CIVIL-MILITARY RELATIONS IN NUCLEAR DECISION-MAKING: A CASE STUDY OF PAKISTAN

Dissertation submitted to the Jawaharlal Nehru University in partial fulfilment of the requirements for the award of the degree of

MASTER OF PHILOSOPHY

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CERTIFICATE

This is to certify that the dissertation entitled **"Civil-Military Relations in Nuclear Decision-making**: A Case Study of Pakistan", submitted by **Satyabrat Sinha**, in partial fulfilment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY**, is his own work and has not been previously submitted for any other degree to this or any other university.

We, therefore, recommend that this dissertation be placed before the examiners for evaluation.

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Contents

Acknowledgements

This dissertation would not have been possible without the Junior Research Fellowship provided by the University Grants Commission. Moving from the introductory Masters program at the School of International Studies to the M.Phil program in the Disarmament division at the Center For International Politics, Organization and Disarmament (CIPOD) brought about an abrupt, but intellectually enriching, change in perspective. It was a great opportunity to study under the watchful and inspiring attention of a most proficient faculty. Prof. Surjit Mansingh for her passion for the subject, Prof. Kanti Bajpai for his rigour and thoroughly entertaining and enlightening classes. Dr. Alka Acharya for being the friend, philosopher and guide in times of academic or administrative trouble.

The soft, smiling demeanor of Mr. Khullar at the CIPOD office and the people working at various libraries were extremely helpful and cooperative.

This dissertation would also not have been possible without the support of my parents who continue to yearn for 'a respectable' job for me but have with complaints implicitly accepted my foray into the academic world. My brother who provided the necessary inspiration and at tough times the finances, deserves credit for believing in me.

The discussions that I had with Dr. Smruti Pattanaik, Dr. Manish at IDSA were enriching and put the dissertation in perspective and were also generous with their time, books and articles. I wish to thank Mr. Rajiv Mata for allowing me the liberty of borrowing books from the IDSA library on his card and the useful armed forces perspective he provided on my study of civil-military relations. This is also the right moment to mention Aryama who was very liberal with his time and expertise in helping me understand and contextualise my study.

In addition, I am grateful to my friends who despite my anti-social behavior during the last few months provide much needed company and relief by not discussing the dissertation. Abhigyan, Anita, Chinmoy, Dawa, Deepa, Devika, Jayant, Murari, Nitin, Niraj, Projit, Saurav, Shantanu, Samrat, Sandeep, Vishal were excellent friends and lastly but in no ways the least, Tsewang Doma.

Finally, my supervisor, Dr. Swaran Singh, deserves all the credit for being patient and understanding to put up with my some times erratic attitude, unpunctuality and yet believing and trusting me. The discussions that we had have gone a long way in providing the necessary depth and structure to this dissertation.

The shortcomings in the dissertation would be entirely mine.

Chapter I
Introduction

The dissertation aims to study the impact of civil-military relations on nuclear decision-making of nuclear weapons states. The general feature of nuclear weapon states is civilian control in nuclear decision-making. This feature was also true of the erstwhile totalitarian Soviet Union and is also true in China today. In the liberal democracies, this fact is self-evident and so is it in Israel. In South Asia, we however see anomaly; while India is believed to be reluctant to bring in the military into its nuclear decision-making, the Pakistani scenario is said to be the opposite. The dominance of the Pakistan army in the domestic political scene has had far reaching ramifications. This has also been true of the nuclear program in Pakistan where the military is said to be in unchallenged control.

The proposed study will analyse the Pakistani nuclear program since January 1972, Multan meeting of Zulfikar Ali Bhutto to date, it will specifically try and examine the control of institutions, influence and nuclear decision-making in Pakistan. The central focus of the dissertation will be to gauge the army's extent of control and influence on Pakistan's nuclear program as a study of the impact of civil-military relations in nuclear weapon states.

Rationale

The study of the impact of civil-military relations on nuclear weapons in Pakistan assumes importance for a number of reasons. *First*, since the military take over of October 1999, Pakistan is in the unique situation of being a country with nuclear capacity under a military regime. *Second*, civil-military relations in Pakistan or the lack of proper

civil-military relations as understood in liberal democracies has influenced policies and decisions of civilian governments, which work under military pressure. *Third*, nuclear Pakistan's proxy war in Kashmir with a nuclear India makes the South Asian region tense and dangerous. *Finally*, such a scenario needs to be understood in terms of the domination of the Pakistani Army, their corporate interests, decision-making, command and control structure of the Pakistani nuclear forces.

Statement of Problem

The failure of the Pakistani elite to develop a consensus about Pakistan's political system, destruction and weakening of the democratic institutions by successive rulers, and military's proclivity to intervene in the politics of the country led to five constitutions, and four military regimes during its past history of 55 years. The military involvement in politics has been the subject of numerous studies. In the third world societies, the military was the only organized, technically trained, cohesive and modern institution and therefore, perceived that it alone can modernize the country and this perception is an incentive to military take over. The cause of military intervention in politics is also attributed to the nature and extent of political participation, and the role of the military.

The nuclear weapons programme of Pakistan, mooted by Zulfikar Ali Bhutto has been shrouded in secrecy and ambiguity. However, after the tests of 1998 at Chagai, the ambiguity is over but the secrecy that characterizes a weapons programme remains. The Pakistani nuclear weapons programme has its motivations, and primarily it is to deter conventional and Indian nuclear superiority. This is what provides the link between

defense economy of Pakistan, its 'unending conflict' with India and the military-dominated structures given its perpetual insecurity vis-a-vis India. The nuclear issue goes to the very heart of Pakistan's perceptions of its security image.

Pakistan and the Nonproliferation Debate

The global debate on nuclear non-proliferation policy began with an initiative by Ireland in 1958.[1] The international community had floated various proposals for a treaty to stop the spread of nuclear weapons but the United States, the Soviet Union, France, and others vacillated in their reactions to these proposals. By the mid-1960's momentum had built to do something to ward off imminent proliferation. Much of the debate in Washington stemmed from the Chinese nuclear test and fear that it would stimulate nuclear proliferation elsewhere, particularly India. This is where nuclear weapons had first entered Pakistan's public debates.

However the concept of non-proliferation was evolved by major powers simply to discourage and prevent other states from acquiring nuclear weapons. It is also propagated by the nuclear powers that the proliferation of nuclear weapons among established powers was balanced and under control but the spread of nuclear weapons to less stable states was undesirable because such governments are unreliable power centers.[2] The United States was to adopt the non-proliferation of nuclear weapons as one of its fundamental principles of foreign policy.

[1] George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Oxford: New Delhi, 2002), p.99

[2] Gerald Segal, *The Simon & Schuster: Guide to the World Today*, (London: West Garden Place, 1987), p.97

Almost a decade after the end of the cold war in September 11 2001, a series of terrorist strikes and the enormous scope of assault on mainland United States shocked the world while also transforming world politics. The world that existed (post-1991) has changed beyond recognition and with the current assault on Iraq will continue to do so under the tutelage of the United States. But what has not changed, in fact has become heightened, is the American obsession with nuclear proliferation ('axis' of evil thesis).

With the change in regimes in Latin America, South Africa and the unilateral surrender of their nuclear option has left South Asia as the most important area of concern vis-à-vis nuclear proliferation. The 1998 nuclear tests on the subcontinent, was an attempt to gate crash into the nuclear weapon state club by India and in reaction by Pakistan. Both the Indian and the Pakistani programs were not a surprise to the world and especially to the Americans. In fact during the Afghan war the United States was instrumental, in ignoring the Pakistani program in effect abetting it, because of its use as a frontline state.

The presence of nuclear weapons in Pakistan and its state of perpetual crisis has deeply ingrained fears of the weapons falling into the hands of religious extremist of the Taliban types. In addition, the traditional hostility between India (another nuclear capable state) and Pakistan, especially over Kashmir, accentuates the dangers inherent in a nuclear capable South Asian. In addition, the world worries about the inadequacy of safeguards, the lack of circumspect behavior in decision-making, and whether command and control arrangements are sufficient to prevent a possible nuclear conflagration because of misperception, miscalculation, or both.[3]

[3] Kotera M. Bhimaya, "Nuclear Deterrence in South Asia: Civil-Military Relations and Decision-Making," *Asian Survey*, Vol. XXXIV, No. 7, July 1994, p.647

Role of the Pakistani Armed Forces

In Pakistan the military has had a substantial role in politics and the history of Pakistan can be alternatively read as the history of the Pakistani military. Although civilians were the initiators of the nuclear program, the Pakistan military has had significant (others say total control) influence not only in the direction of the country's nuclear program but also in the strategic and tactical deployment of its nuclear weapons. In sum, the state of civil-military relations in Pakistan will have a definite bearing on the scope and character of the nuclear weapons program in peace and the employment of these weapons in war.[4]

For twenty five years of its existence, Pakistan has been ruled by the military, either under direct martial law or by a government led by the army commander and supported by the military establishment. More than a decade after the death of the last military ruler, Zia-ul-Haq, and despite four democratic elections, the military essentially the army-which remains the dominant service and continues to play a considerable, if behind-the-scenes, role of governance of the country.[5] Governance in Pakistan is said to be a delicate balancing act between the military chiefs and the elected civilian government. It is a power-sharing agreement whereby the military had important influence over foreign, security and key domestic issues, and mediates confrontations among feuding political leaders, parties and state institutions.[6]

[4] Ibid, p.648
[5] Robert La Porte Jr., "Pakistan: A nation still in the making", in Selig S. Harrison, Paul H. Kreisberg, and Dennis Kux (ed.), *India & Pakistan: The First Fifty Years*, (Washington: Woodrow Wilson Center Press and Cambridge University Press, 1999), p.59
[6] Hasan Askari Rizvi, "Civil-Military Relations in Contemporary Pakistan,"http://www.defencejournal.com/july98/civilmilitary1.htm

The ascendancy of Pakistan's military began shortly after independence, but it was the civilian system that replaced Zia's military rule in 1985 that made the military to shift its emphasis from overt 'rule' to a subtler, but still ubiquitous 'role'. Instead of exercising power directly (though coup option is still available), the military has become a formidable political actor, influencing the nature and direction of political change. The Army Chief is a pivot in Pakistan's post-1988 power structure and together with the President and the Prime Minister; he constitutes one-third of the 'Troika'- an extra-constitutional arrangement for civil-military consensus building on key domestic, foreign policy and security issues. The Prime Minister's position was boosted somewhat by an April 1997 constitutional amendment (again reversed during the Musharaf government) curtailing the President's powers so that he cannot dismiss the Prime Minister. The military's primary consideration could be said to be not the direct exercise of power, but rather the protection and advancement of its professional and corporate interests. The army is willing to negotiate their interests and accommodate the civilian leaders but what is not acceptable is a frontal attack on their institutional and corporate interests as they define them, or unilateral decision-making by the civilian leaders on matters which directly concern them.[7]

Askari Rizvi, an expert on civil-military relations, lists national security as the paramount interest of the army since the Zia era, and its direct control of the nuclear program as the most important concern.[8] The nuclear program has remained the military's turf, even under subsequent civilian rule. Benazir Bhutto complained in September 1991 that she was denied information about highly sensitive aspects of the

[7] Ibid.
[8] Ibid.

country's nuclear program during her first tenure as Prime Minister. Similarly, the Army maintains hold interest in policy towards India, including Kashmir and they do not want civilian dispositions, to ignore what they see as New Delhi's 'hegemonic agenda', to reach rapprochement. Strong and credible conventional defence and nuclear weapons capability are considered vital to ward off Indian pressures. Military leaders also oppose any unilateral cut in defence expenditure by civilians.

The military also relies on the intelligence agencies to influence the political process. The role of the Military Intelligence (MI), the ISI and the Intelligence Bureau (IB) increased during the Zia era. While the MI is a purely military agency, the ISI may be called quasi-military that a army officer heads, appointed by the Prime Minister and reports to both the civilian and military authorities. The IB is a civilian agency. The ISI and IB have been very active in domestic politics and the ISI gained in prominence during the Afghan war. Since the end of the Afghan war the MI and the ISI have focused more on Pakistan's domestic affairs and by the induction of more army personnel into the IB, the military increased its say in the largely civilian organization.[9]

Civil-Military Relations

The British bequeathed the liberal model of civil-military relations to the subcontinent and it took shape and flowered under Nehru's shadow in India but did not do so in Pakistan. In the liberal schema, the military is not expected to intervene in electoral, representative politics.[10] The system should be dominated by politicians who attain power after a competitive struggle on party lines in an open electorate and the

[9] Ibid.
[10] Veena Kukreja, *Civil-Military relations in South Asia: Pakistan, Bangladesh and India,* (New Delhi: Sage, 1991), p.19

policy decisions are implemented by bureaucratic and military elites. National defence policy should rest in the hands of the elected political leaders. The political history of Pakistan seen through the prism of the liberal model seems strangely distressing, especially considering that India succeeded to adapt it with ease.

In the post World War II era, a number of newly independent countries failed to maintain a democratic polity and power was usurped by military dictatorships or by quasi-military ones. The model of civil-military relations in these countries is termed as praetorian. In this scheme as opposed to the liberal model, the armed forces are more likely to than not to be among the potential contenders for political power. Ineffective political leadership and lack of instruments and structures to channelise political support characterize these regimes. The regime is dominated by the military, or by a coalition of the military and the bureaucracy, or a coalition of military, civilian politicians, and technocratic groups.[11]

And so it was with Pakistan. Although the Muslim League had formed a government, it had limited support base in the areas that now constituted Pakistan. The military-bureaucratic apparatus inherited from the British gained ascendancy over the political leadership as early as 1951. While the bureaucracy governed the state, the military-with the support of the pro-western, anti-Indian civil bureaucracy-controlled security policy, choosing to rely on external alliances to counter the perceived Indian threat.[12] The military option has been invoked so frequently in Pakistan, that it has almost become a regular part of Pakistan's political process.

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[11] Ibid, p.23

[12] Samina Ahmad, "Pakistan's Nuclear Program: Turning Points and Nuclear Choices", *International Security,* Vol.23, No.4 (Spring 1999), p.180

Civil-Military Relations and Nuclear Weapons

The enormous power that nuclear weapons hold over public imagination, its destructive potential and its use for political and diplomatic purposes has required that special controls be imposed on them. In fact even in the United States- the oldest democracy of the world- concerns have been raised about the lack of popular say on the issue of nuclear weapons.[13] According to Robert Dahl, nuclear weapons present a tragic paradox as no decisions could be more fateful than decisions about nuclear weapons and yet these decisions have largely escaped the control of the democratic process.[14] Thus, even as an imperfect democracy can be a misfortune for its people, an authoritarian regime is an abomination. Since the military take over of October 1999, Pakistan is in the unique situation of being the only country with nuclear capacity under a military regime.

The civilian control of nuclear weapons is one critical component of the general problem of civil-military relations. The most basic of the rivalries is the one between those who have political authority, the civilians, and those whose task it is to implement policy in operations, the military. By acknowledging civilian control, the military accept the primacy of civilian government in conducting both domestic and foreign policy.

As for other nuclear weapon states the American experience underlines two general approaches to civilian control can be seen: the *delegative* versus *assertive* civilian control.[15] Both forms assume that the military should be subordinate to civilians, but the two have diametrically different conceptions of the role to be played by civilian leaders.

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[13] Robert Dahl, *Controlling Nuclear Weapons: Democracy versus Guardianship*, (New York: Syracuse University Press, 1985)
[14] Ibid., p.3
[15] Peter D. Feaver, *Guarding the Guardians: Civilian Control of Nuclear weapons in the US*, (Cornell Studies in Security Affairs, Ithaca, Cornell University Press, 1992), p.7-9

Delegative civilian control as a concept builds upon the notion of "objective" control, it involves maximizing military professionalism. Huntington has argued that since the professional military ethic embodies the principle of obedience to civilian masters. civilian control is ensured if the officer corps is permitted to develop into a highly professional institution. Thus, *delegative* control is a bequeathal of *de facto* power to an otherwise subordinate element. *Delegative* control is summarized in the maxim "render unto the military all things brass"- that is, give officers the necessary autonomy to determine operations for which they have a special expertise. Delegative control to the military does not compromise civilian control, according to the theory; on the contrary, it is an essential step in making the military truly professional, which is itself a pre-requisite for civilian control.

The military prefer *delegative* control (and the attendant autonomy), but civilians have often wanted a larger role in setting operational policy. Such direct involvement constitutes a new form of civilian control, *assertive* control, i.e. direct civilian supervision over the military, particularly over military operations. In sum, whereas *delegative* control is a harmonious pattern of relations wherein the power, the ideology, and the activity of the military are in balance with civilian society, *assertive* control is a conflictual pattern of relations wherein civilians and the military vie for control over military operations.[16]

Command and Control

The use (as a deterrent) of nuclear weapons carries weight if the likelihood of use is seen as credible. Thus, nuclear weapon states develop, deploy the weapons and prepare

[16] Ibid., p.12

for, and remain ready to fight nuclear war. These pressures lead to complex and important questions of how command and control is to be exercised over nuclear weapons, that is how and when will nuclear weapons be used, and how will they be managed during peace, and when war starts. The command and control of nuclear weapons can be seen as "an arrangement of facilities, personnel, procedures and means of information acquisition, processing, and dissemination used by a commander in planning, directing, and controlling military operations"[17], and remains vital for ensuring credibility.

The attention being paid to command and control of nuclear forces is not without reason, if one keeps in mind the enormity of the destructive power of nuclear weapons. To briefly define command and control, it connotes a system that brings the individual pieces of a defense system together into a coherent overall structure. Warning plans, assessment systems, and theatre forces are integrated by means of command and control.[18] The first dilemma plaguing the control of nuclear weapons is termed the *always/never problem,* by Peter Feaver.[19] The two desirable ends motivate the nuclear command and control structure: that nuclear weapons always explode in the prescribed fashion when authorized leaders so direct, and that nuclear weapons never explode when authorized leaders have not directed their use. Others have called this the *positive* and *negative* control, respectively.[20]

The '*always*' or the *positive* side of control, is conceptually very simple: a reliable nuclear force, and the communications links to it from the top command posts, must

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[17] Paul Bracken, *The Command and Control of Nuclear Forces* (New Haven: Yale University Press, 1983), p.3
[18] Ibid, p. 179
[19] Peter D. Feaver, op. cit., n.15, p.12
[20] Ibid, p.12.

survive long enough to carry out designated strikes. This system can fail if the weapons do not survive, if the communications networks do not survive, if the political leaders who constitute the national command authority (NCA) do not survive, or if the personnel responsible for executing the strikes refuse to (or somehow fail) to carry out orders. The failure of *positive* control could result in a less effective nuclear strike against the enemy or even complete paralysis of the nuclear organization. Ensured *positive* control, then, is an integral part of the military emphasis on reliability.[21]

Negative control or the *never* problem is the second dilemma of the *always/never problem.* And the *negative* control involves guarding against a variety of threats, including accidental use, unauthorized use, and third party use.[22] In simple terms, when the legitimate authority that controls the weapons does not want the weapons to be used then it must not be.

The linkages between pattern of civil-military relations and their effects on nuclear weapons have been largely ignored in proliferation debates and this is especially true about the South Asia. The work of Prof. Scott Sagan and Peter Feaver in this regard is most enlightening and provocative.[23] This section is derived from Prof. Scott D. Sagan's (ed.), *Civil-Military Relations and Nuclear Weapons,* which looks at the experience of nuclear weapon states and civil military relations.[24] In his introduction, Sagan states that:

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[21] Zia Mian, "A Nuclear Tiger by the Tail: Problems of Command and Control in South Asia", in M.V.Ramana and C. Rammanohar Reddy (eds.), *Prisoners of the Nuclear Dream* (New Delhi: Orient Longman, 2003), p.80

[22] Ibid, p.81

[23] Peter D. Feaver, see note 15 and also Feaver, "Command and Control in Emerging nuclear Powers," *International Security*, Vol.17, No. 3 (Winter 1992/93)

[24] Scott D. Sagan (ed.), *Civil-Military Relations and Nuclear Weapons*, (Center for International Security and Arms Control, Stanford University, June 1994)

> When a state develops a nuclear arsenal, these destructive weapons must be initially integrated into existing military forces and initially managed through existing civil and military institutions. The subsequent relationship between nuclear weapons and civil military relations in possessor states is complex, however, and presents an important two-way puzzle. First, it is important to ask how existing patterns of civil-military relations in nuclear states have influenced the likelihood of nuclear-weapons use. Some scholars believe that military officers are less war-prone and hawkish than civilian leaders; others believe the opposite, that the military tends to be bellicose and biased in favor of aggressive military postures. Second, it is important to flip the question around and also ask how nuclear weapons have influenced civil-military relations in the states that have acquired the ultimate weapon.[25]

Prof Sagan examines the interaction between civil-military relations and nuclear weapons and voices concern about proliferation in countries with unstable civil-military relations and makes an argument against nuclear proliferation. According to Sagan, the logic of the "proliferation optimist" flows from the expected-utility assumptions of rational deterrence theory: that nuclear weapons reduce the likelihood of war because it makes the costs of war enormous. While such optimistic views have not escaped criticism, according to Sagan, what is missing, is an alternative theory of consequences of nuclear proliferation: a broader conception of the effects of nuclear weapons proliferation on the likelihood of war.[26]

Sagan presents such an alternative account , which rooted in organization theory, leads to a more pessimistic assessment of the future prospects of peace. There are two central arguments and Sagan, first, argues that professional military organizations, because of common biases, inflexible routines, and parochial interests, display strong tendencies toward organizational behaviors that could lead to deterrence failures. Unlike

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[25] Scott D. Sagan, "Civil-Military relations and Nuclear Weapons: Introduction and Acknowledgements" in Scott D. Sagan (ed.), *Civil-Military Relations and Nuclear Weapons*, (Center for International Security and Arms Control, Stanford University, June 1994), p.1

[26] Ibid, p.5

the widespread psychological critique of rational deterrence theory, this organizational critique argues that professional military organizations, if left to their own, are unlikely to fulfill the operational requirements for rational nuclear deterrence. Second, Sagan argues that such organizational proclivities can be effectively countered only by tight and sustained civilian control of the military.

Sagan believes that there are strong reasons to believe that future nuclear states will lack such positive mechanisms of civilian control. Many current and emerging proliferators have either military-run governments or weak civilian-led governments in which the professional military has a strong and direct influence on policymaking. In such states, the interests of powerful military organizations, and not the "objective" interests of the state, can determine state behaviour. These problems can be compounded by the fact that such organizations are "inward-looking," focusing on internal issues of domestic stability and politics, rather than on external threats to national security. As extensive military involvement in domestic affairs changes the focus of officers' energies and interests, and the military's professional competence as a fighting force (and therefore also as a deterrent) suffers.[27]

On the likely effects of the spread of nuclear weapons, Sagan's argument proceeds in three steps. First, Prof. Sagan contrasts the assumptions and logic of proliferation optimists to the assumptions and logic of a more pessimistic organizational-level approach to nuclear proliferation. Next, he compares the two theories predictions

[27] Sagan, p.4. Also see for this point Samuel P. Huntington, *The Soldier and the State* (Cambridge: Harvard University Press, 1957), p.71 and Amos Perlmutter, *The Military and Politics in Modern Times* (New Haven: Yale University Press, 1977), pp.281-288.

about three major operational requirements of deterrence and then presents the existing empirical evidence concerning each requirement.[28]

Organizational Perspective[29]

Two widespread themes in the organizational theory literature focus attention on the major impediments to pure rationality in organizational behavior. First, large organizations function within a severely "bounded" form of rationality: they have limits on calculation and coordination and use simplifying mechanisms to understand and respond to uncertainty in the external environment. Organizations, by necessity, develop routines to coordinate action among different units: standard operating procedures and organizational rules that govern behavior and not individually reasoned decisions. Organizations commonly play their roles: rather than searching for the policy that maximizes their utility, they often accept the first option that is minimally satisfying. Organizations are also often short-sighted: instead of surveying the entire environment for information, organizational members have biased searches, focusing only on specific areas stemming from their past experience, recent training, and current responsibility. Originations suffer from "goal displacement": they often become fixated on the operational means to the ends and lose focus on their overall objectives. Organizational filters continually shape the beliefs and actions of individuals. Sagan quotes, James March and Herbert Simon,

> the world tends to be perceived by the organization members in terms of the particular concepts that are reflected in the organization's vocabulary. The

[28] Ibid, p. 4
[29] Ibid, p. 5-7

> particular categories it employs are reified, and become, for members of the organization, attributes of the world rather than mere conventions.[30]

Secondly, Sagan points out that complex organizations have multiple, and conflicting goals and the process by which objectives are chosen and pursued are intensely political. From such a political perspective, apparently irrational behaviors are seen as serving the narrow interests of some units within the organization, even if the actions appear "systemically stupid" from the leadership's over all perspective. Organizations are also not simply tools in the hands of higher-level authorities, but are groups of self-interested and competitive sub-units and actors, as Sagan lays it out,

> Theory should see conflict as an inevitable part of organizational life stemming from organizational characteristics rather than from the characteristic of individuals...Organizational divisions and responsibilities help explain why sales and production are in conflict in all firms...or faculty and administration in colleges, doctors and nurses and administrators in hospitals, the treatment and custodial staffs in prisons.[31]

Within the rational deterrence framework, three major requirements for stable nuclear deterrence exist: 1) there must not be a preventive war during the transition period when one state has nuclear weapons and the other state is building, but has not yet achieved, a nuclear capability; 2) both states must develop, not just the ability to inflict unacceptable damage to the other side, but also a sufficient degree of "second-strike" invulnerability so that their forces could retaliate if attacked first; and 3) the nuclear arsenals must not be prone to accidental or unauthorized use. Nuclear optimists believe that nuclear states will meet these requirements because it is in these states' obvious

[30] Ibid.
[31] Ibid, p.6

interests to do so. Sagan looks at the above three requirements from the perspective of organization theory and concludes on a rather pessimistic note.

