PAKISTAN'S NUCLEAR DETERRENCE: POLITICAL AND STRATEGIC DIMENSIONS

A. Z. HİLALİ

A.Z. Hilali is a Research Scholar at the Centre for Security Studies, Department of Politics at the University of Hull, UK.

Security is basically a relational phenomenon and an ambiguous concept.1 It is a broader idea than power, and it has the useful feature of incorporating much of the insight, which derives from the analysis of power.2 The principal dimension of security is maintenance of a people's homeland, or even of their territories beyond the seas. It also means the maintenance of the world's respect for them, the maintenance of their economic interests and core national values.3 In this context, security relates not only to the ultimate desire that the state survive, but also to the desire that it should live without serious external threat.

THEORETICAL FRAMEWORK

In his theory of international politics, Kenneth Waltz identified that states can balance against threats. States can balance externally, through alliances, or internally, through military preparations.4 Both types of balancing incur costs; alliances bring commitments and the threat of unwanted entanglement, while military preparations divert scarce resources from other important projects. In the modern world, states operate in a "self-defence" system in which threats to national security are omnipresent. Most of the 'weak' and 'small' states, in particular, have difficulties meeting challenges from powerful neighbours, since such states are by definition limited in their ability to build sizeable and well-equipped military machines.5 Barry Buzan also described the problems of small and weak states and noted that when the state is strong, national security 'can be viewed primarily in terms of protecting the components of the state from outside threat and interference'6. In other words, strong states with mature institutions, well-defined territories and strong national identities may well promote the security of their people and be able to counter any external threat.7

In contemporary times, the ultimate balance is nuclear weapons. States can either seek nuclear guarantees from established nuclear powers, or they can construct their own nuclear weapons. In this regard, Michael Handel analyses the place of weak states in the international system, claiming that a few small states reconcile themselves to "defensive nihilism", the abandonment of hope to establish an effective defence.8 A few others, such as Israel and Pakistan, adopt a posture of self-reliance, attempting to meet security challenges without outside help. This is called internal balancing; it describes the way a state aggregates power. Some small states align their military capability with that of great powers to strengthen their position vis-à-vis rivals. The mobilisation of other states' resources in confronting external threats is termed external balancing.9 Dependency, however, can constrain a state's power and freedom of action. In many cases, a weak and small state's scope for manoeuvre is also constricted by the prevailing structure of the international system and its regional subsystem. Most small states attempt to devise a strategic doctrine based on an idea of external and internal balancing in order to maximise military power and the freedom to use it.

NUCLEAR WEAPONS AS A VIABLE DEFENCE

Karl von Clausewitz defined war as the continuation of policy by other means.10 This is a universally recognised concept and more or less basic to all military operations. By extension, nuclear weapons can be defined as warfare by other (non-lethal) means. One of the most brilliant and thoroughly developed discussions on nuclear proliferation comes from the modern analysts Gaullist and Kenneth Waltz. Both scholars contend that the traditional utilitarian relationship between military force and political behaviour by states was turned fundamentally on its head by the development of nuclear weapons. According to Gaullist's perception of deterrence strategy and in existential deterrence thinking, proliferation optimism is based on the premise that states behave with robust circumspection when confronted with even a modicum of nuclear risk.11 In this regard, Kenneth Waltz argues, "the measured spread of nuclear weapons is more to be welcomed than feared".12 Waltz believes that "the gradual spread of nuclear weapons will promote peace and reinforce international stability because nuclear weapons induce caution between adversaries who possess them or more may be better".13

Critics of the nuclear option argue that, given their relatively small size and the improbability of their being deployed in truly survivable basing modes, newly acquired nuclear forces are likely to be more vulnerable to destruction than those of long standing nuclear powers, and so are more likely to be used early in a crisis to escape pre-emption and or to execute a pre-emptive attack on the similarly vulnerable forces of an adversary. In addition, security and command and control arrangements for new nuclear forces are likely to be primitive compared to those for the US and Russian nuclear weapons. Consequently, there is a great risk that they could be stolen, used without authorisation, or launched by accident. Furthermore, many of the nations that are seeking a nuclear weapons capability have experienced internal strife and their governments remain vulnerable to political instability. Despite these arguments, Martin Van Creveld alleges that 'weak' and 'small' states which have a small military strength cannot face a big threat and so tend to be extremely cautious with regard to the nuclear weapons they possess or with which they are faced –the proof being that, to date, in every region where these weapons have been introduced, large-scale interstate warfare has disappeared.14

Nuclear weapons are incomparably more devastating than conventional military power. They reduce the probability of a major global war because nuclear weapons are not vulnerable. Moreover, nuclear weapons can make it possible to compress the fury of war without the collapse of the state. They can change the speed; control and the sequence of events and can provide protection from the threat of military defeat and total destruction.15 Hans Morgenthau has observed that nuclear weapons can reduce the conventional threats posed by adversaries and increase states security in an anarchic world.16 Otto Hintze recognised that the militarism of European states arose from the necessity of maintaining large standing armies because these states were in constant security competition with their neighbours. The development of nuclear weapons makes a state secure from external attack.17 Thus, militarism may be reduced or eliminated as the military of the state recognises that it is secure from external threat in the presence of nuclear weapons.

Optimists thus view the spread of nuclear weapons as a positive development, so much so that some even advocate its selective abidance by current nuclear powers. Nuclear proliferation outside this context, however, would occur in regions of the world where politico-military conditions are actually prone to conflict. In many Third World countries, which are traditional

enemies, and in close proximity, mutual disputes and conflicts are endemic and quickly come to engage critical interests. One strategist contends, "Leaders of the Third World may be ready to risk nuclear confrontation, irrespective of high levels of nuclear damage, in pursuit of their national interest or objectives."18 Of most concern is the fear that inter-state conflict in Third World states will also socialise states so that they consider military force, even nuclear weapons, in terms of waging war, rather than in terms of deterrence. Moreover, the new "rogue nations" are not willing to share the sentiments of so many in the West that nuclear weapons have no value. Some states find nuclear weapons extremely attractive for their security. The main attraction of nuclear weapons is that they can limit the risk of aggressively minded states making conventional attacks on their small and weak neighbours. It seems equally clear that defensively minded states cannot compete against powerful states and only nuclear weapons can provide a strong guarantee that a state will not be put in a position of losing everything, even at the hands of an aggressor, which also has nuclear weapons.

PAKISTAN'S SECURITY DILEMMA

Since Pakistan's establishment, its leaders have been convinced that for most practical purposes India is a Hindu polity determined to destroy the separate cultural and political identity of the Muslim community in the subcontinent, and that in pursuing this goal it has sought to undo Pakistan ever since the latter's independence. The more optimistic among them believe that even if India does not want to annihilate Pakistan formally and legally, it intends to do so effectively, by making the country into a satellite. The roots of this suspicion lie partly in the subcontinent's lengthy history and partly in an array of intractable ideological, territorial, and political issues. Several political analysts view the ideological non-congruity between Islamic Pakistan and secular India as the major cause of their problems.

The tension between the two states took a tangible form when they engaged in bloody conflict over Kashmir, an issue which has continued to be a bone of contention ever since. This dispute has been the root cause of three wars (1948, 1965 and 1971) and hostility between the two nations. Now, neither side can afford to give in: India, because allowing secession to take place (a possibility apparently contemplated by Nehru during the early years) might well prove the first step toward disintegration; Pakistan, because of intense popular pressures and its logic that Muslim majority states located in territories contiguous to Pakistan should accede to Pakistan. Thus, neither country has been willing to compromise over Kashmir, partly for strategic reasons, but mainly because this would threaten the legitimating ideology on which each modern state was founded. Moreover, being much the largest power in South Asia, India has always sought to exclude external players, seeking to create instead a series of bilateral agreements with each of its neighbours separately. Conversely, Pakistan –as the weaker party– accuses India of "hegemony" and, by way of a counter weight, has sought and received outside assistance to counter Indian military superiority.

