

The Effects of Pakistan's Nuclear Weapons on Civil-Military Relations in India

Ayesha Ray

THE DEVELOPMENT of Pakistan's nuclear weapons program in the 1980s contained serious implications for Indian civil-military relations in the 1990s. Towards the late 1980s, India's brief but risky military encounters with Pakistan and the rapid development of its nuclear program dramatically shaped Indian approaches to the use of nuclear weapons in the 1990s. Not only was there a fundamental shift in Indian political attitudes towards the development of nuclear technology for strategic use, but more importantly, the Indian military began playing a critical role in the development of new strategic doctrines which could effectively deal with a Pakistani nuclear attack. The Indian military's role in influencing the development of nuclear strategy is a critical part of the evolution in Indian civil-military approaches to nuclear policy. More importantly, the military's attempts to assert its expertise in nuclear policy are of fundamental importance in addressing challenges to the division of labor between civilians and the military.

Indian Political Thought and Nuclear Strategy in the 1970s

To understand how the development of Pakistan's nuclear weapons program may have affected Indian civil-military relations, it becomes important to revisit Indian approaches to nuclear strategy in the 1970s and 1980s. Interestingly, the Indian case reveals that despite the existence of external security threats in the 1970s, India's political leadership found no compelling reason to develop nuclear weapons for strategic use. In fact,

Dr. Ayesha Ray is an assistant professor of political science at King's College, Pennsylvania. She received her PhD in political science from the University of Texas at Austin in 2008 and MA and MPhil degrees in international relations from Jawaharlal Nehru University, New Delhi. The daughter of a retired Indian military official, Dr. Ray has spent many years reading, writing, and conducting research on security issues in South Asia. Her specific area of expertise deals with civil-military relations in nuclear weapon states. She is currently working on a book which addresses contentious issues between civilians and the military in India in the shadow of nuclear weapons.

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 2009		2. REPORT TYPE		3. DATES COVERED 00-00-2009 to 00-00-2009	
4. TITLE AND SUBTITLE The Effects of Pakistan's Nuclear Weapons on Civil-Military Relations in India				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Strategic Studies Quarterly, 155 N. Twining Street, Building 693, Maxwell AFB, AL, 36112-6026				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADA508919.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT Same as Report (SAR)	18. NUMBER OF PAGES 39	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

any kind of serious thinking about the strategic use of nuclear weapons was missing on the political side.

In the aftermath of the 1962 and 1965 wars, China and Pakistan became immediate threats to Indian security. In 1964, China conducted its first nuclear tests. China also established a two-pronged relationship with Pakistan and the United States—while it pursued a military relationship with Pakistan, it simultaneously engaged in diplomatic camaraderie with the United States. China acquiesced to Islamabad's request for arms and assisted in the development of Pakistan's domestic arms-production capabilities. It also provided Islamabad with several anti-aircraft guns and approximately 700 T-59 and PT-76 tanks.¹ With regard to US policy, Sino-American friendship became an important policy instrument for both Republicans and Democrats in Washington.²

For India, a US-China alliance contained possibilities for nuclear and technological collaboration between the two countries. American policy in the subcontinent from 1967 had also become increasingly sympathetic towards Pakistan. In the spring of 1967, the United States resumed the sale of military spare parts to Pakistan. In October 1970, reports indicated that Pakistan had received new American bombers and armored personnel carriers.³ America's military relationship with Pakistan and Pakistan's military relationship with China compounded India's external threat environment. For Indian political leaders, China appeared to pose a much greater threat to India's external security, given its nuclear capabilities and its close military relationship with Pakistan. In its annual report for 1967–68, the Indian Ministry of Defense emphatically stated, "The Chinese danger posed to be a long-term one while the danger from Pakistan centered on certain problems which did not give it such a long-term character."⁴ The report also emphasized the "accelerated pace" at which China's nuclear weapons program was developing and outlined fears about Pakistan's receipt of military supplies from China and the United States.

To counter the threat posed by China and Pakistan, New Delhi began to increase its defense expenditures and turned towards the Soviet Union for military guarantees. The Indian Ministry of Defense's 1964–65 annual report introduced a defense plan which would be implemented over a period of five years. It included strengthening India's defense production base to meet the requirements of arms and ammunition and improving the fields of procurement, storage, and training.⁵ New Delhi also entered into a production agreement with the Soviets to make MiG-21s in India.⁶

From 1967 to 1971, India imported 150 Su-7 fighter-bombers, 450 T-54 and T-55 tanks, 150 PT-76 amphibious tanks, and six Petya-class frigates from the Soviet Union. The Soviet-India defense relationship was exactly the type of external security blanket that New Delhi was looking for in the face of external threats.

In 1971, India went a step ahead and signed the historic Soviet-India Friendship Treaty. This agreement secured diplomatic and military guarantees from the Soviet side and established a firm foundation for India's continued diplomatic and military partnership with the Soviets.⁷ However, one of the glaring drawbacks in Indian defense policy during this time was that, except for securing military guarantees from the Soviet Union and increasing defense expenditure, India's political leadership was not doing much more to improve military affairs. The development of serious military strategy and improvements in conventional war-fighting methods to deal with possible future threats from China and Pakistan were completely absent. By the early 1970s, India's nuclear weapons program, which had begun in the 1950s under the aegis of a small group of scientists, was making sufficient progress. However, it would soon become apparent that India's nuclear weapons program had very little connection to its defense policy.

What is particularly striking is that even though India had a well-entrenched nuclear weapons program in the early 1970s and civilians displayed an intention to develop nuclear weapons, the program was developing separately from Indian defense policy. Various political statements made to the public demonstrate that India's political leadership was not thinking of nuclear weapons in strategic terms. For instance, on 2 August 1972 and again on 15 November 1973, the prime minister released a statement to the Indian Parliament that read: "The Department of Atomic Energy had been studying various situations under which peaceful underground nuclear explosions could prove to be of economic benefit; that progress in this new technology was constantly being reviewed from theoretical as well as experimental angles; and that underground tests for peaceful purposes would be undertaken."⁸ Such public political statements clearly alluded to the nonstrategic use of nuclear technology. Yet, in a surprising move that shocked the international community, India went ahead and conducted its first nuclear tests in 1974.⁹

It is necessary to underscore that these tests did not contain any serious ramifications for Indian civil-military relations. Rather than think about the military use of nuclear weapons, India's political leadership maintained an ambiguous approach to nuclear policy. This was not uncommon, as political arguments favoring a nonmilitary use for nuclear technology had been made as early as the 1950s. India's political leadership had frequently argued in favor of the development of nuclear technology and not nuclear weapons. In making such claims, they had made a conscious distinction between the use of nuclear *technology* and the use of nuclear *weapons*. For civilians, nuclear *technology* was "good," as it was essential for India's economic development. On the other hand, nuclear *weapons* were "bad," as they had the potential to unleash enormous destruction. This, however, does not mean that civilians were unaware of the potential use of nuclear technology for strategic purposes. Stated simply, they were just not interested in developing it for strategic use.

In trying to explain why Indian political leaders gave such little importance to the strategic use of nuclear weapons in the 1960s and 1970s, Rajesh Basrur argues that throughout history, Indian strategic culture accorded limited value to nuclear deterrence as a basis for national security. Moreover, this strategic culture was "consistently incremental in its responses to external and internal pressures for substantial policy change."¹⁰ When it came to nuclear weapons, the approach adopted by civilians was that of "nuclear minimalism."¹¹ For many Indian security experts, like K. Subrahmanyam, "nuclear weapons were not weapons of war; they were political weapons."¹² India's political leadership perceived a very limited utility of nuclear weapons as a source of national security. Civilians also exhibited a political rather than technical understanding of nuclear weapons. On one hand, while they recognized that power was an important requisite for security, they also considered nuclear weapons morally reprehensible because of the risks associated with their use.¹³ Indian defense experts further suggest that New Delhi's lack of strategic thinking on nuclear weapons was directly tied to its inexperience with total war. Unlike the United States, India had remained relatively isolated from the experience of the First and Second World Wars. Its inexperience with total wars kept most sections of Indian society insulated from questions of national security and strategy. Moreover, the "indifference and apathy induced by years of British rule" just helped sustain a lack of strategic thought.¹⁴ Former vice-chief of the Indian army, Vijay Oberoi, observed that the military was always viewed as "a

repressive instrument of British policy and India's political leadership continued to think along such lines even after independence."¹⁵ Therefore, one could claim that due to a very different set of historical experiences, the absence of Indian strategic thought on security issues may have been the single most important reason explaining why Indian political leaders were not thinking of nuclear weapons in strategic terms during the 1970s.

Political hesitancy in accepting the strategic value of nuclear weapons, of course, left Indian nuclear policy with no coherent shape or structure. In addition, the collusion of India's political leaders and scientific establishment in the development of its nuclear weapons program with no strategic purpose in mind had the net effect of excluding the Indian military from nuclear policy making. Civilians had routinely shared the scientists' optimism about nuclear weapons being the prime symbol of India's technological prowess—a resource which could enhance its economic development by channeling its energy base. However, some sections of the Indian military thought otherwise. More specifically, the Indian armed forces appeared unconvinced about the scientists' capability to develop nuclear weapons without military expertise. When the 1974 nuclear tests were conducted with the aid of the scientists, the military appeared rather alarmed that the scientists had been able to pull off this gargantuan feat with the help of India's political leadership. But critics may ask: Why did the Indian military not make a stronger case for their inclusion in nuclear policy in the 1970s?

In examining the nature of Indian civil-military relations during this time, it may appear arbitrary or unfair to place all the blame on India's political leadership for the military's exclusion from nuclear policy. This is because, prior to the 1974 tests, there was no evidence that the armed forces had made a powerful case for the strategic use of nuclear weapons. In fact, throughout the 1960s and up until the early 1970s, the Indian military had remained quite ambivalent about the benefits accrued from nuclear weapons. Stephen Cohen pointed out the reasons for such ambivalence— from a military point of view, an Indian nuclear weapons program in the 1970s seemed institutionally disruptive, as the military had to deal “with questions regarding the control of nuclear weapons, the targets against which the weapons could be deployed and the effects of nuclear weapons on conventional war strategy.”¹⁶ As the Indian military had adhered to a nineteenth-century organizational structure for the longest time, its experience had been limited to relatively unsophisticated military

technologies, and it was completely unfamiliar with the use of nuclear technology. Hence, despite some realization about the inherent value of nuclear weapons for strategic purposes, the military's deep unfamiliarity with such modern weapons precluded them from exerting unnecessary pressure on the civilians to develop nuclear capability.¹⁷ This situation, however, was soon going to change. In the 1980s, India's external security considerations and a series of crises with Pakistan would prompt a major shift in military approaches to the development of nuclear strategy.

Indian Military Thought and Nuclear Strategy in the 1980s and 1990s

From the late 1970s, India observed a surge in Pakistan's nuclear weapons program. Some South Asian scholars argue that Pakistan's nuclear weapons program was developing simultaneously with an Indian nuclear program.¹⁸ As one Pakistani scholar noted, "India's superiority in conventional weapons and its quest for political pre-eminence in the region appeared to be a plausible motivating force for Pakistani policy makers to pursue a bomb option."¹⁹ Moreover, various Pakistani leaders, including Zulfikar Ali Bhutto, who served as Pakistan's president from 1971 to 1973, displayed concerns about India's nuclear weapons program back in the 1960s. Pakistan's war with India in 1965, the liberation of Bangladesh in 1971, and the 1974 Indian nuclear tests aroused fears within Pakistani political circles about Indian intentions of developing a nuclear weapons program that, in the future, could be used to deter Pakistan from attacking India. The Bangladesh war also demonstrated India's conventional arms superiority, which further compounded Pakistan's insecurity.²⁰ And so, India's conventional superiority is often cited as an important reason for Pakistan's move to build its own nuclear weapons program.

