

REDUCING NUCLEAR DANGERS IN SOUTH ASIA: A PAKISTANI PERSPECTIVE

by Abdul Sattar

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Resisting pressures and penalties, Pakistan has declined to renounce the nuclear option. In practice, however, it has demonstrated restraint and reasonableness, deferring conversion of its acquired nuclear capability into weapons, remaining willing to agree to any nondiscriminatory arrangement for a nuclear freeze in South Asia and, meanwhile, even suspending further accumulation of highly-enriched uranium. Pakistan's restraint has not been ignored by informed opinion. Although the Pressler law¹ remains in force in the United States, recent scholarly studies² have taken note of the positive contribution the nascent Pakistani nuclear capability made to preventing a looming war on two occasions: in 1990, when India was contemplating air strikes across the line of control in the disputed state of Kashmir, and possibly also in the winter of 1986-87, when a quarter million Indian troops, concentrated 20 miles

from Pakistan's border for a military exercise, code-named "Brass Tacks," triggered a crisis between the two countries.

Although the incipient revision of the earlier projections of apocalyptic consequences of Pakistan's nuclear pursuit is welcome from Islamabad's perspective, the swing of opinion to the other extreme of neglect of the nuclear and security issues in South Asia does not serve the best interests of either of the two countries involved or those of the world community at large. The subject is too serious for the same episodic approach that was manifest earlier in the acceptance of the *fait accompli* by India following its nuclear detonation in 1974. It warrants instead a sustained policy of constructive engagement aimed at reducing the concomitant dangers of the nuclear environment. India's stockpile of weapons-grade uranium continues to mount, and its buildup of missiles threatens to destabilize

the security situation in the region.

A constructive approach to containing nuclear dangers has to start with a recognition of the existing realities, then evince greater understanding of the security concerns that drive nuclear programs, and finally develop a responsive and affirmative strategy in place of the failed policy of censure and sanctions selectively targeting one country or another. Such a strategy should be founded on the principle of nondiscrimination and attach priority to limiting nuclear capabilities and strengthening restraints against weaponization, missile deployments, and transfer or accidental loss of fissionable materials and technology. These objectives are likely to be realized in a cooperative international framework, designed to assuage the anxieties of the countries involved and of the world community.

At issue is not only the equity, but also the efficacy, of present

nuclear nonproliferation policy and the Missile Technology Control Regime (MTCR). Apart from glaring contradictions between precept and practice, these supply-side strategies of the industrialized states have been proven ineffectual in preventing the spread of nuclear weapon capabilities. The Pressler law, which Pakistanis see as a "black law," is even likely to be counterproductive. Estrangement between traditional partners for peace in South Asia and the Gulf region aside, it could—because it bars conventional arms sales—force Pakistan to place greater reliance on nuclear deterrence.

The world community's goal of limiting, reducing and eventually eliminating nuclear weapons requires a consistent global approach that carries conviction. At the same time it calls for a demand-side package that will neutralize the necessity for individual self-reliance by states in zones of conflict. Measures to strengthen collective security and promote peaceful resolution of conflicts are needed for the long-term. So long as the world community is unable or reluctant to fulfill these expectations implicit in the United Nations Charter, states threatened by aggressive and hegemonic neighbors will remain condemned to fending for their security as best they can. If that seems at present like a tall order, other practical measures can be considered in the short-term. Fortunately, the substantial reductions in nuclear arsenals being implemented by the two superpowers and the current negotiations on a comprehensive test ban and fissile materials production cutoff have generated a conducive atmosphere. After examining the Pakistani and Indian nuclear pro-

grams and placing them in the context of the nonproliferation debate, this article proposes an initiative to associate the holdout states with the nuclear Non-Proliferation Treaty (NPT).

PAKISTANI AND INDIAN NUCLEAR PROGRAMS

The nuclear programs of Pakistan and India present a vivid contrast of motives and commitments. Pakistan followed nuclear abstinence for a quarter century; only the disaster of 1971, when Indian military intervention cut Pakistan into two, necessitated a painful reappraisal. India had dual uses in view from the inception of its nuclear program. It considered nuclear weapons a means for attaining great power status; rivalry with China spurred its program.

Pakistan started its nuclear research and development program in the 1950s. Deficient in fossil fuels and hydroelectric potential, it pursued a transparently peaceful, energy-oriented program. Both its small research reactor and the Canadian-assisted power plant at Karachi, completed in 1972, were placed under the safeguards of the International Atomic Energy Agency (IAEA).

Some Pakistani analysts had no doubt watched India's nuclear program with growing concern, cognizant of the potential for blackmail in an asymmetrical nuclear situation.³ But the government did not allocate resources for plants with a dual-use potential that could then have been built without intrusive external inspection. The industrialized countries had not yet instituted stringent controls on export of nuclear technology. In the 1960s, Pa-

kistan actually declined an offer by a French company to provide a plutonium separation plant. In 1968, it even announced its readiness to accede to the NPT, provided India did the same.

Not until after 1971, when Pakistan's conventional defense capacity proved inadequate to safeguard its territorial integrity, and East Pakistan was militarily separated by India to create Bangladesh, did Pakistan embark upon efforts to acquire the nuclear weapons option as a means of deterring the persistent Indian threat. In early 1972, Zulfikar Bhutto, then-President of Pakistan, reportedly met with Pakistani scientists to discuss the possibility of acquiring the nuclear option.⁴ After the Indian nuclear explosion, Bhutto, then-Prime Minister, declared: "Let me make it clear that we are determined not to be intimidated by this threat." In 1976, Pakistan signed an agreement with France to obtain a reprocessing plant for the purpose of extracting plutonium. It also started an indigenous program for the enrichment of uranium.

India considered the development of atomic energy essential for economic development and technological progress, but Indian leaders also envisaged what Prime Minister Jawaharlal Nehru euphemistically described in 1948 as "other purposes."⁵ The emphasis in public statements was on peaceful uses; in practice, priority was given to the acquisition of the weapons option. Years before India built the first nuclear power station, it set up in the early 1960s a reprocessing plant for the extraction of plutonium from used fuel. Earlier, India had obtained from Canada a so-called "research reactor," which was ideally

sued for the generation of weapons-grade plutonium.

India championed the demand for the elimination of nuclear weapons globally, but it was even more vehement in opposing the nonproliferation proposal on the grounds of discrimination. Whether or not this policy was simply a convenient cover, it is evident from the record that India went on to develop and retain a complete, weapons-oriented nuclear fuel cycle under its own exclusive control. Atomic energy was looked upon as a means to great power status that Indian leaders had long cherished as an aspiration.⁶ Even before independence, Nehru, the mentor of the Indian defense and foreign policy establishment, envisioned India as one of the world's four great powers and as a pivot⁷ in the Western, Southern, and Southeast Asian regions with the right to proclaim a "Monroe Doctrine."⁸

Although India's nuclear policy was conceived years before its border clash with China in 1962, when India felt it suffered a humiliating defeat, and the Chinese atomic test in 1964, these events may have served to accelerate its timetable for the acquisition of nuclear weapons capability. India finally demonstrated its success in May 1974, when it conducted the so-called "peaceful explosion."⁹ The plutonium for the explosive device was produced in the Canadian reactor, using heavy-water supplied by the United States.

India conducted the test, but Pakistan paid the penalty. Angered by the Indian breach of faith, Canada immediately cut off nuclear cooperation also with Pakistan, although Pakistan gave no cause or provocation. Even the fuel supply for the Karachi power reactor was discon-

tinued. Other industrialized countries also slammed shut doors to transfer of nuclear technology. Pakistan's program for peaceful uses of atomic energy virtually ground to a halt.