WHY PAKISTAN NEEDS WEAPONISATION

Pakistan's nuclear preparation and doctrine have been based on fairly clear and straightforward means to forge a credible deterrent to counter India. In pursuit of this aim, Pakistan has been forced to shift from a policy of external balancing to one of internal balancing. Throughout its history, Pakistan's foreign policy has been dominated by the determination to incorporate Kashmir into the republic; its security policy, in turn, has been formed by the perceived threat from India, defined in terms of Kashmir and the integration of the Pakistani state. Since 1970s Pakistan has been engaged in a major nuclear programme to

enhance its nuclear weapons capability as a deterrent against India's overwhelming conventional and nuclear superiority. Thus, Pakistan's nuclear programme has essentially been 'dedicated', much more 'reactive' and it has clear military purpose as its principal raison d'être.

Military doctrine in Pakistan is almost wholly directed to achieve some kind of potential parity with India. For this purpose, Pakistan has sought nuclear weapons principally to meet the threat from India's conventional military superiority and substantial nuclear potential, as well as to counter more subtle forms of Indian dominance in regional affairs. In addition, Pakistani leadership undoubtedly perceived that nuclear arming would enhance Pakistan's image as the most technically advanced state in the Muslim world and that nuclear status would cement Islamabad's military ties with the Persian Gulf states. Nuclear arms are also valuable for reasons of domestic politics. As a symbol of nationhood, they could help unite a society that is yet to be fully integrated into a modern state –and given the popular support for the nuclear programme, ruling elites could consolidate their political base.

Furthermore, the Sino-US rapprochement changed the face of power relations in South Asia. Initially, it moved India further into association with the Soviet Union and it constrained the Chinese ability to take strong action in support of Pakistan in case of Indo-Pakistan conflict. In practice, neither China nor the United States assisted Pakistan in its aims in 1965 or prevented India from breaking up Pakistan in 1971, and it is this that forced Pakistan to shift from a policy of external balancing to one of internal balancing. Counter-intuitively, the rapprochement between Pakistan's two most important allies actually constrained Pakistan's options, with the effect that Pakistan's security was actually not increased. This situation encouraged the Pakistani decision makers to see that Pakistan must guarantee its own security and nuclear weapons came to be seen as the best available means to ensure that the Indian threat would never materialise.

Most Pakistanis see their country's nuclear programme in military as well as political terms. They believe that Indian conventional forces could seize the rest of Kashmir from Pakistan or even dismember all of Pakistan. Conventionally speaking, Pakistan has no match for the much stronger Indian armed forces. The wars with India revealed the country's weak military capacity, relative to its chief antagonist. The race in conventional weaponry between Pakistan and India will always hinge upon numbers and Pakistan will always be at a disadvantage, in this respect. Therefore, Pakistan sees modest nuclear capability as the only way of defending itself against a much more powerful rival.

Thus, strategically, Pakistan's nuclear programme is driven mainly by its perception of threat and security concerns about India, which it claims has not fully accepted the existence of Pakistan as an independent country. Pakistan has always been a weak and vulnerable country and it would face great difficulty in prevailing in a war against India –resources, both military and civilian, are too limited. Pakistan cannot expect to match India tank for tank or gun for gun because the numbers are too great. According William Pfaff, India's intransigence on bilateral disputes and her nuclear superiority have made Pakistani leaders feel compelled to see nuclear weapons as a hedge, in order to stay in the game.19 Pakistanis know that India already possesses several nuclear weapons and assume that such weapons are directed primarily against it and not China. Thus, if Pakistan is a potential target, a modest Pakistani nuclear programme is another deterrence strategy. From the Pakistani perspective, conventional deterrence tends to become unstable and nuclear weapons are the only possible central basis for strategic deterrence against India.

The geography of Pakistan, including a concentration of population centres and major military installations near the Indian border and a lack of territorial depth, saddle it with intractable disadvantages. Its external physical vulnerability to air and ground interdiction of north-south transport and communication links, and the concentration of its main population and industrial centres and defence installations within easy distance of the Indian border present it with formidable defence problems. Thus, unlike France or Britain, who sought a nuclear capability largely for prestige, Pakistan does so to counter India's conventional military advantages and provide a bulwark against India's aggressive designs.

India is a core country of the South Asian region and it has greater size, population, a strength and superior logistic system as compared to other neighbouring states. The smaller states are all concerned with the Indian potential to dominate them. It has by far the most advanced industrial and technological base, including an indigenous armament industry that is the largest among Third World countries in value, volume, diversity of manufacture, and research and development facilities. India manufactures a wide range of equipment and it has undisputed superiority in conventional and nuclear weapons. The other South Asian states, including Pakistan, lag far behind India on arms production and must rely on arms imports for a broad range of their defence requirements. One study estimated that India has accumulated sufficient weapons-grade plutonium for about eighty nuclear weapons while much higher numbers have been given in most open-literature estimates of the size of Indian arsenals.20 In the absence of external support, which would strengthen Pakistan's bargaining position vis-à-vis India, and without the ability to maintain an expensive conventional force Pakistan cannot challenge India's military strength. The renowned South Asian scholar, Stephen Cohen argues that Pakistan's forces would be adequate to protect it against an Indian attack, but are not so large or so modern as to threaten India.21 Further, India also desires that Pakistan accept the status quo and not raise unresolved issues in the international forum; this proposition is unacceptable to Islamabad. In this circumstance, the only option for Pakistan may be the acquisition of nuclear weapons, which will serve the purpose of forcing the enemy out of massed concentrations on the ground and may be used as a punishment strategy.

Alliances with great powers could not improve Pakistan's capacity for action through external balancing, nor could it provide some measure of extended deterrence, a commitment to defend another party. Past experience has shown that the United States was not a reliable ally and did not modernise Pakistan's forces to such an extent that it would be able to challenge India. In fact, the US arms embargo and suspension of aid only affected Pakistan, not India. In the past, the US has regularly waived the Symington, Solarz and Gallen Amendments, the violations of which would otherwise have resulted in US sanctions and aid cut-offs to Pakistan.22 The United States military aid to Pakistan was stopped several years ago and there was no supply of even spare parts, placing Islamabad at a disadvantaged position vis-à-vis New Delhi. On the other hand, the US did tend, however, to perceive Pakistan as a friendlier state than India, while the Soviet Union saw more promise in India than in Pakistan as a potential counterforce against the Chinese.23 Zulfikar Ali Bhutto when he was Prime Minister of Pakistan felt that Pakistan was far too dependent on the West, in particular the United States. He continuously harped on the unreliability of the United States as an ally, and believed firmly that the United States wanted to bring about a rapprochement between Pakistan and India, probably at Pakistan's expense, in order to counterbalance China.24 Certainly, Pakistan's hope that the US assistance would strengthen Pakistan's defence position was in vain. The US alternate means, namely in advanced conventional arms was not sufficient to enable Pakistan to protect its security needs. This situation encouraged

policy makers to develop a nuclear capability to safeguard their independence once and forever.

Interestingly, Indo-Soviet rapprochement in 1971 constrained China's ability to support Pakistan. During the war, the Soviet fully supported India and Pakistan came to realise that China's role as a 'balance' in the region had been effectively checked by the Indo-Soviet partnership, which easily isolated Pakistan and neutralised China against India. Furthermore, the threat of Soviet retaliation for any sort of Chinese intervention loomed direct and large. The Chinese avoided involvement in a crisis where intervention might lead to her becoming embroiled in a larger war, especially considering the Vietnam entanglement.25 At that time, Pakistan's attempts to gain support from the Muslim world also met with disappointment, especially since most Muslim countries have close relations with Pakistan's rival, India. Thus, the rapprochement reduced Pakistan's flexibility, endangered its security and forced it to engage in internal rather than external balancing. Pakistan's feeling that allies cannot be totally relied upon, has led to a great emphasis on self-reliance. This also signalled to Pakistan that it now operated in a different security environment, where it could not count on alliance support against India. Ultimately, it adopted a policy of internal balancing, and, in particular, began the development of its own nuclear weapons programme.