The development of Pakistan's nuclear weapons program began around the same time India launched its nuclear program in the late 1950s. The Pakistan Atomic Energy Commission was established in 1955 to promote and develop nuclear energy for economic development.²¹ From the 1960s, as relations with India began to deteriorate, Pakistan's nuclear weapons program underwent a simultaneous change. Discussing the reasons for a change in Islamabad's nuclear weapons program, Samina Ahmed noted that the 1965 war with India marked an "important turning point" in Pakistan's nuclear program because by the end of the war, the conventional

weapons disparity had quickly shifted in India's favor.²² After the war, Pakistan began securing military guarantees from China, which supplied it with an armory of conventional weapons. Pakistan's defeat in the 1971 war with India further pushed Islamabad in the direction of a full-fledged weapons option.²³ In 1971, Pakistan began to operate a secret network to obtain necessary materials for developing its uranium enrichment capabilities. President Bhutto entered into an agreement with North Korea in September 1971 to obtain critical weapons, following which North Korea dispatched an arms shipment to Pakistan. During most of the 1970s, Pakistan acquired artillery, multiple-rocket launchers, and ammunition from North Korea.²⁴ Also, under the leadership of Dr. Abdul Qadeer Khan, a German-trained metallurgist, Pakistan developed its first nuclear facility at Kahuta in 1976.²⁵ News about the development of Pakistan's nuclear ambitions would soon reach the United States.

In the early 1980s, the US State Department published a report outlining how Pakistan was well on its way towards developing a nuclear weapons program. This report further stated that Pakistan had obtained nuclear technology from Europe and China and that China had cooperated with Pakistan in the production of fissile material.²⁶ In April 1981, Senator Alan Cranston reported news of a construction activity at the Pakistani test site in Baluchistan. By the late 1980s, Pakistan published various articles on centrifuge design, making its nuclear weapons capability public.²⁷ After 1988 its ballistic missile program further expanded with aid from the Chinese, and in 1989, Pakistan tested its short-range nuclear missile, Hatf-I and Hatf-II.²⁸

The possession of nuclear capabilities by Pakistan intensified Indian security concerns. By the mid-1980s, India was clearly convinced of a Pakistani nuclear program.²⁹ Sumit Ganguly noted that "in the early 1980s, the clamor for the acquisition of nuclear weapons grew as US sources provided evidence of Pakistan's quest for nuclear weapons and the Chinese supply of a nuclear weapons design to Pakistan."³⁰ In 1983 India began to process weapons-grade plutonium. Under the leadership of Prime Minister Rajiv Gandhi, the scientific-military establishment in India acquired a declared nuclear weapons capability. Several reports written during this time suggest that India had plutonium resources sufficient to build between 12 and 40 weapons.³¹ While debating whether to keep India's nuclear weapons option open, Prime Minister Gandhi

underscored a simultaneous shift towards military modernization. But few within India's political establishment realized how the development of Pakistan's nuclear program was going to affect Indian security in unexpected ways.

By the mid-1980s, Pakistan's nuclear weapons program was developing at an alarming pace. In 1984 Pakistan had acquired the capability for producing low-enriched uranium.³² Dr. A. Q. Khan held periodic interviews with the press in which he publicly talked about Pakistan's developing nuclear program. During one such interview in February 1984, Khan claimed that Pakistan had already acquired nuclear weapons capability.³³ By the end of the 1980s, under Khan's leadership, the Pakistan Kahuta Laboratories acquired the means to produce highly enriched uranium. But more importantly, Pakistan had begun trading nuclear secrets with Iran, North Korea, and Libya.³⁴ As Gaurav Kampani notes, beginning in the 1980s and during the 1990s, Khan and some of his top associates began "offering a one-stop shop for countries that wished to acquire nuclear technologies for a weapons program." All these countries had obtained blueprints, technical design data, specifications, components, machinery, enrichment equipment, and notes on Khan's P-1 and next-generation P-2 centrifuges.³⁵ In the 1990s, there were also frequent reports of visits by Iranian nuclear scientists to Karachi for technical briefings on Pakistan's nuclear designs.

Pakistan's clandestine nuclear operations did not go unnoticed. From the early 1990s, Washington began raising concerns about nuclear proliferation with Pakistan. In the mid-1990s UNSCOM inspectors in Iraq had uncovered documentary proof that A. Q. Khan had approached Saddam Hussein's regime to assist the Iraqi nuclear weapons program in the area of centrifuge-based uranium enrichment.³⁶ Despite international concerns, on 7 February 1992, Pakistani foreign minister, Shahryar Khan, in an interview with the *Washington Post*, announced that the country had developed the capability to assemble one or more nuclear weapons.³⁷ Shahryar Khan's public pronouncement made the international community increasingly worried about the effects of a Pakistani nuclear program on Indian nuclear policy. In 1988 the *New York Times* reported that India had embarked on an ambitious nuclear energy program that required the storage of tons of plutonium for potential use for nuclear weapons. The report further stated that from 1985 to 1987, India had produced large quantities of plutonium from domestically built sites. During the same year, a

task force report published by the Carnegie Endowment for International Peace concluded that by mid-1987 India “may have accumulated a stockpile of 100 to 200 kilograms of plutonium which was sufficient to build 12–40 weapons.”³⁸ And so, the biggest challenge for the international community in addressing nuclear proliferation concerns in South Asia was the growing evidence of nuclear weapons development for strategic use in both countries.

The development of Pakistan's nuclear capability thus provides a background for the discussion of a series of brief military encounters that would occur between India and Pakistan in the 1980s. More importantly, the manner in which the Indian military responded to these crises is vital in understanding the sudden importance of nuclear strategy for Indian civil-military relations.

By the early 1980s there were several indications that India's political and military leadership had begun to consider the strategic use of nuclear weapons. George Perkovich claims that when Prime Minister Indira Gandhi came to power in 1980, she hoped to keep India's nuclear weapons option open. In 1981 Gandhi had raised concerns about Pakistan's ability to develop the nuclear bomb. She argued that the possession of nuclear weapons capability by Pakistan had compelled New Delhi to weigh its nuclear weapons option more seriously. In other words, Pakistan's nuclear capability was directly pushing India's decision to declare its own nuclear capability.³⁹ Moreover, various American intelligence reports published in 1982 suggested that Indian military planners were urging Prime Minister Gandhi to draw up a plan to destroy Islamabad's facilities.⁴⁰ For example, following the induction of British-procured Jaguar aircraft in the 1980s, the Indian air force developed a brief study in which it weighed the possibility of attacking Pakistan's nuclear facilities at Kahuta. The objective of the study was to neutralize the threat posed by Pakistan through a direct attack on its nuclear facilities.⁴¹ Prime Minister Gandhi, however, did not support any preventive war plans, owing to fears that a Pakistani attack on Indian facilities would prove very costly for India.⁴² Yet, Gandhi kept India's nuclear option open in fear that Pakistan would declare its nuclear weapons capability.⁴³

By 1984 the possibility of a nuclear confrontation between India and Pakistan became real when Pakistani president, Gen Muhammad Zia-ul-Haq, informed the United States that India was trying to emulate Israel's attack upon Iraq's Osiraq reactors with the prime intention of destroying

Pakistan's nuclear program, an allegation that Indira Gandhi vehemently denied.⁴⁴ Amidst such accusations, the inability of American satellites to locate two of India's Jaguar squadrons intensified the threat of a nuclear confrontation between the two adversaries.⁴⁵ The United States was alarmed that both countries were making public threats about going nuclear. While neither side came up with any conclusive evidence about its intentions to attack the other, this initial crisis forced India and Pakistan to seek commitments from their allies—the Soviet Union and the United States, respectively.⁴⁶ Pakistan's plea to the United States made India secure guarantees from the Soviets that in case of a nuclear conflict, the latter would intervene on India's behalf. But despite fears of a nuclear war between India and Pakistan, both countries reached an accord in December 1985 in which they agreed not to attack each other's nuclear facilities.⁴⁷

Tensions between India and Pakistan, however, continued after 1985. A second crisis erupted in 1986–87, popularly known as the Brasstacks crisis. What began as a routine military exercise conducted by the Indian army in 1987 contained the seeds for a nuclear confrontation with Pakistan. Under the leadership of Gen Krishnaswamy Sundarji, the Indian army launched an exercise to test the mechanization of the armed forces.⁴⁸ The Brasstacks exercise was General Sundarji's invention. He specifically wanted to integrate India's special weapons, including tactical nuclear bombs, into day-to-day field maneuvers.⁴⁹ The exercise was held in the northern Rajasthan and involved 10 divisions of the Indian army, including two strike corps and approximately 400,000 troops. But the large buildup of Indian troops along the Line of Control (LOC) set off alarm bells in Islamabad. Fearing an attack from India, Pakistan began deploying large numbers of troops along the LOC. Pakistani troops quickly moved close to the India-Pakistan border near Punjab in a dangerous maneuver that threatened to cut off communications between Kashmir and the rest of India.⁵⁰

During the height of the crisis, the international community became legitimately concerned about the outbreak of a nuclear war between India and Pakistan (even though, in hindsight, such fears were exaggerated).⁵¹ While both countries refrained from engaging in a nuclear conflict, the crisis revealed how India's military leadership was thinking about the possible use of nuclear weapons. Anticipating Pakistani fears of a nuclear attack from India, certain sections of the Indian army felt that the military

balance had shifted in India's favor. Moreover, the chief of army staff, General Sundarji, and other senior military officers believed that the situation was ripe to take out Pakistan in a first strike.⁵² Although India's political leadership did not share the military's views, Sundarji had apparently made some of the army's sentiments clear to Defense minister Arun Singh. Sundarji had also gone a step further by taking the Indian air force into confidence about the army's plans to divert forces to Pakistan-occupied Kashmir. Accordingly, the Indian army began to develop preventive war doctrines without complete knowledge of the civilians.⁵³ Of course, on being informed about the military's plans, there was immediate intervention from the political side. Rajiv Gandhi was particularly outraged at the way in which the Indian military had kept the civilians uninformed about their strategic plans for so long.⁵⁴

A third and final crisis, and perhaps the most dangerous, occurred in 1990. In the 1980s the Muslims of Indian-held Kashmir began organizing themselves against the central government in New Delhi. In 1984 the Congress Party ousted a popularly elected state government and rigged the Kashmiri state elections in 1987, creating further unrest amongst the Kashmiri youth.⁵⁵ Towards the latter part of 1989, Pakistan conducted a large military exercise called *Zarb-i-Momin*. Soon after, there was a sharp increase in insurgent-related activities in the Indian state of Kashmir. Consequently, Pakistan began to extend its support to disaffected Kashmiri youth by arming and training Kashmiri Muslim terrorists.⁵⁶ New Delhi responded by strengthening its military forces in Kashmir and Punjab, which came as another big surprise to Pakistan's political leadership. Islamabad was apparently unclear about Indian intentions and feared that a larger number of forces deployed by New Delhi would launch an offensive operation against it.⁵⁷ The conflict was prevented from escalating to the nuclear level through direct US intervention. William Clark, US ambassador to New Delhi, and Robert Oakley, US ambassador to Pakistan, assured the public and the international community that the military on both sides had not made any large-scale preparations for war. The Gates Mission, headed by the deputy director of the CIA, Robert Gates, marked the culmination of American efforts in resolving tensions between the two countries.⁵⁸

The 1990 crisis had important ramifications for Indian civil-military relations. During that crisis, India's political leadership was alerted by the Indian military to the possibility of a nuclear attack from Pakistan.