Preventive War [32]

The organizational perspective leads to a more pessimistic assessment of the likelihood of nuclear preventive wars, because it draws attention to military biases in favor of such attacks. Sagan cites four reasons to expect that military officers are pre-disposed to view preventive war in particular in much more favorable light than are civilian authorities. First, military officers, because of self-selection into the profession and socialization afterwards, are more inclined than the rest of the population to see war as likely in the near term and inevitable in the long run. The professional focus of attention on warfare also makes military officers skeptical of non-military alternatives to war, while civilian leaders often place strong hopes on diplomatic and economic methods of long-term conflict resolution. Such beliefs make military officers particularly susceptible to "better now than later" logic. Second, officers are trained to focus on pure military logic when analyzing security problems. Therefore other methods are less likely to be influential. Third, military officers display strong biases in favor of offensive doctrines and decisive operations. Offensive doctrines enable military organizations to take the initiative, utilizing their standard plans under conditions they control while forcing the adversaries to react to their favored strategies. Finally, the military, like many organizations, tends to plan incrementally, leading it to focus on immediate plans for war and not subsequent problems of managing the post-war world. The professional military is likely to be short sighted, not examining the long-term political and diplomatic

[32]Ibid, p.8

consequences of preventive war. The key point being that military views on preventive war often differs significantly from the views of leading civilians. In theory, these factors should make military officers stronger advocates of preventive war.

Second Strike Capability [33]

The second operational requirement of deterrence is that new nuclear powers must build invulnerable second-strike nuclear forces. The scholars who support proliferation are confident that any state will create the minimum deterrent of an invulnerable second-strike nuclear arsenal. Four reasons, as to why professional militaries would not develop invulnerable nuclear forces if left to their own emerge from the logic of organizational theory. Military bureaucracies, like any other organizations, are interested in having more resources: they want more weapons, more men in uniform, and more pieces of the budget pie. This could obviously lead to larger than necessary nuclear arsenals. Yet programs for making nuclear arsenals less vulnerable to attack (for example building shelters or missile-carrying trains) are expensive and therefore decreases the resources available for the military hardware, the missiles or aircraft, that the organization values most highly. Secondly, militaries, like other organizations, have favored traditional ways of doing things and therefore maintain a strong sense of "organizational essence". Since efforts to decrease the vulnerability of nuclear forces often requires new missions and weapon systems-and, indeed, often new organizational units-one would expect that the existing organizations would be resistant. Third, if organizational plans for war and conceptions of deterrence do not require invulnerable forces, they will not have incentives to pursue them. Thus, if military officers believe that

[33] Ibid, p.13-14

they are likely to engage in preventive war, preemptive attacks, or even launch-on-warning options, then survivability measures may simply be perceived as unnecessary. Fourth, even if the technical requirements for survivability exist, organizational routines could impede invulnerability.

Accidental or Unauthorized Use[34]

Sagan cites Charles Perrow's *Normal Accidents,* who argues that there are inherent limits to the degree to which any larger organization can understand the technical systems it creates to manage hazardous technologies, such as nuclear power plants, petrochemical industries, advanced biotechnology, and oil tankers. If organizations were omniscient, they could anticipate all potential failure modes in their systems and fix them ahead of time. Perrow argues, however, that boundedly rational organizations in the real world will inevitably have serious system accidents over time whenever they exhibit two structural characteristics: high interactive complexity (systems containing numerous interrelated, yet unplanned, interactions which are not readily comprehensible) and tight coupling (systems with highly time-dependent and invariant production sequences, with limited built-in slack). Sagan uses Perrow's structural argument and combines a political dimension to it to produce greater pessimism about the likelihood of organizational accidents. Conflicting objectives inevitably exist inside any large organization that manages hazardous technology: top level authorities may place a high priority on safety, but others may place a higher value on more parochial objectives,

[34] Ibid, p.18 also see Scott D. Sagan, *The Limits of Safety: Organizations, Accidents and Nuclear Weapons* (Princeton: Princeton University Press, 1993)

such as increasing production levels, enhancing the size of their sub unit, or promoting their individual careers, all of which can lead to risky behaviors.

Normal accidents theory suggests that the basic strategies used to improve organizational safety are highly problematic.[35] From a structural perspective, adding redundant back-up systems can be counterproductive, since redundancy makes the system both more complex and more opaque and therefore can create hidden common-mode errors. A political perspective notes, however, that organizations often continue to add layers of redundancy upon redundancy to complex systems, in large part because increased redundancy is in the narrow interests of sub units since it can enhance their size, resources, and autonomy. The politics of blame inside organizations also reduces trial-and-error learning from accidents because organizational leaders often find operators at lower levels in the hierarchy at fault, both because this absolves them from responsibility, and because it is usually cheaper to fire the operator than to change accident-prone procedures or structures. Knowing this, however, field-level operators have great incentives not to report safety incidents. Finally, from a normal accidents perspective, strong culture and socialization can have negative effects on organizational reliability since they encourage excessive concern about the organization's reputation, disdain for outsiders' and internal dissenters' opinions, and even organizational cover-ups.

[35] Ibid., p.18, Sagan cites Charles Perrow, *Normal Accidents: Living with High-Risk Technologies*(New York: Basic Books, 1984)

Nuclear Accidents in New Nuclear Powers[36]

Sagan cites six reasons to expect that new nuclear states will face much greater risks of nuclear accidents.[37] First, some emergent nuclear powers lack the organizational and financial resources to produce even minimal mechanical safety devices and safe-weapons design features. Second, the "opaque" nature of nuclear proliferation in the contemporary world exacerbates nuclear weapons safety problems. There are both organizational and technical reasons to believe that this opaque path to nuclear-weapons status is inherently less safe: the tighter compartmentalization of such programs meant that there is likely to be less thorough monitoring of safety efforts; the lack of public debate about nuclear issues in such states increases the likelihood that military organizational interests will not be challenged; and the inability to have full-scale nuclear-weapons tests will inhibit safety design efforts. Third, accident-prone nuclear operations will be more prevalent in states with volatile civil-military relations because military officers, who have organizational biases in favor of maintaining high readiness for war, will be less constrained by more safety-conscious civilian authorities. Fourth, the tight-coupling problem will be significantly worse between most new proliferants, at the beginning of their experience in managing nuclear weapons, since they are in closer proximity to their expected adversaries than was the case in the cold war. Fifth, although organizational learning about safe nuclear-weapons operations was far from perfect in the United States and the Soviet Union during the Cold War, it is likely to be even worse in states that inherited a full scale nuclear arsenal without going through the incremental process of tests, exercises, and deployments. Sixth, serious political and social unrest is

[36] Ibid., p.20-22
[37] Ibid.

likely in the future in a number of the nuclear proliferants, which will significantly increase the risks of accidental and unauthorized weapons detonations. For example, a civil war can lead to a firefight between rival military factions at a nuclear weapons base. If domestic unrest leads to severe economic hardships at military bases, disgruntled operators are more likely to engage in acts of sabotage, which could produce accidents. Sagan concludes that the actual behavior of new proliferators will be strongly influenced by the powerful military organizations within those states and that the common biases, rigid routines, and parochial interests of these military organizations could lead to deterrence failures and uses of nuclear weapons despite national interests to the contrary.

Pakistan Military's Nuclear thinking

Pakistan, according to Sagan is the most dramatic case in point, since a rapid development of a Pakistani operational nuclear arsenal could create a temporary nuclear superiority over India.[38] Military biases in favor of preventive war are highly influential in Pakistan, and the military has been in direct control of the government for more than half the state's history. Indeed, Pakistani military leaders have repeatedly advocated and initiated preventive war against India. In the fall of 1962, senior military authorities unsuccessfully urged President Muhammad Ayub Khan, the leader of the military-controlled government, to attack India while its army was tied down in the conflict with China.[39] Three years later, in September 1965, the Ayub government did launch a preventive war on India in an effort to conquer Kashmir before the anticipated Indian

[38] Ibid., p.11
[39] Stephen P. Cohen, *The Pakistan Army* (Berkeley, CA: University of California Press, 1984), p.12

military build-up was completed.[40] The Pakistani attack on India in December 1971 was strongly influenced by the parochial biases and organizational interests of senior army and air force leaders since, as Richard Sisson and Leo Rose have stressed, the ruling military viewed threats to Bengal as "threats to their image, threats to the welfare of the military in a successor state, and threats in the way of charges that the military was prepared to barter away Pakistani sovereignty."[41] Finally, the unconfirmed reports that the Pakistan Air Force made initial preparations for a nuclear first-strike during the May 1990 crisis over Kashmir are alarming, not only because of the potential for miscalculated escalation, but also because Pakistani Prime Minister Benazir Bhutto was reportedly cut out of the dangerous crisis decision-making. Later in 1990, the Benazir Bhutto regime was ousted by the Pakistan military after she attempted to push her own loyal candidate into the army Chief of staff. There is, unfortunately, little reason to assume that future Pakistani governments, even if nominally democratic in nature, will be entirely resistant to parochial military pressures.[42]

Pakistan's nuclear weapons programme was formally launched in 1972 and gained strength and impetus after India's first nuclear tests in May 1974. The 1977 coup by General Zia-ul Haq and the subsequent decade of military government, which was followed by a decade of weak elected governments, abdicated national security policy to the military and this has ensured that the armed forces and the army in particular have complete authority over the nuclear weapons programme. Abdul Sattar, retired diplomat and former foreign minister provides the key motivations of the Pakistani nuclear

[40] Sumit Ganguly, *The Origins of War in South Asia* (Boulder, CO: West view Press, 1986), p.57-95
[41] Richard Sisson and Leo E. Rose (eds.), *War and Secession: Pakistan, India and the Creation of Bangladesh,* (Berkeley, University of California Press, 1990), p.276-277
[42] George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy*, no.91 (Summer 1993), p.90-91

program as India, which in 1971 exploited power disparity and facilitated the secession of East Pakistan. To quote Sattar,

> Neither alliances proved reliable nor the security council acted to fulfill the pledge in the UN Charter of collective measures for the prevention and removal of threats to peace. Pakistan was compelled to undertake a painful reappraisal of the earlier policy of nuclear abstinence. The conclusion was unavoidable: Pakistan had to develop the capacity to deter another adventure against our country.[43]

Pakistan's quest for a constitution over a period of twenty-six years (1947-73) produced three documents. The first two (the 1956 Constitution and the 1962 Constitution) limited terms of the participation of ordinary citizens in public decision-making. The 1973 constitution has proved to be Pakistan's most durable, except for the period from 1977-1985 when it was shelved.[44] During the last caretaker cabinet, there was a move to entrench the military into the governmental structure in a more formal manner by establishing a mixed National Security Council including both military and civilian leadership. Created by President Leghari in January 1996, the Council for Defense and National Security (CDNS) membership included the president (as chairperson), chairman of the Joint Chiefs of Staff committee, the three armed services chiefs, the prime minister, and the ministries of defense, foreign affairs, and finance. After Nawaz Sharif took over office, the CDNS was shelved, but the institution may reappear in sometime in the future, perhaps in a modified form, as a way of formally involving the military in the governmental process.[45]

However, concerning the dominant role of the military in Pakistan's decision-making, the civilian governments also hold responsibility as, many times it has been the

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[43] Abdul Sattar, "Pakistan's Nuclear Strategy: Inaugural Address", *The Nuclear Debate: Strategic Issues*, No.3, March 2000, p.2
[44] LaPorte, op. cit., n. 5, p.48
[45] Ibid, p.60

civilian leadership that has sought a political role for the military for their own interests, giving the military a constant say in civilian matters. In addition, for many years now the military has access to jobs in the civil bureaucracy on special quotas and retired officers often head semi-autonomous and autonomous corporations, apart from being diplomats.[46] In some areas of policymaking, the army continued to maintain operational control since the Zia period despite return to democracy. At the same time, the military has been able to push the idea of a constitutional role for the military.

In the light of such a background when the military in Pakistan controls the levers of power what would be the effects on the stability of nuclear South Asia? In its dominance of Pakistan, the army has been virtually unchallenged by any other institution and has its way in the areas that they consider important to their interests and it is their interests that define the country's. The reports of the increasingly Islamisation of the junior ranks in the Pakistan army and *jihad* that the army espoused in Afghanistan and espouses in Kashmir sounds ominous to the reduction of tensions in the sub continent. Debt servicing along with defense spending eat up more than 70% of the Pakistani national budget. The figures on defense budget do not include the amount that the country spends on nuclear weapons. No expenditure figures have ever been released for Kahuta Research Laboratories, nor are the costs available for the other reported enrichment facility at Golra and also unknown is the cost of weapons development work carried out by the PAEC at various secret locations.[47] Even during periods of civilian rule the oversight function that the National Assembly should be exercising over the defence budget is tightly circumscribed by the stranglehold of the military over the polity. Under

[46] Shireen M. Mazari, "Redefining Civil-Military Relations in Nuclear South Asia?" at http://www.defencejournal.com/feb-mar99/redefining.htm
[47] Pervaiz Hoodbhoy, "Why the bomb?" *Dawn* (Karachi), May 23, 2000

the wide rubric of 'national security' the National Assembly cannot debate or question the defence budget, security issues which includes policy towards India and the nuclear strategy.

The September 11, 2001 strikes in the United States, the linkage of the Al Qaida with the Pakistani military and particularly it's the military intelligence ISI has given rise to wide fears about the safety, control and nuclear doctrine of the Pakistani military. The conflict with India over Kashmir, which involves low-intensity conflicts in the region and has been the cause of three wars in the sub continent. The exchange of nuclear threats during times of tension, and the consistent linkage that the establishment provides between the conflict in Kashmir, nuclear weapons and Islam makes the region unstable and prone to wars that might escalate to the nuclear stage.

The October 1999 coup that removed Nawaz Sharif has also thrown its share of speculations. The unwillingness of the civilian leadership to take the military leadership into confidence on nuclear weapons control matters was ostensibly one of them.[48] The divergence on the Kargil issue between the Sharif government and the Pakistani military has been well documented. If one reads back to the Lahore declaration as some thing Nawaz Sharif was in favor of and the military wasn't, one can conjure an interesting explanation. The nuclear tests of 1998 and the resultant sanctions on Pakistan drove the economy into greater difficulties. Sharif, is said to represent the business face of Pakistan, and also has wide business interests and is said to be in favor of closer economic ties with the West and India in this era of global markets but since this compromised the issues of Kashmir, he ran foul of the army. Now this gives hope and reason to formulate that the return and strengthening of the civilian rule in Pakistan might result in a more stable

[48] http://fas.org/nuke/guide/pakistan/agency/nca.htm

South Asia and better relations with India. A civilian disposition in Pakistan without the military as the power behind the throne might also be willing to discuss matters of confidence building and help ratchet down the nuclear sabre-rattling that both countries regularly indulge in.

It is in this broad theoretical framework that this dissertation aims to study the impact of civil-military relations on the control and decision making of nuclear weapon states and particularly, the Pakistani nuclear program. Decision-making will be studied in the context of the changing civil-military relations and the development of the Pakistani weapons program. Therefore the concept of civil-military relations and its impact on nuclear decision-making will be examined along with the role of the military in politics in Pakistan.

The study of the Pakistani nuclear program will focus primarily on the evolving role of the civilian and the military authorities as their fortunes change in politics. While the weapons program began under a civilian leader, soon after it was taken over by the military regime of Zia-ul Haq. The return of the civilian regime post-Zia, provides an interesting context to study the issue of the tussle between the military and the civilian leadership over nuclear decision-making. Though, like India, there is an overarching consensus on the need to develop nuclear weapons, but the struggle remains more in nuances about decision-making in Pakistan.

It is from here that the following chapters will try to test the following hypothesis: The study of the impact of civil-military relations on decision-making and control of nuclear weapons would be instructive to understand the emerging trend of Pakistani nuclear posture.

Chapter II
The Genesis

The Pakistani nuclear tests were largely a reaction to the Indian nuclear tests. Similarly, Pakistan's nuclear program has been basically reactive and inextricably linked to that of India. India's nuclear development and especially the Indian nuclear test in 1974 provided the impetus to the initiation of Pakistani efforts to acquire a nuclear capability.[1]

Pakistan's security model can be summed up in five words: survival in a hostile environment, which revolves around territorial integrity. It feels insecure as long as the Kashmir dispute is not settled to the satisfaction of all the three parties concerned. Pakistan's security model includes the protection of its 1,000 km coastline, its essential economic zone in the Arabian Sea and the defense of its sea-lanes to west Asia. Furthermore, increasingly the conservative elements also insist on guarding the ideological frontiers, which, face an onslaught from India and the west.[2] As far as Pakistan is concerned, Pakistan always quests for security against India, especially after the dismemberment of Pakistan in 1971. Nuclear deterrence provides a psychological security in the minds of Pakistan's ruling elite that's why there is a consensus on the nuclear issue within Pakistan's decision makers.

A section of the media has raised questions not only about the safety of nuclear arsenal but interestingly also about the existence of Pakistan in itself. The most alarming

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[1] Shafaqat Ali Khan, "Pakistan", in Eric Arnett (Ed.), *Nuclear Weapons after the Comprehensive Test Ban: Implications for Modernization and Proliferation* (New York: Oxford University Press, 1996), p.45

[2] S.Mutahir Ahmad, "The CTBT Controversy: The Role of Nuclear Nationalism and Religious Extremism", in Moonis Ahmar (Ed.), *The CTBT Controversy: Different Perceptions in South Asia*, (Karachi: Karachi University Press, 2000), p.113

of these are whether Pakistan will "fail".[3] Will it come under the influence of radical Islamic groups, and export terrorists, nuclear technology to other countries? The school of thought that believes that Pakistan would "fail" had a field day when Pakistan decided to cooperate with the United States following 9/11. This school felt that the situation would severely test Pakistan's security system at its nuclear weapons complex. Instability and weakening of the central government in Pakistan would make nuclear weapons and the stocks of explosive material dangerously vulnerable to renegade elements of the army.

Phase One: 1954-1959

In the early fifties only the United States and the Soviet Union could lay claim over the advanced technology that lay in the atom. In the words of Nehru "the application of which [nuclear energy] to peaceful and constructive purposes has opened limitless possibilities for human development, prosperity and overabundance".[4] The origins and early history of Pakistani nuclear activities are traced to the international developments in the field of nuclear energy in 1953.[5] The press in Pakistan welcomed the 'atom for peace plan', but it did not have the official policy backing, despite the official Indian commitment since the late 1940s to develop atomic energy in India.[6] The Eisenhower administration launched its 'Atoms for Peace' program in December 1953

[3] Cohen, Stephen P., "Pakistan's fear of Failure", *The Asian Wall Street Journal*, October 23, 2000 from http://www.brook.edu/dybdocroot/views/op-ed/cohens/20001023.htm
[4] George Perkovich, *India's Nuclear Program: The Impact on Global Proliferation*, (New Delhi: Oxford, 1999) p.15
[5] Ashok Kapur, *Pakistan's Nuclear Development*, (New York, Croom Helm: 1987) p.34.
[6] Ibid, p.34

that goaded Pakistani leadership to think of developing a small nuclear research programme.

In October 1954, the Pakistani government expressed an interest and two years later the Pakistan Atomic Energy Commission (PAEC) was formed.[7] It was between 1954-59 that the first initiatives towards nuclear policy formulation were taken in Pakistan and can be said to the first phase of Pakistan's nuclear decision-making. The need to move also came from two external impetus namely to benefit from the ongoing development of science and technology all over the world (particularly in the wake of international inducements for developing atomic energy for peaceful purposes), and to project Pakistan's diplomatic stance on nuclear arms control measures which were being debated in all international forums and to develop Pakistan's bilateral and international nuclear relations.[8]

In India at this time, there existed a scientific and technological base since the mid-1940s; Nehru and Bhabha had in right earnest decided to harness the atom for developmental purposes. Pakistan did not possess even the barest minimum scientific or technological infrastructure to enter this field. Eisenhower's two proposals 'Atoms for Peace' and the establishment of the International Atomic Energy Agency (IAEA) involved the argument that nuclear power technology should be made available to the rest of the world through the intermediary of the new agency.[9]

In Pakistan, it was in 1954, that the Government College at Lahore had established the High Tension and Nuclear Research Laboratory to provide research

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[7] Sumit Ganguly, *Conflict Unending: India-Pakistan tensions since 1947,* (New Delhi :Oxford, 2002) p.105
[8] Zeba Moshavar, *Nuclear Weapons Proliferation in the Indian Sub Continent,* (New York: St. Martin's Press, 1991) p.123
[9] George Perkovich, Op. cit., n. 4, p.25

facilities to post-graduate students in physics department. In October of the same year, the Ministry of Industry announced plans to establish an Atomic Research Body, which was intended to be a part of a new body for scientific and industrial research in the country.[10] In 1955, the government set up a twelve member Atomic Energy Committee to prepare blue prints for the promotion of atomic energy in Pakistan. The Pakistani government appointed a 12-member Atomic Energy committee under Dr. Nazir Ahmad, to prepare plans for the promotion of peaceful uses of atomic energy in 1955 and the committee recommended that the government take steps to appoint a commission. The Atomic Energy Council was set up in March 1956, with the task of planning and developing peaceful uses of atomic energy.[11] The Atomic Energy Council (AEC) consisted of the governing body and the Commission. The Pakistan Atomic Energy Commission (PAEC) was established on the model of the Indian Atomic Energy Commission. The governing Body consisted of 2 Federal Ministers, 2 Secretaries of the Federal Government and the Chairman of the Atomic Energy Commission.[12]

The PAEC was entrusted by the Government with the task of planning and developing the peaceful uses of nuclear energy with special reference to survey procurement and disposal of radioactive materials, planning and establishment of an atomic energy and nuclear research institutes, installation of research and power reactors, negotiation for co-operation in the nuclear field with International Atomic energy bodies

[10] Naeem Ahmed Salik, " Pakistan's Nuclear Programme: Technological Dimensions", in P.R. Chari, P.I.Cheema and Iftekharuzzaman, (eds.) *Nuclear Non-Proliferation in India and Pakistan*, (New Delhi: Manohar, 1996), p.87
[11] Ibid.
[12] Ashok Kapur, Op. cit, n.5, pp.40-41

to create a cadre of trained personnel and application of radio-isotopes to agriculture, health and industry.[13]

In 1957, the Pakistan Atomic Energy Commission (PAEC) through the government signed a bilateral agreement with United States for cooperation in the field of peaceful uses of nuclear energy. Under agreement the Americans were to provide counseling, literature, instruction and training. Pakistan also participated in the work of the Baghdad Nuclear Center. The activity shows that Pakistan was pursuing a nuclear policy to evolve a nuclear infrastructure. However, the PAEC's plans did not move smoothly.

At this time in Pakistan there were frequent changes of government and attempts to develop the Pakistani constitution failed regularly. As for the question why the Pakistani government did not think about nuclear energy before 1953-54, representative writings ascribe it to the domestic political instability and interestingly to the development of military ties with the United States.[14] The program wasn't really off to a flying start, as it was economically unsound, and there was the lack of political support, which suffered due to bureaucratic red tape.

The author of *Pakistan's Nuclear Development*, Ashok Kapur attributes the slow start to a particular and not really successful coalition that was pushing for such,

> the composition of the Atomic Energy Council reflected the ascendancy of the civilian bureaucracy (especially finance) in the body politic. At this time (the mid to late 1950s) the Pakistani military organization was in the process of establishing its ascendancy as a parallel national organization.[15]

[13] Salik, Op. cit., n. 10, p. 89
[14] Ashok Kapur, Op. cit, n. 5, p.35
[15] Ibid. p. 40

It should be borne in mind that the first military coup, officially known as the 'Revolution', was yet to take place in 1958 by General Ayub Khan. Therefore, the PAEC mobilized support for its technical program with in the scientific and academic communities.[16] To quote another illuminating passage from Ashok Kapur,

> In as much as the Pakistani military organization played no official role in the work of the PAEC and the Atomic Energy Council, and it was not represented in either body, one can safely conclude that the Pakistani military was uninterested in nuclear affairs at that time. The nuclear issue lacked salience within the Pakistani military bureaucracy although by the mid-1950s the military leadership had begun to shape the Pakistani foreign policy agenda by joining a military alliance with the USA.[17]

In a list of requirements that make for the successful formation and implementation of a nuclear program in a developing country Ashok Kapur lists three essential conditions.[18] The program should be technically sound and economically necessary, and feasible. And, it should be seen as such by the constituents and users and that sound administrative strategy is necessary to mobilize support for objectives. The second element is that the program should be seen to advance national interests, externally and internally. Lastly Kapur, lists that the program must advance the personal and organizational interests of the dominant political coalition of the country. And in the case of Pakistan, these conditions were not satisfied. The program was technically weak; there was an obvious lack of administrative/politicized strategy, it was not attractive to the dominant coalition, and there was a lack of a strategic-diplomatic-technical rationale.