Under these circumstances, Pakistan desires to acquire nuclear capability, precisely because of its belief that neither external support nor its own security forces can ensure its survival. Therefore, nuclear capability is not a luxury but a necessity for the very existence of the state. One scholar believes that the destruction of Pakistan would create a political instability in the region and this might lead to the expansion of Indian power right up to the Khyber Pass, and that the strategic defence of South Asia would again reside in sure hands.26 Many Indians believe that Pakistan's nuclear weapons, besides neutralising an assumed Indian nuclear force, would provide the umbrella under which Pakistan could reopen the Kashmir issue. A Pakistani nuclear capability would paralyse not only the Indian nuclear decision, but also Indian conventional forces, and a bold Pakistani strike to attack and seize Kashmir might go unchallenged if Indian leadership is indecisive. To a lesser extent, such a nuclear capability might enhance Pakistan's deterrent along the Durand Line to compel the future Afghan rulers to maintain normal relations with Pakistan.

Many observers believe, since the recent nuclear tests, that Pakistan is likely to be the first Muslim country to acquire an atomic weapons capability. Such a development would somewhat offset the Indian military threat, enormously augment the prestige and influence of Pakistan in the Islamic world, and undermine the conventional military capability of other neighbours, such as Iran.27 Pakistan likes to regard itself as the Islamic world's technological showcase because of its success in developing a nuclear weapons capability. Moreover, powerful political and military forces that use nationalism as their main vehicle drive the nuclear programme in Pakistan. Thus, the nuclear programme has emerged as the symbol of Pakistani nationalism and pride. It enjoys overwhelming domestic support and there is a national consensus on the nuclearisation of Pakistan. This is the only issue, which enjoys bipartisan and popular support and is above political controversy. Further, in the case of Pakistan, a powerful incentive for nuclearisation comes from problems of national and historical identity. Created as a homeland for the south Asian Muslims, Pakistan still debates its identity remains concerned about its survival and devotes nearly two-fifths of its national resources to protect its borders against India.

PAKISTAN'S NUCLEAR PROGRAMME

Driven by fears of Indian domination in South Asia and a desire for leadership in the Islamic world, Pakistan launched its own nuclear weapons programme. It has continued to expand its ability to produce weapons-grade nuclear material free from International Atomic Energy Agency (IAEA) safeguards and has continued to resort to clandestine nuclear trade to advance its nuclear programme. The Pakistani military and political elite as an important component in national power always regarded technology, and in its nuclear weapons it has always aspired to a high-tech edge over its rivals. As a result, the Pakistani high regard for smart weapons and technologically advanced support systems has intensified. Prime Minister Zulfikar Ali Bhutto once declared that "Pakistanis would rather eat grass or leaves, or even go hungry, but we will get one of our own, than surrender the nuclear option,"28 and successive Pakistani governments have continued to develop the nuclear option, despite growing US pressures.

Pakistan's nuclear industry was founded in the 1950s and the US "Atomic for Peace" programme trained Pakistani scientists in nuclear-reactor technology. They also enabled Pakistan to buy a 5 MW swimming pool type research reactor and fuel, too small to have any military significance, which became fully operational in 1965; it has been used mainly for training purposes. A Canadian 137 MW heavy-water type power plant reactor (KANUPP) was supplied on a turnkey basis and became operational in 1972. The KANUPP facility is a natural uranium, heavy water reactor of the CANDU type which, according to some sources, can produce as much as 55 kg of plutonium per year (4-6 bomb's worth) when operating at peak capacity.29 However, the reactor has never operated at full capacity and since 1977 it has been operating at a sharply reduced level due to a cut-off in Canadian fuel supplies. Pakistan recently solicited bids for construction of a 900 MW light water, low enriched uranium fuelled power plant on the Indus River at Chashma, where it can draw on hydroelectric power with the co-operation of China. Indeed, China, as a staunch ally of Pakistan, is the principal nuclear benefactor, having provided blueprints for the bomb, as well as highly enriched uranium, tritium, scientists and key components for a nuclear weapons production complex, among other technical tools. The Chinese provided Pakistan with hands-on assistance for the Chashma and Kahuta enrichment plants, with a tested bomb design, and with enough highly enriched uranium for more than two bombs –perhaps even conducting a test of the bomb design for Pakistan at China's Lop Nor test site.30

Pakistan has gained capability to fabricate its own fuel rods using unsafeguarded uranium at the Chashma site. Pakistan reportedly possesses significant uranium deposits in the Suleiman Ranges in the vicinity of Dere Ghazi Khan and in the northern region of Gilgit. It has a pilot plant for the extraction of uranium at the Atomic Minerals Centre, Lahore. It has also acquired sizeable quantities of "yellowcake", the first stage of refining uranium, from Niger, some of which may have come via Libya. This capability and limitations on the safeguards at KANNUP raised fears that Pakistan might have tried irradiating indigenous fuel rods to obtain a source of fissile material.31 According to Western sources, the "hot cell" facility installed at PINSTECH in the mid-1970s with French and Belgium assistance may be able to produce small amounts of plutonium. One report suggested that Pakistan had 30 kg of plutonium by 1980 and would have 605 kg by 1984.32

For various reasons, Zulfikar Ali Bhutto has been called the political father of Pakistan's nuclear programme in its military aspect, as well as its civilian aspect. Bhutto provided the necessary political will and determination as Pakistan pursued its furtive programme. It was

Bhutto who provided a new direction to Pakistan's nuclear policy in the 1960s, as Minister for Natural Resources and Atomic Energy and later as a Foreign Minister and demonstrated keen interest in nuclear weapons. Quite appropriately, an Indian scholar, Ashok Kapur, has stated that Bhutto "mobilised nuclear nationalism in Pakistan".33 He declared in 1966 that if India built a nuclear bomb, Pakistan would follow suit, to retain a strategic balance with India, including the development of nuclear weapons, at any cost. In 1969, Bhutto wrote: "All wars of our age have become total wars... It would be dangerous to plan for less, and our plans should include the nuclear deterrent".34 Bhutto calculated that only the development of nuclear capability could restore some semblance of balance between the two states. He also felt that Pakistan needed to develop an indigenous industrial arms base in order to reduce dependence on foreign countries. He wrote in his book The Myth of Independence about the necessity for Pakistan to develop nuclear weapons and explained this idea in words:

"It would be dangerous to plan for less and our plans should, therefore, include the nuclear deterrent. Difficult though this is to employ, it is vital for Pakistan to give the greatest possible attention to nuclear technology, rather than allow her to be deceived by an international treaty limiting this deterrent to the present nuclear powers. India is unlikely to concede nuclear monopoly to others and, judging from her own nuclear programme and her diplomatic activities, especially at Geneva, it appears that she is determined to proceed with her plans to detonate a nuclear bomb."35

On January 1972 Bhutto held a secret meeting of the country's top scientists and engineers at Multan, where he committed his government to acquiring nuclear power and equipment.36 During the 1970s, Bhutto attempted to purchase a reprocessing facility that would have enabled it to extract weapons-grade plutonium from spent nuclear fuel from France. Washington pressured Paris and Islamabad into cancelling the deal, after which Pakistan clandestinely acquired the technology to enrich uranium. In Pakistan, nuclear technology became linked to power, status and national security after an Indian nuclear test explosion in 1974 and Prime Minister Zulfikar Ali Bhutto responded in the National Assembly by reminding the members of India's past role, narrating its evil designs and plots over a 25 year period that culminated in the dismemberment of Pakistan. He further expressed doubts about India's intentions:

"India has acquired nuclear weapons at very great cost, very great risk and a very great sacrifice to intimidate and blackmail Pakistan. The fact that Pakistan will not be intimidated and blackmailed is a separate question. That has been the purpose to use nuclear weapons, to brandish [the] nuclear sword at Pakistan and to extract political concessions, to exercise domination over the subcontinent, to exercise hegemony over the neighbouring states. These are the purposes for which India has acquired nuclear weapons and Pakistan cannot rule out the possibility that India will use the nuclear device; Pakistan simply cannot be so irresponsible as to say that there will be no war and that if a war occurred India would not use the nuclear bomb."37

Bhutto made it clear that he saw the development of nuclear weapons as necessary to the survival of Muslim Pakistan vis-à-vis Hindu India with its expansionist designs in South Asia. Bhutto, writing from his death cell in 1977, expressed this view: "We know that Israel and South Africa have full nuclear capability. The Christian, Jewish, and Hindu civilisations have this capability. The communist powers also possess it. Only the Islamic civilisation is without it, but that position is about to change."38 Bhutto's government was removed from power because the United States disapproved of his nuclear ambitions. He was

a dynamic and outstanding politician and became a victim of opposition. He defied a superpower and, in the process, sacrificed his government and ultimately life itself, for the sake of national interest and survival.