The Indian army had expressed concerns about Pakistani intentions to explode a nuclear weapon to communicate the threat of a nuclear attack against India. To counter an imminent Pakistani attack, Indian prime minister V. P. Singh ordered a group of scientific advisors to undertake specific emergency measures.⁵⁹ The new emergency measures included a reconsideration of India's nuclear policy options if Pakistan "employed its nuclear power for military purposes."⁶⁰ Towards the end of the crisis, V. P. Singh consulted his principal secretary and noted that "the situation between India and Pakistan was scary" and that decisions "could not be left just between the Prime Minister and Scientific Advisor." Singh was particularly concerned that in the event of a possible nuclear strike from Pakistan, "there was no formal procedure to decide who would do what." Therefore, it was necessary for the civilians "to institutionalize it."⁶¹

Concerned by the apparent lacuna in military strategy, V. P. Singh enlisted the support of Minister of State for Defense Arun Singh, who was asked to undertake a classified review of India's nuclear capabilities and work out the parameters of a nuclear command and control structure. Accordingly, Arun Singh set up an informal committee, which consisted of members from the Department of Atomic Energy (DAE) and the Defense Research and Development Organization (DRDO). Along with the scientists, senior officials from the Indian military and bureaucracy were invited to be part of this committee. At the end of the deliberations, Arun Singh was "dismayed" to learn that the three services had little knowledge about India's nuclear capability. Following the meeting, in an attempt to make the decision-making process transparent to both civilians and the military, he commented: "It is clear that we had to end the wink and nudge approach. When it is crunch time you just can't ring up the Chief of Staff and say press the button. The army will not take the scientists' word that it will work. They will want to know if they do have a usable credible deterrent. Otherwise they are likely to say buzz off. It is a significant disadvantage if you don't have a command and control structure."⁶² Arun Singh's conclusion indicated a major gap between the scientific and military understanding of India's nuclear policy and the absence of a command and control system to deal with Pakistan's developing nuclear capability. The committee's deliberations only helped sharpen the ongoing debate about the Indian military's role in nuclear strategy.

The Significance of Military Expertise on Indian Nuclear Strategy

The development of Pakistan's nuclear weapons program and a series of military encounters between India and Pakistan in the 1980s point to the emergence of a professional Indian military—a military that was seriously thinking about the strategic use of nuclear weapons. When compared to the 1970s, this shift in the Indian military's approach to nuclear weapons and its influence on nuclear policy was nothing short of dramatic. The various crises with Pakistan had created legitimate concerns in Indian political and military circles about the possible use of nuclear weapons. The biggest push for their strategic use had come from a few senior military officers in the Indian army who were desperately trying to assert the military's expertise in nuclear policy. This, in itself, was the beginning of a monumental change in Indian civil-military relations.

It is common knowledge that as early as 1981, India's former chief of army staff, General Sundarji, was one of the first in the Indian army to compile two major essays calling for the introduction of nuclear weapons into the Indian military.⁶³ A few years later, Sundarji explained in an interview that “throughout the 1980s, the armed forces tried to create doctrines and military formations that would meet both conventional and nuclear threats with existing hardware.”⁶⁴ Moreover, nuclear doctrines were being developed alongside conventional doctrines.⁶⁵ The Indian army had also acquired equipment with nuclear, biological, and chemical defense capabilities while trying “to incorporate a doctrine of denial based on an ability to disperse and concentrate quickly.”⁶⁶ These new doctrines of mobility and mechanization, also known as RAPID doctrines, were tested in the Brasstacks exercise. For the Indian military, the creation of such doctrines had been a direct response to the Pakistani threat. In 1986, pointing to the problems emanating from Pakistan's nuclear capability, Sundarji wrote,

There are enough indicators to suggest that Pakistan has achieved or is close to achieving nuclear weapons capability. The Indian military was gearing its organization, training and equipment in such a manner that is not only effective in conventional use but in the unlikely event of nuclear weapons being used by an adversary in the combat zone, the Indian military would limit damage both psychological and physical.⁶⁷

And so, under the leadership of General Sundarji, some sections of the Indian military began to think seriously about the potential use of nuclear weapons.

Besides the army, the Indian air force also took a bold initiative in developing nuclear weapons. The air force wanted a strategy that would develop a conventional offense against nuclear weapons and create a strategic air command that could effectively integrate aircraft missiles with strategic reconnaissance.⁶⁸ Moreover, in an attempt to ward off any possible preventive attack from Pakistan and develop doctrines of denial, the Indian air force dispersed its Jaguar, MiG-23, and MiG-27 tactical strike aircraft.⁶⁹ Evidence of such operational changes in military doctrines to deal with Pakistan's nuclear capability supports how the Indian army and air force were thinking about the military utility of nuclear weapons. The attempt to develop sophisticated military doctrines that incorporated the use of nuclear weapons underscored a greater role for the Indian military in nuclear strategy.

From the mid-1980s, Indian military doctrine had developed a distinct shape to address Pakistan's nuclear weapons capability, moving away from a purely conventional deterrent to "one that incorporated nuclear weapons."⁷⁰ Even though India lacked any sophisticated nuclear doctrine during this time, the presence of nuclear weapons was conditioning a debate in Indian civil-military relations about the effects of nuclear weapons on conventional war. The Integrated Guided Missile Development Program called for a series of missile systems to be developed over subsequent years. Even though the program was run under the auspices of the DRDO, Indian scientists had begun to tie civilian and military research together.⁷¹ India also adopted a deterrence policy without actually developing nuclear weapons. The new deterrence policy included concepts like "existential deterrence" and "nonweaponized deterrence."⁷² Existential deterrence meant that while India had the capability to develop nuclear weapons, its nuclear weapons program was still rudimentary.⁷³ Yet, the presence of a growing nuclear capability was sufficient to deter Pakistan or any other enemy from attacking India in the first place.

Emphasizing the impact of nuclear weapons on conventional war, General Sundarji noted that "while leaders on both sides had once viewed war as a means to achieve certain policy objectives, today, the same calculus did not apply."⁷⁴ While no one really knew what type of assembly system was in place, the assumption was that India had either assembled nuclear weapons or deployed nuclear weapons in the field.⁷⁵ It is important to note here that the use of concepts such as nonweaponized deterrence or existential deterrence were important indicators of a shift in thinking about nuclear weapons.

These concepts may appear primitive compared to American doctrines of massive retaliation and flexible response, but they were significant in that Indian political leaders and the military were struggling to adopt an appropriate deterrence policy for the first time and, in doing so, were simultaneously thinking about the strategic use of nuclear weapons.

By the late 1980s and early 1990s, the threat posed by Pakistan's nuclear arsenal and the dangers of an all-out nuclear confrontation with Pakistan had become obvious to almost everyone in Indian political and military circles (especially since both countries had already shared a series of crises). Interestingly, India's political leadership was beginning to pay careful attention to what the military was saying with regard to the country's nuclear options. At a seminar organized by the United Service Institute (USI) on 10 March 1990, serving and retired Indian officials from all three services, diplomats, and academics debated whether India should exercise its nuclear option. The deliberations of this meeting revealed that most senior officers were in favor of building a strong nuclear arsenal. For instance, the chief of naval staff, Admiral Nadkarni, argued that a functional nuclear policy would help offset Pakistan's nuclear weapons capability. Nadkarni further noted that a nuclear arsenal would be cheaper to maintain than conventional forces.⁷⁶ Underscoring concerns about Pakistan's growing nuclear weapons capability, another senior military official, Gen V. N. Sharma, remarked that India would have "no option" but to possess "nuclear capability" if a potential hostile neighboring nation "acquired a capability to deploy nuclear weapons."⁷⁷ Other military officers also alerted Indian policy makers to the dangers of miscommunication and miscalculation between the two countries in a heightened nuclear environment. For instance, Lt Gen M. Thomas said that prospects of miscalculation in the ambiguous climate between India and Pakistan were of biggest concern for the military high command in India.⁷⁸ VADM K. K. Nayar, former vice-chief of naval staff, also pointed out that Pakistan's admission of having a capability to assemble a nuclear device "should force India to have a realistic assessment of security environment in the region."⁷⁹ Such statements made by all three services of the Indian military provide further evidence of a push for military doctrines that included ideas about the strategic use of nuclear weapons. But while civilians were only now beginning to pay attention to what the military was saying, the military had already taken the lead in developing India's nuclear strategy.

It is necessary to remember that the efforts of the Indian military to influence nuclear strategy were emerging in response to a strategic vacuum driven by the absence of civilian thinking on strategic issues. Civilians in India had “not shown any professional interest in either strategy or tactics of military operations” and “one of the grave weaknesses of the Indian system was that civilians had not developed a careful understanding of military matters.”⁸⁰ An Indian observer claimed that “Indian political leaders had seen nuclear weapons as a way of enhancing their own domestic standing and were always reluctant to talk about their use in military terms.”⁸¹ Similarly, “there had been no serious effort to institutionalize nuclear weapons by incorporating them into the armed forces through the development of doctrine and military organization.”⁸² Such statements have frequently appeared in commentaries made by Indian strategy and defense experts. All these statements, undoubtedly, point to the absence of serious political thinking on the military utility of nuclear weapons. For decades, India’s political leadership had been sending ambiguous signals to the entire world about what nuclear weapons meant for Indian security policy. They also kept the military far removed from nuclear policy due to fears that the military would become much too powerful if introduced to nuclear weapons.⁸³ But for the Indian military, the absence of strategic thinking by India’s political leadership on such vital national security issues indicated a lack of commitment to develop serious military doctrines. Moreover, the ambiguity in civilian approaches to nuclear weapons, of course, made the Indian military disenchanted, as “they were not getting what they wanted.”⁸⁴

The Indian military’s role in thinking about nuclear weapons in the 1980s and early 1990s was an attempt to fill the void created by an absence of political thinking on nuclear strategy in the 1970s. The need to fill this void had been fuelled by the nature of nuclear technology, which introduced questions about the military’s expertise in using these weapons. Samuel Huntington noted that the military has a specific domain of competence, which distinguishes it from civilian functions. This area of military competence is called “the management of violence” and is separate from the act of violence itself.⁸⁵ The distinction between the military’s role in the management of violence and the military’s act of violence is critical in addressing why any professional military might want to assert its expertise in nuclear policy. The Indian military’s push for a nuclear strategy arose because of its dissatisfaction with a civilian policy that fre-

quently used the armed forces as an instrument of violence without giving it any power in the management of violence.