Pakistan was singled out for particularly harsh penalties when it embarked upon efforts to acquire nuclear capability. The United States used its influence with France to frustrate the construction of a plutonium separation plant in Pakistan. In 1976-77, the United States also enacted the Symington and Glenn amendments to the foreign aid law, under which economic aid was cut off to Pakistan when it began construction of a uranium enrichment plant.¹⁰

The amendments to the U.S. law exempted India and Israel from the aid cutoff. Inexplicably, this legislation was not invoked to cut off aid to India, even when it began to enrich uranium in the 1980s. Also, Washington evaded the U.S. Nuclear Nonproliferation Act of 1978¹¹ by persuading France to provide enriched uranium fuel for the power plant at Tarapur that the U.S. had sold to India. That act prohibits, among other things, the export of nuclear materials to countries that do not accept the inspection and control safeguards of the IAEA on all their nuclear plants,

India, while intent on retaining the nuclear weapons option for itself, joined efforts to foreclose the option for Pakistan. Deploying its diplomatic leverage and propaganda machinery, it canvassed against the transfer of technology to Pakistan, describing its program as a plan to produce an "Islamic bomb," hoping to stoke atavistic prejudices. In the early 1980s, the Indian military staff even considered a plan of at-

tack to destroy the Kahuta uranium enrichment plant.¹²

Overcoming obstacles and resisting discriminatory pressures, Pakistan succeeded in building a uranium enrichment plant and acquiring the explosion technology. It now acknowledges possession of nuclear capability but disclaims having produced nuclear weapons.¹³ By 1990, Pakistan is estimated to have accumulated enough enriched uranium for 10-plus explosive devices.¹⁴

Meanwhile India has built up a stockpile of weapons-grade plutonium for an estimated 100-plus Hiroshima-size bombs.¹⁵ The Canadian 40 megawatt thermal (MWt) reactor alone accounts for 400 of the over 500 kilograms of weapons-grade plutonium needed for that purpose. The balance of India's weapons-grade plutonium was generated at the 100 MWt Dhruva reactor. Also, India has begun to enrich uranium,¹⁶ which could be used in combination with plutonium to build thermonuclear weapons.

India's explanation¹⁷—that it intends to use the plutonium it has been separating as fuel—is questionable because such fuel is considered uneconomic, breeder reactor technology has been found problematic, and, in any case, India can separate non-weapons-grade plutonium from the fuel irradiated in its several unsafeguarded power reactors.¹⁸

In acquiring nuclear capability, Pakistan committed no violation of any obligation under international law. It did not divert material from any plant supplied for peaceful uses. In addition, Pakistan demonstrated regard for world opinion by refraining from any test explosion. Also, Pakistan has voluntarily observed NPT guidelines against the transfer of nuclear materials and technology.

Yet, Pakistan continues to be singled out for penalties by the United States.

Economic aid to Pakistan, which was resumed by the United States in 1981 in the wake of the Soviet intervention in Afghanistan, was again cut off soon after the withdrawal of the Soviet forces in 1989. In 1990, President George Bush declined to issue the certificate required under the Pakistan-specific Pressler law to the effect that Pakistan did not possess a nuclear device and was not trying to produce one. As a result, not only were future defense sales banned, but the United States also withheld the transfer of F-16 aircraft and other military equipment for which Pakistan had paid a billion dollars in advance.

SECURITY IN SOUTH ASIA

Pakistan's security concerns have not been alleviated following the end of the Cold War. The lapse of the threat from the northwest is certainly welcome. But the environment in South Asia has now grown more anxious with the erosion of the discipline and restraint that superpower competition exercised on regional rivalries. The great powers are now disinclined to "involve" themselves in the problems of "others" and to bear the burdens of maintaining international peace and security, especially in areas of marginal economic or strategic importance for them. For example, the United States has declined to assign forces to Bosnia-Herzegovina, which is recognized by a United Nations Security Council resolution to be a victim of the twin crimes of aggression and genocide by Serb forces.

Pakistan's perception of threat to

its security is not imaginary; it is founded in the experience of India's recurrent use of force to impose solutions of its own preference upon less powerful neighbors. Moreover, India is continuing its military buildup for no apparent reason other than its aspiration to regional dominance. For years, India has been one of the largest recipients of arms transfers in the third world.¹⁹ It now "has the third largest military in the world"²⁰ and an expanding paramilitary force. For 1994-95, it added an additional 20 percent to its budget for the armed forces. Pakistan's concerns are aggravated by this growing power disparity and compounded by its lack of territorial depth for defense by conventional means.

Tensions in relations with India have been aggravated as a result of the Indian military repression of the Kashmiri struggle for self-determination. Once again India has blamed Pakistan, as it did earlier when the Sikh community revolted following the Indian military attack on their holiest shrine. On two occasions in recent years, the threat of another war loomed over the region. Fortunately, the apprehensions did not materialize. The factors that contributed to the successful denouement are still being probed by South Asia-watchers.

A military confrontation was precipitated in the winter of 1986-87, when India concentrated an unprecedented quarter million troops 20 miles from Pakistan's border. The stated purpose was a military exercise, code named "Brass Tacks," but speculation has persisted that the military planners, if not also the political leadership, harbored ulterior designs. Whatever the intention, Pakistan's preoccupation was with

the capability inherent in the multi-corps juggernaut (with live ammunition) that planned to practice a strategic thrust across the narrow waist of Pakistan's territory to cut the north from the south. Its grave apprehension that the exercise could be turned into a military operation was natural against the background of the Indian intervention in East Pakistan 15 years earlier. Predictably Pakistani forces made counter-deployments, which were considered threatening by India, although that was perhaps not the only reason why the crisis was defused. South Asia-watchers consider the restraints imposed by the nuclear environment to be a prime factor in the peaceful ending.

The nuclear capability was again a factor in defusing the crisis that erupted in 1990 following the uprising in India-held Kashmir. High military officials in India were said to have recommended air strikes on targets in Pakistan. As tension mounted, fears arose that the crisis might explode into a conflict between the two countries. The President of the United States decided to send Robert Gates of the National Security Council to Islamabad and New Delhi. Although scholarly research has discounted sensational reports depicting an actual nuclear threat as a product of journalistic license,²¹ the decision to launch this exercise in "preventive diplomacy" was probably influenced by the apprehension that events could acquire a dangerous momentum in a region with nuclear capabilities.

Whatever the role of nuclear capabilities in averting conflicts between India and Pakistan in 1987 and 1990, the restraining influence of nuclear weapons on the tendency to resort to force is widely recog-

nized by influential opinion in the two countries. Not in Pakistan alone is the view held that "it is the nuclear deterrent that has kept wars in South Asia at bay."²² Answering the question, "Would India and Pakistan have refrained from the three wars they fought in 1948, 1965, and 1971 had both of them possessed a minimal nuclear deterrence?," a former chief of the Indian army and a respected analyst of strategic issues has expressed the view: "*These wars would not have occurred.*"²³ Pakistani professionals agree with that assessment: had Pakistan possessed nuclear deterrence in 1971, "the dismemberment of Pakistan could have been averted."²⁴

Commenting on prospects for the future, a former chief of the Indian naval staff has observed that with nuclear capability, "Pakistan would be able to establish a deterrent nuclear posture against India, rendering in the process the balance of conventional forces considerably less significant than it is today."²⁵ Another senior Indian general has remarked: "What the nuclear capability does is to make sure that the old scenarios of Indian armor crossing the Sukkur barrage over the Indus and slicing Pakistan into two are a thing of the past."²⁶

PROLIFERATION DEBATE

The academic debate for and against proliferation has necessarily taken place in terms of principles, but few of the participants envisage, advocate, or apprehend the spread of nuclear weapons to many additional states. Excluding Argentina and Brazil, which have decided between them to renounce the nuclear option they were earlier developing, and South Africa, which dismantled

the nuclear devices once the white supremacist regime reconciled itself to black-majority rule, now only India, Israel, and Pakistan challenge the nonproliferation regime constructed by the major powers. Only one of them—Pakistan—is under pressure, mainly by the United States, to roll back its acquired capability.

Major nuclear powers and also some political scientists²⁷ oppose proliferation basically on the ground that the spread of nuclear weapons would multiply the dangers of their use in war through miscalculation. Medium and small powers, in their view, lack the resources, the mutual learning experience, and the technical safeguards that help the superpowers manage crises. Particularly Third World states are considered to be unstable politically and immature institutionally, if not also deficient in prudence and rationality; for these or other reasons, they could lose control over these weapons, imperiling their own people as well as the world community.