[16] Ibid, p.40
[17] Ibid.
[18] Ibid, p.18

During these early years, there appeared to be no linkage between Pakistan's nuclear development activity and its defense and foreign policies.[19]

In summary, there were no external (diplomatic or strategic) imperatives and also the absence of an internal scientific imperative to give importance to Pakistan's nuclear development along Indian lines.[20] Secondly this period also reveals an interesting contrast, as the military was able to mobilize support within the political system and international environment to modernize the military, to reorient diplomacy and thereby paving the way for its ascendancy as the dominant element in Pakistani politics.[21] But, the India factor, played no role whatsoever in Pakistani thinking about nuclear affairs at this time.[22] This is remarkable because the two nations were bitter neighbors by then and India played a central role in Pakistani diplomatic and military activities. To add to such a situation the PAEC also held up Indian model of development as the desired model and the Pakistani press provided regular coverage about Indian plans and there also existed some speculation about Indian nuclear intentions.[23] The first phase reflected the dominance of domestic and personal imperatives and the absence of regional security considerations in the nuclear field.

Thus, the first phase (1953-59) under Dr. Nazir Ahmad saw the creation of a loose and unfocussed organizational network and for technically faulty advocacy. An example for this is the PAEC's desire for a CP5 reactor instead of the US light water reactor as at this time Pakistan lacked the technological/human infrastructure for the CP5.[24] But these

[19] Zeba Moshavar, op. cit., n. 8, pp.60-61
[20] Kapur, op. cit., n. 5, p.42
[21] Ibid. p.47
[22] Sumit Ganguly, Op. cit., n. 7, p. 105
[23] Kapur, op. cit, n. 5, p.49
[24] Ibid., pp.50-51

were soon problems which were addressed under Dr. I.H. Usmani who took over as Chairman in 1959, drafted the Atomic Energy Law which gave PAEC an autonomous statutory authority under law and despite being under the Ministry of Tribal Affairs (but with the provision of statutory organizational and financial autonomy), and reported directly to Ayub Khan.[25]

Phase Two: 1959-71

The second phase sees the coming to the helm of Dr. I.H. Usmani of the PAEC and Zulfikar Ali Bhutto as a minister in the Ayub Khan government. Significantly, even in this phase the program remained focused on non-military objectives. In the mid 1960s, the Science and technology Minster Z.A.Bhutto took an active interest in the working of the PAEC. This is the time when Pakistan had its first public debate on nuclear weapons. After Ayub Khan took over in 1958, a clear nexus was projected between the country's foreign policy and its policy on nuclear arms control measures.[26] Ayub was eager to address the problem of Pakistan's security through military as well as diplomatic means but from the military point of view he did not attach much importance to nuclear weapons. This is not to suggest that he neglected the promotion of science and technology, in fact atomic energy development was given more attention than in the first few years of the plan.

Most of the nuclear infrastructure was grafted during Ayub Khan's time and most of the earlier conceived plans were implemented under him. His emphasis was on the development of peaceful uses of atomic energy, while distortions did occur in the

[25] Ibid.
[26] P.L. Bhola, *Pakistan's Nuclear Policy*, (New Delhi: Sterling, 1993), pp.25-27

program, the direction and scope of the program remained consistent. It was also during Ayub's rule that Pakistan's international nuclear relations were diversified. In fact, from 1960 onwards, more attention was paid to the promotion of science and technology and a National Science Council was established to coordinate the activities of the country's research councils, one of them being the PAEC. On top of the new (National Science Council) organizational set-up, a ministerial division of scientific and technological research was created. It was entrusted with the coordination of the work of the Pakistan Council for Scientific and Industrial Research (PSCIR), PAEC and the National Science Council. It dealt with the budgetary and administrative problems of the three organizations. This ministerial division was made a part of the Presidential Secretariat. The new scientific administration had two obvious implications for the PAEC. Firstly, coordination of the work of the PAEC was brought to the highest governmental level. Secondly, unlike in the 1950s, the PAEC was made an autonomous national scientific institution.[27]

The Pakistan Institute of Science and Technology (PINSTECH) constructed at Nilore, near Islamabad in 1960. A US supplied 'swimming pool' type 5 MW nuclear research reactor was set up at PINSTECH in 1963. It went critical in 1965 and in October 1967 started producing radioisotopes. PINSTECH also acquired a laboratory scale reprocessing plant (hot cell), which became operational in the 1960s. Pakistan planned its first nuclear power project, the Karachi Nuclear Power Project (KANUPP), in the early 1960s. Under this project Pakistan set up a Candu-type nuclear power plant with the collaboration of Canada. The plant started its trial runs in 1971. Encouraged by the find

[27] Ibid.

of uranium and other radioactive minerals, the PAEC designed and put into operation at the Atomic Mineral Center, Lahore, and a pilot plant for extraction of uranium. [28]

The 1960s was a hectic phase in the nuclear field for Pakistan. The PAEC Chairman, Dr. Usmani, had so intensified its training program that within two years it would have nearly 150-200 scientists trained in various disciplines of nuclear science and technology. By 1967, three thousand Pakistani students were studying nuclear science within and outside Pakistan. In 1968, a Nuclear Society was formed in Pakistan for the dissemination of nuclear information through publications, lectures, radio talks, television program, films and exhibition. In 1961, the government set up a Space and Upper Atmosphere Research Committee (SUPARCO) under the Chairmanship of Dr. Abdus Salam, Chief Scientific Advisor to the President. The aim of the SUPARCO was to promote exploration and application of space science and technology in the country. [29]

For Ayub Khan, nuclear development was a technical issue, and the promotion of science and technology in the context of the development of Islamic Socialism. Ayub saw no need of nuclear weapons to offset security threats, which were manifest in its relationships primarily with India and during these days also with Afghanistan and the Soviet Union. Ayub believed that conventional modernization of the Pakistani military machine, which would occur; with the Western military alliance would take care of their security needs. More over, he did not disbelieve Indian intentions in the development of nuclear energy for peaceful purpose. And Ayub added that, 'by the time India had a nuclear device, such weapons would be so common that it would be possible for Pakistan

[28] Ibid.
[29] Ibid., p.28

to buy it from the market.'[30] Dr. Usmani, who played an important role in the formulation and execution of Pakistan's nuclear policy, was extremely circumspect about the end-use of nuclear science. Quoting from an article he wrote in 1960 in the Pakistan Quarterly,

> We stand on the crossroads of destiny. A wrong decision may spell complete disaster...wisdom and prudence, in the use of tools science has placed in our hands, may on the other hand, help us carve out a future of lasting peace and prosperity. The choice has to be made now or never.[31]

Usmani's conviction was vindicated by the pattern of nuclear development in Pakistan while he remained in office.

Bhutto began to negotiate with the USA for the supply of a nuclear reactor. Consequently the US supplied, a 5 MW swimming pool type research reactor, which was finally set up at the Pakistan Institute of Science and Technology (PINSTECH) in 1963, and it went critical in 1975, six years behind schedule. The US also agreed to supply enriched Uranium for this reactor, which was to be under IAEA safe guard. Following India's success in securing an atomic power plant *Candu* from Canada, Pakistan also followed suit and the PAEC entered into negotiations with the Canadian government and an agreement was reached in 1965.[32] A trilateral safeguards agreement involving Pakistan, Canada and the IAEA which covered what came to be known as the Karachi Nuclear Power Plant (KANUPP) with a capacity of 137 MW. The plant went critical in 1971.

This was yet another era of turmoil in Pakistani history, but even in the long years of stability provided by Ayub Khan's government the nuclear weapons program did not

[30] Zeba Moshavar, op. cit, n. 8, p.62
[31] Bhola, op. cit, n. 26, p.30
[32] Zalmay Khalizad, "Pakistan and the Bomb", *The Bulletin of Atomic Scientists*, Illinois, January 1980, p.11

progress because of Ayub's belief that industrialization was more important than nuclerisation. Thus, the period till 1971 was essentially peaceful in aims and objectives, as the military leadership did not favor a weapons program for economic as well as political reasons.

Phase Three: 1971-98

According to Sumit Ganguly, the origins of the Pakistani weapons program can be directly traced to the country's military defeat in the 1971 war[33], this had resulted in the creation of Bangladesh from what was formerly East Pakistan. Insecure and deeply cognizant of their military's structural inability to cope with the Indian conventional superiority, the Pakistani elite choose to invest in a nuclear weapons option.[34] The Indian Peaceful Nuclear Explosion (PNE) of 1974 just provided that further impetus.

When Zulfikar Ali Bhutto came to the helm after the secession of East Pakistan, he had the power to follow his head and had the natural circumstances (to fight Indian hegemony in South Asia) to do so. Bhutto since his days as the Minister of Irrigation and Mines had advocated the acquisition of nuclear weapons capability for Pakistan.[35]Most histories of the Pakistani program give credit to Bhutto as conceiving the programme and also for showing it direction during its formative phase.[36]Ashok Kapur writes that:

> ...the Bhutto era was unique. Here Bhutto was the principal player whose actions, beginning in 1972 with the decision to make the bomb, broke with the peaceful orientation of Pakistani nuclear activities during 1956-7.[37]

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[33] Sumit Ganguly, op. cit, n. 7, p.101.
[34] ibid.
[35]Akhtar Ali, *Pakistan's Nuclear Dilemma: Energy and Security Dimensions*, (New Delhi: ABC Publishers, 1984), p.46
[36] Kaushik S.N. and Mehrotra D.N., *Pakistan's Nuclear Bomb*, (New Delhi: Sopan , 1987), p.34
[37] Ashok Kapur, op. cit., n. 5, p.146

In January 1972, soon after taking over, Bhutto called a meeting of Pakistani nuclear scientists in Multan, where he is supposed to have stated, "Look we are going to have a bomb...Can you give it to me? I shall find you the resources and the facilities"[38]. The timing is significant because it counters the western argument that the Indian PNE instigated Pakistan's quest for weapons capability. In fact, Z.A. Bhutto following the public debate in India after the Chinese nuclear tests warned that the Indians would go nuclear soon and he wanted to plan in advance for such an eventuality. In 1969, Bhutto is supposed to have stated that:

> All wars of our age have become total wars and it will have to be assumed that a war waged against Pakistan is capable of becoming a total war. It would be dangerous to plan for less and our plan should therefore include the nuclear deterrent.[39]

Plutonium Reprocessing or Uranium Enrichment

At this time when Bhutto had to make a choice, the international nuclear market was very encouraging and in the early 1970's any interested party could obtain sensitive nuclear facilities, i.e. reprocessing and enrichment facilities under the pretext of having a extended nuclear program. The 1973 oil crisis and the rush for nuclear power pushed the price of uranium fuel, raising the prospect of a uranium fuel shortage. As a solution, nuclear suppliers, eager to sustain interest in nuclear energy, introduced the 'plutonium economy'.[40] This required a shift from conventional reactors using natural and low enriched uranium to fast breeder reactors using plutonium produced in the reprocessing plant. Pakistan first showed interest in the development of plutonium reprocessing in the early 1970's, the official rationale for engaging in reprocessing was to achieve fuel self-

[38] Savita Pande, *Pakistan's Nuclear Policy*, (New Delhi: B.R. Publications, 1991), pp.49-50
[39] Ibid., p.53
[40] Zeba Moshavar, op. cit, n. 8, p.67

sufficiency on the basis of a 'plutonium economy'- that envisaged an eventual replacement of conventional nuclear reactors with plutonium-fueled fast breeder reactors. By the mid-1970's, therefore the search for reprocessing or enrichment technology seemed acceptable in the context of a civil nuclear program. Bhutto's attempt to acquire reprocessing technology was part of the country's upgraded nuclear power program. Whether motivated by the energy rationale or the weapons option, or possibly both, Pakistan's lack of real commitment to improving nuclear power potential casts doubts on Bhutto's search for reprocessing.[41]

The setback came after the Indian nuclear test in May 1974. Some contracts signed by Pakistan with supplier states were either cancelled or not honored.[42] The Indian Peaceful Nuclear Explosion (PNE) changed the international climate about nuclear technology and led to the formation of the Nuclear Suppliers Group in 1977 that imposed a strict embargo on the supplies of nuclear materials and technology to non-NPT countries.[43] The Canadian built Kahuta Nuclear Power Plant (KANUPP) soon faced trouble when Canada refused to supply Uranium for the reactor. Now, Pakistan began to search for acquiring a plutonium reprocessing plant so that it could reprocess the plutonium from used reactor fuel of the KANUPP. For this purpose, it turned to France, which had developed expertise on plutonium reprocessing technology and started negotiations with a specialized engineering firm called Saint-Gobain Techniques Nouvelle (SGN).[44]

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[41] Ibid, p.103
[42] General K.M. Arif, *Working with Zia: Pakistan's Power Politics 1977-1988*, (Karachi: Oxford University Press, 1995), p.351
[43] General Mirza Aslam Beg, "Pakistan's Nuclear Program", in Jorn Gjelstad and Olav Njolstad (eds.), *Nuclear Rivalry and International Order*, (PRIO- International Peace Research Institute, Oslo: Sage, London, 1996), p.163
[44] K.M. Arif, op. cit, n. 42, p.365

After three years of intense negotiations, the reprocessing plant deal (to be located at Chasma) was formally signed in March 1976 with the approval of the IAEA. But this bid for a reprocessing plant, which seemed unnecessary for its small civilian nuclear infrastructure, sent the alarm bells ringing through the international community. Despite being under IAEA safeguards, the plant would allow the accumulation of plutonium which it did not need for its one small, natural uranium fueled reactor, but which could be of obvious use for a weapons program. The US-Canada put intense pressure on the French-Pak deal and France was coerced into establishing a co-processing plant in Pakistan. But later, this whole plan was rejected by Pakistan and the French government decided to cancel the whole contract.[45]

After the cancellation of the reprocessing deal, Pakistan turned to China for it. However, a pilot scale reprocessing facility known as New Labs was built which was capable of extracting Plutonium from spent fuel giving Pakistan a second route to nuclear weapons. Although it is difficult to trace when exactly Bhutto decided to opt for this alternative route. According to Ashok Kapur, "from 1975 to 1978 both reprocessing and enrichment paths were active but after 1978 enrichment became the primary route to nuclear weapons.[46]

A.Q. Khan, the father of the Pakistan bomb marks his entry at this time, he initially worked under Pakistan Atomic Energy Commission (PAEC), headed by Munir Ahmad Khan, for a short period. But the pair fell out, and in July 1976, A.Q. Khan founded the Engineering Research Laboratories (ERL) on 31 July 1976, with the exclusive task of indigenous development of Uranium Enrichment Plant. Within the next

[45] Dennis Kux, *The United States and Pakistan 1947-2000: Disenchanted Allies* (Karachi: Oxford, 2001), p.235
[46] Ashok Kapur, op. cit, n. 5., p.145

five years the target was achieved. On 01 May 1981 ERL was renamed as Dr. A.Q. Khan Research Laboratories (KRL). Chinese assistance in the development of gas centrifuges at Kahuta was indicated by the presence of Chinese technicians at the facility in the early 1980s. The uranium enrichment facility began operating in 1984.

The coup on July 5th 1977 brought an end to Bhutto's rule and the military quickly moved in to control the nuclear programme. Bhutto during his stay at the helm had succeeded in generating a national consensus on giving the nuclear program a weapons capability. This would restore parity between the South Asian foes, help reopen Kashmir, provide leadership of the Islamic world as well as legitimize his stay at the top as the 'protector of the people'. By the time of the coup, Bhutto portrayed the plutonium reprocessing deal with France as the symbol of his devotion to liberate Pakistan from external hegemony. He accused the US and its internal 'collaborators' of having overthrown his government because he stood firm behind the deal and refused to compromise Pakistan's sovereignty. In his last days, his writings from the prison waxed emotionally on his fight for survival of the nation and it was the weapons capability of not only Pakistan but the 'Islamic civilization' at large. With his rhetoric Bhutto succeeded in determining the direction of Pakistan's nuclear issue and the spirit he injected into the nuclear issue outlived him.[47]

The Zia Years

The nuclear program launched by the civilian government in the mid-1970's had little interest for the military except for some ancillary roles it was assigned. Military

[47] Zafar Iqbal Cheema, "Pakistan's Nuclear Use Doctrine and Command and Control", in Peter R. Lavoy, Scott D. Sagan and James J. Wirtz (ed.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons*, (Cornell University Press: Ithaca and London, 2000), p.162

interest increased, however, after General Zia-Ul-Haq came to power in 1977. In sharp contrast to Zulfikar Bhutto's confrontational and provocative attitude, Zia deliberately fostered ambiguity, took calculated risks and exploited the international environment and the loopholes in the US Non-Proliferation policy. In June 1976, the US Congress adopted the Symington Amendment; it prohibited economic and military assistance to any country, which tried to acquire enrichment or reprocessing technology. In September 1977, the United States cut off military and economic assistance to Pakistan when she refused to cancel the deal with France. But when the contract was out of the way, the United States promptly restored economic and military aid for Pakistan in October 1978.[48] This was a period of a new low in US-Pakistan relations when Jimmy Carter was the President and non-proliferation the most important American policy in the subcontinent. And then the Soviet occupation of Afghanistan took place and the equations were re-written with the coming of the Regan administration. Relentless US pressure to abandon the nuclear program transformed it from a diplomatic issue to a question of national pride and sovereignty for the general public in Pakistan.[49]

Zia like Bhutto refused to accept full scope safeguards and remained steadfast. The efforts towards building the Pakistani Nuclear infrastructure through both the reprocessing and Enrichment route to the bomb, which had been initiated by Bhutto, were intensified by Zia. Demonstrating pragmatism and shrewdness, Zia grasped that the reprocessing route to the bomb was not easy and therefore he decided to devote most of the efforts towards the enrichment option. The enrichment process was beneficial in many other ways too, it entailed no safeguards violation, secrecy was possible, by using

[48] K.M. Arif, op. cit., n. 42, p.368
[49] Shafaqat Ali Khan, op. cit., n. 1, p.75

the URENCO plans the R&D costs of enrichment were sharply minimized and A.Q. Khan's approach was innovative in that modus operandi was to get the bits and pieces (components) of enrichment technology and equipment from small high technology western firms who dealt with individual components and to bring the components together so as to achieve mastery over the enrichment cycle.[50]The factor that made enrichment an easy option was Pakistan's newly achieved capacity of exercising ultra-centrifuge technology.

Dr. A. Q. KHAN [51]

The originator of the Pakistani enrichment programme Dr. A.Q.Khan, was born in Bhopal, India, who studied metallurgy in West Germany, Holland and Great Britain. Khan's stint with the Research Institute of URENCO (the British-Dutch-West German Uranium Enrichment Consortium) at Almelo during 1972-1975 was later to come in handy in his efforts towards the Pakistani gas centrifuge programme. When Dr. Khan returned to Pakistan, he was made the supervisor of a project called "Project 706" which included setting up a pilot plant at Sihala, near Islamabad and then a bit further at Kahuta to build a massive industrial unit of 1000 Centrifuge units. The nuclear program was boosted by the forceful selling attitude of European nuclear countries since 1976. Through some smart posturing and skilled balance a number of components were collected from all over the world.

Dr. A.Q.Khan received his training in metallurgy at the University of Delft in Holland as well as in Belgium. After completion of his studies, Abdul Qadir Khan

[50] Ashok Kapur, op. cit, n. 5, p.205
[51] General K.M. Arif, op. cit., n. 42, p.368

worked for the physics and dynamics laboratory of Verenigde Metaalifabrieken Werkspoor of the FDO research Institute of the URENCO consortium at Almelo in the Netherlands. A.Q.Khan obtained citizenship and security clearance from the Dutch government to work on classified projects relating to the centrifuge at URENCO. Owing to his excellent command of the German language, Khan got access to secret designs and is supposed to have worked from 1973 to 1975 and then returned to Pakistan. After his return to Pakistan, Khan kept a deliberate low profile till his ingenuity was used precisely by the leadership of Zia to set up Pakistan's 'Project Manhattan' at Kahuta and Sihala. The project was to be based on the centrifuge that the various critical components needed were not readily available within Pakistan and in this operation of International subterfuge; Khan's past experience in west Europe came of immediate utility.

A year after India's 1974 nuclear test, Dr. Khan departed URENCO with blueprints for the uranium centrifuge, and information on URENCO's key suppliers. A.Q. Khan initially worked under Pakistan Atomic Energy Commission (PAEC), headed by Munir Ahmad Khan, for a short period. But the pair fell out, and in July 1976, Bhutto gave A.Q. Khan autonomous control of the uranium enrichment project, reporting directly to the prime minister's office, which arrangement has continued since.[52]

Repeat

Weapons Capability

The Afghan war and Pakistan's frontline status facilitated the exemption from the American non-proliferation provisions from 1982-1990 and helped it achieve nuclear capability. The Regan administration decided to shut its eyes to Pakistan's nuclear program and Zia fully exploited Pakistan's emerging geo-strategic importance and

[52] http://www.fas.org/nuke/guide/pakistan/facility/kahuta.htm

accelerated the country's nuclear programme. The progress made by the program provided strong evidence to suggest that by the end of 1984, Pakistan had through indigenous effort, crossed the "red line" in Uranium Enrichment to more than 5% of U-235.[53] Dr. Khan's declaration in 1984 that he was on the verge of achieving nuclear capability coupled with the Zia's confirmation that Pakistan had produced low enriched non-weapons grade material sent the alarm bells ringing once again and the US passed the Pressler Amendment in 1985. This amendment required sanctions against Pakistan unless the President of the US certified that Islamabad was not developing Nuclear Weapons.

However, despite Zia's assurances to Washington that Pakistan would not cross the "red line", the programme continued. Leonard Spector and Jacqueline Smith in The Spread of Nuclear Weapons, 1989-90: Nuclear Ambitions, for the Carnegie Endowment programme for International Peace, identify 1985 as the watershed in Pakistan's weapons grade uranium enrichment capability. They assert that "president Regan was aware of this development but choose not to challenge the Pakistani leaders on the issue. The administration invoked waiver provisions of the Pressler Amendment by annually certifying contrary to accumulating evidence that Pakistan was not developing nuclear weapons.[54]

US Intelligence concluded in 1986 that Kahuta had acquired a nominal capability sufficient to produce enough weapons-grade material to build several nuclear bombs per

[53] Samina Ahmad and David Cortright, *Pakistan and the Bomb: Public opinion and Nuclear Options*, (Norte Dame: University of Norte Dame Press, 1998), p.35

[54] Leonard Spector and Jacqueline Smith, *The Spread of Nuclear Weapons, 1989-90: Nuclear Ambitions,* for the Carnegie Endowment Program for International Peace, (Colorado: Boulder, 1990), pp.92-94

year.[55] During this time, a series of articles in the American press, quoting US administration officials, reported that Pakistan had either acquired the capacity to build nuclear weapons or was on the verge of this capability. The confirmation of Pakistan's nuclear development was provided a few years later by former Chief of Army staff, General Mirza Aslam Beg, "By 1987 before my appointment as the Vice Chief of Army Staff, Pakistan had acquired full nuclear capability."[56] But during the time, both General Zia and Dr.Khan in their statements maintained a deliberate ambiguity about the country's actual nuclear weapons status.

Zia in many ways was the author of Pakistan's policy of nuclear ambiguity that characterized the Pakistani nuclear program till the May 1998 tests.[57] Zia considered Zulfikar Bhutto's open talk of developing nuclear weapons as 'irresponsible' and the reason for Pakistan's increasing international isolation. In sharp contrast, Zia remained silent about the rationale for developing a nuclear deterrent and denied that Pakistan was pursuing such a capability.[58] Zia and AQ Khan began to hint about Pakistan's nuclear capability in 1987, once Pakistan had succeeded in processing highly enriched uranium and had acquired other elements of a nuclear infrastructure. But with admittance of capability, Zia hastened to add that Pakistan had no intention of making nuclear weapons and subsequent Pakistani leaders kept their nuclear intentions ambiguous until the tests in 1998.

[55] David Albright, "India and Pakistan's Nuclear Arms Race: Out of the Closet But not in the Street", *Arms Control Today*, Vol.23, No.5, June 1993, p.15
[56] Ahmad and Cortright, op. cit., n. 53, p.37
[57] Zafar Iqbal Cheema, op. cit., n. 47, p.162
[58] Ibid.

