PAKISTAN'S NUCLEAR DOCTRINE AND STRATEGY

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INTRODUCTION

Ever since its independence, Pakistan has been central to India's national security consciousness. This assumed a more complex dimension with the introduction of nuclear weapons in the two nations. Even though the overt demonstration of Pakistan's nuclear weapon capability happened only on May 28 and 30, 1998, after India had revealed its nuclear hand, it is widely believed that Pakistan had acquired the necessary wherewithal in 1984 when A. Q. Khan claimed that Khan Research Laboratories (KRL)[1] was "in a position to detonate... a nuclear device on a week's notice."[2] By 1986, the US National Intelligence Estimate had concluded that Pakistan was only "two screwdriver turns" away from a nuclear weapon[3], and the same was proudly acknowledged by Pakistan in 1987.[4]

Its nuclear capable status, even when not demonstrated through nuclear tests, gave Pakistan the confidence to follow a stratagem espoused by former Chief of Army Staff, Gen. Aslam Beg, designed to contain a conventionally superior Indian military through an offensive policy of engaging it in a proxy war with

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1. Inaugurated in July 1976, it was then known as Engineering Research Laboratories (ERL) until May 1981 when President Zia-ul-Haq changed the name to Khan Research Laboratories in honour of A.Q. Khan's service to Pakistan's nuclear programme.
2. IISS Strategic Dossier, *Nuclear Black Markets: Pakistan, A.Q. Khan and the Rise of Proliferation Networks - A Net Assessment* (London: International Institute for Strategic Studies, May 2, 2007), p. 22
3. Ibid., p. 22.
4. Gen. Aslam Beg, "Pakistan Nuclear Propriety," *National Security*, (FRIENDS, 2000) as cited in Paolo Cotta-Ramusino and Maurizio Martellini, *Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan,* Landau Network - Centro Volta report, January 21, 2002. Gen. Beg, vice chief of the army in 1987 and chief from 1988-91, claims that Pakistan had six nuclear devices by 1989 and 15 delivery systems by 1991.

the help of groups. Over the last two decades, India has been trying to find the means of effectively dealing with asymmetric warfare, cheekily indulged in by Islamabad from the shadows of its nuclear weapons.

To enable India to address this reality, it is important to delve into Pakistan's perception of its nuclear capability. This, of course, is closely linked to how the Pakistani military and political decision-makers (mostly the same) identify their country's security vulnerabilities, its major threat perceptions, and seek to redress them, including through the muscle flexing allowed by their possession of nuclear weapons. Pakistan holds its nuclear weapons as the *ultimate guarantor of national survival* and uses them intelligently to nullify India's conventional superiority. How does it do this? To what extent are nuclear weapons conceived as an extension of the country's conventional capability? What is Pakistan's threshold for the use of nuclear weapons – early in operations, following an escalatory spiral, or not at all? How does this posture reflect in its nuclear force structure and deployment strategy? What are the discerning features of its nuclear doctrine? These are some of the questions that this paper considers in order to provide cues and directions to Indian policy-makers.

PAKISTAN'S EXPECTATIONS FROM ITS NUCLEAR WEAPONS

Pakistan considers the nuclear weapon as its most precious strategic asset. The country's leadership is extremely conscious of its value as the ultimate guarantor of the nation's existence as a sovereign entity. This was avidly brought out in one of the writings of Gen. Mirza Aslam Beg. In an article appropriately titled ''Pakistan's Nuclear Imperatives,'' he wrote, "Some safety against extinction is the inalienable right of an individual or a nation. Oxygen is basic to life, and one does not debate its desirability, *nuclear deterrence has assumed that life-saving property for Pakistan."*[5]

India is the *raison d'etre* of Pakistan's nuclear weapons. Its nuclear doctrine and strategy is *wholly and solely India-centric*, designed to address perceived

5. Gen. Mirza Aslam Beg, "Pakistan's Nuclear Imperatives," *National Development and Security*, vol.3, no.10, November 1994, pp. 29-41.

conventional and nuclear threats from India. Consequently, the nature and function of the Pakistani nuclear deterrent (including delivery mechanisms), as also its rules of employment and deployment, are all tailored to meet this one requirement. And, from this one *brahmastra* in its repertoire of military capabilities, Pakistan and particularly its army, given the nature of the system of governance in the country, expect to reap a rich harvest of military and political objectives.[6]

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MILITARY OBJECTIVES OF PAKISTAN'S NUCLEAR WEAPONS

Strategic Equaliser of Power Asymmetry

Pakistan has always resented its inherited geo-physical and structural asymmetry. A former Pakistani Foreign Minister, Abdul Sattar, lamented that the transition to independence "created seemingly impossible problems for Pakistan, which unlike India, inherited neither a capital nor government nor the financial resources to establish and equip the administrative, economic and military institutions of the new state...."[7] This perception that "Pakistan started its independent career as a weak nation,"[8] for which India was held blameworthy, were met by defining "national identity through religious symbolism and by building India-Pakistan rivalry."[9] Ever since, Pakistan has looked for ways and means to somehow equalise the power asymmetry with India through alliance building with the USA,

6. Peter Lavoy in his essay on Pakistan's nuclear doctrine has listed eight separate "uses" for Pakistan's nuclear weapons, four being specific to India, viz (i) last resort weapons to prevent military defeat or loss of territory; (ii) deterrent to conventional military attack; (iii) facilitators of low-intensity conflict; and (iv) tools to internationalise the Kashmir issue. See Rafiq Dossani, Henry S. Rowen, *Prospects for Peace in South Asia* (Stanford: Stanford University Press, 2005).
7. Abdul Sattar, "Fifty Years of the Kashmir Dispute: The Diplomatic Aspect," in Suroosh Irfani, ed., *Fifty Years of the Kashmir Dispute* (Muzaffarabad: University of Azad J & K, 1997).
8. Pervaiz Iqbal Cheema, *The Armed Forces of Pakistan* (Karachi: Oxford University Press, 2003), p. 34
9. Husain Haqqani, *Pakistan: Between Mosque and Military* (Lahore: Vanguard Books, 2005), p. 12. The author argues that focus on rivalry with India became an instrument for securing legitimacy by the national security apparatus in Pakistan. This continues to be the case.

China and other Muslim countries, as well as through acquisition of modern conventional weaponry to match a far larger and better equipped Indian Army. However, it was in the acquisition of a nuclear weapons capability that Pakistan discovered the best and most effective equaliser.

Islamabad had begun to consider acquisition of nuclear weapons from the time China tested its own nuclear device in 1964 because it assumed that this development would set India down the nuclear path. Zulfikar Ali Bhutto, Pakistan's foreign minister in the government of Gen. Ayub Khan, emphasised the deterrence value of nuclear weapons in 1965 and pressed upon his president that, "All wars of our age have become total wars... and our plan should, therefore, include the nuclear deterrent."[10] However, it was only in January 1972, within three weeks of its defeat in the 1971 War, that serious thought was given to the nuclear weapon as an effective instrument to match up to a larger power.[11] Pakistan was not unique in reaching this conclusion. Even the British Prime Minister, Margaret Thatcher had said in Moscow on March 31, 1987, "Nuclear deterrence is the only means allowing small countries... to stand up to big countries."[12] Likewise, in its search for viable security, Pakistan has found in nuclear weapons a means to balance India's conventional superiority.

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At the same time, the nuclear weapons programme has provided Islamabad the additional benefit of addressing India's perceived advantage in science and technology. In this context, it merits remembering that Z.A. Bhutto, while he himself was out of office in 1969, had cautioned the then Pakistani government, "If Pakistan restricts or suspends her nuclear programme, it would not only enable India to blackmail Pakistan with her nuclear advantage, but would *impose a crippling limitation on the development of Pakistan's science and technology*."[13] He

10. Z.A. Bhutto, *The Myth of Independence* (Karachi: Oxford University Press, 1969), p. 153.
11. Jasjit Singh has identified two crucial strands of Pakistani nuclear strategy that evolved after 1971: (a) nuclear weapons to neutralise India's conventional and military superiority; (b) use of irregular forces and terrorism. Jasjit Singh, "Pakistan's Nuclear Strategy: An Assessment," *Aakrosh*, vol 4, no.13, October 2001, p. 73.
12. Gerard J. Degroot, *The Bomb: A History of Hell on Earth* (London: Pimlico, 2004), p. 188.
13. Bhutto, n.10. Emphasis added.

was clear that Pakistan's development of nuclear weapons would serve to effectively and more holistically counter-balance India's preeminence in the subcontinent, and demonstrate national technological capabilities.