This view held by nuclear power policy-makers is not shared, however, by many political scientists, on both historical and doctrinal grounds. They argue in support of the efficacy of nuclear weapons as a deterrent to war.²⁸ Nuclear weapons "make the cost of war seem frighteningly high and thus discourage states from starting any wars that might lead to the use of such weapons."²⁹ Founded in logic, the deterrence argument is also upheld by empirical evidence. Nuclear weapons have helped maintain peace and prevent military adventures in the past, and there is no reason to expect that the future will be different. Even a powerful state is unlikely to resort to aggression if it concludes that the potential gains are

not worth the losses it has to risk. Such a conclusion is not obvious in a conventional environment: leaders may contemplate an adventure in a situation which admits of a margin of error in judgment; even if the adventure fails, the consequences may not be suicidal. Margins are eliminated however in a nuclear environment.

It is not necessary to conjure up doomsday scenarios of annihilation in a nuclear Armageddon between superpowers to realize that any use of nuclear weapons would entail an unmitigated disaster. Two atomic bombs devastated Hiroshima and Nagasaki, forcing Japan to surrender. It has been estimated that a single 20-kiloton bomb, exploded over a densely populated city, could cause 130,000 instantaneous deaths. In addition, over 200,000 people would suffer blast injuries and radiation burns, and many times more would be condemned to a life worse than death due to ingestion of high doses of radiation and the consequent increase in cancer, miscarriages, and genetic defects. The explosion would also cause destruction of property in a 15-square-mile area, as well as incalculable and irreversible damage to ecology and environment that would make the affected area uninhabitable.³⁰

The awesome potential for destruction invests nuclear weapons with an unequalled power of deterrence. The possibility that nuclear weapons might be used in desperation by an attacked state should foreclose the thought of resort to war in pursuit of a policy of conquest and expansion. This has been the main rationale for the acquisition of nuclear capabilities by states that lack the conventional power to deter aggression. It is assumed that

nuclear weapons "should be used only if the very existence of the state is threatened by a conventional or nuclear attack."³¹ This "weapon of defensive last resort" doctrine explained the nuclear policy of Britain and France, although pride and prestige may be a reason for their retention of nuclear weapons now that they face no apparent threat. It was advanced as the principal argument for Ukraine retaining the nuclear weapons it inherited upon the disintegration of the Soviet Union. These weapons, it was argued, were "the only reliable deterrent to Russian aggression."³² A conventional defense would not be viable and Ukraine would otherwise remain "vulnerable to Russian nuclear blackmail." The last resort argument has also been the Israeli rationale for its nuclear policy, which remains unquestioned by anti-proliferation protagonists and was probably a factor in the American decision to provide prompt and effective assistance to rescue Israel during the 1973 war when it contemplated the use of Doomsday weapons.³³

Arguments against proliferation fail to carry conviction because they are advanced mostly by states that do not themselves practice the precept they preach. Nevertheless, the arguments should be examined on their merits in order to reduce the dangers of acquiring nuclear weapons, which are too serious to be dismissed or ignored. Miscalculation, for instance, brought the United States and the Soviet Union perilously close to disaster in the Cuban missiles crisis in 1962. They had then to devise and institute agreed precautionary measures to preclude such perils.³⁴ Also, procedures should be tightened to prevent theft

and clandestine diversion of nuclear materials. In the past, some states were selective in their vigilance. In the 1960s, 93.8 kilograms of enriched uranium were diverted from a U.S. plant to Israel.³⁵ In 1968, EURATOM released 200 tons of uranium oxide at a chemical plant in Italy, which ended up in Israel.³⁶ For over a quarter of a century a Norwegian firm supplied heavy water, directly or through intermediaries, to Argentina, India, Israel, and South Africa.³⁷

Considering humanity's stake in precluding nuclear dangers, it is obviously desirable that precautions, procedures, and confidence-building measures to reduce the dangers of miscalculation, accidents, and theft developed by more experienced and resourceful states be shared with the others. Similarly, command and control institutions and procedures in the neo-nuclear states should be improved. But the targeting of some "small" states only for expression of exaggerated fears cannot be constructive. Only "ethnocentric views" can perceive non-Westerners as "lesser breeds without the law."³⁸

To be sure, nuclear weapons are neither a panacea for every conflict nor within the means of every state. Even with nuclear weapons, a less powerful state "will face a number of difficult constraints in attempting to construct a survivable deterrent force,"³⁹ especially if it is condemned to live with short warning time, threat of nuclear decapitation, and lack of resources to develop the requisite infrastructure for a survivable nuclear force. Inadequacy of resources could create dangerous dilemmas if a state ends up with an unsurvivable nuclear capability, as well as a degraded conventional force. Unable to deal with a local

conflict by conventional means, it might come under pressure to raise the stakes, coming face to face with the fateful "use or lose" dilemma, cutting into the time for preventive diplomacy and precipitating a nuclear war which could spell annihilation.

The contingencies warranting summons to the weapon of last resort should be clearly and carefully defined. Deep penetration of a state's territory by adversary forces and large scale attacks threatening to overwhelm and destroy its defensive capability are types of situations likely to trigger consideration of use of nuclear weapons. What choice a victim of aggression should make between capitulation or annihilation is a cruel question to which only the people of that state can give an answer.

NUCLEAR SUFFICIENCY

Nuclear powers have built arsenals of diverse sizes. At what level is deterrence realized? Does it remain credible in case of imbalance? To be sure, a nuclear arsenal should not be so small as to be vulnerable to a preemptive strike. It is desirable further to have a safety margin for confidence in a crisis and avoidance of panic in response to a false alarm.⁴⁰ But neither do the numbers have to be so large as to be unaffordable by a medium state.

Even between superpowers, purely deterrent nuclear forces "can be relatively modest."⁴¹ Moreover, nuclear deterrence, unlike a conventional one, is not decisively degraded by quantitative or qualitative disparity. So long as a state's strategic arsenal is sufficient to survive the first strike and still deliver "unacceptable" damage, it does not have

to match the adversary's arsenal.⁴² The Soviet Union achieved deterrence when it had 300 nuclear warheads even though the United States then possessed 5,000 nuclear warheads.⁴³ That the Soviet Union and the United States continued to build stockpiles to peak levels respectively of 45,000 and 32,500 nuclear warheads is explained mainly in the context of extended deterrence involving their responsibility to ensure the security of their allies. Partly, too, the vast buildup is attributed in retrospect to an uncontrolled, but not necessarily uncontrollable, arms race.⁴⁴

Medium nuclear powers have not considered it necessary to build thousands of warheads. Britain and France are said to maintain respectively 200 and 500 nuclear warheads. China's arsenal was estimated to total 450 warheads in 1992. It was considered to have achieved deterrence years earlier despite the fact that its potential adversaries were nuclear superpowers. Israel is believed to possess a stockpile of "100 to several hundred warheads."⁴⁵ This rather large arsenal was apparently built to deter the Soviet Union from coming to the aid of Arab states in a war.

As between medium states, credible deterrence is achieved with a small nuclear arsenal. One scholar has concluded that "five or six" nuclear warheads should be sufficient.⁴⁶ Theoretically, even a smaller number should suffice to deter, provided the weapons can be delivered on targets of high value. It is inconceivable that a responsible government or leader would risk the nuclear devastation of a single metropolis for the satisfaction of vanquishing an adversary. The number should, however, have to be care-

fully determined, taking into account the security of launchers, penetration capability of the carriers and reliability of delivery on preselected targets. The minimum number would have to be increased in proportion to the danger of preemption and interception. If the adversary develops a capability to disable or intercept 50 percent of the weapons, the stockpile should be doubled; if 90 percent of the warheads might be destroyed, the arsenal would have to be increased tenfold.

The economic burden of a small nuclear arsenal is not a decisive constraint on a medium state's decision on whether or not to acquire these weapons. The cost of designing, building, and testing a plutonium-based nuclear device was estimated in a United Nations' study in 1968 at \$100 million; the U.S. Arms Control and Disarmament Agency (ACDA) estimated the cost at \$51 million in 1976. If a country already possessed the fissile material, the figure according to ACDA dropped to \$1 million.⁴⁷ While these figures might be two to three times higher in the depreciated dollars of 1994, the expenditures would not greatly strain the budgets of India and Pakistan, each of which spends billions of dollars annually on defense. Moreover, the infrastructure has already been built by both the countries.