Since Bhutto had linked nuclear weapons with Pakistan's security and the need for nuclear power had become generally accepted by the Pakistani people, no subsequent government or leader could compromise on it because without it, national survival and honour would be at stake. Thus, the Pakistani nuclear weapons programme took shape in 1976 when Dr. Abdul Qadeer Khan, a German-trained metallurgist, returned to Pakistan from the Netherlands and ultimately, an enrichment facility at Kahuta, based on the stolen blueprints from Almelo gas centrifuge enrichment plant, was completed in 1985. Pakistan also has a small pilot plant at Sihala, the existence of which was acknowledged by Zia ul-Haq.39 However, the Kahuta enrichment facility began to produce weapons-grade uranium in the mid-1980s and this plant produces uranium enriched to more than the relatively innocuous five per cent level.40 Thus, it is the uranium enrichment programme that provided the decisive breakthrough for Pakistan in the area of weapon-grade material production. The 1980s saw Pakistan's achievement of the target of designing a nuclear weapon and the acquisition of important hardware. Dr. Abdul Qadeer Khan, the mastermind behind the establishment of the Kahuta enriching plant, was able to announce his country's success in breaking the Western monopoly and exceeding the five per cent level in uranium enrichment.41

Pakistan's crossing of the five per cent "red line" was not challenged by the United States because Pakistan was at that time a key ally, providing the crucial link in the CIA's effort to smuggle billions of dollars of weapons to Afghan guerrillas attempting to drive out the Soviet Union from Afghanistan.42 The Reagan administration was keen to supply Pakistan with sophisticated air-to-air missiles, and key congressional committees also approved $3.2 billion five years (1981-1985) aid package to Pakistan.43 In March 1986, the Reagan administration announced that it would provide Pakistan a second six-year (1985-1991) aid package worth of $4.2 billion. From this point onward, the Reagan administration was aware that Pakistan had achieved capability to build nuclear arms or assemble the components.44 According to Milt Bearden (a senior CIA officer in Pakistan from 1986-1989), in the early 1986 the Soviets and Indians talked Pakistan's nuclear issue with the US diplomats in an effort to isolate Pakistan from the Afghan issue but the US officials refused to discuss this matter and helped to create the conditions to produce weapons grade material.45 According to the Tass report, the Reagan administration allowed Pakistan to increase their self-defence ability and Pakistan's nuclear capability was significantly improved during the years of 1985-86 in order to prevent the Soviets moving towards the Persian Gulf.46 During those years, Pakistan set up a worldwide smuggling ring to buy, copy or steal nuclear weapons technology. Some sources claimed that during this time, Pakistan conducted two nuclear tests and rapidly assembled at least one nuclear device in the event of a future war.47

The Zia regime was completely successful in its clandestine efforts to secure classified designs of a centrifuge –based uranium enrichment plant and in obtaining a number of critical sub-systems, components and materials. Zia strongly supported Pakistan's nuclear programme and refused to accept full-scope safeguards. He said: "We shall eat crumbs but will not allow our national interest to be compromised in any manner what-so-ever."48 Zia admitted, "Pakistan can build a (nuclear) bomb whenever it wishes. Once you have acquired the technology, which Pakistan has, you can do whatever you like."49 He deliberately took calculated risks, and skilfully exploited the international environment in the wake of the

Afghan crisis. Although there was a dearth of hard information concerning Pakistan's nuclear status, it was assumed that the country had the ability to manufacture atomic weapons and had become a de facto nuclear weapons state. The Guardian confirmed this on 3 September 1991, in which the former Prime Minister, Benazir Bhutto, asserted that Pakistan possessed the wherewithal for nuclear weapons construction. According to Arms Control Today, a publication of the Washington-based non-partisan Arms Control Association, the US intelligence agencies contend "India and Pakistan have all the components necessary to make nuclear weapons, within hours if necessary". In 1993, then CIA Director Woolsey warned that this hot spot "poses perhaps the most probable prospect for future use of weapons of mass destruction, including nuclear weapons."50

PAKISTAN 'REACTIVE' POLICY

It is a recognised fact that the most complex nuclear issues are located in Asia, a region that contains more nuclear powers or nuclear capable states than any other in the world. Initially, Asia contained only one nuclear-weapons state, i.e. China, but Pakistan and India have recently chosen to declare their nuclear capabilities while third 'threshold' country would be Israel. A further two countries (Iraq and North Korea) have been found guilty of violating their non-proliferation commitments. In addition, South Korea and Taiwan have run military nuclear programmes since 1960s and 1970s; Iran has ambitions to become the pre-eminent power in the Persian Gulf region; and Japan is also recognised as having a latent capability to produce nuclear weapons within a short time.

The recent India and Pakistani tests have transformed the strategic outlook of the whole region and created a new relationship between India and Pakistan. For India, Pakistan had, in fact, become the central factor in Indian nuclear decision-making. Its successful test of the Ghauri51 intermediate range ballistic missile (IRBM) (known as the Hatf-5) was in itself a most disturbing event for Indian policy makers because New Delhi's major military advantage over Pakistan –its strategic depth– was seriously challenged and nullified.52 The range of the test –1,500 km, with possibly a 700 kg payload, which would cover about a third of India– is probably shorter than the operational range. Pakistan can strike deep into India, opening a new front and exposing India's strategic assets and principal civilian and industrial centres are under its target. Strategically, Pakistan successfully neutralised the Agni, India's key technological advantage over Pakistan and New Delhi did not expect Islamabad to obtain a potent IRBM sensitive system from an external source. Pakistan also launched two other long distance missiles Abdali (range 2,500 km), Ghaznavi (range 2,000 km) and Shaheen II (range 2,000 km), which have the capability of carrying nuclear warheads.53 For tactical ranges, Pakistan has produced the Hatf-1 (100 km) and Hatf-2 (300 km), both with a 500 kg payload. The Hatf-3, which some defence analysts consider to be a Pakistani version of the Chinese M-9 (DF-15), has been flight-tested to 800 km. Moreover, some 30 Chinese made M-11 (DF-11) missiles, with a range of 300 km, have been forward-stored.

For Pakistan, India is an expansionist power and is determined to destroy Pakistan to extend its political and military reach beyond the Asian subcontinent. India has also made significant advances in missile technology by successfully testing the Agni ballistic missile (with an intermediate-range of 2,500 km), the Prithvi, a surface-to-surface missile (with a range of 250 km), the Trishul (a surface-to-air missile, with a range 9 kilometres), the Akash (a surface-to-air missile with a range of 25 km), and the Nag (an anti-tank missile).54 Indian research laboratories are also working on different categories of missiles such as a sea-borne missile, the Sagarika (Oceanic), which will be ballistic or air-breathing, submarine-missile Charlie,

which will be nuclear-powered guided-missile submarine (SSGN) and long-range missile project dubbed Surya (Sun).55

Pakistan views India's Agni and Privthi as a potential threat to its security. Both systems could circumvent Pakistani air defences in a surprise attack and could reach virtually all of Pakistan's important industrial and populated centres, which are located along its eastern border with India. The range of the Agni would allow India to reach targets in Pakistan and China, the Arabian Peninsula and Central Asian states. Agni missiles armed with high explosive or chemical warheads could disrupt airfields and destroy other military installations throughout Pakistan, assuming the missiles achieve sufficient accuracy. The range of the Agni, moreover, makes it possible for India to base it in the south, beyond the range of current Pakistani aircraft or missiles.