In yet another use of its nuclear weapon for bridging the gap with India, Pakistan has intelligently manipulated the US for conventional arms and economic assistance. For instance, after India's peaceful nuclear explosion in 1974, Bhutto warned the US that if his country was unable to get "sufficient conventional weapons" to bridge the disparity, Pakistan "would forego spending on conventional weapons and make a big jump forward for concentrating all its energy on acquiring the nuclear capability."[14] Pakistani leaders have always tried to make a convincing case to justify nuclear weapons as the only means available to "preserve a broad strategic equilibrium with India, to neutralize Indian nuclear threats or blackmail, and to counter India's large conventional forces."[15] And the US was easily convinced since it anyway perceived India as part of the Sovied constellation in the Cold War, while Pakistan was their ally against the Communist bloc.

Deterrent Against Conventional War

Common sense mandates that nuclear deterrence premised on mutual assured destruction should place an automatic limitation on violence and act as a brake on total war. Given its horrendous consequences, no rational leader could risk war if nuclear retaliation was even remotely possible. This reality has been intelligently exploited by Pakistan in its national security strategy. Islamabad believes that notwithstanding its conventional inferiority, the nuclear weapon provides it

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14. P.B. Sinha and R.R. Subramanian, *Nuclear Pakistan: Atomic Threat to South Asia* (New Delhi: Vision Books Pvt Ltd., 1980), p.70
15. Zafar Iqbal Cheema, "Pakistan's Nuclear Use Doctrine and Command and Control," in Peter Lavoy, Scott D Sagan and Jim Wirtz, eds., *Planning the Unthinkable: How the New Powers Will Use Nuclear, Biological and Chemical Weapons* (Ithaca: Cornell University Press, 2000), p. 169.

an "infrangible *(sic)* guarantee of its independence and physical integrity"[16] even in its pursuit of revisionist policies. Keen to avoid a full-scale conventional conflict with India, but desirous of altering the status of Kashmir, Pakistan reckons this possible through nuclear weapons. Without them in its quiver, it is certain that Pakistan's proxy war would have breached the limits of India's tolerance and led to a conventional offensive. This eventuality, Pakistan perceives, stands blocked with its nuclear weapons. As explained by Benazir Bhutto in an interview in 2004, nuclear weapons ensured that "India could not launch a conventional war, knowing that if it did, it would turn nuclear, and that hundreds of millions would die... suicide not just for one, but for both nations."[17]

Evidently then, Pakistani leaders, even civilian, have believed that the danger of nuclear escalation insulates Pakistan from Indian conventional attack, allowing Pakistan to not only ensure its own security, but also pursue a provocative strategy in Kashmir. Pakistan's willingness to launch the Kargil conflict was based on the hypothesis that "their new overt nuclear status would enable them to deter the Indians even more effectively than their *de facto* nuclear capacity had previously done."[18] Two other assumptions underlay the adventure: profound confidence in the belief that the political establishment in India, especially the caretaker government then in power, would not be able to take a hard decision of escalation; and, a reasonable confidence that the presence of nuclear weapons would attract the immediate attention of third parties (most notably, the USA) anxious to defuse a potential nuclear confrontation in South Asia. These conditions were expected to force India to accept a stalemate even at the cost of losing a small slice of its territory. However, that all the three assumptions proved untrue is another story. Yet, for the Pakistani security establishment, nuclear weapons continue to provide a shield to deter conventional aggression, even as it pursues covert aggression through sub-conventional means.

16. Ian Smart, "The Great Engines: The Rise and Decline of a Nuclear Age," *International Affairs*, vol.51, 1975, p. 548, as cited by Rifaat Hussain "Nuclear Doctrines in South Asia," SASSU Research Report, no.4, December 2005.
17. S. Paul Kapur, "India and Pakistan's Unstable Peace: Why Nuclear South Asia is not like Cold War Europe," *International Security*, vol.30, no.2, Fall 2005, pp. 127-152.
18. Kapur, Ibid., p. 144.

Facilitators of Asymmetric Warfare

In most countries possessing nuclear weapons, these are mainly considered instruments of nuclear deterrence, meant to obviate a *nuclear* attack by the enemy. But for Pakistan, its nuclear weapons serve to not only deter a *nuclear* and a *conventional* attack, but also provide it with the immunity to indulge in aggressive military strategies that harbour political ambitions. Accordingly, the Pakistani nuclear doctrine encapsulates a more offensive form of deterrence that seeks to change the *status quo* by holding out the threat of nuclear blackmail on Kashmir while deterring an Indian conventional attack.

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This linkage was evident once there was a significant spurt in insurgency and terrorism in Jammu and Kashmir (J & K) from 1989 onwards, soon after the acquisition of nuclear weapons capability by Pakistan. The trend continued through the 1990s and was interspersed by statements by A.Q. Khan in 1992, and other political and military leaders in 1995-96 threatening India from taking decisive military action against Pakistan.[19] The idea was to allow Islamabad the freedom to manage escalation at a desirable level. According to one analyst, "Islamabad is convinced that the mere threat of approaching the nuclear threshold will prevent India from seizing the strategic initiative and military dominance of events, permitting Pakistan to escalate the crisis at will without the fear of meaningful Indian retribution."[20] Even amidst fighting in Kargil, the Pakistan Army leaders insisted "there is no chance of the Kargil conflict leading to a full-fledged war

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19. For more on these linkages, see J.N. Dixit, *India-Pakistan in War and Peace* (New Delhi: Books Today, 2002).
20. Yossef Bodansky, "Pakistan's Nuclear Brinkmanship," Freeman Centre for Strategic Studies, Israel. Available at http://www.freeman.org

between the two sides."[21] Interestingly, this was similar to the advice given by senior US military officers to President Kennedy during the Cuban crisis in 1962. They believed that the US could afford to launch a limited attack on Cuba because the USSR *would not dare* counter-attack in Berlin. Pakistani military counsel to the civilian government too dismissed the chance of a total war because nuclear deterrence afforded it greater impunity and immunity.

This is also the message Pakistan imbibed from India's decision not to launch an invasion in response to a provocative terrorist attack on the Indian Parliament in 2002 and the Kaluchak massacre at the height of troop mobilisation during Operation Parakram. Buoyed by the perception that nuclear deterrence worked in their favour, the larger Pakistani strategy appears to be to continue to bleed India while not provoking it enough to escalate to a point where any kind of decisive Indian action wrests the control of escalation from Pakistan.

India, meanwhile, has refuted this presumption by repeatedly alluding to the space for limited conventional conflict below the nuclear threshold. In fact, in the context of the US-USSR nuclear equation, Glenn Snyder had extrapolated in 1961, "The Soviets probably feel... that there is a range of minor ventures which they can undertake with impunity, despite the objective existence of some probability of retaliation."[22] India believes the same. The danger, however, remains that neither side is, or can be, absolutely clear about where the threshold lies. And, this, or the fear that conflicts can take on a dynamics of their own which makes escalation difficult to predict or control, imposes limitations on the initiator of violence. Therefore, even as Pakistan continues to use its nuclear weapons as effective facilitators of sub-conventional war to complicate India's security challenges, it cannot, at the same time, be free of the fear of an unintended escalation.

Nuclear Deterrence

Amongst their most prosaic military functions, nuclear weapons in Pakistan perform the traditional task of deterring the adversary's use of nuclear weapons.

21. Ihtasham ul Haque, "Peace Linked to Kashmir Solution," *Dawn Weekly Wire Service*, June 26, 1999. As cited in Peter Lavoy *et al*, eds., n.15, pp. 248-249.
22. Glenn Snyder, *Deterrence and Defense* (Princeton, NJ: Princeton University Press, 1961), p. 226.

Mutual assured destruction (MAD) is expected to uphold deterrence as long as both sides have a retaliatory capability and neither has a first strike capability. So it is that Pakistan, in order to enhance the credibility of its deterrence, has been working towards acquiring a second strike capability against India. Its concept of nuclear deterrence, however, is built on projecting the nuclear weapon as a militarily usable one. By indicating its willingness to use the weapon for its survival, it hopes to enforce deterrence against India's nuclear and conventional forces.