In addition, in judging the burden of a nuclear force, allowance should be made for possible containment of the defense budget because in a nuclear environment the conventional forces do not have to be maintained or equipped for deterrence. Disparity of conventional forces then loses some of its edge: "if a country were forced to use the nuclear option the moment it seemed

to be losing, it would make conventional superiority irrelevant."⁴⁸ In the context of Pakistan and India, General K. Sundarji, former chief of staff of the Indian Army, has persuasively argued: "If a mutual nuclear deterrent exists, I believe there is more scope for both countries to cut back on conventional forces and maintain a lower level balance."⁴⁹

SECURITY AND NUCLEAR ARMS LIMITATION

The logic of complete nuclear disarmament does not appeal to strategic thinkers in the new nuclear-capable states any more than it did in the nuclear weapons states. Commenting on the proposal for elimination of nuclear weapons, Zbigniew Brzezinski is said to have remarked: "It is a plan to make the world safe for conventional warfare. I am therefore not enthusiastic about it."⁵⁰ Even after the Cold War, nuclear powers do not consider a nuclear-free world an acceptable idea. The underlying problem persists: how to make the world *unsafe* for war, conventional or otherwise? Conventional weapons have not historically proved effective in a deterrence role, and deterrence now commands an even higher priority: "nations can no longer afford to fight protracted wars."⁵¹ Great powers may develop high-precision conventional weapons to provide "strategic" deterrence against conventional weapons.⁵² But, this option is not in the sight of medium powers, which lack requisite resources and access to the new weapons.

The ideal of a nuclear-free world will have to await a transformation of the security environment, globally and regionally. Limitation of nuclear

weapons or capabilities is, however, a practical proposition. It can serve the interests not only of humankind in general but also of the states involved, saving expenditures on an unnecessary nuclear arms race and reducing the dangers inherent in nuclear weapons. Such a practical approach would be consistent with the resolutions of the U.N. General Assembly.

The superpowers are setting a good example: under START I and II, the Russian Federation and the United States are to cut their nuclear inventories by some 90 percent in a decade to 3,000 to 3,500 warheads. Clearly, the magnitude of the reduction is impressive, even though the two countries will still retain over three-quarters of the world's stock of nuclear weapons. Besides, the reduction process is likely to continue. States with nuclear weapons capability (such as India and Pakistan) can hardly ignore, much less rebuff this trend, if they are to retain credibility in demanding from the nuclear powers "a genuine commitment with regard to complete nuclear disarmament within a timebound framework."⁵³

While continuing its posture in favor of nonproliferation in South Asia, Pakistan has supported proposals also for a nuclear limitation regime, globally and regionally. Limitation is preferable because it would prevent further buildup of nuclear arsenals and, at the same time, not suddenly detract from the security that nuclear deterrence provides. A proposal put forward by the Bush administration in 1990 to consider nuclear and security issues in South Asia at a conference of five states (China, Russia, the United States, India, and Pakistan) was accepted by Pakistan, but rejected by

India. In 1993, the Clinton administration revised the proposal to include France, Germany, Japan, and the United Kingdom, in a conference of nine, presuming that expanded participation would accommodate India's concern for balance. India, however, turned down this proposal as well. Apparently, India wants an assurance in advance that any limitation proposal would apply to all "geopolitically relevant" countries. Not only do its "security problems include China,"⁵⁴ its concerns extend to the presence of great power forces in the ocean to its south.

Faced with India's rejection of a regional approach to limitation of nuclear capabilities, Washington seems to have given up. Meanwhile, bowing to Congressional pressure for continuation of the Pressler law, it has reverted to the Pakistan-specific policy. It has even withdrawn the suggestion it broached in early 1994 for a one-time waiver of this "black law"⁵⁵ to facilitate the release of 38 F-16 aircraft and other equipment for which Pakistan has already paid a billion dollars. The U.S. Senate apparently wants Pakistan to roll-back its nuclear program and, in effect, to give up the nuclear option unilaterally. Pakistan can hardly afford to accept this in view of its security preoccupations.

While efforts to promote a regional restraints regime in South Asia appear to have reached a dead-end for the present, the global scene seems to have turned quite promising. The Comprehensive Test Ban Treaty (CTBT) is under active consideration at the United Nations Committee on Disarmament (CD) in Geneva. Also, in advance of the NPT Review and Extension Conference to begin in April 1995, nego-

tiations are to begin in the CD on a treaty on cutoff of production of fissile materials for nuclear weapons.

Pakistan supports the CTBT. A segment of political and military opinion⁵⁶ in the country has been advocating a test explosion in order to confirm its design of the nuclear device (as India did 20 years ago). However, the government has rejected the idea. Its willingness to renounce the test option illustrates a recognition that the qualitative limitation the CTBT will promote is in the country's best interest: it will make the development of a thermonuclear device by India more improbable.

Meanwhile, it has been reported that some nuclear powers want an exemption for low-yield hydronuclear explosions for improving the design of nuclear weapons. Such a loophole, although explained by the proponents on grounds of safety, could be exploited to further upgrade the yield of weapons. Most non-nuclear states, however, oppose any such exemption, and may agitate the issue at the NPT Extension Conference, linking the period of extension to the conclusion of the CTBT.

Prospects seem brighter for an international treaty to ban the further production of fissile materials for nuclear weapons. The idea was endorsed by the presidents of the Russian Federation and the United States in January 1994. None of the other nuclear powers appears to have plans for expansion of its nuclear arsenal. Non-nuclear states will no doubt support it enthusiastically. Only some of the weapons-capable states may have to be persuaded to accept the ban because their existing stockpiles of fissile materials may be insufficient for future contingencies.

For Pakistan to accept a ban on further production of fissile materials outside safeguards would involve an awkward decision. Its accumulation of highly-enriched uranium was estimated to be enough for about 10 devices when, under pressure, it discontinued further production in 1990. Any addition to it would be precluded if Pakistan signs the treaty freezing further production of weapons-grade material. Such a treaty could hinder the maintenance of a survivable deterrent, particularly if India continues to enhance its pre-emption and interception capacity by the development and deployment of missiles.

MISSILES: THREAT OF DESTABILIZATION

A plan for strategic arms limitation will be incomplete and unstable if it applies only to nuclear testing and production of fissile materials for weapons. A freeze on missiles should have to be an integral part of "three freezes."⁵⁷ The NPT envisaged "elimination from national arsenals of nuclear weapons and the means of their delivery"⁵⁸ as joint objectives. For that sound reason, the superpowers agreed to eliminate intermediate nuclear forces in Europe and reduce other missiles and aircraft even before they agreed to reduce nuclear warheads.

As force-multipliers, missiles enhance both offensive and defensive capability. Armed with nuclear warheads, missiles make deterrence more credible as they are more difficult to intercept than aircraft. Also, missiles greatly increase the first-strike capability of a state, degrading the survivability and therefore the credibility of the adversary's nuclear deterrent. What was suffi-

cient before would become insufficient after the missiles enter the scene, creating the dilemmas connected with threats to the survivability of a small nuclear force. The threatened state would be faced with the necessity of the enlargement and dispersal of its nuclear arsenal and launchers, making the safety and security of nuclear weapons and command and control over them more problematic and adding to dangers of custodial accidents and leakages.

Initially explained on grounds of technological modernization, India's extensive missile program⁵⁹ reflects its "desire to seek or enhance international prestige and be an important player in world developments."⁶⁰ India has an extensive program for the production of missiles. Apart from short-range, surface-to-air missiles like the Akash, (with aircraft interception capability at the 30- to 36-mile range), India has developed and tested the Prithvi, a surface-to-surface missile with a 90- to 150-mile range, which is already "deployable (and) should be in place by the end of this year (1994)," according to the director of the Indian missile program. The Indian armed forces have reportedly asked for 100 of these missiles, which will make "Pakistan's entire territory vulnerable to its lethal attack." Meanwhile, India is also developing the Agni, which has a range of 600 to 1,500 miles "or more if necessary."⁶¹ It was successfully tested in February 1994.

Equipped with inertial guidance and protected against electronic countermeasures as well as high re-entry temperatures, the Agni has been "developed mainly to strike China."⁶² It is capable of delivering nuclear warheads as far away as

Beijing, Jakarta, Riyadh, and Tehran. Another missile under development is a polar space launch vehicle with an intercontinental range capability.