Huntington argued that the military can be used as a tool of political advice but “it is not a mindless tool because professional military officers possess expertise in judging the capabilities of the military instrument of power.”⁸⁶ The nature of nuclear technology and the military functions associated with its use had introduced India’s political leadership to the importance of professional military expertise in the use of such weapons. More importantly, as civilians had thought very little about the military use of nuclear technology in the 1970s, the problem of delineating political and military functions in nuclear policy had emerged as a serious issue in Indian civil-military relations in the 1980s. As Brig Gurmeet Kanwal notes, the biggest challenge to civil-military relations was that “India first went nuclear and then began to worry about things like doctrine and strategy.”⁸⁷

The introduction of new weapons required new methods for the management of violence. Moreover, as Huntington underscored, while the military man is conservative in strategy, he is inclined to be open-minded and progressive with respect to new weapons.⁸⁸ The Indian military and, more specifically, General Sundarji and other senior officers, had clearly displayed evidence of such thinking during and after the brief military encounters with Pakistan. Some observers believe that Sundarji had used the Brasstacks exercise to “judge the military’s professional competence with new weapons.”⁸⁹ Others claim that Sundarji tried to assert his expertise only because he was obsessed with Islamabad’s nuclear weapons capability and constantly worried about Pakistan’s use of nuclear weapons in an attack on India.⁹⁰ By the late 1980s, it had become quite clear that the short conflict-like situations with Pakistan had brought India’s political leadership face-to-face with the professional judgments of a military that was concerned about the management of conflicts in the shadow of nuclear weapons.⁹¹

For the Indian military, political discussions on the command and control of nuclear weapons were a significant development in itself. To aid India’s political leadership in discussing nuclear command and control issues, senior Indian military officers like General Sundarji continued to emphasize problems with not having a sound nuclear strategy. To develop sophisticated command and control structures, Sundarji proposed the creation of a nuclear doctrine. He observed that “the lack of a nuclear doctrine in India and Pakistan was a dangerous thing. If you keep it

under wraps, you don't know what will develop." By the end of the 1990s crisis, Sundarji had also begun arguing for the creation of formal military doctrines which could control for possibilities of miscalculation in a war with Pakistan. To reduce the incidence of miscalculation, he suggested the adoption of a "declared" nuclear weapons posture.⁹²

Political and military statements addressing nuclear command and control operations were indicative of an emerging agreement in Indian civil-military relations on the strategic use of nuclear weapons. When the V. P. Singh government was replaced by a new Bharatiya Janata Party (BJP) government, India's political leadership began paying even greater political attention to military inputs on nuclear strategy. There is evidence to show that the BJP government supported much of what the Indian military was telling the civilians. For instance, all India secretary of the BJP, J. P. Mathur, concurred with General Sundarji's position on nuclear weapons and believed that India "should go in for nuclear weapons by national consensus without wasting more time."⁹³ Also, in its election manifesto, the BJP proposed to arm the three services with nuclear weapons.⁹⁴ The BJP's affirmation of military views was a major step in the evolution of Indian political attitudes towards the military's role in nuclear policy.

Encouraged by a change in civilian attitudes towards the military's role in nuclear strategy, the Indian armed forces began to expand their influence on nuclear policy. In a rather significant development, the three services stepped up their programs to incorporate nuclear weapons in military strategy. By the early 1990s, the Indian navy had begun developing a nuclear submarine project commonly known as the Advanced Technology Vessel (ATV) project. VADM Premvir S. Das observes that the Indian navy's efforts to build nuclear submarines were deemed necessary to cope with threats from Pakistan, which was rapidly modernizing its navy.⁹⁵ A nuclear submarine project was also felt necessary to address "other burgeoning naval powers in the Indian Ocean."⁹⁶ By early 1997 India's chief of naval staff, ADM Vishnu Bhagwat, ordered a "technical audit" of the ATV project. Under Bhagwat's leadership, there emerged a committed cadre of officers who were dedicated to designing and building nuclear and diesel submarines.⁹⁷ Reports of the Indian navy's nuclear submarine project began appearing in various local newspapers. By late 1997, the *Pioneer* reported that India's nuclear submarine project was "on the verge of a critical breakthrough, with the Prototype Testing Center (PTC) at Kalpakkam getting ready for trials."⁹⁸ The PTC, located within

the Indira Gandhi Center for Atomic Research, was developed to test the submarine's turbines and propellers. Other reports suggested the operation of similar testing facilities at Vishakhapatnam.⁹⁹

With the Indian navy having taken the lead in developing a nuclear submarine project, the army and air force stepped up pressure on civilians to develop a more sophisticated nuclear arsenal. In what may have been considered a monumental move in the history of Indian civil-military relations, Prime Minister Narasimha Rao permitted the "Chiefs of Staff" targets to be assigned to the army's Prithvi-1 (150-km range/1,000-kg payload) ballistic missiles.¹⁰⁰ This development was extremely significant for Indian civil-military relations, as civilians were taking specific measures to assign the military an appropriate role in nuclear affairs. Amidst such instances of civil-military collaboration on nuclear policy, New Delhi decided to conduct a second set of nuclear tests in 1998. But despite ongoing political debate about the military's role in nuclear affairs from the early 1990s, the decision to conduct nuclear tests in 1998 was made by civilians and scientists at the exclusion of the Indian military! Following a historical tradition of keeping the military subservient to civilian control, Indian political leaders appeared hesitant to seek the military's advice on the decision to test nuclear weapons. However, India's declared nuclear weapons status made it even more difficult for civilians to exclude the military from future decisions on nuclear strategy.

One of the major challenges for civilians in the immediate post-1998 nuclear environment was thinking about the allocation of military responsibilities in nuclear decisions. A growing debate was emerging in political, military, and academic circles about the effects of India's declared nuclear weapons status on the military. Most scholars agreed that a declared nuclear weapons posture would make it necessary to include the military in future nuclear decisions. A senior official from the Indian navy noted that India's overt nuclearization would bring civilians and the military closer, as the military had expressed a desire for adequate preparation time in a possible nuclear war with Pakistan.¹⁰¹ Former Indian ambassador to the United Nations, Arundhati Ghose, also recalls that "post 1998, civilians had brought the military much closer into the decision-making process."¹⁰² But debates concerning the Indian military's role in nuclear policy became even more visible after Pakistan also conducted nuclear tests in 1998 and launched a military attack on India in the summer of 1999.

Political Recommendations in Favor of Military Professionalism

The Indian nuclear tests of 1998 were immediately followed by Pakistani nuclear tests. A year after both countries became overt nuclear states, Pakistan attacked India in what became known as the Kargil war to test the Indian military's conventional strength. Pakistan's declared nuclear weapons capability, and the short duration within which it tried to test India's nuclear threshold, made the threat of a nuclear confrontation between the countries very real. While both countries avoided a nuclear confrontation, the end of the Kargil war witnessed the creation of several proposals that supported an expansion in the Indian military's war-fighting methods. A few of these proposals also addressed the Indian military's growing importance in nuclear policy.

The Kargil war was Pakistan's attempt to avenge its military reverses suffered during the 1971 war and the Siachen dispute with India. The operational planning for the Kargil war had begun soon after Gen Pervez Musharraf took over as chief of army staff in October 1998.¹⁰³ Islamabad used the war to achieve three fundamental aims. First, the war provided Pakistan with an opportunity to internationalize the Kashmir issue.¹⁰⁴ Second, Kargil was Pakistan's attempt to push infiltrators across Indian borders to keep cross-border terrorism alive. As Pakistan's extremist activities had been thwarted by the Indian army in the past, Islamabad wanted to reverse that trend. Finally, Pakistan initiated the conflict to test Indian military capability in the wake of the 1998 nuclear tests.¹⁰⁵ By launching a surprise attack on India, Pakistani political leaders believed that if the Indian military could push back Pakistani forces despite facing an element of surprise, then India could defeat Pakistan anywhere.¹⁰⁶

The war, code-named Operation Vijay, was marked by three phases. The initial phase began in early May 1999, during which Indian soldiers suffered heavy casualties and most Indian military operations failed until the introduction of airpower. On receiving reliable information on the location of intruders along the Drass-Batalik-Kaksar heights, the air force was called in to launch air strikes on Pakistani positions. During the second phase of the war, the Indian army consolidated its positions, cleared the Drass heights, and launched a systematic campaign to evict the intruders. Following the Indian army's capture of the Tololing peak on 13 June 1999, the armed forces held an advantageous position vis-à-vis Pakistan. The third and final phase of the war was characterized by significant military

victories on the Indian side. The Indian army captured vital positions, such as Tiger Hills, and successfully evicted intruders from the Mushkok, Kaksar, and Turtuk sectors in Jammu and Kashmir. In the final stages of the war, Pakistan's misadventure was stalled by speedy American intervention. In May 1999 US secretary of state Madeleine Albright and British foreign secretary Robin Cook met with India's external affairs minister, Jaswant Singh. The UN secretary general, Kofi Annan, also held discussions with Indian and Pakistani envoys. The scenario began to improve steadily amidst frequent diplomatic activity. Hostilities ceased by early July when Pres. Bill Clinton sent the Indian and Pakistani prime ministers an official letter urging them to respect the Line of Control in Kashmir.

As the Kargil war was fought in the shadow of nuclear weapons, Indian political leaders exercised a great deal of caution in preventing the war from escalating to the nuclear level. During the course of the war, civilians made all the strategic and political decisions, while the Indian army and air force enjoyed significant autonomy in tactical operations.¹⁰⁷ More importantly, Indian political leaders worked together with the military in fighting. Gen V. P. Malik observed that after the Cabinet Committee on Security met on 25 May, "the three chiefs were closely enmeshed in the political-military decision-making process." The decision-making process was "open and direct" and "after discussions, the concerned executive authorities, including the three chiefs, received directions from the prime minister and the national security advisor, Brajesh Mishra."¹⁰⁸ In a changed nuclear environment, there emerged "an integrated approach to war management with the political, economic, media, and military aspects enmeshed together cogently."¹⁰⁹ The presence of nuclear weapons had also made the military less bashful in advising political leaders about the consequences of using airpower against Pakistan. For instance, at a public press conference in Srinagar, when Air Chief Marshal A. Y. Tipnis was asked about the utility of an air offensive, he stated that consequences of the restricted use of airpower had been made clear to the government. Such instances of civil-military collaboration on military strategy were common during the Kargil war.

The end of the Kargil war raised fundamental questions about Indian defense preparedness in a nuclear environment. In the immediate postwar period, a committee was set up to evaluate the successes and failures of the war. Their report is popularly known as the *Kargil Review Committee Report* (also called the *Subrahmanyam Report*, after its primary architect,

K. Subrahmanyam).¹¹⁰ In explaining the lessons of the Kargil war, the committee highlighted critical lapses in India's intelligence system and structural problems in its higher defense organization. But more importantly, the Kargil report made serious recommendations supporting the Indian military's professional role in nuclear policy.

Prior to highlighting that role, the committee suggested a serious re-organization of India's higher defense system to allow for greater military involvement. The need to set up a national defense headquarters and a defense intelligence agency and to create the post of national security adviser was strongly emphasized. The committee further suggested that "members of the National Security Council, the senior bureaucracy servicing it and the Service Chiefs had to be continually sensitized to intelligence pertaining to national, regional and international issues." Proposals outlining changes in India's institutional structure of civil-military were meant to generate greater synergy between civilian and military branches and also to provide the military with a large range of options in grand strategy. The report also underscored problems in coordinating different intelligence operations within India. The committee observed that "the present structure and processes in intelligence gathering and reporting" had led to "an overload of background and unconfirmed information and inadequately assessed intelligence."¹¹¹ There was an absence of an institutionalized process which could allow different intelligence agencies, such as the Research and Analysis Wing (RAW), Intelligence Bureau (IB), and Border Security Forces (BSF), to interact periodically below the level of the Joint Intelligence Committee (JIC). While the JIC was doing its job as the chief custodian of intelligence, subsidiary organizations like the RAW and IB were not doing as thorough a job. A sharp disconnect between various intelligence agencies had led to faulty intelligence reports during the Kargil war. For instance, as early as 1998, the RAW had detected the presence of one additional Pakistani unit in Gultari but had failed to follow up on the lead through aerial reconnaissance flights. Moreover, as the Indian military had no shared system for exchanging intelligence information with agencies such as the JIC and RAW, the armed forces could do very little to report Pakistan's initial incursions.¹¹² As a result of these problems, an immediate upgrade in India's intelligence services was considered crucial.