POLITICAL OBJECTIVES OF PAKISTAN'S NUCLEAR WEAPONS

Security Guarantor in Absence of Alliance Support for Military Adventurism

Islamabad embarked upon alliance building within the first decade of its independent existence to buttress its security — a Mutual Defence Alliance with the USA in 1953, further reinforced through an executive arrangement in 1959. This was seriously pushed for conversion, in the late 1970s, into a formal security treaty that would strengthen US security guarantees.[23] Though this was not formalised, President Nixon had already declared in September 1973, that the "independence and integrity of Pakistan is a cornerstone of American foreign policy." The US became its major power patron, showering weapons and economic aid on Islamabad. Meanwhile, after eleven long years of negotiations, Pakistan finally established a close relationship with China through a bilateral agreement in June 1976. The historic import of this was described by Bhutto himself as "my greatest achievement and contribution to the survival of our people and our nation."[24]

While these relationships translated into a rich haul of military hardware and other assistance (including nuclear materials such as ring magnets, special furnaces, heavy water, tritium and even weapon designs from China), Pakistan never found them very forthcoming with support for its territorial skirmishes with India. The US disappointed Islamabad in 1965 and 1971, and it was equally

23. For more on this, see Savita Datt, *To Chagai and Beyond: Nuclear Developments in Pakistan* (New Delhi: IK International Pvt Ltd, 2003), pp. 42-44.
24. Zulfikar Ali Bhutto, *If I am Assassinated*...(New Delhi: Vikas, 1979), p. 138.

miffed with China's advice to withdraw its forces from Indian territory in 1965. In 1999, too, both were loath to providing material or moral support to Islamabad for its adventure in Kargil. Therefore, over a period of time, and after every war with India, Pakistan has reluctantly accepted that neither the USA nor China would opt to become embroiled militarily in Indo-Pak Wars, and, in fact, would not hesitate to impose sanctions and embargoes on it. This made Islamabad realise its own vulnerability to political manoeuvring as a result of its dependence on external sources of weaponry. These realisations have added to the Pakistani perception that only its own nuclear weapons capability could guarantee its security and survival.

This consideration weighed heavily upon the Pakistani Administration in 1998 when after the Indian nuclear tests, Washington strongly advised Islamabad to refrain from a similar exercise and even promised substantial economic and military assistance, including the lifting of the Pressler Amendment[25], delivery of the stalled 60 F-16s, and other new weaponry. However, what was not forthcoming was the assurance of continuous military support against India. And, as far as Pakistan was concerned, that was reason enough to overtly demonstrate its nuclear capability. Two other assumptions helped it to make the decision: one, assurance provided by China to help Pakistan in the face of sanctions that were sure to follow its nuclear tests[26]; and second, the confidence that by showcasing the region as a dangerous nuclear flashpoint, it would anyway be able to extract concessions from the US. Kargil, it was hoped, would bring international attention to the region. However, Pakistan may not have bargained for the negative vibes that it received from its allies. In any case, the Kargil experience too reinforced Pakistani faith in its nuclear deterrent as the most reliable tool for its national security when its alliances let it down. Meanwhile, as India transforms its relations with the US and China, Pakistan's fear psychosis and its reliance on nuclear weapons could only grow.[27]

25. The US Congress passed this legislation in 1985 requiring the US president to certify that Pakistan did not possess a nuclear weapon as a precondition for American economic and military assistance.
26. Pakistani officials did travel to China in the period after India's and before its own nuclear tests.
27. Interestingly, some Pakistani analysts have even attributed the Pakistani desire for nuclear weapons to Sino-Indian rapprochement since that would erode Pakistan's margin for diplomatic manoeuvring!

Tool for Nation-Building and Prestige

Apart from security, Bhutto's push for nuclear weapons was also motivated by a desire to "divert the nation's attention from the humiliation it had suffered as a result of its defeat in the East..."[28] and his yearning for Pakistan "to walk tall."[29] Even President Musharraf has referred to Pakistan's nuclear achievements in the same vein. In a speech delivered on March 27, 2001, on the occasion of the retirement of A.Q. Khan, he said, "In a general sea of disappointment, the development of Pakistan's nuclear capability is a unique national success story."[30] And the nation and its people second this. The country's nuclear achievements are an effective rallying point for national pride. Not surprisingly, therefore, Kahuta, that houses the uranium enrichment plant, has been described as the "symbol of our national defiance" and the mastery of the enrichment technology as the "symbol of national pride, scientific and technical modernity and independence from foreign powers."[31] This has been explained thus by Brahma Chellaney[32]:

> The rapid technological advances by Pakistan in recent years are a symbol of nationalistic pride in a country which has overcome major political, technical, and industrial challenges to mount a program with a team of dedicated scientists. Pakistan is showing the world—as China did in the sixties—how a country with limited technical resources and a narrow industrial base can acquire nuclear weapons and ballistic missile capabilities by riding a wave of nationalism.

Instrument to Legitimise Military Power

Ironically enough, Zulfikar Ali Bhutto originally intended Pakistan's nuclear programme to serve as a civilian counterweight to the military. The programme was launched in the mid-1970s by his civilian government and the military evinced little interest in the same. In fact, Gen. Ayub Khan as president had dismissed Bhutto's calls for attention to nuclear weapons when he was his

28. Datt, n.23.
29. Steve Weissman and Herbert Krosney, *The Islamic Bomb* (New York: Times Books, 1981), pp. 17-18.
30. Gordon Corera, *Shopping for Bombs: Nuclear Proliferation, Global Insecurity and the Rise and Fall of the A.Q. Khan Network* (New Delhi: Foundation Books, 2006), p. 150.
31. IISS Strategic Dossier, n.2, p. 20.
32 Brahma Chellaney, "South Asia's Passage to Nuclear Power," *International Security*, vol. 16, issue 1, 1991, p. 43.

foreign minister from 1963-66. But, it was during Zia-ul-Haq's tenure as president that the programme came under military control and directorship. And there it has remained ever since. In fact, the Pakistan Army, keeping even the air force and navy out,[33] has effectively honed it as a "trump card" [34] against the civilian politicians and not allowed their influence in nuclear decision-making. Benazir Bhutto has openly admitted her limited participation in the country's nuclear decisions, including that she was allowed to be the prime minister under the tacit agreement that she would not interfere with the military's control of the nuclear programme. Meanwhile, by retaining the domestic focus on rivalry with India, the army has conditioned the Pakistani public to believe that there is a constant threat from India, which can only be effectively addressed by allowing the military a free hand with the country's economy, polity and nuclear policy.

Tool for Gaining Leadership of the Islamic World

Besides using it as a rallying point for national pride, Pakistan has also used the concept of "Islamic Bomb" to acquire support from, and leadership of, the Islamic countries. By portraying its nuclear weapons capability as belonging to the larger Muslim community, especially in the earlier decades of its nuclear programme, Pakistan was able to garner material and moral support from other Muslim countries such as Saudi Arabia, Libya and Iran. President Zia said in 1978 that Pakistan's possession of the nuclear weapon "would reinforce the power of the Muslim world."[35] Twenty years later, after the nuclear tests in Chagai, Prime Minister (PM) Sharif said, "Not only the whole nation, but the *whole Islamic ummah* hailed Pakistan for its great achievement and expressed happiness over the decision."[36]

However, this tendency to project a wider belongingness of the Pakistani nuclear weapon has considerably reduced post 9/11 and after the revelations of

33. The army has monopolised the post of chairman Joint Chief of Staff since the 1998 nuclear tests, abandoning the tradition of all three Services holding the position by rotation.
34. Ashley Tellis, *India's Emerging Nuclear Posture: Between Recessed Deterrence and Ready Arsenal* (Santa Monica: RAND, 2001).
35. Smruti Pattanaik, "Pakistan's Nuclear Strategy," *Strategic Analysis*, vol 27, no.1, January -March 2003.
36. *Summary of World Broadcasts*, Part 3 (Asia Pacific), FE/3241, June 1, 1998, p. A 1. Emphasis added.

the A.Q. Khan network. Islamabad is now more conscious of signalling a firmer and more responsible attitude towards its weapons of mass destruction (WMD) assets. This is not to suggest that earlier Islamabad had allowed other nations any physical access to its nuclear arsenal, but it did encourage a notional sense of wider Islamic pride in its nuclear venture, which in some cases as Iran and Libya, translated into nuclear proliferation. It is, however, now better known that Pakistan was clever enough to export only snippets of relevant information and obsolete technologies and equipment. This may have been a clever ploy to retain its status as the only Muslim country possessing nuclear weapons, or a genuine concern for the dangers of proliferation.

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PAKISTAN'S NUCLEAR DOCTRINE

There is no official Pakistani nuclear doctrine. Whether as a matter of deliberate policy, or purely by default, but probably because of a bit of both, Pakistan's nuclear doctrine is shrouded in ambiguity. This is not surprising given that most states possessing nuclear weapons seek to exploit the role of opacity and ambiguity by refusing to define the number of weapons in their arsenals or the precise trigger points for nuclear use. So it was that a former Pakistani Foreign Minister, Agha Shahi, wrote in 2000:

> ...a policy of ambiguity would appear to be best for Pakistan's security. Spelling out its nuclear doctrine would detract from the imperative of uncertainty about when a nuclear strike as a last resort would... reinforce maximally credible nuclear deterrence by raising the threshold of Indian calculation of unacceptable risk.[37]

37. Agha Shahi, "Command and Control of Nuclear Weapons in South Asia," *Strategic Issues*, March 2000, p.56, as cited in Hussain, n.16, p. 13.