Pakistan's missile development program is in its infancy, with insignificant material and manpower resources dedicated to the program. The indigenous Hatf missile is at present said to lack an adequate guidance system. However, in the absence of a limitation agreement, Pakistan would be obliged by its threat perception to try and develop an appropriate counter to Indian missiles. Meanwhile, it has procured a small number of short-range tactical missiles from China. The acquisition provided a basis for a possible understanding with India on missile limitation. A proposal was made by the United States in 1993 for Pakistan and India to defer deployment of missiles. Pakistan accepted the proposal. India, however, sidetracked it, and with reports of deployment of the Prithvi, this American initiative, too, appears to have lapsed. Meanwhile, the prospects for a South Asian regional freeze on missiles have become complicated as the Indian program is continuing to gather momentum and as India links its missile development to balancing China. The suggestion for a broader agreement involving a commitment by China not to deploy missiles in the vicinity of India will further confound the issue because the Chinese strategic weapons and deployments are connected to relations with nuclear superpowers.

Chances of a Pakistani-Indian agreement on nondeployment of missiles, bleak to begin with, were further undermined by the decision of the United States to impose sanc-

tions on China and Pakistan in September 1993 for the transfer of missiles in alleged violation of the MTCR. With the MTCR working to its advantage, India has no incentive to consider a bilateral restraints regime. While Pakistan is barred from importing missiles, India with its industrial and technological edge, can continue to produce more and bigger missiles. The one-dimensional policy of restricting sales can only accentuate the power imbalance and foster the tendency of more powerful states to resort to coercion and aggression. Such a policy is bound to operate to the detriment of peace and stability.

CONTAINING NUCLEAR DANGERS

Globalization of restraints by accelerating negotiations on the CTBT and the ban on further production of fissile materials for weapons would help limit capabilities of nuclear-capable states. It is not yet certain, however, that they will join the proposed treaty on fissile materials. It may be necessary to persuade them to do so. This, and the larger objectives of the reduction and elimination of nuclear weapons, may require a more flexible approach, calling for a review of the NPT itself and the adoption of some appropriate measure to associate the weapon-capable states with the NPT.

The NPT was pragmatic in conception. It did not ban or delegitimize nuclear weapons, but sought instead to freeze the number of nuclear weapons powers. Its success has been impressive but not total. The new reality arising from the acquisition of nuclear weapons capability by some NPT nonparties calls for the consideration of a new

pragmatic approach.

Nuclear weapons-capable states cannot be fitted into the NPT's strictly two-tier framework of nuclear powers and non-nuclear states. India, Israel, and Pakistan claim they do not possess nuclear weapons. If they did, they could not be admitted to the treaty because it limits nuclear power status to the five states which had declared their nuclear status before the treaty was negotiated. Nor are they prepared to join as non-nuclear states because that would oblige them to place not only all their nuclear facilities but also their existing stocks of fissile materials under IAEA safeguards. This would virtually preclude their retention of the nuclear option—a consequence that is unacceptable to them at present.

Any hope that the holdout states will accede to the NPT appears quite forlorn at present. But, that is not to say they are insensitive to the dangers inherent in the proliferation of nuclear weapons. While constrained by perceived threats to their security to develop nuclear deterrence, these states should be amenable to persuasion to assume many of the NPT's nonproliferation restraints. Already they are doing so voluntarily. But for assurance and reliability, international commitments would be more desirable. Such commitments would also be more efficacious than country- or region-specific efforts to enforce discipline currently pursued by the United States. It would be useful, therefore, to consider whether a uniform treaty arrangement can be devised to attract the holdout states to commit themselves to observance of most (if not all) of the obligations specified in the NPT.

Protocol to NPT for Nuclear-Capable States

An arrangement to commit nuclear weapons-capable states to observance of nonproliferation restraints could be made through a protocol to the NPT or by a separate treaty. Amending the NPT, though possible under the treaty, would be a cumbersome and probably an impractical undertaking. Even such a thought is anathema at a time when the attention of most of the nuclear weapon powers is focused on obtaining an indefinite and unconditional extension of the treaty. The proposed protocol would call for no change in the NPT. It would be a separate mechanism for associating its signatories with the objectives of the NPT and requiring them to assume many of its obligations, thus achieving the purpose of extending nonproliferation restraints.

The suggested protocol to the NPT could require the signatories to undertake to advance the fundamental objective of the treaty, namely to avert the danger of a nuclear war, prohibit the transfer of fissile materials and technology for nuclear weapons, facilitate the application of IAEA safeguards to existing and future nuclear facilities, and, in addition, ban nuclear explosions and further accumulation of fissile materials for weapons even before treaties on these subjects, which are currently under discussion, enter into force. Specifically the protocol should include the following provisions:

- the obligation not to transfer nuclear weapons technology⁶³;
- the obligation not to receive nuclear weapons technology⁶⁴;
- the obligation to accept safe-

guards on existing and future nuclear facilities (but not on existing stockpiles of fissile materials)⁶⁵;

- the right to receive technology for peaceful uses of nuclear energy⁶⁶;

- the obligation not to conduct any nuclear explosions whatsoever⁶⁷; and

- the obligation to reduce nuclear weapons capabilities.⁶⁸

The advantages of the protocol in the context of nonproliferation are obvious. It would effectively commit the protocol signatories to capping their capabilities. The objective of nondissemination of nuclear explosion technology would be guaranteed. The commitment against testing would make it very difficult for them to produce thermonuclear weapons, as well as limit the scope for sophistication of design and miniaturization of explosive devices. The obligation to reduce weapons capability would bring them in line with nuclear weapons states as they proceed with disarmament. Generally, association with the NPT would diminish the threat that some of them may abandon ambiguity and declare themselves as nuclear weapons states, although they would retain the option to do so in the event of a crisis. The assumption of the proposal is that they are not willing at present to renounce that option.

The protocol, like the NPT itself, would testify to the wisdom of pragmatism. Just as the treaty succeeded in restraining the non-nuclear weapon parties from acquiring nuclear weapons, the protocol would preclude the further expansion of already-acquired capabilities. To that end, signatories to the protocol would assume obligations they do not at present have.

The protocol should not be con-

sidered an acknowledgment of the NPT's failure. The failure or success of a treaty can be correctly assessed with reference to the actions of the parties. In that light, the NPT has been eminently successful. None of the non-nuclear weapon parties to the treaty has proceeded to develop nuclear weapons. A rhetorical point is made by some, pointing to Iraq and North Korea, which, though parties to the NPT, allegedly did not abandon the ambition to produce nuclear weapons. Without going into the substance of the allegation, it can be pointed out that apart from the ruling assumption in international relations requiring parties to fulfill treaty obligations, the NPT contains elaborate provisions for enforcement action by the U.N. Security Council.

Equally, it would be a mistake to consider the protocol as a device for the legitimization of the *de facto* emergence of additional nuclear weapons powers. Apart from the questionable presumption that the *de facto* emergence is illegitimate, an objective view cannot ignore the fact of the coexistence of the NPT with nonparties that have the capability to make nuclear weapons. The protocol will not create any new nuclear weapons-capable states. Secondly, the apparent anomaly will lose its piquancy because the protocol will serve to limit the weapons-making capabilities of the signatories, reducing the nuclear dangers. That indeed is a concrete merit of the proposal.

For the nuclear weapons-capable states, the assumption of obligations under the proposed protocol would be balanced by advantages more concrete than the vicarious satisfaction of association with the NPT and the resultant ending of their isola-

tion at a time when limitation and reduction of nuclear weapons have become dominant trends. The assumption is that they would become entitled to the benefits of Article IV of the NPT—the recognition of their right to receive materials and technology for peaceful uses of nuclear energy. The restrictions at present imposed by the industrialized countries on the transfer of technology for power reactors and other peaceful uses would be eliminated. In addition, cooperation in improving safety at existing nuclear plants should be a significant consideration for India: its nuclear power plants are reported to suffer from radiation leakages and other defects.

