. 20.

(that is, sufficient warheads, on sufficiently accurate and numerous missile delivery systems, to make a counterforce targeting strategy feasible), stable nuclear deterrence between them should, in principle, be readily sustainable as long as accidental and unauthorized launch of weapons can be avoided.⁹

China and India both have quarrels with the Nuclear Non-Proliferation Treaty, but Beijing has not joined forces with the Treaty's harshest critics within the non-aligned movement (NAM). China has championed negative and positive security assurances, continued steep reductions in US and Russian arsenals, conclusion of a Comprehensive Test Ban Treaty (CTBT), and other objectives long advocated by the NAM, but Beijing also continues to test weapons underground and reserves the right to conduct "peaceful nuclear explosions" under a CTBT.¹⁰ As an exclusive member of the nuclear weapons club under the NPT, China's advocacy of compensatory steps to address the treaty's "discriminatory" nature is apparently limited.

India, not a party to the NPT, continues to object strenuously to the treaty's division of the world into nuclear "haves" and "have nots," calling instead for the "complete and universal elimination of weapons of mass destruction," that is, a treaty that does without "discriminatory" provisions, as do the Chemical Weapons Convention and CTBT.¹¹ India's call for global, nondiscriminatory disarmament treaties affords it, like China, a leadership platform among the non-aligned states. It also permits New Delhi considerable freedom of maneuver, as the burden of nuclear disarmament falls elsewhere. This posture does not begin to address, however, nuclear- and missile-related activities that could raise security concerns in southern Asia and beyond.

At present, nuclear- and missile-related activities that could fray bilateral relations between India and China are not prominent. Indeed, the Chinese provision to India of nuclear fuel for its Tarapur power plant suggests how dramatically improved relations have become. No western supplier could be engaged to resupply Tarapur, given India's refusal to accept full-scope International Atomic Energy Agency (IAEA) safeguards for its nuclear power facilities. Nonetheless, the Nuclear Suppliers Group was generally relieved by Beijing's decision to resupply Tarapur, as the alternative was a dangerous refuelling operation and the removal of Tarapur from all IAEA safeguards.¹²

⁹ Pakistan is a potential spoiler in this equation, as Shekhar Gupta's chapter in this occasional paper relates. (See pp. 38-40.)

¹⁰Statement by Amb. Sha Zukang, head of delegation to the 4th PrepCom for the 1995 Review and Extension Conference for the Treaty on Non-Proliferation of Nuclear Weapons. Press release, Mission of the People's Republic of China to the United Nations, New York, 23 January 1995. See also, Maurice A. Mallin, "CTBT and NPT: Options for US Policy," *The Nonproliferation Review*, Wtr 1995, p. 5.

¹¹Statement by H.E. Shri R.L. Bhatia, Minister of State for External Affairs, before the First Committee of the 49th United Nations General Assembly. Press release. Mission of India to the United Nations, New York, 24 October 1994.

¹²Associated Press, New Delhi, January 6, 1995.

Conventional Forces and Regional Disputes

China's conventional forces are shrinking in manpower (some ten percent in the past five years) as the country tries to equip them with more modern technology.¹³ In the process, it has been converting much of its defense capacity to civilian production, and the Peoples Liberation Army (PLA) has gone into business for itself, generating off-budget revenues reinvested in the military.¹⁴ But even with the added revenue, and with foreign assistance, China's ability to design and produce cutting-edge weaponry has been marginal up to now, much as its defense-sector consumer goods lack cutting-edge market appeal.¹⁵ China has been unable to produce a long-range fighter/attack aircraft on its own; its current models, even those infused with Western sensors and engines, appear to have the performance specifications of 30-year-old designs. The F-8 fighter program, launched in 1964, had produced only 80 aircraft by 1979 and these failed to meet PLA Air Force requirements. A mid-1980s program to upgrade the aircraft with US technology was interrupted by US pullout after the 1989 Tiananmen Square massacre. A limited number may be built for the Navy, in a revived program, to serve as a shore-based defense aircraft until a new fighter, on the drawing board since the late 1980s and intended to be F-16-class, MiG-29-class, or better becomes available.¹⁶

China has been working to create a core of well-equipped, quick reaction units within its ground forces. In five years, through late 1993, five to ten of its 88 divisions had been converted.¹⁷ Such forces could, in theory, be transported rapidly to meet a territorial challenge or other regional flareup, but at present only in small numbers. China has been buying Russian Il-76 transport aircraft and makes its own copy of the Russian An-12 medium

¹³International Institute for Strategic Studies, *The Military Balance*, 1988-89 and 1994-95 (London: IISS, 1988, 1994), p. 147, p. 170.