Despite the lack of transparency, however, it is possible to draw out some contours of the Pakistani nuclear doctrine from statements of civilian and military leaders and from the writings on the subject by the Pakistani strategic community.

Minimum Nuclear Deterrence

Like the doctrines of India and China, Pakistani official statements too advocate minimum nuclear deterrence. One year after the conduct of its tests, in May 1999, Prime Minister Nawaz Sharif, in a lecture to the officers of Pakistan's National Defence College (NDC) described minimum nuclear deterrence as "one of the principles guiding Pakistan's nuclear policy."[38] Foreign Minister Abdul Sattar reiterated the same while addressing an international seminar in Islamabad on November 25, 1999. It has been articulated that Pakistani nuclear deterrence does not stem from the quantity of its weapons, but from "its quality, which is primarily a function of the Pakistani leadership to pursue a 'no holds barred' approach towards defensive use of nuclear weapons in the event of a war with India."[39] Therefore, Islamabad, like New Delhi, maintains that the 'minimum' cannot be defined and is, in fact, a dynamic concept based on calculations of the number of nuclear weapons estimated with the adversary, the manner of their deployment, and other technological imperatives such as missile defence. Since these factors impinge upon the survivability of nuclear weapons, and, hence, the deterrence credibility, the quantity of weapons would require to be "upgraded in proportion to the heightened threat of preemption and interception."[40]

Therefore, Pakistan's calculation of minimum is closely linked to its perception of India's nuclear numbers, and its ability to inflict unacceptable damage on India. While the first parameter may be interpreted to mean parity, the second conveys that for nuclear deterrence to work, parity need not be based on "numerical equality of the number of nuclear delivery systems, or of the number of warheads or in the yield of megatons available to each opponent. Parity requires assured destruction capability."[41] The problem, however, arises in defining what would constitute

38. Rajesh Rajagopalan, *Second Strike: Arguments About Nuclear War in South Asia* (New Delhi: Penguin, 2005), p. 51.
39. Rajagopalan, Ibid., p. 14.
40. Ibid., p. 49.
41. Zafar Nawaz Jaspal, "Reassessing Pakistan's Nuclear Strategy," http://www.defencejournal.com, July 2001.

unacceptable damage for a geographically bigger, and an institutionally and economically stronger India. Gen. Mahmud Durrani sought to resolve this problem by suggesting, "Overkill would, by necessity, be built into the response."[42]

Pakistan's construction of minimum nuclear deterrence, however, is not very different from that of India. It is a concept that is less definable in terms of a number and more a reflection of the relatively small amount of nuclear resources being put to optimum use for enhancing the credibility of deterrence.

First Use

Pakistan's main concern has always been to offset India's superior conventional military and its own lack of strategic depth that constrains its ability to pursue a defensive strategy that could allow trading geographic space for reaction time. The nuclear doctrine is aimed at addressing these limitations, and hence, it is not at all illogical that Islamabad retains the option of first use of nuclear weapons, if and when it perceives a threat to the survival of the state. Fearful of the possibility of finding itself at the receiving end in a conventional conflict[43], Pakistan considers its nuclear weapons as a last resort. As argued by Air Cmde(Retd.) Tariq Mahmud Ashraf:

> Being on a weaker military footing... Pakistan's nuclear employment doctrine should assert that since she would be fighting for her very survival as an independent nation state in any future war,... Pakistan... must reserve the right of first use of nuclear weapons and this assertion should be made a part of her nuclear employment doctrine.[44]

The North Atlantic Treaty Organisation (NATO), it may be recalled, followed the same policy in the face of Soviet conventional superiority through the Cold War years. Along similar lines, viewing 'first use' as an "option enhancing policy,"[45] Pakistan dismisses India's offers for a mutual no first use agreement. As explained by Lt. Gen .(Retd.) Sardar Lodi,

42. Maj. Gen. Mahmud Durrani, "Pakistan's Strategic Thinking and Role of Nuclear Weapons," *Cooperative Monitoring Centre Occasional Paper*, SAND 2004, available at http://www.cmc.sandia.gov.
43. Pakistani strategists point out that India's capture of just 140 km would wipe out the state because its communication, irrigation, industry and population are all together within that depth. See Syed Rifaat Hussain, "War Against Terrorism: Pakistan's Perspective," *IPRI Journal*, vol 4, no.1, 2004.
44. Hussain, n. 16, p. 11.
45. Stephen Cohen, *The Pakistan Army* (London : Oxford University Press, 1998).

> India's offer of a treaty to be signed by the two countries, agreeing not to be the first to use nuclear weapons against each other is one-sided and would benefit India only, as it has a superior conventional force. It may be more apt for both countries to sign a mutual test ban treaty to start with, followed by a no-war pact.[46]

However, for all its emphasis on first use, India need not interpret first use as very early use of nuclear weapons in a conflict. Rather, this posture stems from national compulsion and since the Pakistani notion of deterrence is a situation of perpetual conflict, it *has to project* a low nuclear threshold.[47] This is meant to reinforce its deterrence by using nuclear weapons as an effective shield even against conventional attack. The need for Pakistan to adopt such a position might have been exacerbated once India extrapolated the possibility of a limited conventional war in a nuclear environment. If, despite the acquisition of its nuclear capability, Pakistan was still to face the prospect of fighting a conventionally superior force, then the only manner to stave off such an eventuality was to deter India with the thought that Pakistan would not hesitate to use nuclear weapons if pushed too far back against the wall. But, how far back would be too far back has obviously not been clearly identified. In 1999, an op-ed by three prominent Pakistani leaders stated that Pakistan would resort to a nuclear strike only in the event of comprehensive military defeat, threat to large population centres, or lines of communication.[48] Subsequently in 2002, Gen. Khalid Kidwai, head of the Strategic Plans Division (SPD) that manages Pakistan's nuclear operations, spelt out four distinct thresholds for nuclear use: loss of large parts of territory (space threshold); destruction of large part of land or air forces (military threshold); economic strangulation (economic threshold); and political destabilisation or large scale internal subversion (domestic destabilisation threshold). Since then, however, Pakistan has been quieter on its red lines. In fact, Gen. Asad Durrani even said in 2003, that Pakistan does not "identify those core interests that, if threatened,

46. Sardar Lodi, "Pakistan's Nuclear Doctrine," *Defence Journal*, vol.3, no.4, April 1999.
47. Ajay Behera "On the Edge of Metamorphosis" in Ajay Behera and Joseph C. Mathew, eds., *Pakistan in a Changing Strategic Context* (New Delhi: Knowledge World, 2004), p. 36. Emphasis added.
48. Agha Shahi, Zulfiqar Ali Khan and Abdul Sattar, "Securing Nuclear Peace," *The News* (Islamabad), October 5, 1999.

could trigger a nuclear retort... These are elements of operational planning and stating them could betray a country's conventional limits." [49]

By vaguely articulating a range of thresholds likely to trigger nuclear first use, Pakistan has sought to strengthen its strategy of continuing subconventional conflict while checkmating India's superior conventional capability. However, it has been suggested by some military officials that it is most likely that instead of escalating a conflict itself, Pakistan will leave escalation to India, though it would not hesitate from provoking it to a point where Islamabad gets reason to go nuclear!. Lt. Gen. Javed Hassan, commandant of the National Defence College (NDC) of Pakistan argued along these lines at the Brookings Institution in 2002.[50] He opined that if India applied a great deal of pressure in one sector across the Line of Control (LoC) or the International Border (IB), Pakistan would respond with disproportionate counter force which would compel India to escalate beyond a sector to engage Pakistan all along the LoC or IB, and if India's escalation crossed the Pakistani nuclear threshold, the latter will have cause and justification to escalate to the nuclear level. "India will have been shown to have behaved irresponsibly and forced Pakistan to take extreme measures."

By vaguely articulating a range of thresholds likely to trigger nuclear first use, Pakistan has sought to strengthen its strategy of continuing sub-conventional conflict while checkmating India's superior conventional capability.