In addition to the main advantage of stabilizing the already-acquired capabilities of its signatories at the present level, the protocol would keep open the possibility that these states might in the future become parties to the NPT and formally accept a non-nuclear status. Of course, the prospect of such an evolution will depend on improvements in their security environment. It will depend also on whether a new international order can be fostered in which less powerful states do not remain relegated to “a gray area in a security void, a nowhere land where anything can happen.”⁶⁹

Security Guarantees

Nonproliferation efforts might be more effective if the Security Council were to establish a pattern of prompt and effective collective action to frustrate aggression. Such a demand-side strategy would assuage apprehension of states faced with real threats to their security, neutralizing the urge to acquire independent deterrence. This urge has

frustrated the supply-side strategy: restrictions on the transfer of nuclear materials and technology have failed to dissuade insecure states from the pursuit of nuclear weapons. Even economic sanctions applied on a country-specific basis have failed to coerce targeted states.

The "positive" assurance contained in Security Council resolution 255 of 1968 has been considered insufficient by non-nuclear states. Incorporating statements of the Soviet Union, the United Kingdom and the United States, declaring their intent to seek immediate Security Council action to provide assistance to a victim of an act or threat of aggression with nuclear weapons,⁷⁰ the resolution has been ridiculed as "a mere promise to convene a Security Council meeting."⁷¹ Any proposal for action by the Security Council would be subject to veto; the promise of assistance does not apply if the aggressor, though a nuclear power, uses only conventional weapons; and, furthermore, the assistance, even if provided, might be a mere token. Understandably, non-nuclear states have sought more effective guarantees.⁷²

The negative assurance is considered even less satisfactory. Designed to reassure non-nuclear weapon parties to the NPT against the use or threat of use of nuclear weapons, the assurance contained in a resolution of the General Assembly, is rather "convoluted."⁷³ It excludes use of nuclear weapons only against those non-nuclear states which are not allied or associated with a nuclear power. A more categorical assurance of non-use against non-nuclear states was not acceptable to NATO countries with their doctrine of flexible response. Now that the threat of an attack by non-

nuclear East European states has disappeared, the Western powers may be prepared to reconsider the "negative" assurance formulation. Meanwhile, the Russian position has changed; apparently perceiving possible threats in the future from non-nuclear neighbors, Moscow is now opposed to the "no first use" concept.⁷⁴

Evidently, the "no first use" concept is difficult to translate into a precise principle acceptable to all nuclear powers. Only China has made an unqualified declaration: it will "never" be the first to use nuclear weapons; the assurance applies to any conflict with any state, nuclear or non-nuclear. The other nuclear powers have not all been agreeable to give a categorical assurance of non-use even to non-nuclear states. In any case a declaration of this type "can never be considered binding in case of war."⁷⁵ In the event of a looming defeat, the doctrine of "defensive last resort" is likely to govern decisions.

Both the "positive" and "negative" security assurances will not assuage the anxiety of states vulnerable to acts or threats of aggression with conventional weapons from more powerful states that may or may not possess nuclear weapons. The urge to maintain independent deterrence capability will be suppressed only when and if a reliable collective security system has been devised by the world community.

PROSPECTS

Nuclear weapons-capable India, Israel, and Pakistan are no more likely than the nuclear powers to agree to dispossess themselves of their acquisitions; probably much less so because of the sacrifices they

have had to make to achieve this capability in the face of pressures and penalties, perceiving as they do persistent threats to their security and even to their political independence. For them, it is no longer a question of renouncing the weapons option; the real issues now are whether to limit capabilities or expand them, and whether or not to continue the policy of nonweaponization. In making their decisions, Pakistan and India will no doubt consult their own interests and the balance of costs and benefits.

The security environment will naturally be a key factor. Unless the threat perceptions undergo a transformation or a more reliable collective security system emerges, the logic of an independent deterrent will remain valid. The nuclear-capable states continue to consider the costs acceptable. In the short term, only fine-tuning may be expected in order to improve the efficiency of the policies, taking into account the changes in the security environment.

The existing policies of restraint will be more likely to continue, and might even be reinforced, if the sponsors of the NPT act to persuade the weapons-capable states to undertake specific obligations on limitation and permanent members of the Security Council to strengthen assurances of effective action in the event of aggression or coercion with nuclear or conventional forces. It is instructive to remember that the superpowers were successful in persuading a number of potential nuclear weapons states in Europe and East Asia to renounce the option in exchange for security umbrellas under multilateral alliances or bilateral defense pacts.

Both the motivation and capacity

of the Western powers to influence the nuclear policy evolution in South Asia appear to have declined. They cannot fail to note that attainment of nuclear capabilities by Pakistan and India has helped promote stability and prevented dangers of war despite aggravation of tensions. This refutes the perception that South Asia is "the area of greatest near-term danger" with "perhaps the most probable prospect for future use of weapons of mass destruction."⁷⁶ Self-interest itself should persuade Pakistan and India to exercise due restraint. Continuance of responsible conduct is desirable in order to gain greater tolerance of their nuclear policies by the Western powers. There is no substantive reason for these two countries to be treated differently from Israel.

The United States appears to have accepted the reality of the nuclear situation in South Asia. Acting pragmatically, Washington has redefined its nonproliferation policy to give first priority to the capping of weapons-oriented nuclear programs, relegating reduction and elimination of nuclear capabilities to subsequent stages. The objectives of the new policy have a better chance of success in the long-run, even if the policy appears for the present to be in a dormant phase. As a global trend, the limitation of nuclear capabilities also has intrinsic merits. The quantitative requirements of a credible nuclear deterrence are finite, and the costs and dangers of further expansion of stockpiles are both too great and unnecessary. Similarly, conversion of nuclear capabilities into weapons may continue to be deferred. So long as the adversaries are aware that weaponization can be accomplished in a short time during an emergency, ac-

tually doing so does not significantly enhance the deterrent value.

Self-interest, ever the most potent factor in determining the policy of states, may be expected to continue to impel nuclear restraint in Pakistan and India. The trend could be fostered through a globalization of restraints and by linking Pakistan and India to a nondiscriminatory network. Limitation of nuclear capabilities may take place automatically, but reduction may be achievable only through the strengthening of collective security. Meanwhile, the nuclear policies of Pakistan and India are rational, have proven to be beneficial in promoting security and stability, and command solid consensus at home. They are, therefore, unlikely to respond to arbitrary external pressures.

¹ An amendment to the U. S. law on foreign assistance adopted in 1985, which forbids economic aid or military sales to Pakistan unless the president certifies that (a) Pakistan does not possess an atomic weapon, and (b) the provision of aid will dissuade Pakistan from acquiring such a weapon.

² These include a retrospective study of the 1986-87 "Brass Tacks" crisis by Stephen Cohen of the University of Illinois, Urbana (forthcoming), and studies of the 1990 crisis by Michael Krepon of the Henry Stimson Center, Washington, D. C. 1994, and by Shireen Taher-kheli of Princeton University, presented as a draft at a conference in Bellagio, September 1994.

³ "If India has the bomb, that does not mean we are going to be subjected to nuclear blackmail," said Zulfikar Ali Bhutto, on August 13, 1966. See Stanley Wolpert, *Zulfi Bhutto of Pakistan* (New York: Oxford University Press, 1993), p. 112. On another occasion, Bhutto said: "[I]f India acquires nuclear status, Pakistan will have to follow suit...."

⁴ Khalid Hasan, press secretary to Zulfikar A. Bhutto, reportedly made this disclosure according to a documentary by the British Broadcasting Corporation. See Steve Weissman and Herbert Krosney, *The Islamic Bomb* (New Delhi: Vision Books, 1983), p. 18.

⁵ Jawaharlal Nehru, *Selected Works*, Second Series, Vol. 5 (Delhi: Oxford University Press, 1986), p. 27. Speaking in the Indian Constituent Assembly on April 6, 1948, Nehru said: "Of

course if we are compelled as a nation to use it [i.e. atomic energy] for other purposes, possibly no pious statements of any of us will stop the nation from using it that way."