¹⁴Shirley Kan, "China's Arms Sales: Overview and Outlook for the 1990s," in *China's Economic Dilemmas in the 1990s: The Problems of Reforms, Modernization, and Interdependence*, Vol. 2: Study Papers. US Congress, Joint Economic Committee, 102d Cong., 1st sess., S.Prt. 102-21, Vol. 2, April 1991, p. 707. Because of this increasingly entrepreneurial approach to defense finance, David Shambaugh notes, "No analysts, including, probably, the PLA itself, know for sure how much revenue the PLA has at its disposal or how much it spends." (Shambaugh, "China's Challenge," p. 54.) About 40 percent of the defense industry produces only civilian goods, 20 percent produces only military goods, and 40 percent produces both. (*Jane's Defence Weekly*, 19 February 1994, p. 31.)

¹⁵*Washington Post*, 17 March 1993, p. A26.

¹⁶The new fighter is called the XJ-10, and may incorporate Israeli technology from the aborted Lavi project, but is not expected to be operational before the year 2000. China has inked a deal to import Russian Klimov RD-33 aircraft engines, the ones that power the MiG-29, for some of its existing aircraft, but these engines have worn out far faster than expected in Indian Air Force service, and the Chinese military is notoriously deficient in preventive maintenance, making breakdowns likely. Some sources suggest China will use them only in the Chengdu Super-7s that it exports to Pakistan, among other customers. China may benefit from several hundred expatriate Russian advisors in the design of the aircraft, but may still face difficulties in implementing serial production of high technology weapons. (See *Jane's Defence Weekly*, 19 February 1994, p. 28; *Flight International* 19-25 May 1993, p. 15, and 7-13 July 1993, p. 13; and Robert S. Skebo, et al., "Chinese Military Capabilities: Problems and Prospects," in *China's Economic Dilemmas in the 1990s*, p. 666.)

¹⁷Col. John Caldwell (USMC), *China's Conventional Military Capabilities, 1994-2004, An Assessment* (Washington, D.C.: The Center for Strategic and International Studies, 1994), p. 1.

transport known as the Y-8. Even with these aircraft, however, the PLA Air Force can lift just two or three battalions of troops at any one time. Any Chinese military foray, whether by air or ground into, say, Arunachal Pradesh in northeastern India (much of which China claims) would lack substantial air cover until sometime well into the next century. Few of the combat aircraft in China's air force would be capable of providing air cover or ground support to Chinese forces over the 1,000 km distance from bases near Kunming. (Today, China flies just two dozen long-range Russian Su-27 fighters but is reportedly seeking to build the multirole Su-30 version.) Operating bases in northern Myanmar would make Chinese air operations over India more feasible but would themselves be vulnerable to attack by the Indian Air Force.

The Sino-Indian border in the Himalayas is in fact disputed in several places but has caused little trouble in many years. Indeed, recent, first-ever exchange visits by the Indian and Chinese defense chiefs, and a September 1993 Peace and Tranquility Agreement aimed at negotiating an end to the border disputes, suggest continuing progress toward resolving this old source of trouble.¹⁸

Of more concern, perhaps, is China's growing political, economic, and military relationship with the rogue military regime known as the State Law and Order Restoration Council (or SLORC) that has run Myanmar (Burma) since a coup in 1988. Some Indian analysts see rejuvenation of the old southern silk route, from Yunnan Province in China, through Myanmar, into what is now Indian Assam, as more than an effort to rebuild a trade access. Armed with more than \$1 billion in recently-delivered Chinese arms, the SLORC has substantially reinforced Myanmar's border with India and Bangladesh, at least raising the disquieting prospect of (a) covert military aid to dissident groups in India's northeastern states (Assam in particular) and/or (b) an increased flow of heroin and related narcotics into India from the Golden Triangle.¹⁹

In general, rapidly-developing China--southwestern and southeastern China in particular--has much more to gain from trade with the 250 million-person middle class Indian market than it has to gain from seizing additional remote territory with resentful inhabitants, or from fomenting trouble that might cause general instability within India and perhaps impel its breakup. China may well fear its own fissiparous tendencies (in Tibet, Xinjiang, and elsewhere) too much to encourage them in its neighbors. Moreover, since China and Russia are no longer at odds, India no longer appears to China as part of a Soviet encirclement strategy, so pressing at the boundaries of the relationship no longer makes much sense. In

¹⁸B. M. Chengappa, "India-China Relations: Issues and Implications," *Strategic Analysis* (Institute for Defence Studies and Analysis, New Delhi, April 1993), p. 46. Mushahid Hussein, "South Asia: Sino-Indian Detente Makes Pakistan Wary," *Inter Press Service*, Islamabad, 28 July 1994.