Such calculations, however, do not stand the test of rationality for they fail to consider the consequences of the same for Pakistan. India could respond in only two ways to a Pakistani nuclear attack – retaliation with or without nuclear weapons. Pakistan assumes that even after being hit with a nuclear weapon, India would not necessarily undertake nuclear retaliation for three reasons: one, given the Indian strategic culture, New Delhi would not have the stomach and the will to undertake nuclear retaliation; second, the major

49. As cited in Varun Sahni, "The Stability-Instability Paradox: A Less than Perfect Explanation" in E. Sridharan, ed., *India-Pak Undeterred Deterrence Theory and the Conflict* (New Delhi: Routledge, 2006).
50. As cited in Behera, n. 47, p. 36.

powers would intervene to stop India, especially if Pakistan has undertaken a small, first strike against troops marching into Pakistani territory; third, with Pakistan's slow but steady acquisition of a second strike capability, India would be deterred from nuclear use. One or a combination of these circumstances, it is assumed, would not only allow Pakistan to get away with its nuclear use, but also enable it to achieve its political objectives.

However, these are only assumptions and there is nothing to indicate that they might not prove untrue during the moment of truth. And if, contrary to Pakistani expectations, India did respond with its nuclear arsenal in a decisive fashion to put an end to the "bleeding through a hundred cuts policy," then the consequences for Pakistan could be severe. In fact, unlike Pakistan, Indian writings have sought to describe not what India might do in the event of deterrence breakdown, but rather what needs to be done to prevent such a breakdown from occurring.

Use Against Conventional Force

Considering that Pakistan would, or could, be the first to introduce nuclear weapons into a conflict, it is obvious that it plans for their use even against a conventional attack. Just as the US nuclear doctrine maintained a constant underlying theme that nuclear weapons would be employed against the USSR in any conflict to offset their numerical superiority in manpower and conventional arms, Pakistan too has the same doctrine. As said by Sardar Lodi[51],

> In a deteriorating military situation, when an Indian conventional attack is likely to break through our defences or has already breached the main defence line, causing a major setback to the defences, which cannot be restored by conventional means at our disposal, the government would be left with no other option except to use nuclear weapons to stabilize the situation.

Therefore, unlike India where the nuclear weapon is perceived as a special and distinct weapon of immense destructive potential that defies rational use, except for enforcing deterrence, Pakistan seeks to systematically integrate it as another

51. Lodi, n. 46.

weapon into its operational military planning. For India, the impact of the weapon is politico-psychological, while for Pakistan it is military-operational.[52] Islamabad treats its nuclear arsenal as an integral element of its crisis management and military strategy. In fact, analysts like Shireen Mazari have suggested that Pakistan should project its nuclear use being based on a "one rung escalation ladder *knitted tightly with a highly cohesive, state-of-the-art tactical conventional military*."[53]

Offensive Defence

Given the above, it is natural that Pakistan's nuclear doctrine should be no different from its larger military doctrine of offensive defence. The nuclear weapon is projected as an offensive instrument that holds out the threat of nuclear strike right at the beginning of every crisis, irrespective of its nature and scale, and, at the same time, also a defensive weapon against India's punitive action. This is meant to give Pakistan an opportunity to conduct a swift, conventional assault, mostly in Kashmir, and then use the nuclear shield to prevent/mellow/checkmate an Indian response.

Therefore, there is a huge doctrinal gap between India and Pakistan on this issue. While India sees only retributive utility in nuclear weapons, Pakistan is open to an offensive, military use of the weapon to seek political objectives. Ironically, it seeks to derive deterrence by propagating the nuclear weapon for "total defence," to deter both nuclear and conventional attacks, and against counter-force and counter-value targets.[54] It seeks security in the idea that nuclear war cannot be prosecuted for any rational political objective, while attempting the same through its own weapons.

REQUIREMENTS OF PAKISTAN'S NUCLEAR DETERRENCE

To offset a possible conventional attack from a superior Indian force, Pakistan's nuclear deterrent must essentially meet the following requirements:

52. Tellis, n. 34, p. 301.
53. Unpublished paper on South Asian Peace and Security Doctrine, presented at a seminar in Dhaka in 2000 and as cited by Pattanaik, n.35. Emphasis added.
54. Lt. Gen. (Retd) Kamal Matinuddin had written in 2002 that "[Indian] population centers, industrial assets, resources, and nuclear or conventional forces of the enemy can all be targeted... While giving primacy to counter-value targets, the enemy's concentration of armoured formations in the rear should also be considered as targets for a nuclear strike". As cited in n.16, SASSu, p. 13.

Not be Too Small a Nuclear Force

Despite professing minimum nuclear deterrence, Pakistan is cautious not to build too small a nuclear force since "small forces would presumably be easier to destroy in a first strike and, therefore, have less credibility as a deterrent because the surviving forces may not be able to retaliate."[55] In fact, though immediately after the tests, Pakistan was satisfied with existential deterrence based on uncertainty, it now believes that development of a second strike capability is critical for credible deterrence. In this, it may have been influenced by writers such as Andre Beaufre who had suggested in the case of France that "minor nuclear powers can deter much larger nuclear forces if they can hold out the threat of nuclear riposte, even if the riposte is weak."[56]

This desire could expectedly grow as India acquires and deploys some form of a limited missile defence (MD). Pakistan strongly believes that an MD in India, coupled with Pakistan's lack of strategic depth would destabilise regional deterrence. The Indian S-300 and Akash systems are expected to be able to intercept Pakistan's short-range ballistic missile (SRBm) and medium-range ballistic missile (MRBMs) while the Antey 2500 could effectively intercept even the intermediate-range ballistic missiles (IRBMs).[57] Islamabad fears that such a capability would "provide an elated sense of security and prompt pre-emptive impulses from India."[58]

Pakistan's response to this is likely to be to go in for its own defence systems as well as build up its offensive forces to overwhelm Indian defences. It is not a stray coincidence that the rate of nuclear and missile activity in Pakistan has risen manifold over the last few years. President Musharraf admitted as much in July 2005 when he said the country's nuclear programme is progressing "ten times faster than before."[59] While some of this might be an exaggeration, undoubtedly, the pace

55. Jaspal, n. 41
56. Rajagopalan, n. 38, p. 27.
57. Ghazala Yasmin, "Missile Dfence in South Asia: Implications for the Region," http://www.issi.org.pk/2006_files Also see Surya Gangadharan, "Ballistic Missle Defence for India," *Strategic Affairs*, http://www.stratmag.com/issueDec-15
58. Fear, as stated by no less than Director Arms Control and Disarmament Affairs, Strategic Plans Division, Khalid Banuri, "Missile Defences in South Asia: The Next Challenge," *South Asian Survey*, 2004, p.197.
59. "Pak Strategic Missiles can Penetrate Proposed Indian BMD Shield: Gen Musharaff," http://www.pakistanidefence.com, July 26, 2005.

of the programme has accelerated. And for buttressing its nuclear defensive and offensive capabilities, Pakistan is likely to benefit from its all weather friend, China.

Capable of Quick Assembly

Gen. Musharraf has stated that Pakistani nuclear weapons are presently in a "disassembled state." However, the level of disassembly, and naturally therefore, the time taken for assembly is not clear. It could mean a state where the weapons, i.e. the frame and fissile core, are kept separately at a storage facility, and delivery systems are kept elsewhere; or where weapons (frame and core) and delivery systems are stored at the same military bases for rapid mating; or, where weapons (fissile cores) are kept separately but the frame is already mounted on delivery systems. The Pakistani nuclear arsenal is presently believed to be in the third state of disassembly.

This requirement is believed to stem from the need for rapid deployment since Pakistan conceives the possibility of having to use the weapon first, even in a conventional conflict. Therefore, the necessity to "undertake steps to produce, equip, deploy, man and exercise ballistic missiles with operational units."[60] These, however, may be kept at a low alert status, given that India has a no first use posture and Pakistan can assume a period of warning before a crisis builds up. Nevertheless, it does realise that time would be of the essence in the case of numerical inferiority.

Diversified Weapons Based on Highly Enriched Uranium and Plutonium Designs

Initially, Pakistan opted for the plutonium (Pu) route to nuclear weapons. With the natural uranium-heavy water moderated reactor, Karachi Nuclear Power Plant (KANUPP), becoming critical in 1971, Pakistan believed that by acquiring a reprocessing plant, it could access plutonium. This, however, proved to be easier thought than done. Not only did KANUPP prove to be inefficient and under International Atomic Energy Agency (IAEA) safeguards, but Pakistan's contract with France for the reprocessing plant was jettisoned by US non-proliferation

60. Rodney W. Jones, "Pakistan's Nuclear Posture: Quest for Assured Nuclear Deterrence – A Conjecture," *Spotlight on Regional Affairs* (pubished by Institue of Regional Studies, Islamabad), vol 19, no. 1, January 2000.

concerns and stood cancelled in June 1978. Meanwhile, as a hedging strategy based on a conscious decision to accelerate its nuclear programme after 1974, Pakistan had already begun active pursuit of the uranium enrichment technology with a formal launch of a project the same year. In this, it met with far greater success since A. Q. Khan surfaced at just the right time with the stolen designs of centrifuges to procure enriched uranium,[61] and today, Pakistan's nuclear weapons are primarily based on highly enriched uranium (HEU). The main enrichment facility exists at the KRL at Kahuta and is being supplemented with a new enrichment facility near Wah (Gadwal uranium enrichment plant). Meanwhile, smaller, pilot scale enrichment facilities exist at Chaklala, Sihala and Golra.