⁶ The dream of becoming a world power is conjured up again and again in the pronouncements of Indian leaders: (1) In his welcoming address, the chairman of the 1895 annual session of Indian National Congress, Rao Bahadur V. M. Bhide said: "[India is] destined under Providence to take its rank among the foremost nations of the world." A. Moin and Shaheda Zaidi, eds., *The Encyclopaedia of the Indian National Congress*, Vol. II (New Delhi: S. Chand & Co.) p. 506; (2) In a letter to Georges Clemenceau, President of the Paris Peace Conference, 1919, the Congress-appointed delegate, Bal Gangadhar Tilak said, "With her vast area, enormous resources, and prodigious population, she [i.e. India] may well aspire to be a leading power in Asia." R. Palme Dutte, *India Today*, (London: Vicor Gollance, 1940), p. 549.

⁷ Nehru, *op. cit.*, Vol. 1, p. 406: "India...is the pivot of Western, Southern and Southeast Asia."

⁸ Nehru, *op. cit.*, Vol. 3, p.133. Speaking on August 9, 1947, Nehru said: "The doctrine expounded by President Monroe had saved America from foreign aggression for nearly a hundred years...now the time has come when a similar doctrine must be expounded with respect to Asia countries."

⁹ Joel Ullom, "Enriched Uranium versus Plutonium: Proliferant Preferences in the Choice of Fissile Material," *The Nonproliferation Review* 2 (Fall 1994), pp. 5-6.

¹⁰ For more on these issues, see Leonard S. Spector with Jacqueline R. Smith, *Nuclear Ambitions: The Spread of Nuclear Weapons 1989-1990* (Boulder, Colo.: Westview Press, 1990), pp. 90, 109.

¹¹ Gary T. Gardner, *Nuclear Nonproliferation* (Boulder, Colo.: Lynne Rienner Publishers, 1994), p. 45.

¹² J. N. Parimoo, report from Washington, *The Times of India News Service*, September 17, 1984. Referring to news reports published in *The Washington Post* and *The New York Times*, Parimoo reported that "U.S. intelligence agencies recently briefed a senate subcommittee...that military advisers had suggested to [Indian Prime Minister] Mrs. Indira Gandhi that to prevent Pakistan from making the bomb, India should launch a preemptive strike on the Pakistani nuclear facility at Kahuta." *The Times of India* published the report on September 18, 1984, under a slanted headline, "U.S. false alarm to Pak of Indian pre-emptive attack." See also, H.K. Dua, "India concerned over US signal to Pak on Jaguar deployment," *The Indian Express*, New Delhi, September 19, 1984.

¹³ A Pakistani spokesman reiterated on August 24, 1994, that Pakistan has the capacity to produce nuclear weapons but has not actually done so. Former Prime Minister Nawaz Sharif's statement that Pakistan possesses the atomic bomb was described, also by a U.S. State Department

official, as having something to do with domestic politics. *Reuters/AP* dispatches of August 23 and 24, 1994.

⁴ Lewis A. Dunn, *Containing Nuclear Proliferation*, Adelphi Paper No. 263 (London: International Institute for Strategic Studies, 1991), p. 17.

¹⁵ *Ibid.*

¹⁶ Spector, *op. cit.*, pp. 68-69.

¹⁷ Indian spokesmen maintain that plutonium will be used for fabricating mixed-oxide (MOX) fuel for a breeder reactor and possibly also for the Tarapur reactor for which supply of enriched uranium fuel was cut off first by the United States and now by France. So far, however, India lacks a fabricating plant for MOX fuel. Even when such a plant is established, it is unlikely to use the weapons-grade plutonium.

¹⁸ For a list of India's nuclear plants, see Spector, *op. cit.*, pp. 83-87. Unsafeguarded plants include the Canadian and Dhruva research reactors commissioned in 1960 and 1985, with weapons-grade plutonium production capacity of 14 and 30 kilogram per year respectively, plutonium separation plants at Trombay for metallic fuel, at Tarapur for oxide fuel, and at Kalpakkam for fuel from power reactors, and two 220 MWe power reactors each at Madras, Narora, and Kakrapar.

¹⁹ Congressional Research Office, *Conventional Arms Transfers to the Third World, 1986-93* (Washington, D.C.: U.S. Government Printing Office, 1994).

²⁰ Annual report of the U.S. Department of Defense presented to Congress in support of the security assistance program for 1995.

²¹ Seymour M. Hersh says in a report in *The New Yorker* ("On the Nuclear Edge," March 29, 1993, p. 56): "the world was on the edge of a nuclear exchange" in May 1990 when Robert Gates was sent to Pakistan and India to defuse the crisis. This brink-of-nuclear-war characterization was described as "exaggerated" by National Security Adviser Brent Scowcroft ("Did India and Pakistan Face Atomic War? Claim is Debated," *The New York Times*, March 23, 1993). Perhaps to dramatize the situation Hersh also asserted: "The American intelligence community . . . had concluded by late May that Pakistan had put together at last six and perhaps as many as ten nuclear weapons" (*loc. cit.*, p. 56). This claim, too, was not confirmed by Bush administration officials contacted by *The New York Times*. That a crisis did exist and that there was a danger of a conventional war with the "likelihood" of escalation to the nuclear level was not disputed by them, however.

²² General M. Aslam Beg, *Indian and Pakistani Security Perspectives*, (Rawalpindi, Pakistan: Foundation for Research on National Development and Security, 1994), p. 6.

²³ Krishnaswami Sundarji, "Changing Military Equations in Asia: The Relevance of Nuclear Weapons," p. 9. This paper was prepared for the Indo-American Seminar on Non-Proliferation and Technology Transfer, sponsored by the Center for the Advanced Study of India and held at the

University of Pennsylvania from October 3-6, 1993.

²⁴ Beg, *op. cit.*

²⁵ Admiral J. G. Nandkarni quoted, with reference to *Telegraph*, Calcutta, March 23-25 1990, by Mushahid Hussain, "Indian Power Projection in South Asia and the Regional States' Reactions," in Hafeez Malik, ed., *Dilemmas of National Security and Cooperation in India and Pakistan* (New York: St. Martins Press, 1993).

²⁶ Shekhar Gupta, W.P.S. Sidhu, and Kanwar Sandhu, "A Middle-Aged Military Machine," *India Today*, April 30, 1993, p. 44.

²⁷ Dunn, *op. cit.*; Steven E. Miller, "The Case Against a Ukrainian Deterrent," *Foreign Affairs* 72, (Summer 1973); Scott D. Sagan, "The Perils of Proliferation," *International Security* 18 (Spring 1994) and others listed by Sagan, p. 67, footnote 5.

²⁸ Kenneth N. Waltz, *The Spread of Nuclear Weapons: More May Be Better*, Adelphi Papers No. 171 (London: International Institute for Strategic Studies, 1981), p. 3; John J. Mearsheimer, "The Case for a Ukrainian Nuclear Deterrent," *Foreign Affairs* 72 (Summer 1973); Barry R. Posen, "The Security Dilemma and Ethnic Conflict," *International Security* 35, (Spring 1993) and others listed by Scott D. Sagan, himself an opponent, in Sagan, *op. cit.*, p. 66, and footnote 4 on p. 67.

²⁹ Waltz, *op. cit.* p. 3.

³⁰ S. Rashid Naim, "Aadhi Raat Ke Baad (After Midnight)," in Stephen P. Cohen, *Nuclear Proliferation in South Asia* (Boulder, Colo.: Westview Press, 1991).

³¹ Wolfgang Panofsky and George Bunn, "The Doctrine of the Nuclear-Weapon States and the Future of Non-Proliferation," *Arms Control Today* (July/August, 1994), p. 6. This doctrinal surmise is based on *Strategic Views from the Second Tier: The Nuclear Weapons Policies of France, Britain and China*, (San Diego: University of California Institute on Global Conflict and Cooperation, 1994).

³² Mearsheimer, *loc. cit.*, p. 50 et seq.

³³ The circumstances could not possibly have been worse," says Golda Meir in *My Life* (New York: G. P. & Putnam Sons, 1975), p. 427, when the Israeli forces were suffering heavy casualties and the Egyptians advance into the Sinai during the first three days of the war. According to "How Israel Got the Bomb," *Time*, April 12, 1976, p. 39, she gave Defense Minister Moshe Dayan permission to activate Israel's Doomsday weapons. (The Israeli panic appears to have been premature. The war was still confined to occupied Arab territories, with no evidence yet of a threat to Israel's integrity and existence.)