Post –Zia Years

After Zia's untimely death, Ghulam Ishaq Khan succeeded as the president and General Mirza Aslam Beg succeeded as the Army Chief, whereas Munir Ahmad Khan and Dr. A.Q. Khan continued in office as PAEC Chairman and the Director of Kahuta Research Laboratories respectively. Thus, the long military rule came to an end in Pakistan and civilian rule was brought about. It would be pertinent to note that the new army chief and the President's view on the nuclear weapons program did not differ too much from those of their predecessor General Zia. President Ghulam Isahq Khan (1988-93) pursued Zia's policy of ambiguity in letter and spirit.

The power, which had during Zia's time existed only in his hands, was now unequally shared between the 'troika' of the President, the Prime Minister and the army chief. But the decisive power over all matters still rested in the hands of the military with the President a lackey of the army and having the powers through the Eighth Amendment to dismiss the Prime Minister.[59] Benazir through her statements accepted that Pakistan had a nuclear weapons capability and that Pakistan in that absence of any threat, did not intend to use that knowledge, thus, reaffirming the consensus on Pakistan's nuclear weapons objectives. But despite such assurances on part of the Prime Minister, the clandestine operations to equip Pakistan with nuclear weapons potential continued.

But according to General K.M.Arif, the inexperience and vacillating Benazir Bhutto proved too weak to withstand external (read US) pressure on the nuclear issue.[60] For soon after the withdrawal of the Soviet forces the US hostility to Pakistan's nuclear program resurfaced with renewed vigor. With the fall of the Soviet Union and the new

[59] Dennis Kux, *The US and Pakistan 1947-2000: Disenchanted Allies*, (Washington DC: 20001), p.293
[60] General K.M. Arif, op. cit., n.42, p.376

world order, President Bush warned Pakistan to cap its nuclear program. In January 1989 under intense US pressure, the troika and some others decided to freeze the enrichment of uranium at a low level.[61] Research continued on the remaining elements of weapons production: preparation of the device, integrated system testing, and construction of delivery systems. Nawaz Sharif who succeeded Benazir as Prime Minister, kept the lid of confidentiality on the issue. The troika in power appeared to have accepted the US warning but General Beg is said to have maintained that the capping did not affect Pakistan's nuclear programme as it had already achieved the weapons capability.[62]

But with domestic anti-proliferation measures, the Bhutto regime in Pakistan came under the hammer and sanctions were imposed. As Zahid Hussain points out "Benazir's knowledge of the Pakistani program was in fact, wholly dependent on the briefings given to her by US officials on her American visit". [63] While Benazir did succeed in halting the production of highly enriched uranium in June 1989, prior to her US visit but production resumed in early 1990. [64]

Under the new civilian administration, Pakistan's nuclear program continued to be run by the military and the President. According to Perkovich, the Prime Minister did not have any control over the programme and says that no Prime Minister has been allowed to visit the Kahuta facility.[65] The crucial question according to Zafar Iqbal Cheema was

> Not her [Benazir] willingness to stop pursuing a nuclear weapons program but her ability to influence nuclear decision making in Islamabad. She did not control the

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[61] Ibid., p.377
[62] Zahid Hussain, "Deliberate Nuclear Ambiguity", in S. Ahmad and D. Cortright (eds.), *Pakistan and the Bomb: Public Opinion and Nuclear Options,* (Norte Dame: University of Norte Dame Press, 1998), p.39
[63] Ibid, p.38
[64] Ibid, p.39
[65] George Perkovich, "A Nuclear Third Way in South Asia", *Foreign Policy*, Vol., No. 91(Summer 1993), p.90

Nuclear Weapons program Coordination Committee chaired by president Ghulam Ishaque Khan.[66]

After her dismissal as Prime Minister, Benazir revealed that she had not been in charge of Pakistan's nuclear program and that during the 1990 Kashmir crisis, Pakistan had crossed the "Red Line" without her knowledge.[67] Scholars argue that while there was a temporary halt in production of weapons-grade fissile material in early 1989 it was abandoned in the wake of the crisis over Kashmir in 1990. Meanwhile, the American pressure to cap its program and concerns over the Kashmir crisis in Pakistan resulted in the second scare of nuclear war in the subcontinent. Pakistan accelerated its nuclear program once again in 1990 as tensions with India mounted over Kashmir. The decision to accelerate the enrichment program was reportedly taken by President Isahq Khan and the chief of army staff, General Beg.[68]

By this time the relationship between the Prime Minister and the President and army chief were sufficiently strained to lead to the dismissal of Bhutto. General Aslam Beg used the nuclear programme to assert the profile and power of the military and even abandoned the façade of consultations with the civil disposition in power. Following the ouster of Benazir's Government through an army-backed constitutional coup, Washington stopped all economic and military aid to Pakistan in August 1990, as President Bush invoked the Pressler amendment by refusing to certify that Islamabad did not possess nuclear weapons.[69] The American pressure to cap the nuclear program was unanimously rejected across the political and military spectrum.

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[66] Zafar Iqbal Cheema, op. cit., n. 47, p.163
[67] Ibid.
[68] Zahid Hussain, op. cit., n. 62, p.39
[69] Ibid.

After the dismissal of Bhutto, when Nawaz Sharif took over, he reiterated the objective of nuclear development for peaceful uses.[70] The Gulf war saw a burgeoning of anti-American sentiments in Pakistan and generated greater support within the military establishment for Pakistan to shed its ambiguity and go for a nuclear test. Army chief General Beg was the major advocate of an overt nuclear policy, urging Pakistan to develop a viable nuclear option as part of its defense strategy. The new man at the helm adopted a moderate position on the nuclear issue, especially in an interview with *The New York Times*, June 1991 he declared that he wanted to take a more flexible position, but was constrained by certain factors (interpreted as the hard-line military).[71] Sharif faced strong resistance from the Army Chief and in a letter to the Prime Minster in July 1991; General Beg cautioned him of the military's concern and urged him to take a clear and firm line on the issue.[72] The retirement of General Beg eased the pressure on Sharif and also saw a positive response from the US. But the fundamental situation did not change and Islamabad firmly refused to accept Washington's demand for a roll back as a consensus existed among Pakistani elites to retain their nuclear capability. The Prime Minister Sharif for the purpose of shoring up his nationalist and patriotic credentials instructed his foreign secretary to declare Pakistan's nuclear status while on a visit to the United States.[73]

In yet another wrangle between the three centers of power in 1993, the army forced the President and Prime Minister to resign and elections were called soon after. Benazir made it back to office considerably strengthened, as the new President was a PPP

[70] Dennis Kux, op. cit., n. 59, p.311
[71] Zahid Hussain, op. cit., n. 62, p.40
[72] Dennis Kux, op. cit., n. 59, p.314
[73] Zahid Hussain, op. cit., n. 62, p.40

supporter. In her second tenure as Prime Minister Benazir often stated that Pakistan's nuclear program was intended for peaceful purposes but could be converted to military uses if national security was threatened. But the pressure of domestic politics, Kashmir and the Indian threat led her to quickly assert that,

> ..rolling back the nuclear program is not feasible. The nuclear programme is linked with Jammu and Kashmir. There cannot be peace in the region without peaceful resolution of the Kashmir issue.[74]

With the coming of the Clinton administration, a pragmatic shift towards engagement occurred and the US no longer demanded a roll back of Pakistan's nuclear programme, but just seeking a freeze of the status quo. Even after Sharif took over as Prime Minister for the second time in 1997, there was no change in Pakistan's declaratory nuclear policy until the Indian nuclear tests in May 1998.[75]

The Indian Nuclear tests in May 1998 surprised the world and resulted in a tense and strident mood in Pakistan. Prime Minister Nawaz Sharif at this time had a majority in the National Assembly in Pakistan and was, similar, to Zulfikar Bhutto in unparallel control of the political space. The Pakistani test was carried out two weeks after the Indian tests, and during these two weeks, it managed to stave off international pressure and domestic opposition to the tests. There has so far been no evidence to suggest that the Prime Minister and the civilian government differed from the military on the issue of tests.

[74] Denniz Kux, op. cit., n. 59, p.327
[75] Zafar Iqbal Cheema, op. cit., n. 47, p.164

Chapter III
External Linkages

Pakistan can be described as an 'insecure state' that perceives itself not only as small and disadvantaged but as on the defensive against a real and present threat, with its survival at stake. Constructing a force within South Asia to balance India was not feasible because India happens to be far more powerful than any combination of other states within the sub system. Thus a central element of Pakistani policy has been to reach outside South Asia to find support that might off set Indian dominance within the South Asian security system and to avoid bilateral arrangements that would put Pakistan in a one-on-one relationship with India. While Pakistan recognized the fact of overwhelming American predominance in an essentially unipolar world of 1947, it was after a few years that Pakistan looked seriously for strategic support from the USA. Pakistan also initially sought to offset geopolitics through religion: it was to be part of the universal community of believeres, and as the first nation to be formed in the name of Islam felt that it should and would recive full support of the universal community of Muslims, the ummah.[1]

In the initial years, Pakistan stood virtually alone and its own military capabilities were negligible. The need for political backing and for modern military equipment were soon found when Pakistan enrolled in the Central Treaty Organization (CENTO) and the Southeast Asian Treaty Organization (SEATO). However, the US-Pakistani tie utlimately fell victim and when Washington saw a chance to draw India closer to itself through

[1] Thomas Perry Thornton, "Pakistan: Fifty years of Insecurity" in Selig S.Harrison, Paul H. Kriesberg and Dennis Kux (ed.), *India and Pakistan: The First Fifty Years* (Woodrow Wilson Center Press and Cambridge University Press: Cambridge, 1999), p.171

economic assistance and support against the growing Chinese threat. But this was also the window of oppurtunity for Pakistan as Bhutto recognised it immediately.[2]

The deteriorating relations between India and China created an opening for Pakistan. Beijing responded in kind, and the foundation was laid for a remarkable political relationship. Pakistan was also able to develop new ties with Muslim nations to the west emphasizing Pakistan's claims to leadership and realistically recogning that the guiding force for other muslim states was less Islamic nationalist than territorial. But amid all these adventures, caution mandated maintaing close relations with the United States, which remained Pakistan's only substantial source of support, howsoever unreliable.

Under such circumstances, the nuclear program (a remarkable technological accomplishment and a rational response to Pakistan's strategic situation) was more reliable as an 'equalizer' in its relationship with India than the political support it has sought elsewhere and has considerably increased Pakistan's capability of passive deterrence against India. For the Americans, during the years of the cold war, the nature of the regime in Pakistan did not matter.The US was always generous to Ayub Khan during the cold war years in terms of military and economic aid and Pakistan's membership in the SEATO and the CENTO, insititutionalized these roles.[3]

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[2] Stanley Wolpert, *Zulfi Bhutto of Pakistan: His Life and Times*, (New York: Oxford University Press, 1993), p.65

[3] Tariq Ali, *The Clash of Fundamentalisms: Crusades, Jihads and Modernity* (New Delhi: Rupa & Co., 2003) p.183

Links with the WEST

Pakistani ties to the United States have been extremely profitable for Islamabad and were especially important in giving it a secure basis from which to operate in the early years. Pakistan has never been able to put together an acceptable security package that was completely independent of the United States. Ultimately, however, the US tie proved frustrating when Washington found other options more attractive, or Pakistan's behaviour unacceptable, and backed away.

To recall, the hiccups in the nuclear issue in US-Pak relations had made their beginning during the Ford administration. Once Washington became aware that Pakistan's nuclear ambitions were not mere rhetoric, thwarting Islamabad's attempt to match India would become a top policy goal and the principal source of bilateral friction between the United States and Pakistan for the remaining years of the twentieth century.[4] The imperatives of the cold war also facilitated the American backing of Pakistan's military dictators. The non-proliferation pressure of the Carter administration on Pakistan coincided with Zia coming to power in Islamabad and there was an attempt to apply pressure on the Pakistani nuclear program but there exists no evidence to believe that the Americans applied pressure due to the absence of democracy.[5] And, if one does believe Bhutto's version of the Kissinger threat (make a horrible example of you) handed out to him for pursuing a nuclear weapons capability, one can safely conclude that the nature of the regime did not ever matter to the Americans as long as American cold war imperatives were served.

[4] Kux Dennis, *The United States and Pakistan 1947-2000: Disenchanted Allies* (Karachi: Oxford, 2001), p.212.
[5] Ibid, p.239

The Soviet occupation of Afghanistan and the coming to office of the Reagan administration made the Zia dictatorship the instrument through which the cold war was brought to its knees.[6] The American non-proliferation stance has changed from the simplistic and unilateral law making, and pressurizing, to a more stable and resilient attitude to non-proliferation. This is because nuclear proliferation is not the only serious issue affecting the interests, there are other issues and matters of geo-political importance which may be equally or more crucial. In fact non-proliferation objectives often run counter to other geo-political objectives in some areas.[7] In fact after the end of the cold war the non-proliferation pressure on the Benazir and Sharif government belies any difference in the treatment meted out to successive regimes in Pakistan.

The antecedents of the nuclear technologies and institutions in Pakistan lie in the US exhibition "atoms for Peace" that toured the country in 1954 and led to the setting up of the Pakistan Atomic Energy commission, with the cooperation of the US aimed at peaceful utilization of atomic energy. PAEC engineers received training as well as consultants who not only presented them with a technical library but also reviewed the PAEC's overall strategies.[8] Thereafter, following Bhutto's negotiations, a 5MW "swimming pool" type research reactor was set up at PINSTECH in 1963 under IAEA safeguards with the IAEA and the US supplying assistance and enriched uranium and plutonium.

Further, with India securing an atomic reactor from Canada; Bhutto, as the then Minister of Industries, Natural Resources, and Atomic Energy, persuaded the National

[6] Tariq Ali, op. cit, n. 3, p.189
[7] P.B.Sinha and R.R. Subramanian, *Nuclear Pakistan: Atomic Threat to South Asia* (New Delhi: Vision Books, 1980), p.119
[8] Ibid, p.31

Economic Council's Executive committee to accept the proposal to secure a nuclear power reactor from Canada. In 1965 the agreement was signed and Canada granted a soft loan of $23 million and a credit of another $ 24 million to cover the foreign exchange cost of the plant. Japan gave a credit of $3.6 million for the turbo-generator and its installation. Finally, with the help of the Canadian staff, and Pakistani engineers trained in Canada, in December 1968, the 137MW Karachi Nuclear Power project (KANUPP) was set up.[9]

By 1975, Pakistan was already resuming talks with the French to acquire a nuclear reprocessing plant, and on obtaining a heavy water production plant from West Germany. However, since the reprocessing plant's capacity was greatly in excess of the fuel requirements of the Karachi nuclear reactor, US officials were becoming concerned as Pakistan was showing definite signs of competing with India in terms of nuclear capability.[10]

By the late seventies while in India, the Janata Party came to power heralding India as the largest democracy after the national emergency, in marked contrast lay Pakistan with General Zia as its military dictator. Consequently, with its emphasis on promoting democracy and human rights, the Carter administration looked upon Pakistan with concern and on India with favor. Despite this, when Joseph Nye visited Islamabad in 1977, Zia told him that his country planned to proceed with the nuclearization process, a process which by now had also become an issue of national pride.[11] Faced with Pakistan's inflexibility over the issue, the US proceeded to suspend economic assistance,

[9] General K.M. Arif, *Working with Zia: Pakistan's Power Politics 1977-1988*, (Karachi: Oxford University Press, 1995), p.351

[10] Ibid, p.366

[11] Dennis Kux, op. cit., n.4, p.235

and also eventually managed to persuade Paris to shift its policy so that now, the French proposed a technical modification called "co processing" to Pakistan. Zia however, rejected the alternative. Pleased with this success, while the US began to resume economic aid, it was soon learned that Pakistan was still pursing, albeit in secret, its nuclear plans, and for a second time, the Carter administration suspended economic aid.

Even as the Carter administration was trying to work out ways to check Pakistan's nuclear progress, the communist takeover of Afghanistan was on, and the US was slowly realizing the importance of improving ties with Pakistan, it refused to look at Zia's regime with distaste. However, the Soviets finally occupied Afghanistan, it jolted the Carter administration, pushing it to abruptly end the strategic détente, and reaffirming the 1959 bilateral security agreement against Communist aggression. And suddenly, Pakistan found itself being courted by not only the Americans, but also the West Europeans, and the Arabs, not to speak of Pakistan's Chinese friends, as a bulwark against the Soviet threat.[12]

As the newly elected President, Ronald Reagan promised to forge closer ties with Pakistan. However, since the Zia administration remained as rigid as ever on its nuclear policy, Washington finally communicated that the issue need not become the centerpiece of the US-Pakistan relationship. Nevertheless it also warned Pakistan, that if ever a nuclear device were detonated, the Congress would make it impossible for the Reagan administration to cooperate any further with Pakistan. In effect a tacit understanding that the Reagan administration could live with Pakistan's nuclear program as long as

[12] Ibid, p.255

Islamabad did not explode a bomb.[13] On the issue of human rights and democracy, the Pakistanis were told that the internal situation is Pakistan's own problem.

Although agreement was reached on the new relationship, problems persisted aplenty. And even as non-proliferation supporters in the Congress were still a considerable voice, problems had developed over the inclusion of forty F-16 fighter-bombers in the military aid package. Although the entire policy of the Reagan administration to continue to give aid to Pakistan hinged on the tacit understanding that Pakistan would not test a nuclear device, it was obvious that sanctions would not thwart Pakistan from building the bomb. In fact, testifying before the House Foreign Affairs Committee, Deputy Assistant Secretary Coon declared in April 1981,

> We certainly cannot claim...[that sanctions] have been successful ...our interests would be better served by addressing the underlying security concerns of countries such as Pakistan and by developing more useful and cooperative relations which could engage us with them in a positive fashion.[14]

Soon after on May 13, 1981, the Senate Foreign relations Committee voted 10-7 to approve a six year waiver for the sanctions that barred assistance to Pakistan. In April 1984, the *Nawai-I-Waqt*, an Urdu daily, quoted nuclear scientist Abdul Qadeer Khan to have claimed that Pakistan had succeeded in enriching uranium to weapons grade, stirred anxiety.[15] Further, contrary to the peaceful assurances that Zia would constantly offer to American visitors, intelligence reports would always indicate to the opposite. Finally, as two Pakistanis in Canada were caught seeking to illegally export US origin nuclear related items; and then when three Pakistani nationals were indicted in Houston, Texas, in July 1984 for trying to illegally to export equipment useful for a weapons program,

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[13] Ibid, p.257
[14] Ibid, p.260
[15] Robert G. Wirsing, *Pakistan's Security Under Zia: 1977-1988, The Policy Imperatives of a Peripheral Asian State* (London: Macmillan, 1991), p.110

Congressional apprehension reached its peak even as the Reagan administration geared up to seek approval for a second and slightly larger multiyear military and economic aid program for Pakistan.

At this time, a nonproliferation proponent by the name of Senator Glenn, argued that the sanctions waiver approved in 1981 had removed all restraints on Islamabad's developing a nuclear weapon as long as it did not explode a device, and to impose a higher barrier, proposed an (Pressler) amendment to the foreign assistance act that would require the president to certify annually that Pakistan neither possessed nor was developing a nuclear weapon for aid to continue. At the same time, the Reagan administration also accepted an amendment to the foreign assistance act submitted by Representative Solarz barring aid to any country whose government entities illegally imported nuclear technology from the United States. Unlike the Pressler Amendment, the Solarz amendment included a presidential waiver.[16]

However, Zia, a shrewd judge of how far he could push the Americans on the nuclear issue, calculated that occasional trouble over clandestine procurement of nuclear-related equipment and even enriching uranium to weapons grade, would not breach the "embarrassment" barrier and further assumed and in fact correctly so, that Washington would give the struggle against the Soviets in Afghanistan a higher priority than his country's nuclear program. So, as long as Pakistan did not explode a device, Zia believed that the Reagan administration would find some way to avoid undercutting the struggle against the Red Army by imposing nuclear sanctions against Pakistan.

After the death of Zia and the 1988 elections, the Pakistan Peoples Party (PPP) won a narrow victory over Nawaz Sharif led Islamic Alliance. According to Assistant

[16] Dennis Kux, op. cit., n.4, p.278

secretary of Defense for International Security Affairs Richard Armitage, the military leadership said that it was ready to accept Benazir Bhutto as long as she did not meddle with promotions and other internal military matters. Robert Oakley then American envoy in Pakistan indicated that there was a further understanding that she would not become heavily involved with Afghanistan and the nuclear question.[17] It is important to mention here that the US envoy to Pakistan, Oakley and other US officials had pressed for fair elections and, after the results, had urged the military to agree to Benazir Bhutto's assuming office.

After Zia's death, the chief of Army staff, Gen. Mirza Aslam Beg, and President Ghulam Ishaq Khan were in charge of the nuclear program. Benazir Bhutto initially was not even involved, but she asserted that after a briefing by a visiting CIA team in December 1988, she was able to "push her way" into the policy circle with the two other members of the troika.[18] The new Bush administration signaled the American desire to continue the close security relationship with Pakistan, provided Islamabad froze the nuclear program. At the same time, the US leadership was making clear that, with the departure of Soviet troops from Afghanistan and the winding down of the cold war, the policy dynamic on the nuclear issue had changed.

A visit to the United States by General Beg in early 1989 offered US officials an opportunity to address the issue directly. After Beg returned home, US intelligence reported that the Pakistanis had stopped the production of weapons-grade uranium, which was regarded as the most troublesome part of the nuclear program. According to Benazir, Pakistan had what amounted to a nuclear understanding with the US, one that she

[17] Ibid, p.293
[18] Ibid.

regarded as highly favourable: Her country could keep its existing nuclear capabilities and continue to receive military and economic aid. Although denying any understanding with Washington, Beg said that Islamabad could safely suspend production of enriched uranium because it already had enough for the deterrent. Beg and Benazir Bhutto maintained that, by 1989, Pakistan had already developed a nuclear explosive capability.[19]

The Gates mission in May 1990 over the raised tensions over Kashmir saw yet another warning to the Pakistanis over the nuclear program. The Americans laid out the problem and cautioned Pakistan that it was "committing suicide" so far as relations with the United States were concerned, unless it agreed to roll back its nuclear capability. Apart from denying that Pakistan had advanced the program, the response was one of disbelief that the Americans would actually implement the Pressler amendment. Just as the Bush administration was coming to grips with the first Persian Gulf crisis, it had to decide what to do about the Pressler amendment certification for Pakistan, and in October 1990 the economic and military aid to Pakistan was frozen.

In 1995 after Benazir's visit to Washington the Brown amendment to the foreign assistance act was passed that offered green light for renewed economic assistance, loan guarantees by the Overseas Private Investment Corporation, and export-Import Bank lending while maintaining the ban on US government arms assistance and transfers. The Brown amendment left intact the heart of the Pressler sanctions: the ban on US military assistance and government-to-government transfers, Pakistani officialdom, nonetheless, was satisfied. In its view, the Clinton administration had acknowledged the inherent

[19] Ibid, p.300

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[19] Ibid, p.300

unfairness of the Pressler amendment and tried to make amends.[20] The intelligence information about the missiles storage at Sarghoda and the setting up of a factory by the Chinese to manufacture missiles put the Clinton administration in an awkward position.[21]

The Indian nuclear tests in May 1998 prompted wide reaching sanctions against India mandated by the 1994, Pressler amendment to the US Foreign Assistance Act: the United States cut off all aid, voted against loans by the World bank and the Asian development Bank, and urged other states to follow suit. This brought the attention on Pakistan and a special emissary was sent and Clinton talked to Sharif regularly to dissuade the inevitable tests. In the end, Sharif told Clinton that he needed a US security guarantee against India to hold off from testing.[22] The answer was not good enough for the Prime Minister and on May 28, 1998 Pakistan tested. However, even as the Clinton administration was announcing the details of the sanctions, efforts to water them down were underway, on the grounds of commercial self-interest. Also the Congress voted in a separate action to give the chief executive authority to waive all sanctions, including those imposed by the Pressler amendment. The most extended high level US engagement with South Asia began amidst concerns about Pakistan's possible financial collapse.[23] Strobe Talbott, Clinton's chief interlocutor in post-May 1998, South Asia proposed a scenario under which the United States would seek the lifting of all sanctions against Pakistan, including the Pressler amendment, if Islamabad would sign the CTBT, stop its missile cooperation with North Korea, agree to participate in the multilateral negotiations to ban the production of fissile material, and put into place a comprehensive nuclear

[20] Ibid, p.330
[21] Devin T. Hagerty, "China and Pakistan: Strains in the Relationship", *Current History,* Vol. 101, No.656, September 2002
[22] Dennis Kux, op. cit., n.4, p.340
[23] Hilary Synnott, *The Causes and Consequences of South Asia's Nuclear Tests,* Adelphi Paper 332 (New York: Oxford, 1999), p.31

export-control regime.[24] The American hopes were dashed as the Pakistani reverted to a "me-too" stance, insisting that India had to take the lead in adopting the US proposals before Pakistan would do so.