¹⁹On rebellion in Assam, see Ragu G. C. Thomas, *South Asian Security in the 1990s*, Adelphi Paper No. 278 (London: Brassey's for the IISS, July 1993), pp. 35-36. On Chinese-Myanmar relations, see J. Mohan Malik, "Sino-Indian Rivalry in Myanmar: Implications for Regional Security," in *Contemporary Southeast Asia* (September 1994), pp. 139-140. On drug trafficking, see P. Stobdan, "China's Forays into Burma--Implications for India," in *Strategic Analysis* (Institute for Defence Studies and Analysis, New Delhi, April 1993), pp. 25-29.

the words of one analyst, India has become "just another great power disconnected from China's primary strategic concerns."²⁰

If the removal of the element of superpower competition from southern Asia permits India and China to improve their relations, it may at the same time increase concerns in Pakistan about the long-term reliability of China as an arms supplier. Pakistani and Chinese defense organizations are collaborating on a new jet trainer and a new Pakistani main battle tank, among other equipment.²¹ The more China hews to international norms in its transfers, particularly the norms of the Missile Technology Control Regime, the more Pakistan may come to rely, both militarily and psychologically, on its nuclear equalizer.

Naval Forces and Regional Prestige

Although the Chinese Navy is today primarily a coastal force, it has wider aims for a blue-water fleet by 2050. Observers note its evolving "offshore defense" (*jinyang fangyu*) strategy, which defines a seaward defense perimeter stretching 200-400 nautical miles from the Chinese coast, to the first chain of islands, and "more in the case of the South China Sea."

In addition to "safeguarding China's territorial integrity" (including the integrity of Chinese claims to the Spratly Islands in the South China Sea), the Navy's principal missions are "to conduct a possible blockade of Taiwan; to defeat a sea-based invasion; [and] to make ready survivable nuclear retaliatory forces." "Fist formations" in each fleet are to be China's oceanic rapid reaction forces.²²

None of these missions are, as yet, directly relevant to the Indian Ocean. But China has been upgrading at least one port facility in Myanmar and has been building facilities in the Coco Islands adjacent to an Indian base in the nearby Andamans, apparently within radar range of the splashdown points for Indian ballistic missile tests.²³ Refueling and observation facilities in Myanmar would greatly simplify the logistics of Chinese naval presence in the region, a presence intended as much to remind India that it does not rule the Indian Ocean as to accomplish any specific strategic objective (much as the Indian Navy is intended to symbolize India's claims to great power status more than to meet specific sea-based threats).

Nuclear submarines could do without such refueling stops, and China operates a handful of them, but its historical rate of production for nuclear-powered submarines has

²⁰Gary Klintonworth, "Chinese Perspectives on India as a Great Power," in Ross Babbage and Sandy Gordon, eds., *India's Strategic Future* (New York: St. Martin's Press, 1992), p. 99-100.

²¹Hussain, "Pakistan-China defense cooperation," p. 109-110; Ron Matthews, "Pakistan: on the road to economic reality," *Jane's Defence Weekly*, 3 July 1993, p. 29.

²²John Lewis and Xue Litai, *China's Strategic Seapower: The Politics of Force Modernization in the Nuclear Age* (Stanford, Calif.: Stanford University Press, 1994), pp. 229-230. The "first chain" includes Japan, the Ryukyus, Taiwan, the Philippines, and Kalimantan (Borneo, closer to 1,500 km from China's southernmost Hainan Island). On "fist formations," see Shannon Selin, *Asia Pacific Arms Buildups, Part One: Scope, Causes, and Problems*, Working Paper No. 6 (Vancouver, BC: Institute of International Relations, The University of British Columbia, November 1994), p. 12-14.