³⁴ Robert S. McNamara, *The Changing Nature of Global Security And Its Impact On South Asia* (Washington, D.C.: Washington Council on Non-Proliferation, 1992), p. 7.

³⁵ Seymour M. Hersh, *The Samson Option* (New York: Vintage Books, 1993), pp. 242-243. Zalman Shapiro was, according to Hersh, "an active member of the Zionist Organization of America who organized a publicly owned

nuclear fuel processing firm...."

³⁶ Davenport, *et. al.*, *The Plumbat Affair* (London: Andre Deutsch, 1978). The book describes at length how an Israeli agent in West Germany ordered the uranium ore on behalf of an Italian chemical company in Milan, the approval of the sale by EURATOM, its shipment in 560 drums marked PLUMBAT aboard a ship which was purchased with Mossad funds, the transfer of the material to an Israeli vessel in the Mediterranean after a mock hijacking, and the sweeping of the affair under the rug by EURATOM. For a summary reference to this affair, see Hersh, *op. cit.*, p. 180-181.

³⁷ *International Herald Tribune*, October 7, 1988, p. 6, report entitled "3 Scandals Oslo Must Put to Rest," by Gary Milhollin, Director of Wisconsin Project on Nuclear Arms Control, and *Der Spiegel* October 17, 1988. In 1959, Norway permitted export of 20 tons of heavy water directly to Israel for use in the Dimona reactor for peaceful purposes. Again one ton was exported to Israel in 1970 through an intermediary. In 1983, Norway authorized sale of 15 tons of heavy-water through the West German firm of Alfred Hampel to Romania, which was airlifted instead to Switzerland and thence to Bombay. Hampel was alleged also to have exported 70 tons of heavy-water from China to Argentina and India.

³⁸ Waltz, *op. cit.*, p.11.

³⁹ Miller, *loc. cit.*, p. 73.

⁴⁰ Waltz, *op. cit.*, p. 15.

⁴¹ *Ibid.*, p. 22. The remark was made by former U.S. Defense Secretary Harold Brown.

⁴² McNamara, *op. cit.*, p. 44.

⁴³ Robert S. McNamara, *Blundering Into Disaster* (New York, NY: Pantheon Books, 1986).

⁴⁴ Peter Gray, *Briefing Book on the Nonproliferation of Nuclear Weapons* (Washington, D.C.: Council for a Livable World Education Fund), p. 7. Also figures about the nuclear arsenals of other countries are taken from this source.

⁴⁵ *Ibid.*, p. 8.

⁴⁶ Rodney W. Jones, *Small Nuclear Forces and U.S. Security Policy* (Lexington, MA: Lexington Books, 1984), pp. 243-256.

⁴⁷ Mitchell Reiss, *Without the Bomb: The Politics of Nuclear Nonproliferation* (New York: Columbia University Press, 1988), p. 28.

⁴⁸ Gupta, *et al.*, *loc. cit.*

⁴⁹ *Ibid.*

⁵⁰ McNamara, *op. cit.*, p. 87.

⁵¹ Keith Suter, *Visions for the 21st Century*, p. 28.

⁵² Paul Nitze, ("Is It Time To Junk Our Nukes?," *The Washington Post*, January 16, 1994) recommends that the United States should convert "its principal strategic deterrent from nuclear weapons to a more credible deterrent based at least in part upon smart conventional weapons... (because they) are safer, cause less collateral damage and pose less threat of escalation than do nuclear weapons."

⁵³ Declaration of the Nonaligned Summit, 1992.

⁵⁴ Thomas W. Lippman, "U.S. Efforts to Curb Nuclear Weapons in Peril as India Insists on Lim-

its for China," *The Washington Post*, July 7, 1994, p. A12, quoting a senior Indian official.

⁵⁵ This epithet has been used by Pakistani commentators because of the Pressler law's discriminatory targeting of Pakistan for penalties.

⁵⁶ Prime Minister Benazir Bhutto has said: "I conducted a poll [in Pakistan] and 90% thought Pakistan should detonate a nuclear device. It is a dangerous situation. This should be recognised and rewarded." Interview with *Times* of London, November 26, 1994.

⁵⁷ Jeremy J. Stone, "Four Civilizations Gently Collide at Arms Control Conference," *Federation of American Scientists Public Interest Report* 47 (March/April, 1994).

⁵⁸ Preamble to NPT.

⁵⁹ Rai Chengappa, *et. al.*, "The Missile Man," *India Today*, April 15, 1994, pp. 38-45; Special Reports on missiles and interviews with the director of the missile program by Rai Chengappa, and interviews with the chief of army staff by B.C. Joshi, and with chief of air staff by S. K. Kaul.

⁶⁰ The phrasing in the paragraph is based on a draft paper contributed by an Indian scholar at the Shanghai Workshop in February 1994, which was "Not for Citation." For report on the Workshop, see Stone, *loc. cit.*

⁶¹ Chengappa, *loc. cit.*, p.38, quoting A. Kalam, head of India's 10 billion rupees (\$330 million) defense research program.

⁶² *Ibid.*, p. 39.

⁶³ Accordingly Article I of NPT, which defines the obligations of nuclear weapon states, could be modified for protocol signatories to undertake "...not in any way to assist, encourage, or induce any non-nuclear-weapon state to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices."

⁶⁴ Accordingly, Article II which is applicable to non-nuclear weapon states, could be modified for protocol signatories to undertake: "... not to receive the transfer from any transferor whatsoever of nuclear weapons or other nuclear explosive devices or of control over such (transferred) weapons or other nuclear explosive devices;... and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices."

⁶⁵ Accordingly, Article III which is applicable to non-nuclear weapon states could be modified so that each protocol signatories "1...undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency (on all nuclear facilities whether existing at the time of the conclusion of the agreement or established subsequently)...with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices...."

"2...undertakes not to provide: (a) source or special fissionable material, to any nonnuclear-weapon state for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards...."

⁶⁶ Accordingly, Article IV, which applies to all NPT parties, should be included in the protocol so that its signatories, too, will have the right "to participate in the fullest exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy...."

⁶⁷ Article V provides for sharing of potential benefits from any peaceful applications of nuclear explosions. The "potential" has proved to be illusory. Therefore no reference should be necessary to peaceful explosions in the protocol. Instead its signatories could be expected to commit themselves to refraining from any nuclear explosions whatsoever, unless the CTBT has meanwhile come into force, making reference to the matter redundant. The preamble to the NPT recalls the determination expressed by the parties to the 1963 Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water in its Preamble to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end.

⁶⁸ Article VI, relating to cessation of the nuclear arms race and disarmament, could be modified so that each protocol signatory "...undertakes to pursue negotiations in good faith on effective measures relating to (limitation and reduction of its nuclear weapons capability, in parallel with negotiations on) cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

⁶⁹ President Lech Walesa is quoted to have used this eloquent phrase while pleading for Poland's admission to NATO. *The Washington Post*, July 8, 1994, lead editorial.

⁷⁰ The statements promise "to seek immediate Security Council action to provide assistance, in accordance with the Charter, to any non-nuclear-weapon State party to the treaty on the non-proliferation of nuclear weapons that is a victim of an act of aggression or an object of threat of aggression in which nuclear weapons are used."

⁷¹ Washington Council on Non-Proliferation, *Nuclear Arms Control: The U.S. and India* (Washington, D.C.: 1993), p. 24.

⁷² Dunn (*op. cit.*, p. 43) contains a comprehensive discussion on lessening the technical "propensity to war."

⁷³ Washington Council on Non-Proliferation, *op. cit.*, p. 25.

⁷⁴ Panofsky and Bunn, *op. cit.*, p. 6, based on remarks by Russian Defense Minister Pavel Grachev on November 3, 1993.

⁷⁵ *Ibid.*

⁷⁶ Robert A. Manning, *Back to the Future: Toward a Post-Nuclear Ethic, the New Logic of Non-proliferation* (Washington, D.C.: Progressive Foundation, 1994), p. 15. Manning also recalls CIA Director James Woolsey's statement: "The arms race between India and Pakistan poses perhaps the most probable prospect for future use of weapons of mass destruction, including nuclear weapons. Both nations could on short notice assemble nuclear weapons."