The October 1999 coup was the first time the army seized power without the approval of Washington. The Clinton administration, which had argued against a military take-over, was irritated by the unilateralist display on part of the army.[25] Clinton in five hours stay in Pakistan during the March 2000 trip to South Asia was important for the brevity of the visit as he only mentioned nonproliferation problems and return to democracy among a host of issues. After the regime change in Washington and 9/11, the need of the American empire now required the services of a frontline state and its tried and tested armed forces. Reminiscent of the early Zia years, Pakistan again was in the embrace of the US and military and economic aid started flowing with token demands on the return to democracy and keeping tensions down in Kashmir.

The People's Republic of China

The relationship with China has been a much more steady prop to Pakistan, especially valuable in filling the gaps that the American relationship left behind and, apparently, in the nuclear and missile areas, where the Chinese support has been critical. Whatever the past, today, the future of the Sino-Pakistani relationship looks to be more limited. The cold war complusions that underlay the Chinese attachment to Pakistan are no more, and for Beijing, for the time being at least, India is more interesting as a negotiating partner than as an enemy shared with Pakistan.

[24] Dennis Kux, op. cit., n. 4, p.347
[25] Tariq Ali, op. cit., n. 3, p.255

At the start of the China-India crisis in 1959 over the road across Aksai Chin, Zulfikar Ali Bhutto's sharp political mind recognized this simmering conflict as a major source of potential diplomatic advantage for Pakistan if properly exploited. At the UN session in 1960, Bhutto broke ranks with the US position on China, by abstaining rather than voting against Peking's membership in the world forum. On US dissatisfaction when the foreign minister Qadir retracted Bhutto's discretionary powers on future UN votes, Bhutto wired back, "I feel that the time has come for Pakistan to adopt an attitude in the United Nations more consistent with its recognition of the Peking regime than has been the case since 1954."[26] It would be illustrative to cite a Bhutto quote,

> China is a nuclear power and a genuine nuclear power in contradistinction to phoney nuclear powers. India is a phoney nuclear power....It does not have the economic infrastructure to really support a nuclear programme. People are really starving there, they have to really suck the blood of the people...the Indians have to go right deep down to the bowels of their people to extract the money to do it.[27]

Bhutto bolstered his China argument by noting how important it was to 'strengthen our position' among the third world Asian Africans. He viewed Sino-Pakistani friendship not only as a counter to Indian hegemony but as one part of his blueprint for an Afro-Asian 'third force".[28] Zulfikar Bhutto's first major achievement as foreign minister was to conclude a Sino-Pakistan boundary agreement on 2nd March 1963 that became the cornerstone of Pakistan's strongest, most important Asian Alliance. "We have our friends.... we have assurances also from other countries that if India commits aggression against us, they will regard it as an aggression against them...we shall never

[26] Stanley Wolpert, op. cit., n. 2, p.65
[27] Ibid, p.254
[28] Ibid, p.65

be alone in facing aggression."[29] Thus, Bhutto laid the foundation of an enduring relationship, which flourished especially with regard to defence transfers. No doubt that Bhutto had the blessings of Ayub Khan, the President but it was Bhutto's incisive mind, which discerned the changes in the Asian strategic environment while it was happening and moved early to gain maximum benefit out of it.

The Chinese angle to the Pakistani-India story kept getting deeper, with the 1971 crisis over Bangladesh, when Zulfikar Bhutto accepted Yahya Khan's invitation to fly to Peking as Pakistan's special envoy to request Chinese military assistance, should India invade in the East. Prior to Indian's PNE in May 1974, Bhutto on a visit to China was promised military support, including aid in developing Pakistan's nuclear capability along with the Chinese support to the right of the Kashmiris to plebiscite. In April, Bhutto hosted Vice-premier Li Xinian on a six-day state visit to Pakistan. The two countries exchanged promises of "steadfast support" against "hegemonism and expansionism" and discussed in detail ways in which China could help Pakistan develop its newly drafted program for building at least a dozen large nuclear power plants over the next quarter century.[30] At Chasma in Punjab a large nuclear plant was started, which Bhutto hoped to see operational by 1979 but would not live to launch. A smaller nuclear plant was also started in Karachi. During Bhutto's years at the helm, he sought and ultimately received nuclear aid from China.[31] However, despite the claims of all weather friendship between Pakistan-China, some sources cite that the death of Bhutto seemed to

[29] Ibid, p.75
[30] Ibid, p.253
[31] Devin T. Hagerty, op. cit, n. 21, p.286

have resulted in the temporary suspension of nuclear assistance by Beijing.[32] The Chinese nuclear assistance was thereafter revived with the Soviet intervention in Afghanistan and Pakistan's role as a conduit to the *mujahideen.*

Pakistan's desire to match India's growing missile capability and after the failure of Islamabad's own efforts to develop missiles indigenously, Pakistan turned for help to its old friend, China. However, it was only in 1991, US intelligence confirmed indications that China might be providing Pakistan with medium range, mobile M-11 missile launchers. Such a transaction were violations of the ground rules of the Missile Technology Control Regime (MTCR), an international effort to prevent the spread of delivery systems for nuclear weapons. After China disregarded US warnings and shipped the launchers to Pakistan, Washington proceeded to impose sanctions, blacklisting the Chinese and Pakistani entities involved in the transaction. However, after the Chinese agreed to abide by the rules of MTCR Washington lifted the sanctions.

The problems did not go away, as in the waning days of the Bush administration, US intelligence detected that the Chinese had, in fact, provided the Pakistanis with M-11 missiles as well as launchers.[33] Along with sanctions against China, the United States imposed parallel restrictions on high-technology exports to Pakistan. But these restrictions had little economic impact. In fact Pakistan was largely a bystander in the M-11 missile controversy, which Washington addressed almost entirely in the context of US-China relations.[34] The US intelligence in 1994 concluded that the China Nuclear Energy Industry Corporation had sold some five thousand custom-made ring magnets to

[32] Karan R. Sawhny, "The Sino-Pakistani Nuclear Alliance Prospect & Retrospect", *Peace Initiatives*, Vol. V, No. III-VI, May-December 1999, p.22
[33] Dennis Kux, op. cit., n. 4, p.319
[34] Ibid, p.326

the Kahuta uranium-enrichment facility in 1995. In the summer of 1996, China's dealings with Pakistan stirred fresh difficulties when the US intelligence concluded that complete Chinese M-11 missiles were stored in crates near the Pakistani Air Force base at Sargodha in Punjab and could be deployed in a matter of days. Another credible report indicated that China was assisting Pakistan in setting up a factory to manufacture missiles. [35]

The robust relationship that grew between Pakistan and China has found sustenance in their joint adversary India. The Pakistanis gave to China a foothold to contain India and contest Russian dominance of the Central Asia. The Chinese help to Pakistan in the area of nuclear material and ballistic missile transfers have allowed Islamabad to maintain rough parity with New Delhi.[36] However, the last few years has seen a growing bonhomie between China and India. Beijing's liberalization strategy has increased the incentives to cooperate with the United States, Russia and India- to the relative neglect of Pakistan.[37] For the China, an authoritarian state itself, the nature of regime in Pakistan was the least of their concerns. In fact to the disappointment of the left in Pakistan and East Pakistan in particular, during the war in 1971, Chou En Lai's support to Yahya Khan's measures evoked shock and disbelief. Thereby the Chinese proved the relationship with Pakistan was strategic in nature and was driven by mutual enmity towards India. The Chinese over the years has had uniformly warm relationships with both civilian and military regimes in Pakistan.

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[35] Ibid, p.333

[36] For a detailed look at the missile and technology transfers from China to Pakistan see http://www.cns.miis.edu/research/india/china/mpakpos.htm and related links. The site has the most detailed list of the transfers, statements and developments related to nuclear and missile technology transfers from China to Pakistan.

[37] Devin T. Hagerty, op. cit., n. 21, p.284

Islam and the Pakistani Bomb

Relations with the Muslim world have also brought Pakistan both rewards and dissapointments. It was not until the 1960's that Pakistan was able to establish a strong relationship with Iran and Turkey, and the real rewards of working with the ummah came only in the 1970's. The Muslim connection continues to provide Pakistan with prized diploimatic and moral support ; it is, however, only a partial contribution to Pakistan's security. The Islamic content in the bomb has been suggested by the aid that the Arab countries provided to Pakistan when the United States under Jimmy Carter cut off aid in lieu of the Pakistani nuclear program.The cut off in aid just prior to the frontline status that was to come with the Soviet occupation of Afghanistan. The Carter's decision had created a desperate situation for the Pakistani economy with sufficient foreign exchnage for only three weeks of imports. [38]

Pakistan opened a 'second' diplomatic front when before the Political Committee of the UN, Bhutto delivered a strong statement in support of the people of Algeria against French Imperialism. According to Wolpert this was Pakistan's first open stand on the important issue of Pan-Islam that was to remain at the top of Zulfi foreign policy agenda. Interestingly Bhutto was not yet foreign minister at this time but he took 'bold' initiatives that build the first of the several important pan-Islamic bridges across North Africa that Bhutto kept in good repair.[39]

Colonel Gaddafi of Libya in order to redress the Arab-Israeli nuclear imbalance. tried to acquire nuclear weapons by straightforward purchase from China, later he reportedly tried to obtain them from India, know how but in vain. It was at this stage that

[38] Sinha and Subramaniun, op. cit., n. 7, p.135
[39] Stanley Wolpert, op. cit., n. 2, p.63

Colonel Qaddafi turned to Pakistan, providing Uranium from Niger- approximately 650 tons- as well as finances for making purchases of sensitive equipment from abroad and it is likely that it has assisted Pakistan in making purchases of vital materials (enriched uranium), from western black and grey markets. The Libyan Deputy Prime Minister on a visit to Pakistan in 1978, promised $30 million in aid towards the enrichment project.[40] However Libya is not the only Arab country that has extended financial and moral support to Pakistan in its nuclear venture. Saudi Arabia has extended very considerable help as the richest and the most influential Arab state.

Bhutto's purpose in building a nuclear bomb was more than a reaction to India, for him it represented a trump card in his foreign policy. Pakistan would become the first Muslim country with the bomb. Among the rich and security-anxious Arab states with which he planned to share the secrets it would enhance Pakistan's stature and importance incalculably.[41] There is evidence that heavy funds were injected by the Libyans to promote his plan, which if realized, would tip the balance of power in the Middle East. With a nuclear bomb and the ability to share it with the Arab states, Bhutto saw himself catapulted into an international role far greater than his poor country permitted him.

Akhtar Ali in his study of Pakistan's Nuclear Dilemma, on the question of a Islamic bomb states that such an in idea misses the point if one is aware at the internecine conflict between the Arab states.[42] The viability of an Arab nuclear force and joint command and control system is highly questionable due to mutual hostilities, mistrust

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[40] Sinha and Subramanian, op. cit., n. 7, p.20-21, 123

[41] Salman Taseer, *Bhutto Political Biography*, (London: Ithaca, 1979), p.154

[42] Akhtar Ali, *Pakistan's Nuclear Dilemma: Energy and Security Dimensions*, (New Delhi: ABC Publishers, 1984), p.8

and differing political azimuths.[43] General Arif, states that the allegation of Libyan financial support to Pakistan's nuclear effort does not make sense. Arif, says that the warm relationship between Pakistan and Libya was due to the personal dynamics between Bhutto and Qaddafi which could not be continued with Zia at the helm.[44] However, it would be foolish to deny the close economic interaction between the oil rich Arab states and Pakistan. It is believed that the Saudi Prince Sultan Bin Abdul Aziz toured the Kahuta facility in May 1999, possibly in connection with purchases of the Ghauri missiles. This visit could mean two things, one it could point towards the Saudi financing of the Pakistani program (a recurring allegation) and to fears about proliferation to the Middle East through Pakistan.[45]

However, there is a lack of evidence with regard to the allegations that Muslim countries like Libya and Saudi Arabia have specifically funded Pakistan's nuclear projects. If the Muslim countries were helping Pakistan in developing the 'Islamic bomb', there should have been no reason for Dr. Munir Ahmad Khan, Chairman of PAEC to have 'called upon Muslim countries to institute a special fund to help Pakistan develop nuclear capability'. Commenting on Dr. Khan's plea, the daily *Nawa-I-Waqt* of Lahore expressed, 'surprise and concern over the indifference and unconcern shown by other Muslim countries to Pakistan's nuclear programme...Muslim and Arab countries are not providing any substantial cooperation to their brother and ally...such an attitude certainly adds to the difficulties of Pakistan, particularly because acquisition of nuclear technology

[43] Ibid, p.8
[44] Gen. K.M.Arif, op. cit., n. 9, p.373
[45] http://www.fas.org/nuke/guide/pakistan/facility/kahuta.htm

is a "now or never" affair because of the determined bid of western countries to deny transfer to Pakistan..."[46]

North Korea

In April 1998, Pakistan's missile imports once more caused trouble and the culprit this time was North Korea. US intelligence concluded that Pakistan had imported North Korean technology to develop a medium-range missile. The Pakistanis claimed that the missile, provocatively named the Ghauri, gave them an edge over their neighbour. Islamabad denied the US assertion, that the missile was a modified version of the North Korean No-dong, and declared that Pakistani scientists had developed the Ghauri on its own.[47] There have been allegations of late that the Pakistanis in return for missiles that they obtained from North Korea have given them uranium enrichment equipment and technical expertise.[48]

The military relationship between North Korea and Pakistan- from which the nuclear connection eventually emerged-began during the 1970's, when then-prime Minister Zulfikar Ali Bhutto began expanding bilateral ties with Pyongyang. In 1993, discussions between Benazir Bhutto and North Korean officials were ostensibly about economic relations but analysts believe that the discussion centered on the purchase of ballistic missiles. According to recent newspaper reports, the transfers took place under the weak civilian regimes prior to the Musharaff coup, but the newspapers do not fail to add that, "Pakistan is governed in a secretive manner, with its intelligence services and

[46] Brij Mohan Kaushik and O.N. Mehrotra, *Pakistan's Nuclear Bomb* (New Delhi: Sopan Publishing House, 1980), p.138
[47] Dennis Kux, op. cit., n. 4, p.343
[48] Husain Haqqani, "The Pakistan-North Korea Connection", *International Herald Tribune*, October 26, 2002 at http://ceip.org/files/publications/haqqani10262002.asp

military running affairs in spheres of international concern. Even when the civilians are in charge of government, security policy remains largely in the military's hands."[49] There by accentuating the confusion as to who authorized the transfers, the weak civilian regime or the military that has complete control over security and nuclear related policies.

American Deputy Secretary of State Richard Armitage, expressed concern that the Pakistani nuclear labs, the Khan Research Laboratory (KRL) and the Pakistan Atomic Energy Commission (PAEC), might be spreading nuclear technology to North Korea.[50] Scholars like Gaurav Kampani believe that if there as a transfer, KRL would probably be the contact, but even he could not have done it without the sanction of the military, which tightly controls the nuclear weapons program.[51] The KRL is home to both a missile-development center and a centrifuge plant for enriching uranium. Most of the ballistic missiles purchased from North Korea were delivered to the KRL. It is mentioned that A.Q.Khan made as many as 13 trips to North Korea. That Pakistan obtained ballistic missiles from North Korea is not in question but for long people have wondered how Pakistan would repay the debt and of late the answer seems to be confirmed that the missiles were paid for by the Pakistanis by providing to the North Koreans enrichment technology.

Europe

The Pakistani nuclear program since its inception has benefited like the Indian program greatly from technology transfers under the IAEA regime by various countries. The close cooperation extended by the Canadians, French, German and other countries

[49] Ibid.
[50] http://www.pakistan-facts.com/staticpages/index.php/20030111164804284
[51] http://www.bayarea.com/mld/mercurynews/news/local/4356687.htm

like Belgium, Italy, The Netherlands greatly helped a third world backward nation to master the technology. The pursuit of a nuclear research and energy program, in Pakistan, was inconceivable in the absence of a core of specially trained scientists, engineers and technicians. Since Pakistan did not have suitable training facilities of its own, the PAEC, soon after its creation, made arrangements for the training of a number of scientists abroad, primarily in Britain, France, Canada and the United States, in radio-isotopes and reactor technology.[52]

The industrial structure of Pakistan was extremely weak to support Pakistan's nuclear program. It would have taken several years for Pakistan to assemble workable devices and produce enough bomb material of the requisite purity as well as other components and stores required for testing. However, Pakistani planners and managers wisely resisted the temptation of letting their scientists occupy themselves with the task of re-inventing the wheel. Instead, after carefully surveying western markets where precision components can be purchased by exercising a little ingenuity, selected the items they wanted, identified sources of supply and started procuring them.[53]

In March 1966, the National Economic Council approved the establishment of a 140 MW nuclear power station at Roopure in then East Pakistan. An agreement was signed with the USSR, in 1968, for the preparation of a technical and feasibility report for this plant. It was, however, found that Soviet reactors were unsuitable for power stations below 400 MW capacity. Then Belgium was approached and it was expected that Brussels would provide assistance on easy terms. Besides agreement with several other countries were also entered into by Pakistan. In 1962, the PAEC signed an agreement

[52] Kapur, Ashok, *Pakistan's Nuclear Development*, (New York, Croom Helm: 1987) p.34.
[53] Sinha and Subramanium, op. cit., n. 7, p.16

with France for close cooperation and the supply of materials and in 1964/65, two agreements were signed with Great Britain for the supply of uranium and other nuclear related materials. Pakistan signed another cooperation agreement with Denmark in 1965. Next year, 1966, Italy signed an agreement for collaboration with Pakistan in the field of training and supply of nuclear materials and equipment. During the same year Spain also concluded an agreement for collaboration with Pakistan.[54]

Bhutto initiated a dialogue with France in February 1973 for the purchase of a nuclear fuel reprocessing plant.[55] After three years of "intense negotiations" the reprocessing plant deal was finalized. Pakistan had accepted the safeguards required by France for the peaceful uses of the facility including the specification not to duplicate the plant received through indigenous efforts. The IAEA cleared the agreement and the two countries formally signed the deal on March 16, 1976. The fact that the reprocessing plant by separating fissionable plutonium from the spent reactor fuel could facilitate Pakistan in launching on a nuclear weapon program caused anxiety in Canada and USA- the two biggest collaborators of Pakistan in the field of nuclear technology. Both countries, dismissed as untenable Pakistan's claim that the reprocessing plant was essential for it to become self-reliant in peaceful uses of nuclear technology, and pressed Pakistan to cancel the deal. Pakistan's failure to call off the reprocessing plant deal or to accept full-scale safeguards by the dead line of December 1976 put an end to the Canada-Pakistan nuclear cooperation.[56] However, by 1978 France on being pressed by the USA, suggested renegotiations to modify the deal by supplying a "co-processing" instead of the

[54] Ibid, p.34
[55] Naeem Ahmed Salik, " Pakistan's Nuclear Programme: Technological Dimensions", in P.R. Chari, P.I.Cheema and Iftekharuzzaman, (eds.) *Nuclear Non-Proliferation in India and Pakistan*, (New Delhi: Manohar, 1996), p.87
[56] Zeba Moshavar, *Nuclear Weapons Proliferation in the Indian Sub Continent*, (New York: St. Martin's Press, 1991), p.123

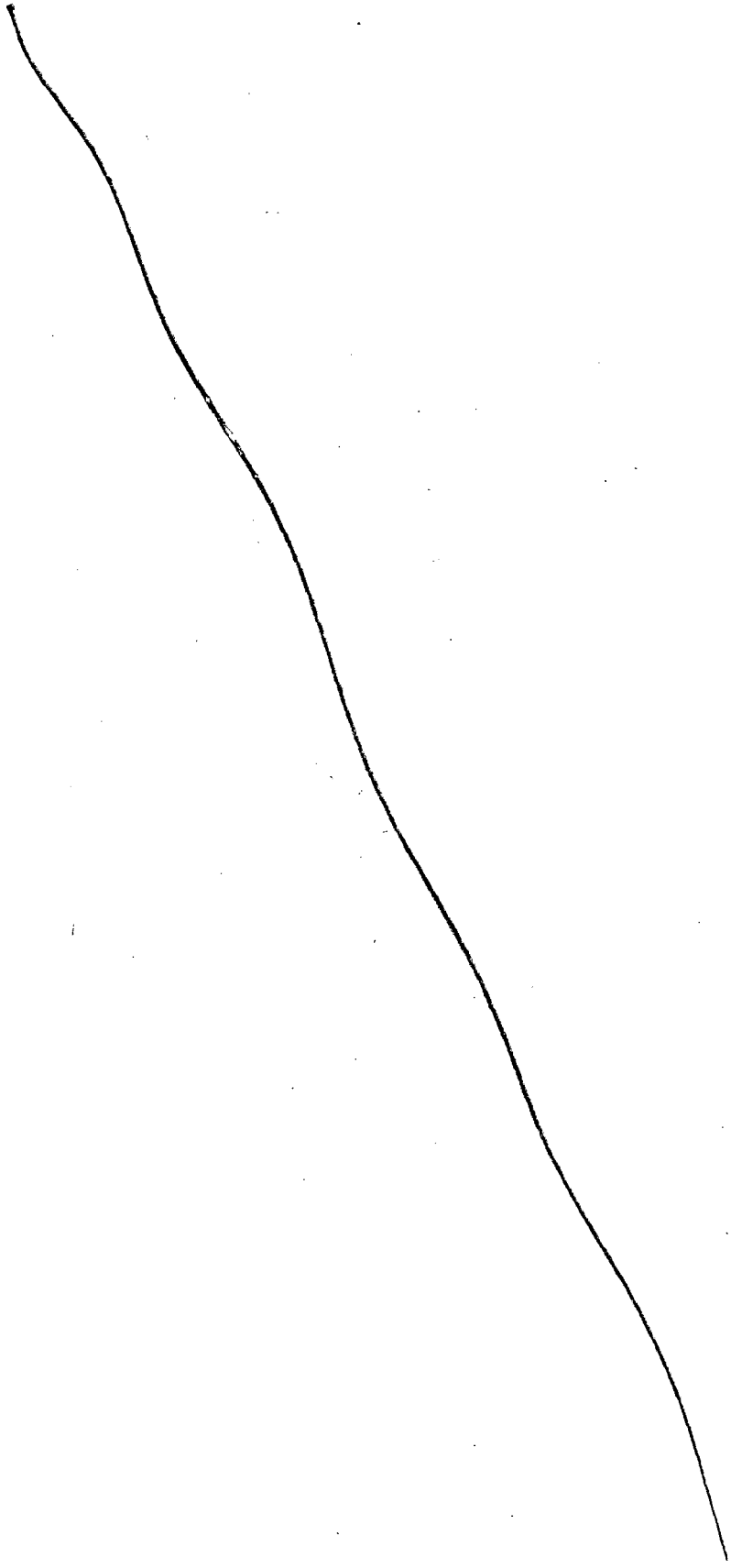
reprocessing plant. However by 1979 the last of French technicians-advisors withdrew on Pakistani refusal to re negotiate the deal as a co-processing plant.[57]

Over the years, European cooperation to the Pakistani nuclear program has waned but some projects continue under IAEA safeguards. The Europeans under American pressure during the mid-70's withdraw from sharing technology with the Pakistanis. One of the important reasons was the scare of proliferation provided by the Indian PNE of May 1974. The Chinese test in 1965 followed by the Indian PNE in May 1974 helped create a common front for the Nuclear weapon capable states against future proliferaters. The National Suppliers Group (NSG) was formed around this time. Of late the European countries link all forms of aid, economic, military and technology with the nature of the regime in Pakistan.

To conclude, therefore, from its inception, Pakistan's nuclear policy has been India-centric in nature, revolving around perceptions of threat from and hostility towards India with which it has fought three wars. As a result of this adversarial relationship, Pakistan has consistently attempted to challenge or undermine India's standing within the South Asian region and in global forums. Nuclear weapons are perceived as one of the means of advancing Pakistan's regional interests and it's standing in the international arena vis-à-vis India. And in this endeavour, Pakistan has been unwittingly helped by the west and in a clandestine manner by Chinese. The latest disclosure that the Pakistanis have transferred enrichment technology to the North Koreans in return for the missile purchase, raises concern about the non-proliferation practises that the Pakistani state consistently emphasises despite not signing the NPT. In light of the background of

[57] Stanley Wolpert, op. cit., n. 2, p.256

Pakistani links with the Taliban and terrorist in Kashmir, such proliferation is identical to that of an irresponsible and irrational nation.



Chapter IV
Who Controls What?

To understand the contours of the rather blurred decision-making in Pakistan's nuclear policy in addition to examining its external links, one could also approach the complicated subject by examining as to who controls what in Pakistan's nuclear establishment. This chapter accordingly looks at the control of the Pakistani nuclear program in terms of infrastructure and decision-making in various operational fields. It first examines the control of physical infrastructure and then looks at the nuclear debate in Pakistan, the nuclear doctrine and command and control arrangements.