Pakistani nuclear tests carried out in 1998 were of low yield, HEU fission weapons of varying designs, yield and sizes. Pakistani officials themselves have provided different yields of the five devices tested on the first day with some suggesting it to be of 25 and 12 kilotons (kt) (besides three sub-kiloton) devices, and A.Q. Khan claiming that one of the devices was a boosted fission device of 30-35 kt and the other four being tactical weapons.[62] The sixth device tested on May 30, 1998 is believed to have been a plutonium weapon, though there is no consensus on this.[63] In any case, according to some Western sources, Pakistan has at least two different basic nuclear weapons designs. The first developed by the Pakistan Atomic Energy Commission (PAEC) for air delivery has a range of about 10-20 kt and the other with a larger yield of about 15-25 kt is an HEU, implosion warhead design "of proven reliability" procured by Pakistan from China in the early 1980s.[64] Pakistan has also devoted attention to the miniaturisation of nuclear warheads for making them light, compact and easily deliverable. Most of its missiles have a payload of 500 kg and the Pakistani nuclear warhead based on the Chinese design is expected to weigh about the same.

61. For details on A. Q. Khan's operations, see Corera, n. 30.
62. IISS Dossier, n.2, p. 33
63. The American Los Alamos Laboratory had claimed it to be a plutonium device on the basis of air sampling. But the report was contested by Lawrence Livermore Laboratories. It may also be recalled that after the North Korean nuclear test in October 2006, which was believed to be a plutonium weapon, President Musharraf denied any Pakistani role since it did not have a plutonium weapon.
64. A. Q. Khan claimed as much in 1998. IISS Dossier, n.2, p. 32.

Tactical Nuclear Weapons (TNW)

Development and deployment of atomic artillery weapons has been denied by Gen. Kidwai[65], but some others like Brig. Saeed Ismat have written in favour of tactical nuclear weapons.

> We should have well defined and declared strategy of using our ultimate choice of nuclear weapons aimed at the destruction of those military forces, which have intruded in our territory. Our aim should be the destruction of the invading military forces only and not his civilian population. We should aim to strike with tactical nuclear weapons at the base of enemy offensive... Some standard artillery guns, rockets, and missiles can deliver these, so can helicopters and aircraft. Such low yield, high radiation nuclear weapons can quickly and decisively alter the entire course of battle. Though tactical in characteristics these, can produce strategic effect.[66]

According to this viewpoint, given Pakistan's lack of geographical depth and inferior military resources, TNW are the only possible tools for tilting the balance in favour of Pakistan by threatening enemy intruders with a planned employment of these weapons. This strategy, in fact, has been propounded as being a more moral one and described as "Pakistan's Military Doctrine of Necessity." Also, given that Pakistan projects its nuclear weapons as militarily usable, this "conventionalisation" of its nuclear weapon supports a force posture capable of conducting tactical nuclear operations.

Credible Delivery Systems

Quite like India, the first nuclear delivery platforms available with Pakistan were aircraft. F-16 fighters[67] have been suitably modified to carry nuclear bombs, even as Mirage V and Chinese produced A-5 are also available.[68] The modifications,

65. Cotta-Ramusino, n.4.
66. Brig. (Retd.) Saeed Ismat, "A Conceptual Nuclear Doctrine", *Defence Journal*, vol.3, no.8, March 2000.
67. Pakistan is currently estimated to have 32 F-16s in service, deployed in 3 squadrons. It awaits delivery of another 75 from the US as reward for its contribution to the global war on terror.
68. Significantly, the US claims to have taken care not to provide Pakistan with any equipment that would facilitate nuclear delivery missions, such as the electrical mechanisms necessary for safe maintenance, transportation and delivery of nuclear weapons by F -16s.

however, had the disadvantage of reducing speed and manoeuvrability. Therefore, even as weapon delivery flight training and bomb design modifications went on, Pakistan began to explore the option of procuring ballistic missiles (BMs). In any case, after 1985, under the Pressler Amendment further delivery of aircraft was impossible, and BMs were seen as the new potent symbols of credible deterrence.

A. Q. Khan, once again, proved successful in this field when he struck a deal with North Korea for the liquid fuelled No-dongs. Renamed Ghauri in Pakistan, versions of different ranges of this missile have been regularly tested for up to 1,500 km. Meanwhile, another programme run by the National Defence Complex with the Pakistan Space and Upper Atmosphere Research Commission and PAEC has concentrated since the 1980s on solid fuel propelled short-range ballistic missiles, the Hatf series. Available in different ranges, these missiles are believed to be based on the Chinese M-11. However, it is the 290 km, single stage, solid fuelled and road mobile Ghaznavi or Hatf 3 which is declared to be nuclear capable and operational with the army from 2004 onwards. Pakistan also has a vigorous research and development (R&D) and procurement programme for MRBMs of a range of 650-1,000 km. The Shaheen1 (600-800 km) from this category is nuclear capable and in service from 2003. Shaheen 2 (two stage, solid fuel) with a range of 2,000 km and carrying multiple warheads, and Ghauri 2 (liquid fuel) also of about the same range, are still undergoing tests. The former is expected to provide the true deterrent to Pakistan while the latter would be an alternative. Over the years, Pakistani missiles have been equipped with better guidance systems, longer ranges and better accuracies. The Babur, a 500 km, nuclear capable cruise missile, is also undergoing testing, as is the Ghauri 3 with a design range of 3,500 km and possibly drawn from the North Korean Taepodong missile.[69]

Considering the active missile programme of the country, Pakistan's keenness to equip itself with a credible deterrent delivery capability based on mobility, dispersion and concealment is evident. It seeks through these measures to enhance the survival of its nuclear force against a decapitating strike. Meanwhile, the consistent pursuit of missiles of ever longer ranges may be explained for two

69. For more detailed information on Pakistani missiles, see "Pakistani Nuclear Forces 2006," *SIPRI Yearbook, 2006* (Oxford: Oxford University Press, 2006).

reasons: one, to be able to hit deeper into India; and secondly, to base its own missiles in more remote and less accessible mountainous areas such as Baluchistan in order to enhance survivability and Pakistan's second strike capability.

Accumulation of Fissile Material

Given the secrecy and opacity that normally shrouds nuclear developments, there are no confirmed figures available on Pakistan's fissile material stocks. According to International Security Information Service (ISIS) (London) estimates, at the end of 1999, Pakistan had 585-800 kg of HEU and 1.7-13 kg of separated plutonium.[70] A more recent estimate, however, places Pakistan's HEU stockpile at 1,300 to 1,500 kg and 90 kg of Pu.[71] This is roughly expected to translate into about 65 HEU weapons at 20 kg HEU per weapon and about 15 Pu weapons at 6-8 kg per weapon. However, there can be no direct derivation of the number of weapons from the fissile material stockpile since it is a more complex function of specific warhead designs, and their efficiency. Only some rough estimates are possible.

In any case, it could be said with some certainty that Pakistan is keen to accumulate as much fissile material as possible in order to increase its arsenal to roughly what India is believed to have. Its extreme discomfort at the thought of a Fissile Material Cut-off Treaty (FMCT) freezing its numerical inferiority by proscribing future production of fissile material for weapons is evident in its approach to the treaty in the Conference on Disarmament (CD). Refusing to even call it a cut-off treaty since that has only a prospective connotation, Pakistan desires the treaty to deal with existing stocks as a way of reducing asymmetry. Key aspects of the Pakistani official position on the matter include[72]:

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70. David Albright, "Securing Pakistan's Nuclear Weapons Complex," October 2001, http://www.isis-online/publications
71. Zia Mian, A. H. Nayyar, R. Rajaraman and M. V. Ramana , *Fissile Materials in South Asia: The Implications of the US-India Nuclear Deal,* Draft Report for the International Panel on Fissile Materials, July 2006, pp. 11-15.
72. As cited in Gaurav Rajen and Michael Vannoni," Fissile Materials Control in South Asia: Regional Analyses and Potential CBM," *Cooperative Monitoring Centre Occasional Paper*, February 2006 www.cmc.sandia.gov/links/cmc-papers/occasional-papers.