²³Slobdan, "China's Forays," p. 33-34.

been quite low. Problems with radiation safety in its first two *Han*-class boats suggest they may retire early (by the year 2000), and production has apparently ended after five units. Reliability concerns may preclude these boats' use in such long forays as cruises into the Indian Ocean.²⁴ The decades-long gestation of China's second-generation ballistic missile submarine (at least 25 years from initial design to first boat at the turn of the century), suggests that a second-generation nuclear attack submarine will be slow to reach deployment.²⁵ In any case, submarines are much less impressive than surface ships when it comes to showing the flag.

The most impressive surface ships are aircraft carriers, which India operates and China desires. A 1993 report to the National People's Congress included a wish list for two 48,000-ton carriers capable of launching conventional aircraft. Although the technologies for launching and recovering aircraft aboard ship are not new, their effective use in conjunction with other naval forces requires not just the development of technologies but the evolution of a new naval sub-culture, and open ocean exercises to train carriers and other vessels to operate in synchrony.²⁶ It is unlikely that China will have a functioning carrier of the type described integrated into the fleet before the end of the next decade. But should it wish to acquire smaller ships able to handle helicopters and vertical-takeoff jets, it might follow Thailand's lead and contract with the Spanish shipbuilder that is slated to deliver such a ship to the Thai Navy in 1997.²⁷

China, India and Regional Security Perceptions

The smaller countries girdling China, from Taiwan to Pakistan, are locked into an asymmetric security dilemma vis a vis their large neighbors, whose own security concerns are focused elsewhere. Chinese and Indian military policies and programs create sufficient uncertainty and anxiety to push many of their neighbors to expand their own military capabilities (with spare change in several expanding economies encouraging the process), but the effect does not work in reverse. China (and India) build their forces with other objectives in mind, either barely taking note of their small neighbors' concerns and reactions, or dismissing them as an unimportant byproduct of necessary policies. Thus, while Pakistan is clearly focused on the threat it sees in Indian military capabilities, India builds with one eye on China and the other on its great power aspirations, with a studied disregard for Pakistani military power.

Most of China's neighbors observe its slowly growing military power with concern, try to guess where it may be going and whether they might be in its path, and modestly hedge

²⁴Indeed, Chinese SSNs rarely venture very far from homeport. Skebo, et al., "Chinese Military Capabilities," p. 672.

²⁵*Jane's Fighting Ships, 1994-95*, p. 114. *Jane's* suggests that Russian expatriates are assisting the Chinese development process, restoring, unofficially, an engineering input lost in 1960. On Chinese nuclear submarine construction, see Lewis and Xue, *China's Strategic Seapower*, part I.

²⁶Paul Beaver, "Carriers key to Chinese Air Power," *Jane's Defence Weekly*, 25 September 1993, p. 23. China did have the opportunity to look closely at the former Australian carrier *Melbourne*, which it broke up for scrap in 1984.

²⁷*Jane's Defence Weekly*, 11 February 1995, p. 27.

their security bets. Chinese planners do not likely spend much time on worst-case estimates of what Thailand or South Korea may buy or do. It may take notice should India expand its power projection capabilities substantially, and may well calibrate some of its planning to support a blockade of Taiwan. Indeed, it seems to emphasize the recovery of "lost" islands. Further down the road, it may hope for superpower status, in the meantime accumulating regional respect for a revived Middle Kingdom and building a "strong state and unified nation," and warding off internal chaos and regionalism.²⁸

Prospects for Collective or Cooperative Security

Collectivized regional defense arrangements would allow China's neighbors to pool forces quickly and effectively, but such arrangements are not, as yet, thought desirable. Instead, regional "comprehensive security" initiatives like the Regional Forum of the Association of Southeast Asian Nations (ASEAN) aim at general confidence-, consensus-, and relationship-building, which is valuable in its own right and meshes reasonably well with China's own notion of security as something that entails much more than military capacity. This similarity in approach may at least permit a dialogue to be launched that addresses the non-military elements of regional relations that are not quite so sensitive as territorial claims and ambitions.

The growing external role of China in South and Southeast Asia may encourage India and the Southeast Asian powers to cooperate in political-military matters. And while there is, as yet, no call for the US military to play the sort of balancing role in southern Asia that it does in East Asia, if Chinese pressure forces closer defense relations among most of the states to its south, the US may yet find itself cooperating with India and the ASEAN states to counterbalance China, if not in this decade, then in the next.

²⁸On the principles of Chinese foreign and military policy, see Shambaugh, "Growing Strong," pp. 44-46.