India's long-term nuclear ambition has been its development of the Agni-1, (IRBM project), an intermediate-range ballistic missiles which can deliver a 2,200 pound (1,000 kg) payload to a range of 1,550 miles (2,500 km), more than enough to cover all of Pakistan if stationed in northwest of India. This missile is based on rocket boosters, navigation and guidance systems, the fight control system, and the re-entry vehicle. It is integrated with the nuclear payload and with a dummy warhead. This missile is the carbon copy of the US Scout rocket and the Soviet SA-2 surface-to-air missile (SAM). A. P. J. Abdul Kalam, India's defence scientist, stated in 1994 that the 1,500 km range Agni-1, was already a proven system and that random batch tests would be carried out once its production began.56 Agni-2, with a range of over 2,500 km and possibly up to 4,500 km and a 1,000 kg payload, is likely to be flight-tested in the first half of 1999 and will also use a different propellant configuration. India has a programme to produce an improved road-mobile IRBM that, with a 2,000 - 3,000 km range and all-solid propellants will be able to strike far deeper than the Agni-1, and will be more survivable and manoeuvrable.57 In this way, the liquid-fuelled second stage is the Prithvi rocket, while the solid-fuelled is the first stage of the space-launch vehicle (SLV-3), which has placed several Indian satellites into orbit. However, India is determined to build an effective missile deterrent force and it needs IRBMs with ranges in the mid-upper sections of their 1,000 to 5,000 km classes. The other missile, Prithvi-1, has also reached around 100 km from the Pakistani border. Much of the Pakistani Punjab, including Lahore, is within range of forward-based Prithvis.

In this field India has clear superiority of missiles development in the region but the military significance of deployments depends largely on whether the missiles are armed with nuclear weapons. India's ambition to develop missiles stems from its concerns about Pakistan and China. India needs long-range missiles to attack Pakistan, for which it has already more than enough advanced strike aircraft. The deployment of missiles with the range of the Agni puts a number of important Pakistani and Chinese industrial and military centres within India's reach, while its work on the Agni-2 and is an important stepping stone to an upper-range IRBM that could target easily industrial and commercial areas such as Karachi, Lahore and Faisalabad. Thus, the significance of India's missile capability stems from its association with India's nuclear programme, which together could enable the country to project a nuclear force over a large part of the Eurasian land mass.

The essence of the Pakistani attitude towards nuclear weapon development and deployment is 'reactive'. Initially, some Indian analysts argued that Pakistan's nuclear weapon orientation and ambitions are not fundamentally conditioned by Indian actions but are to a large extent independently motivated. It is undeniable that there are some independent factors that push

Pakistan towards a nuclear programme such as the search for prestige in the Islamic world and maintaining internal unity. Nevertheless, the decisive factor remains India and its preparations. This factor provides the foundation of and key motivation for Pakistan's two-track approach and its essentially narrow perspective. Thus, Pakistan's deliberations have never been encumbered by moral doubt and they have been based on a real politik approach to perceptions of threat from India or containing its supremacy. Strategists agree that the decision for Pakistan to move towards threshold status could provide better security guarantee for Pakistan, to protect the country against Indian attack or from more humiliation.

Interestingly, Indian planners were thinking that their military relevance and its nuclear capability would remain confined to Pakistan and international pressure would restrict the latter's ability to develop deterrence as a counterweight to India. But Pakistan continued its nuclear programme and ultimately established nuclear deterrence to compensate for its smaller conventional forces. Instead of India's nuclear capability acting as an equaliser against China, its conventional military superiority over Pakistan has effectively been equalised by Islamabad. Moreover, Pakistan is prominent in Indian strategic thinking because of its China connection. According to Brahma Chellaney, without its Chinese link, Pakistan would not be able to sustain its bellicosity towards India or to pose the level of nuclear and missile threat that it does.58 China has used its diplomatic skill in the rapprochement process with India and on the other hand, provided full Weapons of Mass Destruction (WMD) assistance and complete missiles technology, as well as key nuclear technology and plutonium production facilities to Pakistan. Indeed, China has provided extensive support to Pakistan to equalise and neutralise Indian nuclear and missile advances by transferring equivalent technologies to Islamabad and allowing Pakistan to wage low intensity warfare. Thus, in Indian strategic calculations, "the importance China attaches to Pakistan is similar to that which the United States attaches to Israel."59

PAKISTAN'S NUCLEAR POTENTIAL

The Pakistani and Indian nuclear tests of 1998 came long after both countries initiated their military-nuclear efforts. The tests were the culmination of long-established weaponisation and delivery-vehicle programmes. The Hindu nationalist Bharatiya Janata Party (BJP) government took the initiative to conduct five nuclear tests on 11 May and 13 May 1998 and subsequently pushed Pakistan into a position where it had no option but to take "appropriate measures" to protect its sovereignty and security. Gauhar Ayub, the Foreign Minister, declared that: "India's actions, which pose an immediate and grave threat to Pakistan's security, will not go unanswered."60 Pakistan had to go for its own nuclear test, as the credibility of Pakistan's deterrents had been called into question by India's behaviour.

Pakistan had been plunged into a "deeper crisis" and the threat to its security was even graver than in 1971. All major political parties were united in their demand that Pakistan must go nuclear; what the world came to call "the Islamic bomb."61 In these circumstances, Pakistan replied to India's five nuclear tests with its own six tests on 28 May and 30 May 1998 in the Ras Koh range in the desolate Chagai region of southwestern Baluchistan. After almost three decades of preparation, Pakistan can now prove that it has the nuclear weapons to protect itself from external security threats. After the conduct of the nuclear tests, Dr Abdul Qadeer Khan, the father of Pakistan's nuclear and ballistic missile ambitions, indicated on 31 May that mass-production of the Ghauri IRBM had started, and that Pakistan could deploy nuclear warheads on the Ghauri within days.62 This statement must be taken seriously because India

and Pakistan's deployment of operational nuclear forces is not at the point of initiation, but nearing completion.

India and Pakistan have both tested, with varying degrees of success, different kinds of technologies and categories of fission bombs: atom bombs with power sufficient to wipe out a medium-sized city (a 12 kt weapon by India and a 15 kt weapon by Pakistan); and sub kiloton devices presumably serving as battlefield nuclear weapons.63 India has indicated that it has also tested a 43 kt hydrogen bomb (actually 20 kt) and it was a low yield for a fully-fledged thermonuclear weapon explosion. There is speculation that India may have produced some 400 kg of plutonium reprocessed from fuel irradiated in the Cirrus and Dhruva reactors, from which 70 to 80 nuclear devices could have been manufactured.64 Other sources indicate that India may dispose up to 1.95 tonnes of plutonium derived from its six unsafeguarded CANDU-type nuclear reactors, enough to produce more than 400 warheads.65 India also has a tritium-production capability for hydrogen bombs.

In contrast, Pakistan's nuclear weapons are produced from centrifuge-generated highly sophisticated enriched uranium at the Kahuta laboratory. Thus, fissile material may amount to between 400 kg and 600 kg, allowing for the manufacture of some 20 to 30 nuclear weapons.66 Foreign Minister Gohar Ayub Khan reports that Pakistan's six tests were based on "boosted fission devices using uranium 235" and the country also has the ability to conduct a fusion or thermo-nuclear blast.67 The US Los Alamos National Laboratory report declared that Pakistan's nuclear tests based on smaller and more powerful plutonium-based weapons could fit more easily onto ballistic missiles than those fuelled by the highly enriched uranium that Pakistan has produced recently.68 However, Pakistan also has the ability to extracted weapons-grade plutonium from the Chashma plant and substantial amounts of plutonium for weapons is also available from the Khushab reactor in the Punjab province, which is fully operational and will soon be capable of producing 5 to 10 kg of weapons-grade plutonium, enough for one bomb, annually.