- Progressive reduction and eventual elimination of existing stocks of fissile materials.
- Schedule for transfer of stockpiles into civilian use with verification (transfers must first be made by the states with the largest stockpiles).
- Caps on future stocks to be accompanied by a reduction in asymmetries of existing stocks.

Asymmetry in fissile material stocks is a genuine Pakistani concern and it would be natural to assume that it seeks to exploit its negotiating position to stall movement and buy time for accumulating as much fissile material as possible. It is revealing that besides HEU, Pakistan has also been looking at the Pu option with fresh eyes since its 50 Mwt reactor went critical at Khushab in 1998. Built with Chinese help and unsafeguarded, it has the capacity to produce 10-15 kg Pu every year. An unsafeguarded pilot scale reprocessing facility is now operational at the New Labs at the Pakistan Institute of Nuclear Science and Technology (PINSTECH) complex near Rawalpindi. Meanwhile, a second reactor is being built at Khushab and has been variously estimated at having a capacity between 40-100 Mwt or even 1,000 Mwt.[73] If the latter estimate is true, the reactor could annually produce about 200 kg Pu that would be enough for 30-40 nuclear weapons a year. However, before getting alarmed by such estimates, it must be pointed out that Pakistan does not yet have the reprocessing capacity for such amounts of spent fuel.

Asymmetry in fissile material stocks is a genuine Pakistani concern.

UNCERTAINTIES OF NUCLEAR DETERRENCE

While the true value of deterrence lies in its remaining untested, or holding up in case of a crisis, the paradox is that for deterrence to be credible, one has to be prepared for it to break down. This possibility needs to be factored in by India with respect to Pakistan that has an offensive nuclear doctrine. In an approach best suited to its national interest, Pakistan has projected a carefully cultivated

73. IISS Dossier, n.2, p. 21.

strategy of escalation spinning out of control if India launches a major conventional attack. Extremely intelligently, Pakistan has worked at reducing the risk of retaliation against its proxy war, by heightening the risk of war if India were to press action. And, simultaneously, it has sought to reduce the risk of war by threatening that any war could turn into an all out nuclear war.

In Western literature this has been described as the "risk maximizing approach" that relies on the enemy's fear that pressure exerted from his side could "provoke a viscerally violent response rather than a rationally restrained one,"[74] By making nuclear threats, it seeks to manipulate risks to its advantage even if following through on them would be nothing short of suicidal for itself. Rather bombastically, it has been stated by serving military men, "If Pakistan is being destroyed through conventional means, we will destroy them by using the nuclear option; as they say, if I am going down the ditch, I will also take my enemy with me."[75] Whether this would really happen or not, Pakistan banks on uncertainty bordering on desperation, or irrationality about its actions for deterring India.

Such a policy of brinkmanship that exploits uncertainty and rests on a perception of irrationality, however, carries the risk of deterrence breakdown. There is no guarantee that the threshold of tolerance will never be breached or that the other side may not actually undertake an offensive and call Pakistan's bluff. In fact, if this were to happen, it would actually be in the best interests of Pakistan to avoid the use of the nuclear weapons and retain the credibility of its nuclear deterrence for the future. It may be recalled that one of the reasons that the US did not use the nuclear weapon in the Korean War in the 1950s was the fear that if the bomb was used but did not achieve its purpose, then it would "undermine the very foundations of American strategic policy which rested so heavily on the

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74. Thomas Schelling, *The Strategy of Conflict* (London: Oxford University Press, 1960).
75. Lt. Gen. Javed Ashraf Qazi made this statement to the Press in 2002 at the height of the India-Pak stand- off. Cited in Rahul Roy-Chaudhury, "Nuclear Doctrine, Declaratory Policy and Escalation Control," Stimson Centre South Asian Regional Security Project, April 2004.

weapon's omnipotence." Therefore, as the US discovered, the only way to maintain the credibility of the bomb was not to use it. "Deployment meant running the risk that its mysterious power might be revealed as a sham – that the Emperor might be discovered to have no clothes."[76]

However, there are a few scenarios wherein Pakistani nuclear weapons could come into play and these need serious consideration.

As a Result of Premeditated Attack

This could result from Pakistan mounting a conscious and planned massive (counter-force and counter-value), decapitating nuclear strike against India to end an unfavourable conventional confrontation. Pakistan would hope to wreak massive destruction in order to spread chaos and demoralise the remaining public and leadership enough to refrain from retaliation. It would also hope that in the remote possibility of an Indian nuclear response, it would be weak enough for Pakistan to handle since all major Indian delivery sites would have been destroyed. While this may be a dream scenario for Pakistan, fortunately for India, Pakistan does not yet have the capability to undertake such a strike. It cannot hope to obviate all or even a substantive part of the Indian arsenal and would only end up inviting assured destruction. Moreover, there can be no reason to assume that Pakistani decision-makers, civilian or military, could be so completely irrational. Every leader has a stake in the survival of his state because it is his source of power and, hence, a deliberate suicidal mission by a rational leader appears improbable.

Unless a radical Islamist leader (military or civilian) was in the seat of power, indoctrinated with a suicidal mentality that places little value upon his own survival or that of his nation, such a person could launch a pre-mediated nuclear strike on India in a bid to destroy the enemy, even at the cost of great sacrifice. One could, however, debate the possibility of such an eventuality. Radical Islamist political parties have not been able to garner significant votes in elections. On the other hand, the rise to power of a radical military man through a military coup is possible. But, could he alone, in complete disjunction with the administration, be able to commandeer the country's nuclear arsenal? Nuclear

76. Degroot, n. 12, p. 188.

infrastructure involves a large number of people who do impose a system of checks and balances. The SPD claims that Pakistan follows the three-rule principle for authorisation of nuclear use. Could all three people in the nuclear loop be equally motivated/deranged? Moreover, one must concede that under US pressure since 9/11, Pakistani nuclear command and control has matured from a personalised, ad hoc system into a more institutionalised one, that one hopes could not only survive regime change and domestic political upheaval, but also neutralise an irrational leader.[77]

As a Result of Accident or Miscalculation

This could occur in three ways. Firstly, as a result of a failure of the Pakistani command and control(C2) system. Given the small nuclear force and the Pakistani posture of first use, its C2 structure does require some delegation of authority. For reasons of survivability too, geographic dispersion of the small arsenal is a necessity, which, nevertheless, brings its own challenges of effective and timely communication. Moreover, as launch authority flows downward, the human factor becomes significant and any unauthorised launch of nuclear weapons, though remote, cannot be ruled out. Secondly, if Pakistan wrongly perceives its nuclear force as having been inadvertently destroyed by a conventional Indian counter-force strike, simply because it happened to be deployed in the region. Pressures of time in a crisis can lead to faulty decision-making without checking facts. Thirdly, as a result of an army misadventure. The last possibility is actually feasible given the past record of the Pakistani military in planning and authorising offensive ventures. In an attempt to distract attention from domestic unrest, or genuinely believing that it could pull off a strategic success against Indian conventional forces, deriving confidence from its recent large acquisition of modern conventional weapons, the army could be expected to indulge in such thinking. The Pakistan Army, in any case, has a high self-image as the defender of the nation. Unfortunately, though, this does not detract from the conclusion that had been arrived at by Sun Tzu, "Military organizations that assume policy responsibility

77. The Strategic Plans Division was created in 1999, the National Command Authority was set up in February 2000 and an Export Control Act passed in September 2004.

often make poor strategic choices." In fact, even the organisation theory identifies a set of parochial military interests and biases that lead senior officers to favour offensive doctrines, preventive wars, preemptive strikes, decisive counter-force options without thinking them through. Kargil was one such incidence and the flawed strategic thinking that led to it has been criticised by many Pakistani analysts, including retired military men.[78] And yet, there are several who blame the civilian government of the time for buckling under US pressure and denying the Pakistani military an opportunity to avenge past wrongs.

In Desperation or Despair

If the conventional military might of India were to breach the four thresholds identified by Gen. Kidwai, thereby endangering Pakistan's *survival as a nation*, Pakistan may use its nuclear weapon in desperation. The same is also possible in a moment of despair, if the Pakistani leadership finds itself in such a hopeless situation, domestically and internationally, that it finds *greater sense in self-annihilation than life after war*. Indications of this thinking were provided in an interview of a retired Pakistani general who claimed to speak for several others when he said that the situation in the country was so despondent as to merit a fresh start after a nuclear war!!

India could help avert nuclear use by Pakistan in desperation by clearly articulating the military objectives of a conventional strike. It will have to be stated, as has been done in the past, that removing Pakistan from the face of the political map of the world was not an Indian political or military objective. Therefore, with Pakistan's survival not at stake, there should be little reason for a resort to nuclear weapons. Of course, this logic can work only if in Pakistani thinking the survival of its military regime is not equated with that of the nation-state.