It has been mentioned often in the literature about the nuclear program in Pakistan that the military is in complete control since the coup in 1977. How far this control exists only at the level of policy making or at a more physical and operational level is some thing that has never been clear. It is generally accepted as a fact that the military was not initially involved with in the nuclear weapons program and that the control passed over to the military only after Zia removed Bhutto. Prof. Cohen in his study of the Pakistan army says that: "It was not until 1974 that the military seriously addressed itself to the strategic implications of an Indian- and then a Pakistani- nuclear weapon."[1] Since the military take over in 1977, it has been responsible for physical control of the Pakistan's nuclear weapons program. In much of the literature, there is also the mention of the fact that Benazir Bhutto or for that matter any Prime Minister is reported to have never paid a visit to the Kahuta Research Laboratories or any of Dr. A.Q. Khan's projects.[2]

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[1] Stephen P. Cohen, *The Pakistan Army*, (New Delhi: Himalayan Books, 1984), p.153

[2] Peter R. Lavoy, "Civil-Military Relations, Strategic Conduct, and the Stability of Nuclear Deterrence in South Asia," in Scott D. Sagan (ed.), *Civil Military Relations and Nuclear Weapons*, (Stanford, California:

Zulfikar Bhutto after the Indian tests seized the political initiative and emphasized that his predecessors (can be read as Ayub Khan and therefore the army) were criminally ignorant of this critical factor in relations with India and Pakistan's search for security. Bhutto tied the nuclear issue to the fragile national security and became "the sole spokesman"[3] to represent what constituted the national interests of Pakistan. With the creation of Bangladesh the military in Pakistan was demoralized and discredited and the nuclear program may have been Bhutto's way of buying security for Pakistan away from the power of the military. However, Bhutto's plan did not work out the way he wanted to and the nuclear program has over the years strengthened the hands of the military. The control of the command and control of Pakistan's nuclear weapons program lies in the hands of the military in connivance with the ISI, the bureaucracy and the powerful section of nuclear scientists. It is difficult to confirm or deny the infrastructural control of the military over the nuclear weapon complex. The forthcoming section lists the important agencies that form part of the nuclear complex in Pakistan and their function.

Institutions and Agencies[4]

Ministry of Defense[5]

The minister of defense is a civilian member of the cabinet, chairs the Defense Council, and is in turn a member of the higher-level Cabinet Defense Committee. The Ministry of Defense has a permanent staff of civil servants headed by the defense secretary general. Of particular importance to the Ministry of Defense is the adviser for

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Centre for International Security and Arms Control, Stanford University, 1994) also see George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy*, No.91, Summer 1993

[3] Haider K. Nizamani, *The Roots of Rhetoric: Politics of Nuclear Weapons in India and Pakistan*, (New Delhi: India Research Press, 2001), p.86

[4] http://www.fas.org/nuke/guide/pakistan/agency.htm

[5] http://fas.org/nuke/guide/pakistan/agency/mod.htm

military finance, who heads the Military Finance Division in the Ministry of Finance but is attached to the Ministry of Defense. The adviser functions as the principal financial officer of the defense ministry and the subordinate services.

Joint Chiefs of Staff Committee (JCSC)[6]

The Joint Chiefs of Staff Committee (JCSC), an important tier of higher defense organization, came into being in 1976. It consists of a permanent Chairman and the three Chiefs of Staff. It is headed by a four star officer designated as Chairman. Joint Staff Headquarters act as secretariat of JCSC. In peacetime the main function of Chairman JCSC is to plan for the defense of the country. In war-like situation the Chairman will assume responsibilities as Principal Staff Officer to assist the Government in the supervision and conduct of war.

JCSC is the highest military body for considering all problems bearing on the military aspects of national defence and rendering professional military advice thereon. It is mainly responsible for preparing joint strategic plans and providing for the strategic direction of the armed forces. It reviews periodically the role, size and shape of the three services and advises the Government on related aspects of national defense and security.

The Joint Chiefs of Staff Committee deals with all problems bearing on the military aspects of state security and is charged with integrating and coordinating the three services. In peacetime, its principal function is planning; in time of war, its chairman is the principal staff officer to the president in the supervision and conduct of the war. The secretariat of the committee serves as the principal link between the service headquarters and the Ministry of Defense in addition to coordinating matters between the

[6] http://fas.org/nuke/guide/pakistan/agency/jcsc.htm

services. The three branches within the Joint Chiefs of Staff Committee deal with planning, training, and logistics. Affiliated with the committee are the offices of the engineer in chief, the director general of medical service, the director of inter-services intelligence, and the director of inter-services public relations. The Joint Chiefs of Staff Committee supervises the National Defense College, the Joint Services Staff College, and the Inter-Service Selection Board.

Strategic Planning Directorate /Combat Development Directorate

The central role in strategic planning, overall supervision and coordination is vested in the Strategic Planning Directorate (SPD), previously known as the Combat Development Directorate (CDD), of the General Headquarters (GHQ) and the army plays the central role.

Air Weapon Complex (AWC), Kamra

The Wah Cantonment Ordnance Complex consists of three nearby armament facilities in Wah (Pakistan Ordnance Factories - POF), Kamra (Air Weapon Complex - AWC), and Taxila (Heavy Industries Taxila -HIT). One or more of these facilities is probably associated with the weaponization of Pakistan's nuclear devices. The Air Weapon Complex at Kamra is devoted to air-to-surface munitions, among other activities, and would probably have at least some connection with the development of air-delivered nuclear weapons.

Pakistan Aeronautical Complex (PAC)

The Pakistan Aeronautical Complex (PAC) encompasses four Factories: F-6 Rebuild Factory, Mirage Rebuild Factory, Aircraft Manufacturing Factory and Kamra Avionics and Radar Factory. The Pakistan Aeronautical Complex (PAC) was almost certainly responsible for the modification of Pakistani aircraft, probably including F-16 fighters, to a configuration capable of delivering airdropped nuclear weapons.

Khan Research Laboratories, Kahuta[7]

Kahuta is the site of the Khan Research Laboratories [KRL], Pakistan's main nuclear weapons laboratory as well as an emerging center for long-range missile development. The primary Pakistani fissile-material production facility is located at Kahuta, employing gas centrifuge enrichment technology to produce Highly Enriched Uranium [HEU]. This facility is not under International Atomic Energy Agency safeguards, but according the government of Pakistan the facility is physically secure and safe. Bhutto gave A.Q. Khan autonomous control of the uranium enrichment project, reporting directly to the prime minister's office, the arrangement has continued since. It was enrichment of Uranium in KRL that ultimately led to the successful detonation of Pakistan's first nuclear device on 28 May 1998. Little information is publicly available concerning annual or total production of weapon-grade uranium at Kahuta.

The Kahuta facility has also been a participant in Pakistan's missile development program. Pakistan operates a ballistic missile research center at Kahuta along with its uranium enrichment operation. KRL has successfully developed and tested Intermediate Range Ballistic Missiles based on liquid fuel technology and its associated sub systems.

[7] http://www.fas.org/nuke/guide/pakistan/facility/kahuta.htm

Saudi Prince Sultan Bin Abdul Aziz toured the Kahuta facility in May 1999, possibly in connection with purchases of the Ghauri missiles. This visit could mean two things, one it could point towards the Saudi financing of the Pakistani program (a recurring allegation) and to fears about proliferation to the Middle East through Pakistan. The KRL comes under the Directorate of Scientific & Technical Cooperation.

Pakistan Atomic Energy Commission (PAEC)[8]

After Dr. Nazir Ahmad who was the first head of the PAEC, Dr. I. H. Usmani, and Abdus Salam [who won the Nobel Prize in 1979], worked to establish Pakistan's first nuclear power reactor called Kannupp, near Karachi as well as with PINSTECH and SUPARCO. I. H. Usmani, the chairman of the PAEC who had carefully and painstakingly built up Pakistan's nuclear power infrastructure over the last decade, tried to dissuade Zulfikar Ali Bhutto, Pakistan's newly elected prime minister, from embarking on a nuclear weapons program.

Following the fateful Multan conference, Bhutto announced Usmani would head the newly created ministry of science and technology. Usmani and Abdus Salam resigned in 1974 when Zulfiqar Ali Bhutto wanted to take the development of nuclear technology to, in his words, "its natural conclusion" i.e. the build up of nuclear weapons. On 20 January 1972, Bhutto appointed Munir Ahmad Khan as the head of the PAEC. Munir Ahmad Khan had joined the IAEA in 1958, where he served in the division of nuclear power and reactors until moving to the PAEC. A.Q. Khan initially worked under Munir Ahmad Khan's Pakistan Atomic Energy Commission for a short period. But the pair fell out, and a long and bitter rivalry followed. In July 1976, Bhutto gave A.Q. Khan

[8] http://www.fas.org/nuke/guide/pakistan/agency/paec.htm

autonomous control of the uranium enrichment project, reporting directly to the prime minister's office, which arrangement has continued since. The rivalry between the two continued at the institutional level between the KRL and the PAEC. Pakistan acquiring nuclear weapons remained as head of the PAEC for 19 years until his retirement in 1991 [he died in April 1999].

PINSTECH , Nilhore[9]

Pakistan's nuclear programs began in 1965 with a 5 MW research reactor at the Pakistan Institute of Nuclear Sciences and Technology (PINSTECH). The Pakistan Institute of Science & Technology is responsible for fuel cycle R&D activities; including analytical chemistry, nuclear materials, metallurgy, fuel development, digital electronics, control instrumentation, and computational physics; basic research facilities are open to scientists/engineers from universities as well as research organizations. The facilities include: PARR-1 - research reactor, PARR-2 - training reactor, New Labs Reprocessing Plant - pilot-scale "hot cell" facility. The PARR 2 and 1-research reactors are covered by IAEA safeguards.

Pakistan's weapons program was initially focused on plutonium that would have been derived from reactor fuel from a 137 MW(e) power reactor at Chasma. However, in 1978 France cancelled an agreement to build a reprocessing plant. Around this time Pakistan began construction of a small reprocessing facility called the "New Labs" at the PINSTECH complex with illicitly acquired French and Belgian technology. Completed around 1982, this facility remained idle since completion as Pakistan lacked unsafe guarded spent fuel.

[9] http://www.fas.org/nuke/guide/pakistan/facility/rawalpindi.htm

Khushab[10]

The 50 MWT, heavy water and natural uranium research reactor at Khushab is a central element of Pakistan's program for production of plutonium and tritium for advanced compact warheads. The Khushab facility, like that at Kahuta, is not subject to IAEA inspections. Khushab, with a capacity variously reported at between 40 MWT to 50 MWT [and as high as 70 MWT], was "commissioned" in March 1996, and had been under construction with Chinese assistance since the mid-1980s.

National Development Center[11]

Pakistan has built a missile factory with Chinese assistance, variously described as being 40 km west or 50 south-west of Islamabad. As of late 1999 this facility, variously called the National Defense Complex, or the National Development Complex or National Development Center, was under the leadership of the Director General of the NDC, Dr. Samar Mubarik Mand. The Prime Minister laid the foundation of the National Defense Complex (NDC) during 1993, and the Shaheen missile program was initiated in 1995 and assigned to the NDC. The Shaheen project used the resources that were available within the various other institutions in Pakistan, supplemented with infrastructure created at the National Development Complex for capabilities, which were not available elsewhere in Pakistan. The facilities of SUPARCO were utilized in the Shaheen project, along with the facilities of industry in Lahore, Karachi, Islamabad, Gujranwala, Sialkot, Gujrat and other cities. Missile components from these various facilities were brought to the NDC for final integration.

[10] http://www.fas.org/nuke/guide/pakistan/facility/khushab.htm
[11] http://www.fas.org/nuke/guide/pakistan/facility/fatehjung.htm

Space and Upper Atmosphere Research Commission (SUPARCO)[12]

Pakistan's Space and Upper Atmosphere Research Commission (SUPARCO) was established in 1961, and started functioning in 1964. A national organization with a high degree of autonomy, it implements the space policy established by the Space Research Council (SRC), whose president is the Prime Minister. SUPARCO's programs include the development and launch of sounding rockets, and satellite applications in the field of remote sensing and communications. SUPARCO is headquartered at the Arabian Sea port of Karachi in southern Pakistan, with additional facilities at the University of the Punjab at Lahore. As of late 1999 the Chairman of SUPARCO was Dr. Abdul Majeed.

Sonmiani [13]

The Space and Upper Atmospheric Research Commission (SUPARCO) operates a Flight Test Range at Sonmiani Beach, some 40 km northwest of Pakistan's southern port city of Karachi. The Indian test of the Agni II IRBM was conducted on 11 April 1999. Pakistan responded on 15 April 1999, with a successful test of the Shaheen [M-11] missile. This first flight of the Shaheen was fired from the Sonmiani Naval Base in the Sonmiani Bay area.

Military Industrial Complex, Taxila[14]

The Wah Cantonment Ordnance Complex consists of three nearby armament facilities in Wah (Pakistan Ordnance Factories - POF), Kamra (Air Weapon Complex - AWC). One or more of these facilities is probably associated with the weaponization of

[12] http://www.fas.org/spp/guide/pakistan/agency/index.html
[13] http://www.fas.org/nuke/guide/pakistan/facility/sonmiani.htm
[14] http://www.fas.org/nuke/guide/pakistan/facility/taxila.htm

repeat from p. 82

Pakistan's nuclear devices. According to some reports, the main storage and maintenance site of the Pakistani nuclear weapons, particularly the weapons at a 'screwdriver level', is located at the 'ordnance complex' in Wah. The Air Weapon Complex at Kamra is devoted to air-to-surface munitions, among other activities, and would probably have at least some connection with the development of air-delivered nuclear weapons.

Chasma Nulcear Plant, CHASNUPP[15]

The Chasma Nuclear Power Plant [CHASNUPP] project was initiated in the 1970s with French assistance, with primary work in Central Punjab conducted by the French firm Saint Gobain. The 137 MW(e) project was terminated by France in 1978. The French decision was based on the failure of Pakistan to sign the NPT and accept safeguards on its entire nuclear program. Prior to Pakistan's 1998 nuclear tests, US officials downplayed Pakistan's reprocessing capabilities, suggesting that the reprocessing plant at Chasma as "an empty shell" -- but after the tests sources claimed that know-how which had been provided to Pakistan was "very considerable."

Karachi Nuclear Plant, KANUPP[16]

Pakistan's first nuclear energy plant (heavy-water, natural uranium, 137 MWe), Karachi Nuclear Power Plant (KANUPP), became operational in 1972 under International Atomic Energy Agency (IAEA) safeguards. Built with Canadian assistance, KANUPP is a unique variant of the CANDU reactor built by Canadian General Electric

[15] http://www.fas.org/nuke/guide/pakistan/facility/chashma.htm
[16] http://www.fas.org/nuke/guide/pakistan/facility/karachi.htm

Co., using a fuel design only available from Canadian manufacturers. KANUPP is a heavy water reactor that uses natural uranium rather than enriched uranium as fuel. The Karachi Nuclear Power Plant is operated under international IAEA safeguards. Pakistan also operates a small heavy water production facility at KANUPP under IAEA safeguards. Fuel and some spare parts for this plant are manufactured and produced in Pakistan.

Multan[17]

In January 1972 Zulfiqar Ali Bhutto initiated a program to develop nuclear weapons with a meeting of physicists and engineers at Multan. Multan is the reported location of an IAEA un-safeguarded, heavy water production facility, with an annual capacity of 13 metric tons, obtained from Belgium in 1980. The Multan facility, which is said to be co-located with or disguised as a fertilizer plant, could supply the Khushab reactor with heavy water.

This section on the physical infrastructure does not answer the questions it was supposed to, and there are two reasons for this. First, information is hard to come by, more over where information is available; it is misleading as to the *de facto* control despite a contrary *de jure* status. For example, if one examines the Khan Research Laboratories (KRL), legally it is under the authority of the Directorate of Scientific & Technical Cooperation that is a civilian office but numerous studies cite that no Prime Minister has ever been able to visit the KRL. In such a state of affairs to clearly demarcate the lines of control over physical infrastructure seems to be an effort towards shadow boxing. It would be pertinent to conclude this section by pointing out that after

[17] <http://www.fas.org/nuke/guide/pakistan/facility/multan.htm>

the death of Zulfikar Ali Bhutto, the key installations were taken over by the military and such a situation is supposed to continue.

The Tussle

> The situation [in Kargil] was further clouded because it was not altogether clear who was calling the shots in Islamabad. Prime Minister Sharif had seemed genuinely interested in pursuing the Lahore process when he met with Vajpayee and he had argued eloquently with a series of American guests, including U.S.UN Ambassador Bill Richardson, that he wanted an end to the fifty-year-old quarrel with India. His military chief, General Pervez Musharraf, seemed to be in a different mould.[18]

The above statement by the President Clinton's Special Assistant for Near Eastern and South Asia Affairs at the National Security Council, Bruce Reidel sums up the general situation in Islamabad and specifically so during the Kargil war. The military in Pakistan is the most formidable and autonomous political actor and is capable of influencing the nature and direction of political change and also of foreign policy. Civil-military relations in Pakistan were manifested in different forms: an active role for the military in policy making in collaboration with the bureaucracy, displacement of civilian government in 1958, 1969,1977 and 1999, direct military rule, civilization of military rule, and the military's penetration of civilian state institutions, the economy and society. The long years of direct and indirect rule have enabled the military to spread out so widely into the government, the economy and society that its clout and influence no longer depends on controlling the levers of power. The military derives its power from

[18] Bruce Reidel, President Clinton's Special Assistant for Near Eastern and South Asia Affairs at the National Security Council, http://www.sas.upenn.edu/casi/reports/RiedelPaper051302.htm

organizational strengths and its significant presence in all sectors of government and society.[19]

The Military in Decision-Making

The Pakistani army plays the central role in strategic planning, the overall supervision and coordination is vested in the Strategic Planning Directorate (SPD), previously known as the Combat Development Directorate (CDD), of the General Headquarters (GHQ). It is generally believed that the Defense Committee of the Cabinet (DCC), chaired by the prime minister, would take the ultimate decision for use of nuclear weapons in case of war.[20] However, reports that the erstwhile Prime Minister Nawaz Sharif was not fully apprised of the Kargil operation by the military, created new uncertainties as to who would take that decision during a crisis. Indeed, some U.S. analysts "see the civilian finger on the nuclear trigger as only one among two or even three others."[21] Although Nawaz Sharif, who had two-thirds majority in the lower house of parliament, at a stage seemed to have asserted greater control over the military, the army's Kargil operation sealed Sharif's authority and political career. As the international community pressured Islamabad to withdraw the Pakistani-backed Islamic forces, the Pakistani army, proud of its "successes" at Kargil, was not amenable to such a dictate. Sharif's last-minute dash to Washington on July 4 to meet President Clinton finally overcame the army's reluctance to withdraw the fighters.

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[19] Hasan-Askari Rizvi, Military, *State and Society in Pakistan*, (London: Macmillan , 2000), p. xii

[20] Farah Zhara, "Pakistan's Road To a Minimum Nuclear Deterrent," at http://www.armscontrol.org/act/1999_07-08/fzja99.asp

[21] Ibid.

Notwithstanding the general political changes in Pakistan, a "hybrid" between civilian and military rule may continue to define the decision-making arrangements in Pakistan with regard to nuclear weapons procurement as well as nuclear weapons policy and doctrine, including command and control.[22]If these uncertainties continue, they might render "hot line" consultations between the prime ministers of the two countries irrelevant in a highly volatile situation. The existing evidence suggests that while the chances of a deliberate, planned nuclear attack may be low, the risk of an accidental or unauthorized nuclear strike cannot be ruled out. Two fears about Pakistan's nuclear control are most frequently expressed.[23] The first suggests a breakdown of the politico-military order in Pakistan and the concomitant loss of control over the country's nuclear weapons infrastructure. A variant of this scenario holds that radical supporters of the Taliban and of bin Laden within Pakistani society may seize control of these weapons.

Domestic Nuclear Debate in Pakistan

In a remarkable book *"The Roots of Rhetoric: Politics of Nuclear Weapons in India and Pakistan"* Haider K. Nizamani, examines Foucauldian influence in positing a direct relationship between knowledge and power in establishing 'truths'. The book takes a fascinating and comprehensible look at the nuclear debates and political pronouncements by leaders (calls it nuke speak) in the sub continent.[24] The dominant

[22] Hasan-Askari Rizvi, "Civil Military Relations in Contemporary Pakistan," *Survival*, Vol. 40, No. 2, Summer 1998, International Institute for Strategic Studies, London, p.110.

[23] Sumit Ganguly, "Beyond the Nuclear Dimension: Forging Stability in South Asia," at http://www.armscontrol.org/act/2001_12/gangulynov01.asp

[24] Haider K. Nizamani, *The Roots of Rhetoric: Politics of Nuclear Weapons in India and Pakistan*, (New Delhi: India Research Press, 2001), p.2

discourse of the 1960's shows the absence of the nuclear factor but it gradually became an integral part of Pakistan's strategic discourse in the 1970's. The two positions are best exemplified by the two political figures at the helm of affairs in Pakistan, Ayub Khan and Zulfikar Ali Bhutto. The nuclear option was never considered an effective deterrent or politically useful tool during the days of Ayub Khan. It was Bhutto, leader of a truncated Pakistan from 1972-77, who methodically turned this dormant issue into a symbol of national identity. Bhutto can singularly be credited for introducing and popularizing the politics of the nuclear issue in Pakistan. While Bhutto was a minister in Ayub Khan's government, despite being convinced that the major threat to Pakistan's security emanated from India, he did not stipulate the nuclear course for Pakistan to deter conventionally superior India.

During this period Pakistani strategic analysts were equally oblivious to the possibilities of the nuclear option as a viable deterrent against India. The oldest journal on international affairs published in Pakistan, *Pakistan Horizon*, of the 1960's resonates by the lack of articles on the nuclear issue.[25] The earliest and largely systematic discussion of the utility of the nuclear option to thwart the Indian threat appears in Bhutto's book, *The Myth of Independence,* published in 1969. Bhutto states the nature of threats faced by Pakistan, followed by the reasons of the threats and suggests the nuclear option as a remedy to meet these threats. Bhutto further outlines the priorities of the Pakistani state. First of all, that Pakistan's security and territorial integrity are more important than economic development. The seeds of the high emotional content on the nuclear issue in Pakistan were thus, sown by Bhutto and it involved demonizing India, comparing Kashmir as the head of the Pakistani body and a very beautiful head and

[25]Ibid., p.76

pledging a thousand years war with India on Kashmir, thereby irrevocably linking Pakistani security with Kashmir and nuclear weapons.[26] It is extremely important to note the linkage that Bhutto made as this is what makes many cite 'South Asia as the most dangerous place', today.

Role of the Media[27]

The Indian "Peaceful Nuclear explosion" (PNE) of May 1974, hit the headlines in the Pakistani media. However, there was no pressure on the government by the opposition politicians, foreign policy analysts, or the Pakistani public to outline the Pakistani response on the issue.[28] It is at this moment that Bhutto seized the political initiative and emphasized the magnitude of the issue and critical importance of his efforts to cope with any likely eventuality. The Pakistani parliament debated the implications of the Indian PNE for Pakistani security in June 1974. Concluding the debate, Bhutto used the nuclear issue to castigate political opponents as less patriotic, as the opposition in the parliament had boycotted the debate for reasons not linked to the issue.

In a survey Nizamani scrutinized the leading newspaper *The Dawn*, for write ups/opinion/editorials on the nuclear issue. Interestingly Nizamani discovered that, the newspaper published only one editorial on the issue in a span of six weeks (since the PNE of May1974) and the editorial demanded a nuclear umbrella from the Nuclear Weapon states to meet the challenge. However, Haider did find two signed articles in that period that were different in attitude and while one predicted proliferation in the neighbourhood,

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[26] Ibid.
[27] This section draws from Haider K. Nizamani, *The Roots of Rhetoric: Politics of Nuclear Weapons in India and Pakistan*, (New Delhi: India Research Press, 2001)
[28] Ibid, p.85

the other suggested the strengthening of the nuclear program as the only real option. The intensity seemed to be lacking and issue was not yet critically important. *Pakistan Horizon*, in 1974-1975 volumes did not publish any analysis by a Pakistani scholar regarding the implications of the Indian blast. Only Bhutto seemed to be consistently drawing attention to the nuclear issue in the context of Pakistan's security needs up to his removal in 1977.

With the army coup in 1977, Bhutto linked the movement against his regime to a US ploy to remove him in the wake of the nuclear reprocessing plant deal his government had stuck with France. Bhutto pledged to keep the nation's interest supreme in the wake of all kinds of pressures and the nuclear program was portrayed as a symbol of resistance by an independent Islamic state against the US and Indian hegemonic designs. After the coup and the death of Bhutto, the nuclear issue became one of the favoured national possessions to be saved by the new regime. The Zia regime adopted Bhutto's views on the nuclear issue as a cornerstone of the security discourse. Essentially, there was continuity in the nature and direction of the discourse but with different faces. Facing the death penalty, Bhutto turned the nuclear issue into a manifestation of his life long dream of strengthening Pakistan's security against India in the geo-strategic realm and introducing a qualitative strategic shift in terms of civilizations:

> The Christian, Jewish, and Hindu civilizations have nuclear capability along with the communist powers. Only the Islamic civilization was without it, but the situation was about to change.[29]

Pakistan's nuclear hawks see the country's nuclear program not only as an effective deterrent against Hindu India, but a shield to protect the Muslim world against

[29] Zulfikar Ali Bhutto, *If I Am Assassinated*, (London: Oxford University Press, 1969) p.138

Zionist Israel. The nuclear program soon became a sacred sight for the proponents of religious identity in Pakistan. The Zia era saw the rise of a new community of strategic experts that constitute the core of nuclear discourse in Pakistan. The basic guiding principle of the new pool of experts would be a reference to the national consensus on the nuclear issue. During Zia's era, Islam, stability, and national security became *raison d'etre* for the regime and increasingly mutually dependent on each other in the dominant security discourse. Pakistan's nuclear program became an integral part of the security discourse and a symbol of national unity and sovereignty.