Over the years, Pakistan and India have acquired a broad array of aircraft, which could readily be configured for nuclear weapons. For this purpose, India have 88 Jaguar and 147 MiG-27 fighters, MiG-29, 35 Mirage 2000 and 238 MiG-21s, of which it can afford to dedicate a substantial number to nuclear missions.69 In this regard, Pakistan is not well endowed but it has enough aircraft to conduct a nuclear mission without obstacle. Its 34 F-16 (A/B) and 20 Mirage IIIEP aircraft could form the nucleus of an atomic strike force, with a dozen squadrons of French and Chinese-made aircraft. However, India and Pakistan both have strategic disadvantages because a large proportion of the aircraft are based close to the borders of both countries, in the vicinity of Lahore, Sargodha, New Delhi, Hindan and Ambala.70 Each country's federal and provincial capitals are within easy reach of the other's aircraft. The largest economic and commercial centres of both countries, such as Karachi and Mimbai, are also within operational range. Moreover, at the tactical level, India and Pakistan both have potential nuclear delivery systems fielded by the defence forces including a variety of surface-to-surface missiles and artillery. India can only counter Pakistan attack by their Agni and Prithvi missiles and both have been deployed less than 100 km from Pakistani border. All the major cities of Pakistani Punjab, including Lahore, are thus within range of forward-based Prithvis. However, aside from the political debate, Indian and western strategists are agreed that Pakistan's nuclear programme is more sophisticated, based on Chinese designs and model and it had no technical imperatives. Pakistan has produced smaller bombs that can be placed atop its two ballistic missile systems. On the other hand, India's bombs are cruder and larger and not yet capable of being carried by their missile system and

remain burdened with an unreliable nuclear capability based on one test of a crude fission device. India has relied more on indigenous and Soviet technology for its nuclear and missile programmes.

THE BENEFITS OF NUCLEAR WEAPONS

Pakistan offers strategic justification for becoming a nuclear power and lays the real responsibility for its tests at the doorstep of India. On the other hand, the western powers failed to offer any credible nuclear umbrella to Pakistan. According to Ralph Cossa, after the Indian tests, the United States and China could have offered a joint security guarantee to Pakistan in return for a pledge not to respond in kind to India's provocative actions.71 Since no such guarantees were made, Pakistan did the logical thing and justified its own tests, claiming that the lack of outside security assurances left it with no choice but to provide for its own defence and no doubt nuclear parity created a stable deterrence because neither side will conduct a pre-emptive strike nor feel the need to use nuclear weapons early in a conflict.

To the Pakistanis, the present state of affairs works in favour of India and this means that they will not only have to forget about the Kashmir issue but will also have to learn to live under the shadow of a hostile and powerful nuclear neighbour. Pakistan would, under these circumstances, be forced to compete or accept New Delhi's hegemony. In this scenario, however, it is by no means certain that declared nuclear deterrent would be effective and capable of meeting Islamabad's security goals. It is also true that with nuclear weapons, Pakistan could maintain, explicitly or implicitly, a credible threat of nuclear counter retaliation.

The effect on Pakistan of India's nuclear detonation was in some ways similar to that which occurred in the former Soviet Union in the 1940s when the United States exploded an atomic device. The feeling and fear was raised in Pakistan, as it was in the Soviet Union, that unless it, too, could get the nuclear bomb, it could be blackmailed into accepting the dominant position of its rival. For Pakistan, the acquisition of nuclear weapons is not a matter of choice, but a necessity for its very existence. In this context, the Pakistani approach is conceptually akin to the French approach that nuclear weapons have become associated with national independence and security against war. They are also deemed insurance and a guarantee of political and strategic autonomy.

Thus, Pakistan sees nuclear power as a deterrent to India's conventional military advantages and strategic ambitions. Nuclear weapons have enabled Pakistan to create the threat of retaliation, which is necessary for stable deterrence of premeditated attacks. This kind of deterrence will work; if the state's territorial security is on the verge of collapse then there are possibilities to use nuclear weapons against internal or external foes. This situation is critical because it will create crisis instability, which is more dangerous when one state has few nuclear weapons, and the other has many more, as India is believed to have many more nuclear weapons than Pakistan.

Moreover, in a crisis in which Indian decision makers believe, perhaps falsely, that Pakistan would launch a nuclear attack, it would be rational for India to pre-empt Pakistan's attack because, even though it would not destroy all of Pakistan's nuclear weapons, it would destroy some of them, and so fewer Indians would die. The risk of inadvertent escalation may also make the consequences of the spread of nuclear weapons dangerous. According to Barry Posen's evaluation, the situation depends on the will of the political and military leaders

who permit or order them, large-scale conventional operations may come into direct contact with the nuclear forces of an adversary and substantially affect the victim's confidence in his future ability to operate these forces. In this regard, conventional attacks are particularly dangerous where there is a degradation of "the basic nuclear retaliatory capability of the victim –his second strike capability– for among nuclear powers this is the only insurance policy against nuclear coercion or annihilating attack".72 The danger of inadvertent escalation is particularly acute for emerging nuclear states because an attacker might not believe that the state does not yet possess nuclear weapons or because the attacker believes that it could strike only conventional forces without harming the emerging state's retaliatory capability. In a future conventional conflict between the archrivals, India might try to destroy Pakistani airfields in order to destroy the aircrafts and runways. It could inadvertently jeopardise Pakistan's retaliatory capability. The situation could arise, in which the planes and their nuclear weapons would be destroyed if not used; Pakistan may thus be forced to use nuclear weapons before its secure second-strike capability is lost to attrition.

Further, in terms of deterrent relationship between India and Pakistan, for example, Pakistan has a much smaller nuclear arsenal than India but India cannot be certain about the survivability of the Pakistani arsenal. This lack of certainty complicates Indian decision-making in a crisis and therefore promotes crisis stability. India lacks the real-time or near real-time intelligence capability that would be need to maximise damage limitation through a counterforce or counter-control strike. However, Pakistan has every incentive to maximise Indian uncertainty and must do so to minimise the risk of Indian pre-emption until Pakistan's arsenal increases in size, and its nuclear force structure becomes more survivable.

Theoretical interest also focuses on ways of ensuring that the nuclear deterrent would always be credible, the two elements of the problem being the capability to inflict the punishment and the will to do so. The capability component of credibility requires the ability to penetrate Indian defence, and protection against a surprise preventive attack by Indian forces. Thus, it is important that Pakistan's strategic deterrent should be based upon the capability required to deter India from a conventional attack, and not on matching her weapon system for weapon system. In this case, nuclear retaliation is a possibility, not a policy. As Richard Nixon said during the Korean crisis in 1958, "You should never let the enemy know what you will not do, because the use of nuclear weapons is something the enemy could not know and you can gain your objectives."73 In a similar way, Pakistan's nuclear weapons could be used as a means of punishing aggressors in order to counter the bigger enemy attack in conventional fields.

Further, nuclear security is primarily about status and power. Nuclear power is considered the ultimate means of defending national honour and virility. The nation-state is portrayed as the mother in need of protection against the outside enemy, in an appeal, not to maternal instincts, but to a male macho psyche that is called upon for defence and survival. Thus, state sovereignty and security have become tied to nuclear power. At the level of symbolism, then, nuclear discourse is about hyper masculinity establishing a relationship of protection and protected. The flawed quality of this logic was made evident by examining the fundamental assumptions upon which the concept of deterrence rests. First, the potential aggressor must always conclude that the adversary has adequate survivable nuclear forces to inflict an unacceptable level of damage on the aggressor if attacked directly or provoked by different actions. Second, the potential aggressor must be convinced that the adversary has the will to use nuclear weapons to maintain its territorial integrity. However, Pakistani nuclear scientist Dr. Abdul Qadeer Khan told in his interview to VOA that "nuclear capability kept us at

distance from war and I am hopeful that there will be no war between Pakistan and India in the coming years."74 Now India and Pakistan have both attained, strategists argue, a level of credibility in each other's eyes that is good enough to create an impression of deterrence.