With regard to the Indian military's professional role in nuclear strategy, the *Kargil Report* made a critical recommendation. It suggested that the military had to be made as well informed as its Pakistani counterpart on

nuclear policy. Committee members noted that during the Kargil war, Pakistani political leaders had been thinking very clearly about the role of nuclear weapons. The clarity in Pakistani political thought about the role of nuclear weapons was a result of strategic decisions being taken jointly by both civilians and the military. In India the military's exclusion from nuclear policy for several decades had left it at a more disadvantaged position. Senior Indian military officers had alerted the committee to contradictory approaches taken by civilians on nuclear policy. Air Chief Marshal Mehra had observed that even though flight trials for the delivery of Indian nuclear weapons were conducted in 1990 and several political leaders from V. P. Singh to Rajiv Gandhi had sustained a nuclear weapons program, most Indian prime ministers had tried to keep the program confidential.¹¹³ Again, while civilians had routinely reassured the Indian public that the country's nuclear weapons option would remain open if Pakistan developed nuclear weapons, they had said very little about what a functional nuclear weapons program would entail. In sharp contrast to the political indecisiveness displayed by Indian leaders, several Pakistani political and military leaders, such as Benazir Bhutto, Nawaz Sharif, and chief of army staff Gen Aslam Beg, had openly shared information with the public about Pakistan's nuclear weapons capability.

Highlighting the problems in excluding the military from nuclear policy, the *Kargil Report* also noted that "the nuclear posture adopted by successive prime ministers had put the Indian army at a disadvantage vis-à-vis its Pakistani counterpart. While the former was in the dark about India's nuclear capability, the latter as the custodian of Pakistani nuclear weaponry was fully aware of its own capability. Three former chiefs of army staff had expressed unhappiness about this asymmetric situation." Moreover, the lack of an open dialogue between civilians and the military on nuclear strategy had the potential of harming the Indian military's position in the management of nuclear weapons in the future. At the end of the Kargil war, disturbed by the political neglect of its role in the management of nuclear weapons, the Indian military had expressed its dissatisfaction for not being included in the nuclear decision-making loop. And so, to facilitate greater transparency in civil-military relations on nuclear strategy, the *Kargil Report* suggested the publication of a white paper on India's nuclear weapons program.¹¹⁴

Besides recommending the integration of the Indian armed forces in nuclear decisions, the Kargil Committee contained proposals for enhanc-

ing the military's professional role in counterinsurgency operations. Members of the committee alerted the government to the inherent defects of using the military as a police force in such operations. In its recommendations, the committee noted that heavy involvement of the Indian army in counterinsurgency operations had affected its military preparedness in defending the country against external aggression. The committee further noted that such a situation had arisen because successive governments had not developed a long-term strategy to deal with insurgency. Members of the committee feared that the military's prolonged deployment in counterinsurgency operations would not only impede its training program in the future but could also lead to a military mind-set that detracted from its primary function of fighting wars. The Ministry of Home Affairs, state governments, and paramilitary forces had also frequently assumed that "the military would always be available to combat insurgency."¹¹⁵ In addition, law enforcement agencies such as the Indian Paramilitary and Central Police Forces had not been adequately trained to deal with counterinsurgency operations. This led to an increased dependence on the military and "transformed it into an ordinary police force."¹¹⁶ The *Kargil Report* suggested that to strengthen the military's professional role, civilians would need to use the military in fighting conventional wars only.

The Kargil Committee's recommendations outlining a professional role for the Indian military in future wars with Pakistan were an important development in Indian civil-military relations. But just as India's political leadership began to follow through with the committee's recommendations, Pakistani terrorists launched a second attack on India in 2001–02, threatening the outbreak of yet another nuclear crisis in the subcontinent.

The Military's Critique of Political Objectives in a Conflict with Pakistan

On 13 December 2001, six individuals affiliated with a Pakistani militant organization, *Lashkar-e-Taiba*, attacked the Indian Parliament. The ensuing battle between assailants and Indian security forces claimed the lives of all six attackers and eight members of the Indian security forces. To prevent Pakistan from waging future attacks of a similar kind, the Indian military undertook a large-scale mobilization of its troops along the LOC. The Indian military response to Pakistan's brazen attack is popularly known as Operation Parakram.¹¹⁷ In response to the buildup of Indian military

forces along the LOC, Pakistan announced to the world that its medium-range nuclear missiles were on high alert. As the situation contained the possibility of a nuclear crisis between India and Pakistan, American officials intervened to alleviate Indian fears of a Pakistani nuclear strike. But despite American intervention, New Delhi maintained a deployed state of readiness along its borders, claiming that Pakistan had done little to eradicate militancy in the subcontinent. The Indian military also remained resolute in its strategy against Pakistan. Chief of army staff, General Padmanabhan, noted that “any country that was mad enough to initiate a nuclear strike against India would be punished severely.”¹¹⁸ Despite Pakistani president Gen Pervez Musharraf’s assurances to end militancy, New Delhi maintained a posture of force and even went to the extent of testing a missile capable of delivering a nuclear warhead.¹¹⁹ On 14 May 2002, Pakistan launched a second set of attacks on an Indian army base in Kaluchek, Jammu and Kashmir. This attack killed over 30 innocent civilians. To make matters worse, a prominent Kashmiri separatist leader, Abdul Ghani Lone, was assassinated. By the end of May 2002, war appeared imminent, and Indian troop deployments were strengthened along the border. The United States exerted diplomatic pressure on both India and Pakistan to end hostilities. By June 2002, there was a reduction in hostilities, and by October 2002, the crisis was finally over.

India’s military encounter with Pakistan in 2001–02 had significant ramifications for civil-military relations. The crisis generated robust military responses from the Indian army. More importantly, during the crisis, the Indian military had become disappointed with political objectives. The Indian armed forces believed that there was a complete mismatch between strategic and tactical goals. The military underlined three basic problems with political decisions during the crisis. First, they disagreed with civilians over adopting a defensive military posture against Pakistan. Second, New Delhi’s indefinite stance on war objectives had significantly undermined Indian military operations.¹²⁰ And, third, they were unhappy with civilians for blaming the Indian armed forces for a slow response in fighting the militants.

Defending the military’s position, chief of army staff, General Padmanabhan noted that the Indian military’s slow response during the crisis was a direct result of civilian indecisiveness rather than military unpreparedness. Reporting on poor civilian directions during the crisis, Padmanabhan argued that “significant military gains could have been achieved in January

2002 had politicians made the decision to go to war.” These objectives, he says, could have included “degradation of the other force, and perhaps the capture of disputed territory in Jammu and Kashmir. They were more achievable in January, less achievable in February, and even less achievable in March. By then, the balance of forces had gradually changed.” Also, when Pakistan launched its attack on the Indian Parliament, the Indian army’s strike formations were in garrison and very little could have been done to mobilize large military forces across the LOC. General Padmanabhan argued that political strategies against Pakistan were faulty, as the type of limited strikes civilians were pushing for would have been “totally futile.” Addressing the military’s hesitancy in applying limited war objectives, Padmanabhan stated that “if you really want to punish someone for something very terrible he has done, you smash him. You destroy his weapons and capture his territory. War is a serious business and you don’t go in just like that.”¹²¹

General Padmanabhan’s criticism of civilian strategy during the crisis and similar sentiments expressed by serving and retired officers suggest that the biggest challenge for the Indian military was that India’s political leadership had no clear plan on how to respond to a terrorist attack from Pakistan. Civilians did not clearly understand the range of military options available or their potential consequences. On the military side, the crisis highlighted the need for a military doctrine, which could go beyond just fighting a limited war. Pakistan’s brazen and unpredictable attack on India had proven that a defense-oriented approach towards the enemy would be an ineffective military strategy in the long run. The Indian military was also concerned about the human cost of war. Political directives had resulted in a large number of military deaths. The Indian army had lost more men in Operation Parakram than in the Kargil conflict. During Operation Vijay (code name for the Kargil war), 527 soldiers lost their lives. During Operation Parakram, more than 680 were killed.¹²² Over 100 soldiers died while laying nearly a million mines near the border, and as many as 110 soldiers died in road accidents. Despite such alarming statistics, the Indian government was unwilling to concede the extent of casualties. In fact, the government had projected the military operation as bloodless, even though casualty figures suggested that the conflict had a human cost.¹²³

Padmanabhan’s criticisms of political objectives during the 2001–02 crisis were a way of asserting the military’s expertise in adopting a more

suitable military strategy against Pakistan. The significance of military expertise can be understood by looking at recent events in American civil-military relations in the war on Iraq. Until recently, serving officers in the US military had been cautious in criticizing the Bush administration's military policies in Iraq. But as the situation worsened, with mounting casualties on the American side, serving and retired generals began to discuss war objectives more openly. On 12 October 2006, the media reported that the former commander in Iraq, retired general Ricardo Sanchez, criticized the Bush administration's Iraq policy, calling it a "nightmare."¹²⁴ The US military's criticism of political objectives in the Iraq war further intensified after General Petraeus' testimony to the Senate Armed Services Committee in 2007. In his testimony, Petraeus described some of the major problems facing the US military in Iraq and expressed disappointment in the lack of progress toward political reconciliation there. In a letter addressed to his troops, Petraeus emphasized that although violence has diminished, "it has not worked out as we had hoped."¹²⁵

A careful reading of military responses to political objectives in India and the United States suggests that the biggest concern for any professional military is to find appropriate methods that can match military objectives to political decisions. Civilian policies that do not reflect military objectives adequately tend to compromise the military's professional expertise. Unless civilians can find ways to match military objectives with strategic policy, the military will continue to remain critical of civilian policies. And, in an effort to introduce favorable civilian approaches to military strategy, the military uses a crisis or war to criticize political decisions publicly. By doing this, it tries to transform civilian policy without overtly challenging civilian orders. The 2001–02 India-Pakistan crisis revealed to the Indian military the ineffectiveness of pursuing limited-war objectives against Pakistan. In thinking about military responses to deal with a nuclear Pakistan, the Indian armed forces began taking a leading role in formulating new strategic doctrines, which would privilege an offensive military strategy against Pakistan in future crises.