Analysts, experts, journalists, and policy makers share the belief that the nuclear program of Pakistan like that of India enjoys a consensus in the societies as the guarantors of national security and symbols of national power. In this reverent cloak of patriotism, nuclear weapons have helped revive plummeting political fortunes of some political parties and relegated their opponents to potential foreign agents. The voices challenging the validity of official claims (of nuclear tests) are silenced in the name of national pride.[30]

The dominant security discourse in South Asia exhibits the trend whereby the other/enemy is portrayed as an inferior. For example the dominant discourse in Pakistan equates all Indians with Hinduism, a religion that they consider inferior to Islam. The self in Pakistan implies an identity based upon Islam as a unifying religion and Urdu as the national language. India is portrayed as a danger to the Pakistani identity (read as Urdu and Islam), India is projected as a monolithic Hindu entity primarily interested in destroying Pakistan. The nuclear discourse especially that of Pakistan, is closely tied to

[30] Haider K. Nizamani, op. cit., n. 24, p.2

the process in which the nuclear option is portrayed as a guarantor of the independent identity of an Islamic Pakistan against the evil designs of heathen India.[31]

Pakistani Security Community Elite

In terms of evolution of security experts in Pakistan, Abdul Qayyum was one of the early soldier experts who analyzed the nuclear issue with patriotic zeal.[32] Other high-ranking soldiers would join him in the coming years. Gradually, strategic experts, retired generals and ambassadors, and religious ideologues turned the Pakistani nuclear program into a bulwark against Zionism, Hindu India and the United States. Among the experts on strategy in the 1980's, the nuclear issue became a rallying point for truth. Hasan Aakari-Rizvi, one of the leading security experts, justified Pakistan's defense spending on the grounds of external threats faced by the country. The 1974 Indian PNE was considered one such threat that called for Pakistan to boost up its nuclear capability. Such and similar views were incessantly echoed in conferences and seminars organized by the government sponsored think tanks.[33]

Mushahid Hussain, represented a new generation of experts who viewed Pakistan's program as "a response to India's nuclear ambitions". The main objective of Pakistan was 'to seek a credible nuclear deterrent against its principal adversary, i.e., India'. [34] Hussain served as a minister in information in Nawaz Sharif's second

[31] Ibid, p.13-14
[32] Ibid, p.100
[33] Ibid, p.104. Think Tanks especially Institute of Strategic Studies, Islamabad.
[34] Ibid, p.104

government and has edited the Islamabad based English daily *The Muslim*, and is one of the leading columnists in Pakistan.[35]

The Islamic Bogey

It might be interesting here to look at the role of the hard-line religious parties, their interaction with the military and their influence on the nuclear programme. The Pakistani electorate in successive elections, voted against hardline religious parties and the strength of religious extremism has till now been derived from state patronage rather than popular support.[36] The religious groups were the creation of the late general Zia ul Haq, who received political, military and financial support from the United States throughout his eleven years as a dictator of Pakistan. It was during this period (1977-89) that a network of *madrasas* was established throughout the country, most of them funded at first by foreign aid. The Jamaat-e-Islami grew in influence during the Zia years; this policy of Zia was aimed at seeking legitimacy for his regime in the background of the *jihad* against the Soviet Union in Afghanistan. It was during Benazir Bhutto's government that the Pakistani army commando units unleashed the Taliban to take Kabul and fearful of increased Iranian influence in the region, the United States had backed this decision.

The influence and the close interaction between the state and the religious parties have evoked fear of hard-line Islamists taking over the Pakistani army. For it is no secret that the fundamentalists have comprehensively penetrated the army. What distinguishes them from the old style religious groups is that they want to seize state power, and for

[35] Ibid, p.115,
[36] Tariq Ali, *The Clash of Fundamentalisms: Crusades, Jihads and Modernity* (New Delhi: Rupa & Co., 2003), p.195

that they need the army.[37] Everything depends on the unity of the officer corps. To some degree, though difficult to gauge, Sunni Fundamentalism has also penetrated the ranks of the armed forces. The abandonment of the Taliban in Afghanistan is a better pill for many in the army, especially at junior levels of command, where religious influence is strongest. Jamait-I-Islami has been at the forefront of the bomb crusaders in Pakistan and runs a think tank *The Institute of Policy Studies* (IPS), Islamabad. Professor Khurshid Ahmad, a leading ideologue of the Jamait, claimed, "even a single person on the streets of Pakistan would not say that we should abdicate our nuclear option."[38]

General (Retd.) K.M. Arif, a close associate of Zia is now a prolific commentator on Pakistan's security, warned the nation of unified moves by the "the Indo-Jewish lobby" to "defame and malign" Pakistan. And in the face of "enduring danger" posed by India, retaining the nuclear option becomes a pressing necessity to thwart such threats.[39] Also illustrative of the security discourse in Pakistan is the linkage provided by (Late) Ghani Eirabi, who regarded the US pressure on the Pakistani governments to give up the nuclear program as a package deal that also included betraying "the Kashmiris and revise our commitment to Islam". Air Chief Marshall (Retd.) Zulfiqar Ali Khan, Dr. S.M. Koreshi, a former ambassador reflects the dominance of the military-bureaucratic people in the field of strategic experts.[40]

Two former diplomats, Agha Shahi and Abdul Sattar are also important people in the nuclear discourse in Pakistan. Agha Shahi served as Foreign Secretary during the Zia

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[37] Ibid, p. 199

[38] Khurshid Ahmad, "Summation: Capping the Nation," in Tarik Jan, ed., *Pakistan's Security and the Nuclear Option* (Islamabad: Institute of Policy Studies, 1995), p.148

[39] Tarik Jan, edited, *Pakistan's Security and the Nuclear Option* (Islamabad: Institute of Policy Studies, 1995), would be representative book of the hawks in general and interestingly it is published by the think tank of the Jamait-I-Islami. Khurshid Ahmad, Gen. K.M. Arif both feature in the book.

[40] Haider K. Nizamani, op. cit., n. 24, p.107-9

period and led the Pakistani delegation during the NPT negotiations. Since his retirement in the 1980's he has been vocal in expressing his views on Pakistan's foreign policy, especially with reference to the country's nuclear program. He is the founder of the *Islamabad Council of World Affairs*, a think tank. Abdul Sattar was a Foreign Minister after the military coup in 1999. He briefly served as foreign minister in 1993, and in addition has been the High Commissioner to India and since retirement frequently contributes in the national media on issues of Pakistan's foreign policy with special reference to relations with India.[41]

The Dissenters

Among the dissenters in the nuclear discourse of Pakistan three prominent and influential experts are Khaled Ahmad, a journalists who regularly questions Pakistan's security doctrine; Dr. Zia Mian, an influential and key organizer of the anti-bomb group; and Pervez Hoodbhoy, a physicist by profession and a veteran pacifist.[42]Most writings in this category start with the customary disclaimer that by not adhering to the dominant position they are not indulging in any act of treason. Critics who have questioned the dominant logic have to face the "unfounded allegations and insinuations" of being Indian or American agents.[43]

Khaled Ahmad's writings reflect American non-proliferation concerns that nuclear weapons in the hands of the leaders of developing countries would be dangerous as these leaders act on whim rather than on reason and instability is rife and therefore the

[41] Ibid, p.116.
[42] Ibid, p.126. For the dissenters see Zia Mian, edited, *Pakistan's Atomic Bomb & The Search For Security* (Lahore: Gautam Publishers, 1995) and Smitu Kothari and Zia Mian (eds.), *Out of the Nuclear Shadow,* (New Delhi: Rainbow and Lokayan, 2001)
[43] Ibid, p.127

world would be in danger. Khaled Ahmad has edited two English Language dailies, *The Nation* (Lahore) and *The Frontier Post* (Lahore). At present he writes for the Lahore based weekly *The Friday Times* and edits the Urdu version of the paper. Scientists such a Hoodbhoy and Zia Mian dissent because of the possibility of accidents and accidental usage and on grounds of economics and environment. Dr. Zia Mian is a physicist by training and worked in the Sustainable Development Policy Institute and is the founding member of an antinuclear group called the Campaign for Nuclear Sanity. Pervez Hoodbhoy teaches physics at the Quaid-I-Azam University, Islamabad.

In sharp contrast to the Indian PNE in May 1974, when Nizamani found a conspicuous lack of concern and attention in the major newspaper *The Dawn,* the recent years have seen a heightened level of concern and coverage in the mainstream English newspapers of Pakistan like *The Jang*, and *The Dawn.* In random visits to the web sites of the above mentioned newspapers and perusing their index, the nuclear issue did not in any way seem absent, rather there seems to be a plethora of writings on it. The Jang's index on nuclear issues runs to close to six printed pages.[44] It lists more than 50 signed opinion pieces and many more news items, features and analysis. The profusion of coverage on the nuclear issue owed to the nuclear tests, the issues of CTBT and general tension with owing to India following the Kargil war and the Indian mobilization owing to the 'war on terrorism'. The opinion pieces are written by a wide section in society from military to civilian experts but the dominant discourse asks for a 'fitting response to Indian tests' and one could with a little error conclude that most of the opinion makers belong to the military-bureaucratic-scientific establishment.

[44] http:/www.jang.com.pk/thenews/spedition/nuclear/index.htm

Samina Ahmad consistently maintains that the nuclear weapons program is and has been 'under absolute control of the armed forces' and that the civil bureaucracy played an active role through its subsidiary arm, the nuclear scientific establishment.[45] Looking at the May 1998 test she, postulates that domestic factors continue to play a critical role in the adoption or rejection of nuclear options. Direct or indirect authoritarian rule, weak representative governments and an inept and divided political leadership have combined to perpetuate the military's control over security policy, including the nuclear weapons program, which the military formulates in line with its perceptions and institutional interests.[46] The partnership between the armed forces and the civil bureaucracy, including its subsidiary nuclear scientific establishment, further marginalizes the role of the political leadership in the nuclear decision-making process. Ahmad also sees this nexus between the civil bureaucracy and the military intelligence that set up clandestine networks to acquire the necessary technology and hardware for ultra-high-speed centrifuges from Western Europe.[47]

Strategy, Posture and Doctrine

Just like much of its larger foreign and security policies, Pakistan's official position on nuclear issues remains conditional to India. The Indian governments position on nuclear disarmament is similarly conditional, to the global situation, i.e. that it will keep nuclear weapons until there is global nuclear disarmament. Conditional disarmament is convenient for all those states that had no desire to build nuclear weapons

[45] Samina Ahmad, "Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices", *International Security*, Vol.23, No.4 (Spring 1999), also see Samina Ahmad, "The (Nuclear) Testing of Pakistan", *Current History, December 1998*
[46] Ibid, p.179
[47] Ibid, p.184

in the first place and were forced to go for the weapons option. For example when the CTBT was being debated in 1996, the then foreign minister of Pakistan, Aseff Ali claimed 'the CTBT would be rendered virtually meaningless if its universality were to be eroded by the non-participation of a state like India', a position on the CTBT which was more like hiding behind India.[48]

Until the tests of May 1998, South Asia was presumed to be under what has been variously termed 'recessed', 'opaque' or 'non-weaponised' deterrence. The nuclear tests carried out first by India and then Pakistan in May 1998 lifted the veil of ambiguity surrounding the nuclear weapon programs of the two South Asian neighbors. While Pakistan has not brought out an official document defining a nuclear doctrine, the essential elements of a doctrine can be read from various Pakistani writings, both military and civilian, on the subject. Pakistan has made it abundantly clear that it will use nuclear weapons, if its survival is threatened. The circumstances under which Pakistan would use nuclear weapons would be dependent on the military and territorial losses it can sustain. The losses Pakistan can sustain would be of two kinds: actual losses as a consequence of combat, and potential losses as a consequence of Indian nuclear retaliation which would follow a Pakistani nuclear strike on India.[49]

One of the most authoritative articles in the subject is "Securing Nuclear Peace," *The News* (Pakistan), October 5, 1999 by Agha Shahi, Zulfiqar Ali Khan and Abdul Sattar. The authors define the red line that would trigger a Pakistani nuclear strike against India. The article lists three previous occasions before 1998 when nuclear deterrence, produced a restraining effect on India, there by admitting that nuclear threats were issued

[48] Zia Mian, "Hegemonic Nuclear Ideas", *Seminar* 444, August 1996, p.22
[49] V.R.Raghavan, "Limited War and Nuclear Escalation in South Asia", *The Nonproliferation* Review, Fall-Winter 2001, p.92

(implicit or explicit) by Pakistan on the occasions. The authors argue that a minimum deterrent would be adequate for Pakistan, and they say that Pakistan need not enter an arms race with India.[50] The authors are contemptuous of India's No-First Use doctrine and call it "a cost-free exercise in sanctimonious propaganda."[51] They define the red line, for use of nuclear weapons as a situation when, "the enemy launches a general war and undertakes a piercing attack threatening to occupy large territory or communication junctions".[52] According to V.R.Raghavan, these views indicate the Pakistani tendency to extend the nuclear deterrent to different levels of military conflict.[53] The threat of use of nuclear weapons would be exploited to contain a larger military response from India. This strategy would be in keeping with plans for the Pakistani nuclear deterrent to be used in influencing the outcome of armed political conflict. The conditions for a nuclear first strike by Pakistan, once war is joined are described by a senior military analyst,

> 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 set-back to the defences which cannot be restored by conventional means at our disposal, the government would be left with no option except to use nuclear weapons to stabilize the situation. India's superiority in conventional arms and manpower would have to be offset by nuclear weapons.[54]

The preferred option to escalate quickly to the nuclear level is indicated by Dr.Shireen Mazari, another influential analyst,

> It [Pakistan] should go for a one-rung escalation ladder knitted in tightly with a highly cohesive state-of-art tactical conventional military. This means that it must acquire sophisticated conventional technology at the tactical, theater level while maintaining a posture of one rung escalation in case of all out strategic war. This

[50] Cited by V.R.Raghavan, Ibid., also see Agha Shahi, Zulfiqar Ali Khan and Abdul Sattar "Securing Nuclear Peace," *The News* (Pakistan), October 5, 1999.
[51] Ibid.
[52] Ibid.
[53] V.R.Raghavan, op. cit, n. 49, p.93
[54] Cited by V.R. Raghavan, Ibid, also see Lt.Gen. Sardar F.S.Lodhi, "Pakistan's Nuclear Doctrine," *Defence Journal*(Pakistan), April 1999

becomes necessary because Pakistan lacks spatial depth and should not needlessly waste its resources in a static conventional war.[55]

The publication of the draft of India's nuclear doctrine 'raised the ante' as stated by most of the participants in a seminar organized by the *Islamabad Council for World Affairs* and the *Institute of Strategic Studies*, Islamabad titled "Pakistan's Response to the Indian Nuclear Doctrine" in November 1999.[56] According to the over view by it's Editor-in-Chief, Tanvir Ahmad Khan, "it relegated to history half-way concepts like existential deterrence and recessed deterrence that had dominated the debates in India and Pakistan for years...the nuclear doctrine made it manifestly clear that India planned to manufacture and deploy nuclear weapons in large numbers with the requisite reserves of nuclear warheads and delivery vehicles."[57] The 'reluctant weaponisers', Pakistan were forced to provide a response by the 'hegemonic and aggressive' India. The Pakistani response was to maintain a minimum nuclear force sufficient to avoid being sucked into a ruinous arms race with India.

For most analysts, the relevant model is the deliberately restrained small arsenal of China. In one view, the existence of a few city busters capable of wreaking havoc in one or two major cities of the enemy was enough of a deterrent. In another, the Pakistani deterrent did not have to seek any fixed ratio to the Indian nuclear weapons but required, nevertheless, "a self-assured autonomous existence in which dynamic reappraisals determined the size."[58] The low level that Pakistan should aim at was thus not static but

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[55] Cited by Ibid., also see Dr.Shireen Mazari, "India's Nuclear Doctrine in Perspective and Pakistan's options," *Defence Journal* (Pakistan), October 1999

[56] *The Nuclear Debate: Strategic Issues*, No.3, March 2000 Selections Published by the Institute of Strategic Studies, Islamabad, Pakistan.

[57] Tanvir Ahmad Khan, "Overview", *The Nuclear Debate: Strategic Issues*, No.3, March 2000, p.i

[58] Ibid.

dynamic, which presupposed continued freedom to preserve deterrent stability through increments, improvements and diversification of warheads and delivery vehicles. International and regional developments, it has been argued, warrant an upward revision of the concept of minimum nuclear deterrent for Pakistan's security stretching it towards sufficiency in all likely scenarios. And unlike the Indian doctrine, Pakistan wants no part of the worldwide calculus of nuclear weapons and prefers to restrict itself to its dominant security concerns in the region. Pakistan's security dilemma becomes even more acute as India adds to its force structures and invests them with high-tech features: Pakistan would be obliged to rely even more heavily on nuclear deterrence.

The challenge of reconciling minimum with credible deterrence should not be underestimated. It will have to be faced squarely as pressures to cut off fissile materials mount. Pakistan's stock pile is probably well short of the minimum number of war heads that the Indian arsenal would dictate and therefore cannot easily agree to cap the production of fissile material. Given the grave imbalance of conventional forces and the absence of a result-oriented process for resolving outstanding issues, Pakistan cannot commit itself to non-first-use (NFU) of nuclear weapons. Registering the large size of India's GDP and the increase in defense budget, writings state that, Pakistan has no option but to make its affordable minimum deterrent both credible and effective. At the same time, it is proposed to resort to proactive diplomacy to convince the international community that a just settlement between India and Pakistan will reverse the present escalation in the nuclear field.

In the absence of alternatives, acquisition of the nuclear option was conceived as a means to deter and prevent aggression. Safeguarding the peace and security of Pakistan was the sole objective. According to Abdul Sattar,

> Pakistan entertains no ambition to great power status or regional domination. Minimum nuclear deterrence remains the guiding principle of the nuclear strategy. The minimum cannot be quantified in static numbers. The Indian build up will necessitate review and reassessment. In order to ensure the survivability and credibility of the deterrent, Pakistan will have to maintain, preserve and upgrade its capability.[59]

Agha Shahi believes that the Indian doctrine's triad of nuclear forces would exceed in strength those of US and France and might be greater even than that of China. Shahi further states that, "It would not be possible for Pakistan to match India or to engage in an arms race. The only feasible course of action for Pakistan is to maintain a minimum level of deterrence, including a second strike capacity.[60] Shahi also states that Pakistan has suggested to the US and India, a strategic restraint regime proposal, involving nuclear and missile restraints, conventional arms balance concepts and resolution of disputes and that non-weaponisation and non-development of nuclear delivery systems are imperative to lessen mistrust and tension and that the Indian nuclear doctrine envisages deployment and employment of nuclear forces which are dangerous.[61]

Shahi in another article claims that 'since India considers its concept of credible minimum deterrence cannot be a fixed and static one but must be flexible and dynamic to respond to a changing security environment. Pakistan's minimum deterrence must

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[59] Abdul Sattar, "Pakistan's Nuclear Strategy: Inaugural Address", *The Nuclear Debate: Strategic Issues*, No.3, March 2000, p.3

[60] Agha Shahi, "Pakistan's Response to the Indian Nuclear Doctrine", *The Nuclear Debate: Strategic Issues*, No.3, March 2000, p.10

[61] Ibid, p.10-11

perforce be also visualized in the same terms.'[62] According to Shahi, Pakistan's minimum deterrence would rest on delivery by aircraft and land based medium and short-range missiles and that it would not get into an arms race and that it would bolster its conventional arms strength to raise the threshold of nuclear deterrence.[63] Shahi makes an important point regarding the threshold for the use of nuclear weapons by Pakistan and says that it would depend "on the scale and gravity of the threat to Pakistan's existence. In these circumstances, in the opinion of some experts, 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 is to be resorted to."[64]

Pakistan's nuclear arsenal is therefore India specific and is designed to counter the perceived conventional and nuclear superiority of its larger neighbor. It has an implicit first use doctrine, which is based on two assumptions.[65] First, given India's conventional superiority, nuclear weapons are seen as equalizing the imbalance. They are to be used at the appropriate moment of Pakistan's choosing to preserve the existence of Pakistan and therefore, Pakistan could not afford the luxury of a second strike doctrine. Second Pakistan's first use doctrine also 'reflects the use 'em or loses 'em syndrome.' As Pakistan's arsenal may not survive an Indian pre-emptive attack, Islamabad would have to use it before it is destroyed. However, the arsenal was intended to be used only as a weapon of last resort when the very existence of Pakistan was at stake. This implied that there was scope for limited military engagement as long as they were confined to a

[62] Agha Shahi, "Command and Control of Nuclear Weapons in South Asia", *The Nuclear Debate: Strategic Issues*, No.3, March 2000,p.55
[63] Agha Shahi, "Command and Control, Ibid, p.56
[64] Agha Shahi, "Command and Control, Ibid, p.56
[65] Waheguru Pal Singh Sidhu, "Weapons of Last Resort and First Use", at http://www.ceip.org/programs/npp/sidhu2.htm

localized area and did not escalate into either hot-pursuit or a full-fledged conventional war.'[66]

Pakistan's present targeting doctrine appears to be a combination of a counter-force and counter-city doctrine that would attempt to launch a nuclear attack to cripple India's political, economic, nuclear and military command and control. One indication of this is that while it has signed up an agreement not to attack India's nuclear facilities, it has consistently rejected India's proposal to extend that to include non-attack on civilian and economic targets.[67] Any large concentration of Indian forces particularly those that have crossed the border into Pakistan would also be considered legitimate targets. Thus, a fairly elaborate doctrine of use appears to have been worked out by Pakistan but it is still some way away from acquiring the necessary hardware to implement it.

Pakistan has a doctrine of graduated response from the conventional to the nuclear for a variety of scenarios. But some analysts who believe, that in response to Advani's statement after India's nuclear tests that 'Islamabad should realize the change in the geo-strategic situation in the region and roll back its anti-India policy, especially with regard to Kashmir' and promised hot-pursuit of terrorists, the doctrine has been modified to a doctrine of massive retaliation.[68] Pakistan's nuclear doctrine would therefore emerge as a hybrid mix incorporating various elements of NATO's nuclear strategies of "Mutually Assured Destruction".

[66] Waheguru Pal Singh Sidhu, Ibid.
[67] Ibid.
[68] Ibid.

Command and Control

Nuclear command and control arrangements in Pakistan are in a rudimentary stage of development. Pakistan has announced a command and control organization, however, there is no clear indication that Pakistan has developed specialized command and control, communication and intelligence systems.[69] Scholars point out that the nuclear button and the whole program in effect has always been exclusively under the control of the military and there seems to be little prospect of any change in the foreseeable future.

Nuclear Command Authority[70]

In February 2000, the military government announced the establishment of a National Command Authority (NCA) to manage Pakistan's nuclear forces. The NCA is responsible for policy formulation and will "exercise employment and development control over all strategic forces and strategic organizations."

The NCA comprises an Employment Control Committee (ECC), a Development Control Committee (DCC), and a Strategic Plans Division (SPD). The head of the Pakistani government chairs the ECC. Other members include the ministers of foreign affairs, defense, interior; the chairman of the Joint Chiefs of Staff committee; the three service chiefs; the director-general of the SPD, and technical advisors as required.

The DCC controls the "development of strategic assets." The head of the Pakistani government also chairs the DCC. Other members include the chairman of the Joint Chiefs

[69] Zafar Iqbal Cheema, "Pakistan's Nuclear Use Doctrine and Command Control," in Peter R. Lavoy, Scott D. Sagan, and James J.Wirtz, (eds.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons* (Ithaca: Cornell University Press, 2000)

[70] "National Command Authority Established," Associated Press of Pakistan, 3 February 2000 from http://cns.miis.edu/

of Staff committee; the three service chiefs; the director-general of the SPD; and representatives of strategic organizations and the scientific community. The SPD acts as the secretariat for the NCA and is responsible for establishing a reliable command, control, communications, computer, and intelligence network. The SPD is located in the joint services headquarters and is led by a senior army officer.