Indeed, in case of future war Pakistan would not allow humiliation and would not hesitate to retaliate to offsetting India's traditional superiority in conventional arms. For example, in 1990, Pakistan assembled nuclear weapons and was contemplating a certain degree of adventurism against India over Kashmir. This plan entailed activities by Islamabad that would have been suggestive of introducing a nuclear dimension to the adventurism, and this would have resulted in attracting international attention –particularly that of the United States. This tactic was based on Pakistan's traditional policy of offsetting India through engaging outside powers in its disputes with India as a means of balancing its more powerful neighbour. Seymour M. Hersh, a renowned US scholar, claims that in the early spring of 1990, during a crisis with India over the rapidly escalating insurgency in Kashmir, Pakistan openly deployed its main armoured tank units along the Indian border and in secret placed its nuclear-weapons arsenal on alert. Military planners authorised the technicians at Kahuta to put together nuclear weapons, to use against India if necessary.75

The fact that the tension was abated so quickly in early June 1990, would seem to indicate that both Pakistan and India were anxious to back away from the brink of war, and both were deterred from war by the existence of mutual nuclear weapons capabilities and the chance that, no matter what Indian and Pakistani decision-makers said or did, any military clash could escalate to the nuclear level. In this regard, Pakistan's leadership has acknowledged the "indispensable contribution" that Pakistan's nascent nuclear capability has made to deterrence of aggression and maintenance of peace. In fact, it was Pakistan's nuclear threat that prevented India from making an attack on Pakistan. The Military leadership confidently asserted, "Pakistan will not hesitate to use a nuclear bomb to prevent the collapse of its conventional forces in the event of a war with India."76 This perception was confirmed by former Prime Minister Benazir Bhutto during her spring 1995 visit to the United States, when she said: "Our nuclear programme is peaceful but if the existence of our country is challenged by any outside power, then I certainly have no apologies to make, not in Islamabad, not in New Delhi and not in Washington."77 However, if deterrence fails, and conventional war does occur between emerging nuclear states, then both must act quickly to stop the war and not escalate it through the deliberate use of nuclear weapons, or inadvertently by threatening or destroying the nuclear forces and command and control system of the adversary. This concept means two things: the freedom to act when challenged and the military ability to do so effectively. Though cognisant of the inherent limitations on a small state, Pakistan hopes to achieve a capacity to respond unilaterally to any emerging security challenges and to establish a deterrent power.

Thus, the possession of nuclear weapons has strengthened Pakistan's bargaining position and provided strong support for its foreign policy. It has made a major contribution to peace between the two nations. Nuclear weapons are the symbol of state security and Pakistani defence planners view them as the best defence to contain Indian belligerence towards Pakistan, as India must be convinced that the threat of conventional attack on Pakistan would carry an automatic nuclear response. India could not afford massive losses of its own population in exchange for the elimination of Pakistan as a state. Therefore, nuclear weapons in this sense exist to counter other nuclear weapons and they serve the purposes of existential deterrence.

Under these circumstances, its domestic and regional security threat perceptions make it unlikely that no Pakistani government could compromise, rollback or cap its nuclear programme under the threat of sanctions by the US or any other country. Western diplomats in Pakistan are reported to agree that no government could do so and survive in Pakistan, where, as in a number of other developing states approaching the atomic threshold, the nuclear development programme has gone too far and has become too ingrained with national honour and prestige for practically any government to reverse course. In this regard, the Pakistani defence experts believe that Pakistan should opt for nuclear weapons as a viable defence, rather than merely as a bargaining chip. In the post nuclear scenario the nuclear option becomes the only rational defence posture for Pakistan. At the strategic level, Pakistan will need to focus on a counter-value military doctrine for its nuclear weapons, while integrating this with a counter-force posture at the tactical level. Therefore, Pakistan must disengage its nuclear policy from whatever the Indian nuclear policy may be, and deal with the nuclear issue within its own security needs. In this regard, Pakistani planners and strategists suggest that the Indian government must be made to believe that any use of nuclear weapons, no matter how limited, will lead inevitably to massive exchanges. Thus, once war begins, and if the forces fail to attain victory by conventional means, then Pakistan will use nuclear weapons rather then redefine or limit its military strategic objectives to conform to political reality.

TIME TO REDUCE CRISIS INSTABILITY

In fact, nuclear weapons will not help to reduce defence expenditure. Nuclear weapons by themselves may be cheaper than larger forces, but they require other technical costs, especially those of command, control, communications, computers and intelligence structure (C4I). Nuclear weapons require highly skilled personnel, whose training and services therefore cost more than regular service personnel. In a similar vein, the costs of extra security arrangements and radioactivity checks are considerable and must be added to the nuclear weapons bill.78 Moreover, India and Pakistan have both achieved capability in nuclear weapons and now both have a responsibility to find a solution to crisis instability. It may help to think of crisis management as a curve. A steep curve requires considerable energy to move an object up its slope or to transform a system from one state to another. A relatively flat curve, by contrast, permits considerable movement in response to even minimal force.

Crisis stability would be greater in a political and military environment characterised by a steep curve, that is, one in which considerable “energy” has to be put into the system in order to move the confrontation up toward the top of the curve. Such an environment would also be self-correcting; the strategic warning and response systems between India and Pakistan would tend to return to their day-to-day states in the aftermath of a crisis that did not lead to war.

In theory, India and Pakistan both possessing a secure second-strike capability and a similar counter value strategy, would be highly stable in a crisis. Neither side would have any incentive to pre-empt –quite the reverse, in fact, as pre-emption would be entirely suicidal. Nor would de-escalation pose a problem following the resolution of a crisis. It is unlikely, however, that either side will be reconciled to this vision of security; both have sought to maximise their relative strategic advantage. Moreover, crisis stability is likely to deteriorate even further in the course of the coming decade, because of the new and more threatening strategic forces that both sides will deploy.

However, strategists argued that India and Pakistan must go beyond the search for technical solutions to manage the current nuclear crisis and squarely confront the real source of the problem: contemporary force structures and the strategic doctrines governing their deployment and use. Until arms control measures or other arrangements reduce the ability of strategic weapons to destroy economic centres in a matter of minutes and subsequently to obliterate other vital command and control nodes, crisis instability will persist. Too narrow a focus on technical means of enhancing the survivability of control, command, communications and intelligence (C3I) could even prove detrimental, because it could divert attention from more important efforts to do something about the present crisis instability. Therefore, strategists suggest some recommendations to manage the South Asian nuclear crisis:

THE NEED FOR MORE SURVIVABLE C3

Survivability of strategic command and control would enhance crisis stability, because more durable command and control would go a long way toward reducing pressures on policy makers to pre-empt. It might even permit the retention of negative control well into an acute crisis or the opening phase of a war. Many measures could be put into effect without in any way raising the risks of loss of control; some would actually improve control. A case in point is the hardening and proliferation of communication channels between the national command authority and the unified and specified commands. Moreover, command and control improvements cut across service boundaries and all of the services have given them low priority. They see command and control as peripheral to their central missions and interests. Better command and control also raises the prospect of greater integration of the services and tighter civilian control over them, constituting another source of resistance.

THE DANGER OF QUICK LAUNCH

In contrast to India, Pakistan has publicly asserted that in case of enemy attack, she will not hesitate to retaliate. This doctrine was adopted after the 1971 war as a judicious means of preventing accidental war. Pakistan's force structure and doctrine and one of its long-standing rationales, "extended deterrence", are predicated upon the possibility of first use of nuclear weapons. For Pakistan, the fundamental attraction of nuclear weapons is to prevent larger conventional attacks of enemy and put the aggressor in a position of having nothing left to lose. This is the basis of "extended deterrence" and the stated justification of the ongoing deployment of its nuclear weapons. In this context, Pakistan continues to reserve the right to use nuclear weapons first and has rejected the Indian offer of "no first use of nuclear weapons" because Islamabad does not enjoy parity with New Delhi in conventional weapons. It cannot, therefore, surrender its strategic options and give India the upper hand in the matter. Pakistan has every incentive to maximise Indian uncertainty and must do so to minimise the risk of Indian pre-emption until Pakistan's arsenal increases in size, and its nuclear force structure becomes more survivable.

The quick-launch option offers a technically viable or a politically feasible solution to the problem of strategic vulnerability. It can, nevertheless, make some contribution to crisis stability. If India and Pakistan each believe that the other has a quick-launch option it is prepared to use, then it will be reluctant to consider pre-emption. In any case, each country gives evidence of believing in the other's capability to exercise some kind of quick-launch option and it is only way to prevent accident war.