In the case of the second situation where a nuclear exchange is brought on by Pakistan's sense of despair, it needs to be pointed out to Pakistan, that despite the country being in dire straits – economically, politically, socially – the situation could

78. For instance, Maj. Gen. Durrani observed that "Kargil was the result of flawed strategic thinking in Pakistan." Maleeha Lodhi attributes Kargil to "systemic flaws" in Pakistani decision-making process which is "impulsive, chaotic, erratic and overly secretive." Maleeha Lodhi, "Anatomy of a Debacle," *Newsline*, July 1999, pp. 32-33.

be salvaged if the country could reorient its priorities differently. Ever since independence, Pakistan's attention and energies have been largely focussed on negating or eroding India's achievements – of democracy, secularism, economic development — by fomenting trouble and fanning insurgencies. A proxy war has been sustained through terrorism based on the radical ideology of *jihad,* physically supported through a network of training camps, and financially aided by narco-trafficking and gun-running.

While India has been badly bled by such policies, it has not been possible for Pakistan to escape the repercussions of playing with fire. Terrorist organisations have acquired a mind and agenda of their own. The easy availability of weapons[79], and an illicit drug trade, as also distorted development priorities have led to a decline in social sector spending on public education so that *madrassas* remain the only option for many. With an unemployment rate of nearly 16 per cent, and *madrassa*-trained youth anyway unable to compete for modern jobs in the government or the limited private sector, joining *jihad* presents itself as a means of gainful employment for the majority. These trends, however, are reversible over time given the requisite political will of the Pakistani leadership.

As a Result of Nuclear Use by Terrorists With/Without Government Support

One positive outcome of the revelations of the A.Q. Khan proliferation network was to compel Pakistan to enhance the security of its nuclear material, technologies and weapons in order to address Western fears of nuclear terrorism. Amongst the measures undertaken, the five-year National Nuclear Safety and Security Action Plan initiated by the Pakistan Nuclear Regulatory Authority (PNRA) stands out for establishing a robust nuclear security regime that would minimise chances of theft of a nuclear weapon or fissile material. An official of the PNRA has claimed that "controls around various installations and radiation facilities in Pakistan are enough to deter and delay a terrorist attack...."[80]

However, three possibilities of nuclear terrorism, with or without

79. It is estimated that nearly two million small arms are in circulation in Pakistan while about three million rest in clandestine stockpiles available to militant outfits ready to take up the cause of Kashmir.
80. Abdul Mannan, *Preventing Nuclear Terrorism in Pakistan: Sabotage of a Spent Fuel Cask or a Commercial Irradiation Source in Transport* (Stimson Centre, April 2007). p.4.

government support, cannot be dismissed: one, that of a fundamentalist army general or a radical government in power itself clandestinely passing on a weapon to non-state actors for a strike against India. India should be able to deter such a possibility by stating a clear policy of treating this as first use of nuclear weapons and resorting to massive retaliation against the culpable state; two, the Taliban or Al Qaeda terrorists acquiring nuclear material because of their links with some retired military and Inter-Services Intelligence (ISI) officials and nuclear scientists and using them to manufacture a radiological dispersal device (RDD)[81]; and, three, the possibility of a terrorist strike on, or sabotage of, Indian nuclear facilities, including while spent nuclear fuel is being transported. Both these latter cases would cause massive contamination, panic, economic damage, and political instability besides degrading response capabilities and having a traumatic socio-psychological impact. India's response to this will primarily have to be to enhance the preparedness of its civil defence organisation. India has been training for the last few years to handle such scenarios with the institution of the National Disaster Management Authority. The terrorist acts would also, most likely, lead to more decisive action being taken across the LoC to hit out at terrorist camps and infrastructure. And, that's the time when nuclear deterrence will be tested.

CONCLUSION

The above analysis clearly indicates that Pakistan sees the nuclear weapon as insurance of its survival. What is extremely significant is that there is strong domestic public support for nuclear weapons. According to one analyst, "Workers and peasants, *maulvis*, white collars and intellectuals worship the Bomb" and even perceive it as a "great comforter, giving them spiritual strength to endure the hardships of life."[82] This support is largely a result of the conditioning of the domestic audience by the Pakistan Army that the country

81. This has been referred to as the most worrisome and real trend by a US South Asia analyst Lisa Curtis in her testimony deliverd before the Subcommittee on the Middle Wast and South Asia and the Subcommittee on Terrorism, Non-proliferation and Trade of the Committee on Foreign Affairs of the US House of Representatives on June 27, 2007. For text of the testimony, see http:www.heritage.org.
82. Artem Rudentsky, "Understanding Nuclear Pakistan: Global, Regional and Domestic Dimensions," *World Affairs*, vol.9, no. 3, Autumn 2005, p. 51.

faces a serious security threat from India which can be met only if the army remains a major political decision-maker in the affairs of the country and retains a free hand with its nuclear policy. The latter, in fact, has been clearly projected as a military domain, with the army showing little tolerance for civilian interference. By all indications, the Pakistani nuclear programme will remain military driven until such time an effective democracy can take root.

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Pakistan has an intelligent and rational nuclear policy best suited to its national security needs. Though bound by minimum nuclear deterrence, since a free run of resources is anyway not available, the first use nuclear doctrine makes a deliberate attempt to demonstrate irrationality and heighten the nuclear danger for two audiences: one, to instill fear in India that it has a low nuclear threshold; and secondly, to attract international intervention on Kashmir. Pakistani nuclear weapons play an important role in enhancing its defensive capability to meet the perceived threat from India and are designed to deter both conventional and nuclear aggression. In the process, Pakistani leaders of every hue have not shied away from making loud pronouncements on nuclear use, which according to some Indian analysts, have even followed a clear pattern – that of nuclear threats being louder during the beginning or end of a crisis and not during the crisis.[83]

However, doctrines alter with change in capabilities, and the same is true for Pakistan too. From first use but last resort, Pakistan's nuclear weapons doctrine today aspires for first use with second strike capability in order to enhance nuclear deterrence. But, how would conventional modernisation and growing nuclear and missile capability affect the country's nuclear doctrine? Would a better-matched conventional capability with India make Pakistan more, or less, restrained to undertake adventurous offensives? And, less or more prone to nuclear bluster? Would improved survivability of its nuclear arsenal make a no first use posture acceptable to Pakistan? In a normal nuclear dyad, this should

83. For more on this, see Rajagopalan, n.38, pp. 56-57.

have been so. But, it appears less likely in the case of Pakistan since it is a revisionist nuclear power. Even though Agha Shahi had said, "The threshold of nuclear use will be inversely proportional to the level of balance or imbalance in conventional forces," since Pakistan seeks a change in *status quo*, the acquisition of defensive conventional weaponry may not translate into nuclear restraint. In fact, despite technology and capability advancements, some nuclear facts are likely to remain unchanged:

(a) Nuclear weapons will remain central to Pakistani national security.

(b) Till such time as Pakistan finds it prudent to abandon its proxy war against India, or give up its revisionist designs, it will retain first use doctrine.

(c) Despite large-scale modernisation of conventional forces, Pakistan will seek deterrence against an Indian conventional attack by projecting easy use of nuclear weapons.

(d) Given the continued centrality of nuclear weapons to its national security, Pakistani priorities in the next 10-15 years will be to improve survivability, penetrability and improvements in its command, control, communications, intelligence (C3I) capabilities. This will be achieved through creation of hard and deep buried storage and launch facilities, air defence around strategic sites, mobile missile units, concealment and deception, and possibly a strategic triad.

(e) Acquisition of missile defence to nullify India's advantage in this field and the simultaneous development of counter-measures would be undertaken, with significant Chinese help.

Since nuclear deterrence is essentially a mind game, Pakistan cannot be grudged any of the above actions. At the same time, India need not be completely out of depth in dealing with a nuclear Pakistan. India must understand the role of nuclear weapons in the Pakistani national security psyche and its dependence on them. This would enable it to not be unnecessarily taken in by the bluster and become self-deterred. At the same time the

Pakistan will seek deterrence against an Indian conventional attack by projecting easy use of nuclear weapons.

dangers of nuclear escalation must be realised and treated with the seriousness they deserve. In addressing the nuclear threat from the Pakistani state, India must strengthen it own nuclear deterrence. And, for addressing the contemporary threat of nuclear use by non-state actors, India would do well to enhance its civil defence preparedness, and get the US to put pressure on Pakistan for greater safety and security of its nuclear assets and for the further refinement of its command and control systems.