The Indian Military's Role in the Development of Strategic Doctrines

The Indian military's push for new strategic doctrines has to be understood in the light of certain events in Indian civil-military relations. On

24 January 2000, in an inaugural address to the Second International Conference on Asian Security in the 21st Century, Indian defense minister George Fernandes introduced the Limited War Doctrine. Fernandes declared that the Kargil war was proof of India's ability to fight and win a limited war at a time and place chosen by the aggressor.¹²⁶ While the main tenets of a limited-war doctrine remained unclear, Fernandes' statements had generated further thinking in strategic and military circles about the impact of nuclear weapons on conventional wars. Questions about the manner in which Indian military doctrines had to be tailored to deal with low-intensity conflicts and the Indian military's role in such operations attained an important place in Indian strategic debates. As Swaran Singh notes, the creation of a limited-war doctrine required sophisticated force structures that could address the entire gamut of contingencies, ranging from a controlled nuclear war to maintaining civil defense awareness in suspected target locations. And to deal with various types of aggression—nuclear, conventional, military, and subconventional—the Indian army would have to develop better war-fighting techniques.¹²⁷

At the end of the Kargil war, India's political leadership produced a formal nuclear doctrine, which discussed the major features of its nuclear capabilities.¹²⁸ The doctrine was not very detailed but did contain some essential features. It enumerated a policy of minimum nuclear deterrence and no-first-use. The nuclear command and control system would consist of a mix of land-based, maritime, and air capabilities. Additional guidelines published in 2003 indicated that nuclear weapons could be used to deter or retaliate against the use of biological or chemical weapons.¹²⁹ While the doctrine established a framework for Indian nuclear policy, most scholars seem to agree that it was rather minimalist. In other words, sections of the doctrine were ambiguous, and there was no detailed analysis of how civilians and the military would work together on nuclear decisions. Even though the nuclear doctrine lacked explicit references about the role of the military in future nuclear operations, civilian attempts to set up a command and control system marked a crucial step forward in the military's inclusion in nuclear strategy. Discussing the importance of the Indian military in nuclear operations, Arundhati Ghose remarked that "even on the definition of 'minimum' credible deterrent, civilians would need the military to come into the picture. Also, the military would insist on missiles being tested before they were willing to absorb such weapons

into their arsenal. Hence, the real change in civil-military relations was on the nuclear side.”¹³⁰

For the military, the publication of an Indian nuclear doctrine demanded some serious thinking about deterrence strategies against Pakistan. Interestingly, the India-Pakistan conflicts of 1999 and 2002 had confirmed that the presence of nuclear weapons was making it harder to achieve political and military stability in the subcontinent. The Kargil war had demonstrated the failure of deterrence at the level of low-intensity conflicts because the presence of nuclear weapons had encouraged conflict below the level of nuclear and conventional confrontation.¹³¹ While the existence of nuclear weapons had prevented total war, stability had been undermined by the possibility of subconventional conflicts or proxy wars.¹³² Some Indian experts also argued that post-weaponization military stability had not been assured in South Asia, because the presence of nuclear weapons had created possible scenarios for miscalculation and misperception of enemy responses.¹³³ And so, India's declared nuclear weapons status had created conditions for greater civil-military collaboration in keeping future military operations at the low-intensity level.¹³⁴ When asked about the effect of nuclear weapons on Indian civil-military relations, Gen V. R. Raghavan noted that “India's no-first-use doctrine would deter civilians from using these weapons in conflicts with Pakistan but this does not mean that the military had not thought seriously enough about fighting with nuclear weapons.”¹³⁵ Raghavan's statement suggests that in the aftermath of India's overt nuclearization and subsequent conflicts with Pakistan, the importance of structured thinking in conducting future wars with Pakistan had become extremely critical. And more importantly, the Indian military was emerging as an important player in nuclear strategy.

The turn of the century witnessed the Indian military's growing influence on creating sophisticated doctrines in a war with Pakistan. The 2001–02 encounters with Pakistan had left the armed forces extremely skeptical of limited-war objectives. The end of the crisis witnessed the Indian military's efforts in developing doctrines which would be a more appropriate fit against a nuclear Pakistan. Accordingly, on 28 April 2004, the Indian army officially introduced the Cold Start Doctrine. This new doctrine called for a “rapid deployment of integrated battle groups to conduct high-intensity offensive operations.”¹³⁶ The doctrine was the brainchild of senior military officers, such as General Padmanabhan, who wanted the Indian military to adopt a blitzkrieg-like strategy in future operations that included all three services.

While details of this doctrine remain classified, such doctrines had been used in NATO operations and included integrated groups in offensive military operations at the highest levels.¹³⁷ As part of this new strategy, the Indian military would have to undertake offensive military operations at the very outset of hostilities, short of a nuclear war. The objective of such a strategy was to prevent Pakistan or any other hostile South Asian state from counting on intervention by their external allies. Battle groups at various levels would be “task oriented in terms of varying composition of armor and infantry elements with integrated attack helicopters of the Army Aviation and the Air Force having close support from ground-attack Air Force squadrons.”¹³⁸ Battle groups could be used individually for limited operations or in conjunction with operations on a larger scale.

The Cold Start Doctrine was certainly different from previous Indian military doctrines, as “a decisive military victory was no longer held as the only goal of any war against Pakistan.” The purpose of this doctrine “was to increase the range of options available to India for fighting and winning a war against Pakistan by moving away from an all-or-nothing strategy.”¹³⁹ The Indian military’s preference for an offensive posture also implied that military intervention or preemptive strikes would now be considered legitimate options in South Asia.¹⁴⁰ To determine the effectiveness of this new strategy, the Indian army tested the Cold Start Doctrine in various military exercises. In early May 2005, the Indian army conducted an exercise called Vajra Shakti. This exercise involved the use of an infantry division and an independent mechanized brigade of II Corps, along with associated armored elements integral to the corps, to initiate offensive strikes at the outbreak of future hostilities. A year after conducting this military exercise, the Indian army retested its Cold Start Doctrine in the summer of 2006. The second military exercise, code-named Sanghe-Shakti, not only tested the feasibility of the new doctrine but also the military’s capacity to respond to a nuclear, biological, or chemical attack. Twenty thousand troops together with the Indian air force concluded the week-long exercise approximately 100 kilometers from the Indian border. At the end of the exercise, Lt Gen Daulat Shekhawat, commander of the elite II Corps (one of three key strike formations of the Indian army), reported that there was room for a swift strike in case of a nuclear attack from Pakistan and that the exercise had validated the new military doctrine.¹⁴¹ Senior military officials, including chief of army staff Gen J. J. Singh, were jubilant at the integration which had been achieved between ground troops and

the air force through the conduct of this exercise. Exercise Sanghe-Shakti appeared to have achieved its objective of making all three services work together in the fulfillment of a doctrine that required a “quick response” against the enemy.

Interestingly, the impact of new strategic doctrines on Indian civil-military relations has been largely ignored in Indian literature on the subject. Few Indian observers have paid attention to the implication of such new doctrines for civil-military relations. While some scholars have discussed the significance of the Cold Start Doctrine in terms of Indian responses to a Pakistani attack on India, other observers have focused on the merits of using a defense-oriented corps (better known as “Pivot Corps”) to launch offensive operations into enemy territory—a technique which, they argue, can be successfully employed by other strike formations.¹⁴² Yet, no one has tried to clarify what an offensive military strategy would mean for Indian civil-military relations.

The creation of the Cold Start Doctrine undoubtedly carries significant implications for Indian civil-military relations. First, a military doctrine which gives primacy to an offensive strategy reflects the military's desire to disassociate itself from defensive military strategies used in the past. Scholars argue that for several decades, the Indian military had subscribed to a defensive war strategy at the behest of political directives. India's political leadership had always displayed a lack of political will in developing military power in accordance with the country's national security interests.¹⁴³ By developing new doctrines, the military was not only trying to break away from antiquated military strategies but was also displaying the seriousness in taking effective steps against any future attacks from Pakistan. Underlining the importance of the military's role in developing such new doctrines, Indian nuclear expert and member of the NSAB, Bharat Karnad, notes that “it is only now that the military is getting into nuclear matters.” This is an exciting time in Indian civil-military relations as the “military is trying to define a role for itself. . . . From the 1990s, the Indian army had talked about the space for conventional war in a nuclear environment. And if the military was going to start a conventional war, the Cold Start Doctrine was a way of telling the government to start thinking beforehand.”¹⁴⁴ Indeed, the military's attempt to develop new doctrines was a way of asserting their professional judgment and expertise in strategic affairs.

A second implication of the push for new strategic doctrines is the shift from a clear separation in civil-military responsibilities to a convergence

in civil-military functions. Charles Moskos noted that a convergence in civil-military functions is often the direct consequence of changes induced by sophisticated weapons systems. The American experience with nuclear technology indicates that the presence of nuclear weapons gave rise “not just to a need for technical proficiency but also for men trained in modern and managerial skills.”¹⁴⁵ As the United States developed a sophisticated nuclear weapons arsenal, the military began playing a major role in the management of such weapons. Moreover, the possible use of nuclear weapons in a war with the Soviet Union introduced fundamental changes in the nature of US warfare. Various strategic doctrines began to be built around deterrence theory. While nuclear capability was the bedrock of deterrence strategies, “to be effective, the American military had to exhibit a capability and credibility in pursuing policies other than nuclear war.” The need to make the threat of a nuclear war credible consequently introduced a complex dynamic in US civil-military relations as American political leaders had to work together with the military in the fulfillment of political objectives.¹⁴⁶ More importantly, besides fighting a nuclear war, an effective deterrence strategy also required the US military to be trained in a variety of nonnuclear conflicts that demanded further civil-military collaboration. Thus, in the United States, the presence of nuclear weapons produced a convergence in civil-military functions and raised serious questions about the blurring in the division of labor between civil-military domains.

In the Indian case, military encounters with Pakistan from the 1980s had always contained a possibility for escalation to the nuclear level. By the late 1990s, new military doctrines which could include the strategic use of nuclear weapons in a war with Pakistan had become extremely critical. But, the introduction of new strategic doctrines also required a more careful review of civil-military objectives. Offensive military doctrines demand a structured and speedy political decision-making process with sophisticated crisis-management procedures so that military operations remain unrestricted and the element of surprise, vital to such doctrines, is not lost.¹⁴⁷ Accordingly, in any future war or crisis, the Indian army’s offensive operations would require regular and unrestricted civil-military collaboration on collection, collation, and assessment of enemy information. This, of course, will integrate the military more deeply into the political decision-making process. Instead of working separately, the military can help civilians execute a successful offensive strategy.

As the American case demonstrates, the possibility for a convergence in civil-military functions significantly undermines the division of labor between civilians and the military. The success of the Indian military in the development of new doctrines in the future will depend on the Indian political leadership's willingness to accept such new doctrines. For civilians, the introduction of offense-oriented military doctrines could very well open up possibilities for a reduction in the effectiveness of civilian control. Given the "quick response time" needed as part of this strategy, combat commanders would have to exercise far greater freedom for independent initiative than would be deemed acceptable by the civilians.¹⁴⁸ More importantly, to make the new doctrine functional without compromising civilian control, there would be a greater need to develop institutions which support a rapid response doctrine. India's command and control system would also have to be sophisticated enough to withstand an increase in decision-making activity generated by the nature of intense combat operations. The biggest challenge for civilians in accepting new military doctrines is the likelihood of a convergence in civil-military functions. As long as there exists a possibility for future wars with Pakistan in the shadow of nuclear weapons, a clear separation in civil-military functions might be impossible to achieve. ❧

Notes

1. Raju G. C. Thomas, "Indian Defense Policy: Continuity and Change under the Janata Government," *Pacific Affairs* 53, no. 2 (Summer 1980): 225.

2. *Ibid.*, 227.

3. Raju G. C. Thomas, *Threat Perceptions, Nonalignment and the Defense Burden* (New Delhi: MacMillan, 1978), 54. For details on the US-Pakistan relationship, see Dennis Kux, *The United States and Pakistan, 1947-2000: Disenchanted Allies* (Washington, DC: Johns Hopkins University Press, 2001).