UPGRADING EARLY WARNING

Crisis instability could be somewhat reduced by upgrading the quality and reliability of the early warning systems of both countries. Both countries' military commanders have already established 'hotlines' to avoid any serious situation and exchange lists of nuclear installations. However, inadequate warning systems are dangerous in two ways: False or misleading information can prompt either side to launch a strike in the mistaken belief that it is retaliating. Western sources suggest that Pakistan and India both have less reliable communication system and a greater apparent reliance on quick-launch options. Former Pakistani Air Marshall Asghar Khan has commented that neither India nor Pakistan C3I system to minimise the risk of any miscalculation.79 Thus, accurate information can serve as an effective antidote to the baseless fears and it can also minimise the chances of a tragic mistake stemming from hardware failure or malfunction.

THE NEED FOR ARMS CONTROL

Arms control could go a long way toward facilitating connectivity and thereby easing crisis instability. In this regard, one important step would be the creation of "keep-out-zones" around both countries' capitals, in order to protect their leaderships from sudden destruction. A suitable radius for a keep-out-zones might be 2,500 km80 and this would compel both countries to withdraw their missiles from the border areas of the other. Other proposals to consider include consultations on alert procedures, a prohibition on further nuclear tests, a ban on forward deployment of all kind of missiles, the creation of undersea command posts and sanctuaries for ballistic missiles, the creation of risk reduction centres and the improvement of the hotline between two countries' capitals.81 Furthermore, the ultimate objective should be not just to limit the means of destruction but to reduce the perceived utility associated with military assets by reviewing arms control capabilities and practices. In this regard, India and Pakistan must be encouraged to adopt Conventional Ballistic Missiles (CBMs) to ease bilateral concerns, to open discussions on nuclear transparency issues and to strengthen national export controls on sensitive technology and materials.

Both countries are also under world pressure to abandon their nuclear programmes and sign the non-proliferation treaty (NPT), the comprehensive test ban treaty (CTBT) and the fissile material cut-off treaty (FMCT). Pakistan has never refused to sign the treaty but its stance on the issue has been that India should also sign it at the same time so that credible parity in the regions defence equilibrium would ensure. On the other hand, India has never been willing to sign the CTBT and has always been wary of its discriminatory orientation. The Indian leadership is widely believed to have a nuclear weapons programme and so, of course, proliferation control is not in its interest as it is one of the states to be controlled. The essential dissimilarity between the positions of Islamabad and New Delhi on CTBT is that while the former is ready to sign the treaty purely in the regional context, the latter insists on it being dealt within a global perspective. However, there is a fair chance that India will ultimately accept the CTBT under some appropriate conditions for example, that the US lift the ban on technology exports in force since 1974. Nevertheless, strategists argue that the instruments such as CTBT and FMCT are essentially non-proliferation measures and no longer valid for South Asia because this region has already been nuclearised. Thus, the priority issues in South Asia are: cessation of arms race, nuclear stabilisation, and nuclear and conventional arms control.

CONCLUSION

In the near future, it seems clear that Pakistan will continue to make rational nuclear choices in its self-interest. Pakistan perceives that its security is under threat and it sees India as arrogant, aggressive and expansionist. India insists that Pakistan has no legitimate defence needs and it has to accept its de facto strategic inferiority. But Pakistan is determined to defy India's predominant position in South Asia, and has developed its own nuclear weapons in order to strengthen its bargaining position vis-à-vis India and reduce its dependence on external sources.

It is certainly true that India's nuclear tests have made Pakistan vulnerable. No one focuses on its security requirements, beyond paying lip service, and pressure has been exerted to keep Pakistan out because it had no need to follow India's lead. In these circumstances, Pakistan's defence planners immediately decided to strengthen their country's nuclear deterrence posture and to take steps to ensure that a failure of nuclear deterrence will not necessarily occasion nuclear warfare. Furthermore, the understanding that Pakistan's survival depends entirely upon purposeful self-reliance, in turn, requires a multifaceted nuclear strategy involving deterrence, pre-emption, and war fighting capabilities, and a corollary conventional strategy that is similarly comprehensive and undiminished by territorial losses.

In order to achieve such a conventional strategy, Pakistan must understand that nuclear war could arrive not only as a bolt-from-the-blue missile attack, but also as a result (intended or inadvertent) of escalation. Thus, for example, if India commenced conventional attacks upon Pakistan, Islamabad could respond, sooner or later, with nuclear reprisals. Or, if India began conventional attacks upon Pakistan, then, Islamabad's conventional reprisals could be met with enemy nuclear counter strikes. So, a persuasive Pakistani conventional deterrent, to the extent that it prevented enemy state conventional attack in the first place, could reduce Pakistan's risk of escalatory exposure to nuclear war.

Pakistani hawks support the use of nuclear weapons to counter an Indian conventional attack but doves suggest that as long as an enemy attack is fully conventional, then Pakistan's response must be non-nuclear. This would mean, correspondingly, that the only way for Pakistan to deter a larger-scale conventional attack would be by maintaining visibly large-scale conventional capabilities. Of course, enemy states contemplating a first-strike attack using chemical or biological weapons are apt to take Pakistan's nuclear deterrent far more seriously. However, a strong conventional capability is needed by Pakistan, essentially to deter or pre-empt conventional attack, strikes that could, if they were undertaken, lead quickly via escalation to various forms of unconventional war.

Nevertheless, the five-decade history of hostility gives a lesson to Pakistan that it should not attempt to fight with India without nuclear weapons. It is the only option to reduce the risks of an enemy state's aggression. It is also necessary to learn from the past that it is unwise to rely on external help as far the country's security is concerned. Thus, Pakistan needs self-reliance in military technology; in particular it needs a strong nuclear deterrent. But it cannot rely entirely upon this one basis for national security because, ultimately, it should be stronger in conventional deterrence. Moreover, it must rely upon complementary nuclear and conventional forces, and upon the continuing and associated availability of critical pre-emption option. Suitable observable preparations for multiple bases of viable security could provide the essential requirements for survival into the next millennium. Without all of these interrelated security foundations, Pakistan's future could be founded upon altogether vain

hopes, an apocalyptic future that might ultimately include the palpably nightmarish vision of a regional nuclear war.

It is also equally clear that Pakistan will sign the CTBT or the FMCT under some conditions and it will not harm its nuclear deterrent. This policy will help the US and Western countries to put pressure on India to accept both treaties which are widely perceived as non-proliferation and not disarmament measures. Nevertheless, no Pakistani government will think to give up the nuclear option in the foreseeable future, without significant incentives.

Finally, for the foreseeable future, Pakistan's only security choices are among unattractive options. To act rationally, Islamabad must choose, in each case, the least unattractive option. While this is indeed a distressing state of affairs and while-in the best of all possible worlds-Pakistan could fall back upon durable political settlements of all disputed matters, this is the starkly adversarial context within which Islamabad must operate. There is no other option and there is no better world. Political settlement is desirable, but only if it can be achieved without harming national interests and without the loss of national integrity.

However, it must be understood that proliferation in South Asia is a complex affair and the best strategy to deal with the South Asian nuclear proliferation would be to identify the minimum-security requirements of both India and Pakistan; it would also have to treat the nuclear issue as part of the security calculation of regional states, and not try to eradicate it. Thus, the problem of regional settlement of nuclear proliferation in South Asia is very difficult due to the outstanding disputes among the major states of the area. Both India and Pakistan are prominent holders-out against Nuclear Non-Proliferation Treaty (NPT) systems, and both have rejected all multilateral or US pressure due to some differing priorities and different goals.

Pakistan has led the negotiation process, at least in a rhetorical sense, and Pakistan has also introduced a variety of proposals for regional denuclearisation in South Asia. Some analysts have dismissed these efforts as designed to give Pakistan the moral 'high ground' in the war of words against India. Moreover, the Indian response does not seem encouraging and the main Pakistan proposals are still floating in the realms of uncertainty. Thus, the dilemma continues and the credibility remains in doubt. Nevertheless, Pakistan has sound reasons for pursuing a nuclear policy, because nuclear weapons are more punitive than acquisitive and their possession is the only option to defend the state. Pakistan may have no choice but to gain nuclear capability, to ensure its survival.

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