4. *Annual Report, 1967-68, Government of India, Ministry of Defense*, 1.

5. *Annual Report, 1964-65, Government of India, Ministry of Defense*, 2.

6. Itty Abraham, *Producing Defense: Reinterpreting Civil-Military Relations in India*, ACDIS paper (Urbana-Champaign: University of Illinois, 1992).

7. For details on the India-Soviet relationship, see Santosh K. Mehrotra, *India and the Soviet Union: Trade and Technology Transfer* (Cambridge: Cambridge University Press, 1991).

8. Rikhi Jaipal, "The Indian Nuclear Explosion," *International Security* 1, no. 4 (Spring 1977): 44.

9. On the scientists' roles in India's nuclear energy program, see Onkar Marwah, "India's Nuclear and Space Programs: Intent and Policy," *International Security* 2, no. 2 (Autumn 1977): 96-121. Scholars have advanced various political, economic, and strategic explanations for the conduct of India's nuclear tests in 1974. For more on this subject, see Ashish Nandy, "Between

two Gandhis: Psychopolitical Aspects of the Nuclearization of India,” *Asian Survey* 14, no. 11 (November 1974): 967. Also see George Perkovich, *India’s Nuclear Bomb* (Berkeley: University of California Press, 2001); P. N. Dhar, *Indira Gandhi, the “Emergency” and Indian Democracy* (New York: Oxford University Press, 2001); and Selig S. Harrison, Paul H. Kreisberg, and Dennis Kux, eds., *India and Pakistan: The First Fifty Years* (Cambridge: Cambridge University Press, 1998).

10. Rajesh Basrur, “Nuclear Weapons and Indian Strategic Culture,” *Journal of Peace Research* 38, no. 2 (March 2001): 181–98.

11. Ibid.

12. K. Subrahmanyam (convener of the National Security Advisory Board [NSAB]), interview by author, New Delhi, 24 May 2006.

13. Ibid.

14. Lt Gen Satish Nambiar, “Fifty Years of Indian Independence: A Strategic Review,” Institute for Peace and Conflict Studies paper, 15 August 1997, <http://www.ipcs.org/>.

15. Gen Vijay Oberoi (former vice-chief of the Indian army), interview by author, New Delhi, 7 June 2006.

16. Stephen Cohen, “Security Issues in South Asia,” *Asian Survey* 15, no. 3 (March 1975): 209.

17. Ibid.

18. Federation of American Scientists, “A Brief History of Pakistan’s Nuclear Weapons Program,” <http://www.fas.org/nuke/guide/pakistan/nuke/index.html>.

19. Rasul B. Rais, “Pakistan’s Nuclear Program: Prospects for Proliferation,” *Asian Survey* 25, no. 4 (April 1985): 463. For a detailed analysis of Pakistan’s nuclear weapons program, see Steve Weissman and Herbert Krosney, *The Islamic Bomb: The Nuclear Threat to Israel and the Middle East* (New York: Times Books, 1991); and Owen Bennett Jones, *Pakistan: Eye of the Storm* (New Haven, CT: Yale University Press, 2003).

20. Carey Sublette, “Pakistan’s Nuclear Weapons Program: The Beginning,” <http://nuclearweaponarchive.org/Pakistan/PakOrigin.html>.

21. Rais, “Pakistan’s Nuclear Program,” 465.

22. Samina Ahmed, “Pakistan’s Nuclear Weapons Program: Turning Points and Nuclear Choices,” *International Security* 23, no. 4 (Spring 1999): 182.

23. Ibid., 183.

24. Joseph S. Bermudez, “DPRK-Pakistan Ghauri Missile Cooperation,” 21 May 1998, <http://www.fas.org/news/pakistan/1998/05/ghauri2.htm>.

25. For recent books on A. Q. Khan’s influence on Pakistan’s nuclear weapons program, see Douglas Frantz and Catherine Collins, eds., *The Nuclear Jihadist* (New York: Twelve Books, 2007); and Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity, and the Rise and Fall of the A. Q. Khan Network* (London: Oxford University Press, 2006).

26. State Department, “The Pakistani Nuclear Program,” (Washington, DC: 23 June 1983), <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB45/printindex.html>.

27. Sublette, “Pakistan’s Nuclear Weapons Program.”

28. Leonard S. Spector, *Nuclear Proliferation Today* (Cambridge: Ballinger, 1984), 107.

29. Raj Chengappa, *Weapons of Peace: The Secret Story of India’s Quest to be a Nuclear Power* (New Delhi: HarperCollins Publishers India, 2000), 329–32.

30. Sumit Ganguly, “India’s Pathway to Pokhran II: The Prospects and Sources of New Delhi’s Nuclear Weapons Program,” *International Security* 23, no. 4 (Spring 1999): 163.

31. Ibid., 165. Also see Steven R. Weisman, “India’s Nuclear Energy Policy Raises New Doubts on Arms,” *New York Times*, 7 May 1988.

The Effects of Pakistan's Nuclear Weapons on Civil-Military Relations in India

32. David Albright, Frans Berkhout, and William Walker, eds., *Plutonium and Highly Enriched Uranium 1996: World Inventories, Capabilities and Policies*, SIPRI Monograph (Oxford: Oxford University Press, Stockholm International Peace Research Institute, 1997).

33. Sublette, "Pakistan's Nuclear Weapons Program."

34. For reports on Pakistan's nuclear transfers to Iran, North Korea, and Libya, see David Rhode and David E. Sanger, "Key Pakistani is Said to Admit Atom Transfers," *New York Times*, 1 February 2004; Patrick Chalmers, "Pakistan's Khan Arranged Uranium for Libya," *Washington Post*, 20 February 2004; and Glenn Kessler, "Pakistan's North Korea Deals Stir Scrutiny: Aid to Nuclear Arms Bid May be Recent," *Washington Post*, 13 November 2002.

35. Gaurav Kampani, "Proliferation Unbound: Nuclear Tales from Pakistan," CNS Research Story, 23 February 2004, <http://cns.miis.edu/stories/040223.htm>.

36. Ibid.

37. For more on the development of Pakistan's overt nuclear capability, see David Albright and Mark Hibbs, "Pakistan's Bomb: Out of the Closet," *Bulletin of the Atomic Scientists* 48, no. 6 (July/August 1992): 38–43.

38. Steven R. Weismann, "India's Nuclear Energy Policy Raises New Doubts on Arms," *New York Times*, 7 May 1988.

39. Michael Richardson, "Arms and the Woman," *Far Eastern Economic Review*, 25 September 1981, 20. Also see Sumit Ganguly and Devin Hagerty, *Fearful Symmetry: India-Pakistan Crises in the Shadow of Nuclear Weapons* (Vancouver: University of British Columbia Press, 2006), 53. For a general discussion of the nature of India-Pakistan wars, see J. N. Dixit, *India-Pakistan in War and Peace* (London: Routledge, 2002).

40. Don Oberdofer, "US sees India Pakistan Rifts Not as Signals of Imminent War," *Washington Post*, 20 December 1982.

41. Perkovich, *India's Nuclear Bomb*, 240.

42. Milton R. Benjamin, "India Said to Eye Raid on Pakistan's A-Plants," *Washington Post*, 20 December 1982.

43. Ibid.

44. P. R. Chari, "Nuclear Crisis, Escalation Control, and Deterrence in South Asia," working paper, version 1.0 (Washington, DC: Henry Stimson Center, 2003). For more on Zia-ul-Haq's policies, see Robert Wirsing, *Pakistan's Security under Zia* (New York: Palgrave Macmillan, 1991).

45. Ibid.

46. *Far Eastern Economic Review*, 8 September 1984.

47. Perkovich, *India's Nuclear Bomb*, 276–77.

48. Prof. Kanti Bajpai (headmaster, Doon School, New Delhi), interview by author, 12 June 2006.

49. Seymour Hersh, "On the Nuclear Edge," *New Yorker*, 29 March 1993.

50. Chari, "Nuclear Crisis."

51. According to one report, Pakistan's nuclear scientist A. Q. Khan stated in an interview with an Indian journalist that Pakistan would use the bomb if required. The authenticity of this claim remains dubious and does not count for a fact.

52. During this time, the Pakistanis were developing nuclear weapons but lacked the kind of advanced nuclear arsenal that India had.

53. Such conclusions were drawn from interviews with military officials and are available in Kanti Bajpai et al., eds.; *Brasstacks and Beyond: Perception and Management of Crisis in South Asia* (New Delhi: Manohar, 1995). Other scholars, such as Raj Chengappa, arrived at a similar conclusion. Sundarji's real plan was to attack Pakistan's Punjab and cut off its access to Sindh. The primary objective was to destroy Pakistan's nascent nuclear arsenal before it matured and

prevented India from waging a conventional war without minimizing the risk of nuclear conflict. See Raj Chengappa, *Weapons of Peace*, 322–23.

54. General Hoon of the Indian army accused General Sundarji of trying to engage Pakistan in a war without Prime Minister Rajiv Gandhi's knowledge. For more on this issue, see P. N. Hoon, *Unmasking Secrets of Turbulence: Midnight Freedom to a Nuclear Dawn* (New Delhi: Manas Publications, 2000).

55. Devin Hagerty, "Nuclear Deterrence in South Asia: The 1990 Indo-Pakistani Crisis," *International Security* 20, no. 3 (Winter 1995). For a study on the causes of Kashmiri unrest and the birth of insurgency in the 1990s, see Sumit Ganguly, "Explaining the Kashmir Insurgency: Political Mobilization and Institutional Decay," *International Security* 21, no. 2 (Autumn 1996).

56. Chari, "Nuclear Crisis."

57. For details on the 1990 crisis, read P. R. Chari, Pervaiz Iqbal Cheema, and Stephen Cohen, *Perception, Politics and Security in South Asia: The Compound Crisis of 1990* (London: Routledge, 2003), 84.

58. For details on the negotiations and the Gates Mission, see Michael Krepon and Mishi Faruquee, eds., *Conflict Prevention and Conflict-Building Measures in South Asia: The 1990 Crisis*, occasional paper no. 17, (Washington, DC: Henry Stimson Center, 1994), 6.

59. Raj Chengappa, "End the Wink and Nudge Approach," *Weapons of Peace: The Secret Story of India's Quest to be a Nuclear Power* (New Delhi: HarperCollins, 2000), 357–58.

60. "Indian Prime Minister on His Country's Nuclear Policy," *Xinhua General Overseas News Service*, 21 February 1990.

61. Chengappa, "End the Wink and Nudge Approach," 355.

62. *Ibid.*, 355–56.

63. The two essays are "Effects of Nuclear Symmetry on Conventional Deterrence" and "Nuclear Weapons in the Third World Context," combat papers 1–2 (Mhow: College of Combat, 1981).

64. Gen Krishnaswamy Sundarji, interview by W. P. S. Sidhu.

65. W. P. S. Sidhu, "Evolution of India's Nuclear Doctrine," occasional paper no. 9, Center for Policy Research, Paper Series 2003–2004, 17.

66. *Ibid.*

67. "The Thinking Man's General," *India Today*, 15 February 1986, 78.

68. *Ibid.* Also see Air Commodore Jasjit Singh, "The Strategic Deterrent Option," *Strategic Analysis* 13, no. 6 (September 1989).

69. According to one report, by 1989 six squadrons of nuclear delivery aircraft were operational. See "India's Fixed-Wing Nuclear Delivery 'A Reality,'" *Defensive and Foreign Affairs Weekly*, 3 October 1988.

70. Sidhu, "Evolution of India's Nuclear Doctrine," 9.

71. A. Z. Hilali, "India's Strategic Thinking and Its National Security Policy," *Asian Survey* 41, no. 5, (September–October 2001): 760.

72. Hagerty, "Nuclear Deterrence in South Asia."

73. Jasjit Singh, "Prospects for Nuclear Proliferation," in S. Sur, ed., *Nuclear Deterrence: Problems and Perspectives in the 1990s* (New York: UN Institute for Disarmament Research, 1993), 66.

74. See Hagerty, "Nuclear Deterrence in South Asia."

75. George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy* 91 (Summer 1993): 85–104. For more on the development of nuclear policy by Indian scientists in the

The Effects of Pakistan's Nuclear Weapons on Civil-Military Relations in India

1980s, see Gaurav Kampani, "From Existential to Minimum Deterrence: Explaining India's Decision to Test," *Nonproliferation Review* 6, no. 1 (Fall 1998): 12–24.

76. "Officials Comment on India's Nuclear Option: Navy Chief of Staff," *Telegraph* (Calcutta), 11 March 1990.

77. Ibid.

78. "South Asia retains its nuclear option," *Washington Post*, 30 September 1991, A-1, A-15.

79. "Military Experts Say Time for Nuclear Option," *Hindu* (Chennai edition), 10 February 1992, 9.

80. Subrahmanyam, interview.

81. Sidhu, "Evolution of India's Nuclear Doctrine."

82. Basrur, "Nuclear Weapons and Indian Strategic Culture," 189.

83. Ibid.

84. Raj Chengappa, *Weapons of Peace*, 260, 294–95.

85. Samuel Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge: Belknap Press, 1957), 11.

86. Martin Cook, "The Proper Role of Professional Military Advice in Contemporary Uses of Force," *Parameters* (Winter 2003): 26.

87. Brig Gurmeet Kanwal (senior research fellow, Observer Research Foundation), interview by author, 15 May 2006.

88. Huntington, *Soldier and the State*.

89. Manoj Joshi (editor of *Hindustan Times*, New Delhi), interview by author, 16 May 2006.

90. P. R. Chari (former member of the Indian Ministry of Defense and currently, research professor, Institute for Peace and Conflict Studies, New Delhi), interview by author, 22 May 2006.

91. Huntington, *Soldier and the State*, 71.

92. Gen K. Sundarji, "Declare Nuclear Status," *India Today*, 31 December 1990.

93. "BJP Advocates India Going Nuclear," *Times of India* (Mumbai), 13 February 1991.

94. "BJP Manifesto Promises Nuclear Teeth for Defense," *BBC Summary of World Broadcasts*, 2 May 1991.

95. "Indian Nuclear Milestones: 1945–2005," *The Risk Report* 11, no. 6, (November–December 2005), <http://www.wisconsinproject.org/countries/india/india-nuclear-miles.html>.

96. "Indian Navy to Build Its First Aircraft Carrier," *Jane's Defence Weekly*, 23 August 1995.

97. Bharat Karnad, "The Perils of Deterrence by Half Measures," *Nuclear Weapons and Indian Security: The Realist Foundations of Strategy* (New Delhi: MacMillan, 2002), 657–58.

98. Wilson John, "Secret Nuclear Submarine Reaches Vital Stage," *Pioneer* (New Delhi), 21 May 1997.

99. Ibid.

100. Karnad, "The Perils of Deterrence by Half Measures."

101. Vice Admiral Suri, interview by author, New Delhi, 23 June 2006.

102. Arundhati Ghose (former Indian ambassador to the United Nations and chief negotiator on the CTBT), interview by author, New Delhi, 25 May 2006.

103. For various books and articles on the Kargil war, see Jasjit Singh, "Pakistan's Fourth War," *Strategic Analysis* 23, no. 5 (August 1999): 696; Jasjit Singh, *Kargil 1999: Pakistan's Fourth War for Kashmir* (New Delhi: Knowledge World, 1999); Praveen Swami, *The Kargil War* (New Delhi: Leftword Books, 1999); and Kanti Bajpai, Amitabh Mattoo, and Afsir Karim, eds., *Kargil and After* (New Delhi: Har Anand, 2001).

104. Brahma Chellaney, "Challenges to India's National Security in the New Millennium," *Securing India's Future in the New Millennium* (New Delhi: Orient Longman Press, 1999), 538.

105. Ayesha Ray, "The Kargil War: Consequences for India's Security," MPhil dissertation, Jawaharlal Nehru University, 2001, 21.
106. Singh, *Pakistan's Fourth War*, 685.
107. Maj Gen Ashok Krishna, "Lessons, Precepts, and Perspectives," in Ashok Krishna and P. R. Chair, eds., *Kargil: The Tables Turned* (New Delhi: Manohar, 2001), 166.
108. Gen V. P. Malik, *Kargil: From Surprise to Victory* (New Delhi: HarperCollins, 2007), 132.
109. *Ibid.*, 133.
110. India Kargil Review Committee, *From Surprise to Reckoning: The Kargil Review Committee Report* (New Delhi: Sage, 2000).
111. For the executive summary of the *Kargil Report*, see <http://nuclearweaponarchive.org/India/KargilRCB.html>. The effects of such institutional changes are discussed at great length in chap. 2.
112. Read Section II, "Intelligence," summary of the *Kargil Review Committee Report*, <http://nuclearweaponarchive.org/India/KargilRCB.html>.
113. *Kargil Review Committee Report*, executive summary, 25 February 2000, <http://www.fas.org/news/india/2000/25indi1.htm#3>.
114. *Ibid.*
115. See Section IV of the executive summary on the *Kargil Review Committee Report*, "CI Operations, Kargil and Integrated Manpower Policy," <http://nuclearweaponarchive.org/India/KargilRCB.html>.
116. *Ibid.*
117. In some Indian strategic circles, the military mobilization during this crisis is considered to be the first full-blown deployment since 1971.
118. "We Are Prepared: Army Chief," *Hindu*, 12 January 2001.
119. For the most comprehensive account of the crisis, see Lt Gen V. K. Sood and Pravin Sawhney, *Operation Parakram: The War Unfinished* (New Delhi: Sage, 2003). For a clear description of the two phases of the crisis and more on American diplomacy in the region, see Sumit Ganguly and Devin Hagerty, *Fearful Symmetry: India-Pakistan Crisis in the Shadow of Nuclear Weapons* (New Delhi: Oxford University Press, 2003).
120. Praveen Swami, "General Padmanabhan Mulls over Lessons of Parakram," *Hindu*, 5 February 2004.
121. *Ibid.*
122. Sanjay Ahirwal, "Operation Parakram: Human Costs Outnumber Kargil," *DefenceIndia.com*, 31 July 2004, <http://www.defenceindia.com/26-jul-2k4/news32.html>.
123. *Ibid.*
124. For examples of the American military's criticism with war objectives in Iraq, see "Ex General Calls Iraq a Nightmare," *Al-Jazeera*, 13 October 2007; and Thom Shanker, "Third Retired General Wants Rumsfeld Out," *New York Times*, 10 April 2006.
125. Michael Abramowitz and Karen De Young, "Petraeus Disappointed at Political State of Iraq," *Washington Post*, 8 September 2007.
126. Swaran Singh, "Kargil Conflict and India's Debate on Limited War," *Encounter* 3, no. 5 (2001): 26. For more on this subject in the Indian context, see Swaran Singh, *Limited War* (New Delhi: Lancer, 1995).
127. *Ibid.*, 27–28.
128. The timing of India's nuclear doctrine suggests that civilians had begun paying greater attention to nuclear strategy. The reasons for publishing a nuclear doctrine in the immediate post-Kargil period may have been twofold. First, civilians may have felt the need to demonstrate

The Effects of Pakistan's Nuclear Weapons on Civil-Military Relations in India

a sense of seriousness on the issue of nuclearization, especially since the Kargil war had made a nuclear scenario very real. Second, a nuclear doctrine which specified Indian goals of pursuing a minimum nuclear deterrent and no-first-use policy was meant to communicate India's firm resolve in preventing future conflicts with Pakistan from spiraling out of control.

129. Indian Ministry of External Affairs, "Draft Report of the National Security Advisory Board on Indian Nuclear Doctrine," 17 August 1999.

130. Ghose, interview.

131. Kanti Bajpai, "The Fallacy of an Indian Deterrent," in Amitabh Mattoo, ed., *India's Nuclear Deterrent: Pokhran II and Beyond* (New Delhi: Har Anand, 1998), 178.

132. This is commonly referred to as the stability-instability paradox. For more on this issue, see Glenn Snyder, "The Balance of Power and the Balance of Terror," in Paul Seabury, ed., *The Balance of Power* (San Francisco: Chandler, 1965). For a more detailed discussion of this concept in the South Asian context, see Sumit Ganguly, *Conflict Unending* (New York: Columbia University Press, 2002).

133. Scott Sagan, "The Perils of Proliferation in South Asia," *Asian Survey* (November–December 2001): 1064–86.

134. V. R. Raghavan, "The Kargil Conundrum," *Hindu* (Madras), 28 May 1999.

135. Gen V. R. Raghavan (former member of the Hans Blix Commission on Weapons of Mass Destruction and director of the Delhi Policy Group), interview by author, 27 April 2006.

136. Capt Bharat Varma, "A Revolution in the Indian Mindset," *Security Research Review* 1, no. 1 (October 2004), <http://www.bharat-rakshak.com/SRR/2004.html>.

137. For recent studies on this subject, see Walter Ladwig, "A Cold Start for Hot Wars? The Indian Army's New Limited War Doctrine," *International Security* 32, no. 3 (Winter 2007/08): 158–90; and Subhash Kapila, *India's New "Cold Start" War Doctrine Strategically Reviewed*, paper no. 991, South Asia Analysis Group, 5 April 2004, <http://www.southasiaanalysis.org/%5Cpapers10%5Cpaper991.html>.

138. *Ibid.*

139. Y. I. Patel, "Dig Vijay to Divya Astra—A Paradigm Shift in the Indian Army's Doctrine," *Bharat Rakshak Monitor* 6, no. 6 (May–July 2004).

140. For more on the Cold Start Doctrine, see Kapila, *India's New "Cold Start" War Doctrine*, and Kapila, *Indian Army's New "Cold Start" War Doctrine Strategically Reviewed—Part II: Additional Imperatives*, SAAG paper no. 1013, 1 June 2006.

141. "Indian Army Tests Its New Cold Start Doctrine," *India eNews*, 19 May 2006, <http://www.indiaenews.com/india/20060519/8465.htm>.

142. Kapila, *India's New "Cold Start" War Doctrine*.

143. Subhash Kapila, "Indian Army Validates Its Cold Start Doctrine," 7 June 2005, <http://intellibriefs.blogspot.com/2005/06/indian-army-validates-its-cold-start.html>.

144. Bharat Karnad (former member of the NSAB), interview by author, New Delhi, 26 April 2007.

145. Charles Moskos, "The Emergent Military: Civil, Traditional or Plural," *Pacific Sociological Review* 16, no. 2 (April 1973): 267.

146. Sam C. Sarkesian, "Military Professionalism and Civil-Military Relations in the West," *International Political Science Review* 2, no. 3 (1981): 288.

147. *Ibid.*

148. For more on how the civilians and the military would need to collaborate on executing the strategy, see Patel, "Dig Vijay to Divya Astra."