However, the National Command Authority (comprising a Nuclear Employment Committee and a Nuclear Development Committee serviced by a Strategic Plans Division) has yet to evolve its nuclear doctrine. Control over Pakistan's nuclear capability has always remained with the military.[71] Under the new "Nuclear Employment Command Authority", the decision would be taken by the Prime Minister (Presently the Chief Executive) with the Foreign Minister as deputy and the three Service Chiefs.[72] On a "decapitating" attack on the top level of the command and control structure, the authority would be "delegated" down in the first instance to the commander of the Army's Strategic Force Command-a Major General.[73]

It would be useful to quote Lewis Dunn, Pete Lavoy and Scott Sagan who reach this conclusion,

> it is not clear whether a Pakistani Prime Minister or President could prevent a battlefield use, or even a larger strategic strike, if senior military leaders were convinced (even though the Prime Minister and President were not) that the use of nuclear weapons was required to maintain the security of the state. When a member of the military heads the Pakistani government...these problems will be exacerbated.[74]

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[71] Agha Shahi, "Command and Control, p.59
[72] Agha Shahi, "Command and Control, p.59
[73] Agha Shahi, Command and Control, p.60
[74] Lewis A.Dunn, Peter R. Lavoy, Scott D. Sagan, "Conclusions: Planning the Unthinkable," in Peter R. Lavoy, Scott D. Sagan, and James J.Wirtz, (eds.), *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons* (Ithaca: Cornell University Press, 2000), p.249

Decision-making Process

In an unstable conflict situation, decision-making processes assume a special importance. The processes and assumptions that influence decision-making can be critical elements in conflict management and escalation control. Decision-making in Pakistan has traditionally been influenced by the burden of dealing with a stronger and larger adversary. The "pathology of decision making" in Pakistan has been largely influenced by the military.[75] The Pakistani military in power ignored advice based on political and international realities and past experiences show that it has preferred to choose military offensive even in situation of asymmetry. In the military dominated government of Pakistan, the absence of strong representatives from other key government departments, particularly the foreign and domestic ministries, gives the central decision makers the illusion that they are operating without political limits.[76]

In addition decision-making in Pakistan has not been free from 'cultural discounting'. The phenomenon of cultural discounting describes the belief that the adversary is culturally inferior and there fore can be defeated despite his real quantitative advantage. That Pakistan's military has taken decisions based on such assumptions has been convincingly demonstrated.[77] Its military hierarchy and the decision-making dynamics would heavily influence Pakistan's decision on a nuclear strike.

In an effort to institutionalize the role of the army in governance, the Pakistan President, Gen. Pervez Musharraf, reconstituted the National Security Council (NSC) in

[75] A phrase coined by Ashley Tellis, quoted by V.R.Raghavan, "Limited War and Nuclear Escalation in South Asia", *The Nonproliferation Review*, Fall-Winter 2001, p.91
[76] V.R.Raghavan, op. cit., n. 49, p.91
[77] Ibid.

July 2001.[78] The NSC, formed after the military takeover in October 1999, is the supreme body vested with powers to aid and advice the President on all vital national matters. The President is the head of the organization. The reconstituted NSC would be dominated by the military and all other members on the Council would be the appointees of the President. The job of the Council is to aid and advise the President on matters relating to Islamic ideology, security, integrity and solidarity of Pakistan.

The President will be the Chairman of the Council. It will comprise the Chief Executive, Chairman, Joint Chiefs of Staff Committee, the three service chiefs; the President in his discretion may appoint provincial Governors and 'such other members'. The Council member would hold office during the pleasure of the President and its meeting would be called at any place deemed fit by the President. As per the new order, the decision of the President, after taking into consideration the deliberations of the Council "shall be enforced and given effect in a manner as deemed fit by the President". In other words, as per the new order, the President shall be the supreme authority of the Council and the tilt of the reconstituted body is heavily in favor of the military.

Gen (Retd). Jehangir Karamat, the predecessor of Gen. Musharraf, had quit his job following differences with the then Prime Minister, Mr. Nawaz Sharif, over the question of constitution of the Council. Gen. Musharraf, ever since he took over the reins of the country, has been hinting on the need for institutionalisation of the Army's role in Pakistan in governance, as he believed that there was a need for checks and balances on the unbridled powers of the office of the Prime Minister, given the bitter experience of the past.

[78] B. Muralidhar Reddy, "Armymen to dominate Pak. Security Council", *The Hindu*, 5th July 2001 at http://www.hinduonnet.com/thehindu/2001/07/06/stories/0306000a.htm

Long periods of authoritarian rule and weak or nonexistent representative institutions have reinforced the military's control over Pakistan's nuclear weapons program, which is formulated in line with the perceptions and institutional interests of the armed forces. Since the Pakistani military views India with suspicion and hostility, the acquisition of a countervailing nuclear and conventional capability is given priority in the internal allocation of state resources. This stress on military security also advances the institutional interests of the armed forces as the considerable expenditure on a large standing military establishment is justified on the grounds of national security. Unable or unwilling to challenge the military's dominance, the political leadership has for the most part accepted the military's interpretation of security and its control over nuclear policy. A long-standing partnership between the armed forces and the civil bureaucracy, including its subsidiary nuclear scientific establishment, further marginalizes the role of the political leadership.[79]

Although its political leadership instituted Pakistan's nuclear weapons program in 1972, over time, the military with the bureaucracy's support ousted the political leadership and also gained absolute control over defense decision-making. Even after the restoration of democracy in 1988, the military's perceptions and institutional interests continue to dictate the acceptance or rejection of security choices, including the decision to opt for nuclear tests in May 1998. The adverse impact of multilateral economic sanctions has however resulted in an unprecedented internal debate on the costs and benefits of Pakistan's nuclear weapons program. Should functioning democratic institutions replace Pakistan's quasi-authoritarian state structure, changed domestic

[79] Samina Ahmad, op. cit., n.45, p.179

priorities could result in a questioning of the military's nuclear preferences by a less sympathetic and more assertive political leadership.[80]

Until that time, the military will continue to formulate Pakistan's nuclear weapons to promote its corporate interests and in line with its perceptions of the Indian threat and the directions of India's nuclear weapons program. The international response to South Asian nuclear proliferation and the Pakistani military's calculations of potential domestic repercussions will however play an equally important role in determining Pakistan's nuclear directions.

[80] Samina Ahmed, "Pakistan's Nuclear Weapons Program: Moving Forward or Tactical Retreat?" Kroc Institute Occasional Paper #18:OP: 2, February 2000, p.7

Chapter V
Conclusion

This concluding chapter looks at the experience of Pakistan with nuclear weapons during times of crisis, to understand how in operative terms Pakistani nuclear decision-making will be able to realize its vision. The crisis's in more recent past of the South Asian subcontinent listed in the strategic literature include the 1987 Brasstacks crisis, the 1990 crisis over Kashmir, and the Kargil war of 1999. The chapter would draw conclusions from the proceeding chapters and refocus on the pattern of civil-military relations and their impact on nuclear decision-making in Pakistan.

Nuclear Stand Offs

Strategic literature in the subcontinent dates the role of the nuclear deterrent in avoiding a conventional conflict to the Brasstacks crisis in 1987. This is generally taken as the beginning of the operation of deterrence in India Pakistan relations. Though difficult to actually substantiate but the first threat from Pakistan to deter India by its nuclear capability may have been made during the Brass stacks crisis.[1] It would also be important to point out that this chapter is not a study of merely the India Pakistan crisis in the recent past. Instead it is illustrative of Pakistan's security dilemma, that it faces a 'fatal' threat from the Indian state with its 'revisionist' (purportedly to undo the partition of the sub continent in 1947) agenda. The rationale of Pakistan's nuclear ambitions also remains India based, as are most of its foreign and security policies. It would be

[1] Kanti Bajpai, P.R. Chari, Pervaiz Iqbal Cheema, Stephen P. Cohen, and Sumit Ganguly, *Brasstacks and Beyond: Perception and the management of Crisis in South Asia* (New Delhi: Manhoar Books, 1995)

interesting to point out that most analysts attribute the Pakistani entanglement in Afghan affairs as, Pakistan's search for strategic depth against India.

Brasstacks, 1987

The nuclear stand off had its origins in an Indian military exercise code named 'Brasstacks' against the backdrop of continuing turmoil and Pakistani abetted violence in Punjab. The exercise was the brainchild of Gen. K. Sundarji, the Chief of Army Staff and its size and complexity was without parallel and it was also held along an east-west axis (pointing towards Pakistan) instead of the usual north-south axis in the state of Rajasthan.[2] The size and location of the exercise caused anxiety in Pakistan and on enquiry they received sketchy information and inaccurate figures. Unable to be reassured of the goals and significance of the exercise the Pakistani military despite completion of their planned exercise in November/December 1986 remained in battle ready positions.[3] The crisis erupted in mid January 1987 and regular contacts across Islamabad and New Delhi managed to defuse it by February.

It has been stressed regularly that this crisis also had a nuclear dimension to it. In an interview conducted in the end of January, the Indian journalist Kuldip Nayar was told by the Dr. A.Q Khan that, "Nobody can undo Pakistan or take us for granted. We are here to stay and let it be clear that we shall use the bomb if our existence is threatened."[4] But this report was only published on March 1, in *The Observer* of London and by this time

[2] Sumit Ganguly, *Conflict Unending: India-Pakistan Tensions since 1947* (New Delhi: Oxford, 2002), p. 86
[3] Kanti Bajpai et al, op. cit., n.1, p.27-30
[4] George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (New Delhi: Oxford, 1999), p.280

the crisis had been settled and had little effect on the evolution of the crisis.[5] Perkovich states that the statement did not necessarily reflect official Pakistani calculations and it cannot be said to have influenced the Brasstacks crisis. However, Khan's statements affected subsequent perceptions of the role of nuclear weapons in India-Pakistan security relations. From the point of view of the dissertation it is also pertinent to point out that at this time Zia was the President of Pakistan and democracy still was a year away. The subsequent crisis's occurred under 'civilian' regimes, and it would be sensible to study the role of the military in these crises during democracy, to discern the behind-the-scenes 'usurpation of power' (if at all) by the military.

Kashmir 1990

The domestic mishandling of center-state tensions in Jammu & Kashmir, by India lead to wide spread protests, demonstrations and violent incidents swept across the valley in 1988-89. This period had actually seen an upturn in India-Pakistan relations with the return of democracy to Pakistan and with Rajiv Gandhi and Benazir Bhutto at the helm, the young leaders were supposed to work out some kind of political rapprochement. The second non-Congress government had just taken oath in New Delhi in December 1990 with V.P. Singh as Prime Minister and Inder Kumar Gujral as the external affairs minister. As Kashmir moved towards anarchy, opposition parties in Pakistan continued to outbid Benazir on the question of Kashmir, leading her to raise her rhetorical skills.[6]

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[5] Ibid.

[6] Sumit Ganguly, op. cit., n. 2, p.92. The Kashmir Crisis of 1990 was close in hindsight when Seymour M. Hersh, published "On the Nuclear Edge", *New Yorker*, March 29, in 1993. Though most participants in the crisis have denied much of what Hersh claims and its authenticity is doubted and is termed a sensational article.

According to Perkovich, Bhutto's bellicosity 'reflected the influence of President Ghulam Ishaq Khan, Chief of Army Staff general Aslam Beg, and Pakistan's Inter-Services Intelligence Directorate (ISI), who were militantly anti-Indian and determined to up the ante in Kashmir.'[7] The President and the Army Chief along with the ISI wielded enormous power in the Pakistani power structure and held in many ways the Prime Minister hostage.

The conflict in Kashmir opened up avenues for Pakistani military aid to insurgents and the incipient nuclear capability was to deter an Indian conventional attack on Pakistan. The exchange of hostile rhetoric took place and both countries mobilized forces on the international border and Pakistan even called up its military reserves. Talks at the foreign ministry level were held to quell the tension. At the meet between the foreign ministers, I.K.Gujral was warned of 'war clouds hovering over the sub continent' by the Pakistani foreign minister Sahibzada Yakub Khan [8]. According to a Stimson Center report, 'it appears that the United States intercepted a message to the Pakistani Atomic Energy Commission (PAEC) ordering it to assemble at least one nuclear weapon.'[9] The knowledge of this and concern about full-scale war in the sub continent led the Bush administration to send US deputy national security adviser Robert Gates and Richard Haas to South Asia.[10] The Indians were not worrying explicitly about a nuclear threat from Pakistan, as they did not know about the activity detected by American

[7] George Perkovich, op. cit., n. 4, p.307
[8] Devin T. Hagerty, "Nuclear deterrence in South Asia," *International Security*, No. 3 (Winter 1995/1996), p.79-114
[9] Michael Krepon and Mishi Faruqee, eds., "Conflict Prevention and Confidence-Building Measures in South Asia: The 1990 Crisis," Occasional Paper no.17, Henry L. Stimson Center, Washington, 1994, p.30-31
[10] George Perkovich , op. cit., n. 4, p.309

Intelligence and the Robert Gates did not tell them about it.[11] In an interview with George Perkovich, shortly after his retirement in 1992, General Aslam Beg stated that:

> The fear of retaliation lessens the likelihood of war between India and Pakistan. I can assure you that if there were no such fear, we would probably have gone to war in 1990.[12]

The Seymour Hersh article on the 1990 crisis states that, '...General Beg had authorized the technicians at Kahuta to put together nuclear weapons...'[13] The literature on the crisis does not look into the dynamics of decision making and who was calling the shots but Hagerty quoting the American ambassador in Pakistan, Robert Oakley states that, "ISI was putting out all sorts of messages."[14] Hagerty further states that intelligence analysts in Washington found these messages to be more credible than the diplomats in the field which points to institutional rift within the government.[15] While the nuclear dimensions of the 1990 crisis are still disputed especially by officials, the Pakistani establishments support to the Kashmiri insurgents, sought deliberately to 'empower radical Islamic organizations, thereby combining the forces of religion and nationalism, a mixture that had been successful in Afghanistan against Soviet forces.'[16]

The Kargil Conflict 1999

The Kargil war followed close on the heels of the Lahore Declaration signed when the Indian Prime Minister visited Lahore in February 1999. The political leaders of India and Pakistan were set, ostensibly on a course for the diplomatic normalization of

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[11] Ibid., p.310.
[12] Ibid., p.312
[13] Devin T. Hagerty, *The Consequences of Nuclear Proliferation: Lessons from South Asia* (Cambridge, Massachusetts: BCSIA Studies in International Security, MIT Press, 1998), p.154

[14] Ibid., p.160
[15] Ibid.
[16] George Perkovich, op. cit, n. 4, p.307

relations after the nuclear tests in May 1998. This short *bonhomie* was cut short by a Pakistani attempt to intrude regular troops from the Northern Light Infantry and Kashmiri insurgents in the Kargil region in the spring of 1999 that caught the Indian military and intelligence completely off guard.[17]

The Kargil war raged from May to mid-July 1999 and inflicted heavy casualties on both sides. As in earlier Indo-Pak crises in 1987 and 1990, the actual level of nuclear threat hanging over Kargil conflict remained uncertain. Nuclear threats implicit and explicit were exchanged through the crisis but it remained uncertain if any material threat lay behind the rhetoric. The Kargil crisis threw up two important variables with regard to military supremacy in democratic Pakistan. The first was, the question that was Prime Minister aware of the military endeavor and the second was there any material reality in the nuclear threats exchanged.

The Prime Minister Nawaz Sharif was in his second stint and his government enjoyed a majority in the National Assembly. This was the most stable civilian government in Pakistan since Zulfikar Bhutto's government in 1972. The Sharif government had managed to have its way in almost all spheres of democratic life, with the stifling of the media, meddling in the appointments of judges to the Supreme Court of Pakistan and in even steeping down of an army chief when the General's indictment of the government, evoked a strong displeasing statement. The Prime Minister, feigned ignorance of the Kargil intrusion and this was corroborated by the Indian Prime Minister and Defence Minister's statement who said that they believed it was the army which had created the trouble without the knowledge of the civilian regime.

[17] Sumit Ganguly, op. cit., n. 2, p.114

George Perkovich, in the afterward to his study of the history of the Indian nuclear bomb, agrees to this interpretation of events. To quote Perkovich, "Unfortunately, not all centers of power in Pakistan shared the spirit of the Lahore Declaration. Key military leaders at General Headquarters in Rawalpindi bristled at the lofty, conciliatory rhetoric and the intimations of pending rapprochement."[18] General Pervaiz Musharraf, the new army chief appointed by Sharif after the resignation of Jehangir Karamat, stated that, he objected to the Lahore Declaration and as he could not accept the lack of emphasis on Kashmir and felt that at Lahore, Sharif had surrendered Pakistan's leverage for extracting Indian concessions in Kashmir.[19]

Thus, Sharif claimed innocence of the Kargil intrusion and blamed it on the military. But other sources point out that Sharif knew about the Kargil intrusion, even before the Lahore declaration and had even approved of it.[20] A number of scholars do not believe the Sharif testimony of not being privy to the Kargil intrusion.[21] This lie and the subsequent withdrawal of Pakistani troops decided by Sharif at Washington without consulting the top brass may have been responsible for the October 12 1999 coup in which Musharraf removed Sharif from power.[22]

The second element was did any real effort at nuclear mobilization take place and if so who directed those efforts. Bruce Reidel, who was President Clinton's Special Assistant for Near Eastern and South Asia Affairs at the National Security Council, has

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[18] George Perkovich, op. cit., n. 4, p.472
[19] Ibid.
[20] Ibid., p. 473
[21] Tariq Ali, *The Clash of Fundamentalisms: Crusades, Jihads and Modernity* (New Delhi: Rupa & Co., 2003), p.249 also see Bruce Reidel's account at http://www.sas.upenn.edu/casi/reports/RiedelPaper051302.htm, Reidel says that Musharraf and Sharif have put out different versions of who said what to whom.
[22] Hasan Askari-Rizvi, *Military, State and Society in Pakistan* (London: Macmillan, 2002), p.232

written an account of the July 4th 1999 meet between Nawaz Sharif and Clinton.[23] It was at this meet that Sharif agreed to withdraw Pakistani troops under harsh international pressure for creating tensions in nuclear South Asia. The account of the meeting is illustrative for the pressures that the military was applying on Sharif for non-withdrawal. Reidel writes that, "The PM was distraught, deeply worried about the direction the crisis was going toward disaster, but equally worried about his own hold on power and the threat from his military chiefs who were pressing for a tough stand. The Prime Minister told Clinton that he wanted desperately to find a solution that would allow Pakistan to withdraw with some cover. Without something to point to, Sharif warned ominously, the fundamentalists in Pakistan would move against him and this meeting would be his last with Clinton."[24]

On the question of the raking up nuclear tensions, Reidel states that, "Clinton asked Sharif if he knew how advanced the threat of nuclear war really was? Did Sharif know his military was preparing their nuclear tipped missiles? Sharif seemed taken aback and said only that India was probably doing the same...Sharif was getting exhausted. He denied that he had ordered the preparation of their missile force, said he was against that but he was worried for his life now back in Pakistan."[25] Reidel further states that, it was not altogether clear who was calling the shots in Islamabad. Prime Minister Sharif seemed genuinely interested in pursuing the Lahore process and he had argued eloquently with a series of American guests, including America's UN Ambassador Bill Richardson, that he wanted an end to the fifty-year-old quarrel with India. We will probably never

[23] http://www.sas.upenn.edu/casi/reports/RiedelPaper051302.htm
[24] Ibid.

[25] Ibid.

know for sure the exact calculus of decision-making in Islamabad. Each of the players had their own reasons for selling a particular version of the process. Musharraf and Sharif have already put out different versions of who said what to whom.[26]

In a study of crisis behavior and decision-making mechanisms in Pakistan, Kotera M. Bhimaya states in his conclusion that, leaders (military due to its rule) in 1965 and 1971 seemed to have been reasonable in there calculation of cost benefit before starting a conflict.[27] The military leaders were also anxious to limit the scope and duration of conflict and were open to external pressures. They were able to enforce their will on subordinate commanders, and despite the defeat in 1971 there was no willful insubordination of junior officers and that the command system worked smoothly.[28]

This study of the influence of the Pakistani military on the nuclear program lays bare its entrenched position in Pakistani polity and society. Zulfikar Bhutto may have had myriad motivations to guide Pakistan down the road to nuclear weapons capability. Apart from security against an incipient Indian capability it could also have been a desire on Bhutto's part to challenge the monopoly of security held by the military. The bitterness and blood shed amidst which Pakistan was born, has resulted in a kind of fear- psychosis when it comes to Indian intentions and this fear has led to a larger than required role for the military in the Pakistani state. It was Bhutto who laid the foundations of the jingoistic nuclear discourse in Pakistan. In tying the issue to the fragile national security theme, he established a connection between patriotism and support for the nuclear option. Bhutto's role and foresight in giving priority to the nuclear established during his tenure in Ayub

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[26] Ibid.
[27] Kotera M. Bhimaya, "Nuclear Deterrence in South Asia: Civil-Military relations and Decision-making", *Asian Survey,* Vol.XXXIV, No.7, July 1994, p.655
[28] Ibid.

Khan's government and when he was at the helm of affairs, were crucial to the development of the Pakistani nuclear capability. Bhutto's opening to China amidst opposition from the pro-west foreign minister of Ayub Khan proved beneficial in the long run.

The years of direct military rule 1977-1988, the frontline state status and the willful American ignorance helped Zia continue with the nuclear weapons potential. Zia handled the issue with a lot more ambiguity and without fail stressed the peaceful nature of the Pakistani nuclear program. In the subsequent civilian rule, the military did not allow the government of the day to interfere in some priority areas like Pakistan's India, Afghanistan policy and the nuclear program. While the atomic energy establishments in Pakistan were ostensibly under the civilian government, the military's handling of the security of the crucial agencies probably gave real power into the hands of the military.

Hasan Askari-Rizvi in his study of the role of the military in Pakistani state and society states that the depth to which the military is entrenched in Pakistani society. It would be useful to quote Rizvi in the entirety,

> Long years in power have enabled the military to spread out so widely in the civilian institutions of the state and society that its presence is firmly established in all walks of life. It has carved out a role and position in the public and private sectors, industries, business, agriculture, education and scientific development, health care, communications and transportation. Such omnipresence ensures an important role for the military in the state and society even if the generals do not directly control the levers of power.[29]

Thus, if one can draw Askari's conclusions to the nuclear program it is not difficult to see through the consensus that the Pakistani establishment enjoys. The civilian regimes after Zia ul Haq have never really differed on the nuclear issue from military. This leads many to point out the continuities in the India and nuclear policy that exists in

[29] Hasan Askari –Rizvi, op. cit, n. 21, p.233

Pakistan and that the nature of the regime would not make any difference to it. One can discern gaps in this reading; these civilian regimes never enjoy the space to chart an independent path and are heavily circumscribed by the power of the military. Most of the literature on Pakistani polity does not fail to mention that the real power during the civilian rule period 1988-1999, always lay in the hands of the military, so it would be an error to point to the above-mentioned civilian-military consensus. Since no elected government has been allowed to complete its term, political parties believe that the military's continued support and approval are an essential precondition for attaining or retaining power. Hence, as Samina Ahmad says, elected governments as well as the political opposition not only tacitly accept the military's dictates on security issues, but also use their political platforms to further the military's perceptions, priorities and policies.[30]

Ian Talbott, in an article offers us a different explanation to explain the continuities between periods of civilian and military rule.[31] Talbott states that one should not see the army as just a powerful institution with its own agenda, but as a predominantly Punjabi based force.[32] Talbott further states that,

> The Punjabization of the colonial predecessor of the Pakistan Army helped pave the way for the Punjabization of Pakistan itself. It is impossible to appreciate the impact of the army on contemporary domestic and foreign affairs without acknowledging the congruence between its interests and those of significant sections of Punjabi society.[33]

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[30] Samina Ahmad, "Public Opinion, democratic governance and the making of Pakistani Nuclear policy", in Eric Arnett (ed.), *Nuclear Weapons and Arms Control, South Asia* (SIPRI: Oxford University Press, 1997), p.57

[31] Ian Talbott, "Does the Army Shape Pakistan's Foreign Policy?" in Christophe Jaffrelot (ed.), *Pakistan: Nationalism without a Nation?* (New Delhi: Manohar, 2002)

[32] Ibid, p.315

[33] Ibid.

Tariq Ali believes that the Pakistani state and army have merged on virtually every level from political, social to the economic.[34] As the army gained more experience in running the country, the military elite began to see itself as a party/army.[35] On the few occasions that the military agreed to elections, a political front organization is rapidly assembled (PML-Nawaz during Zia's time, PML-Quaid in Musharraf's). The defense allocation in successive budgets survived every regime. The ISI became an army within an army, accountable only to its own high command and controlling its own budget. The rationale behind the fear of India, serves only one purpose, the maintenance of a huge military industrial establishment that is spread across the country and sustains the military's political hegemony.

Thus, drawing from Prof. Sagan's argument, that professional military organizations- because of common biases, inflexible routines, and parochial interests- display strong tendencies toward organizational behaviors that could lead to deterrence failures.[36] This organizational critique argues that professional military organizations, if left to their own, are unlikely to fulfill the operational requirements for rational nuclear deterrence. Second, Sagan argues that such organizational proclivities can be effectively countered only by tight and sustained civilian control of the military. In such (unstable civil-military relations) states, the biases, routines, and parochial interests of powerful military organizations, and not the "objective" interests of the state, can determine state behavior. Thus, is the case with Pakistan and its 'unending conflict' with India and the western reading of the subcontinent as a 'nuclear flashpoint'.

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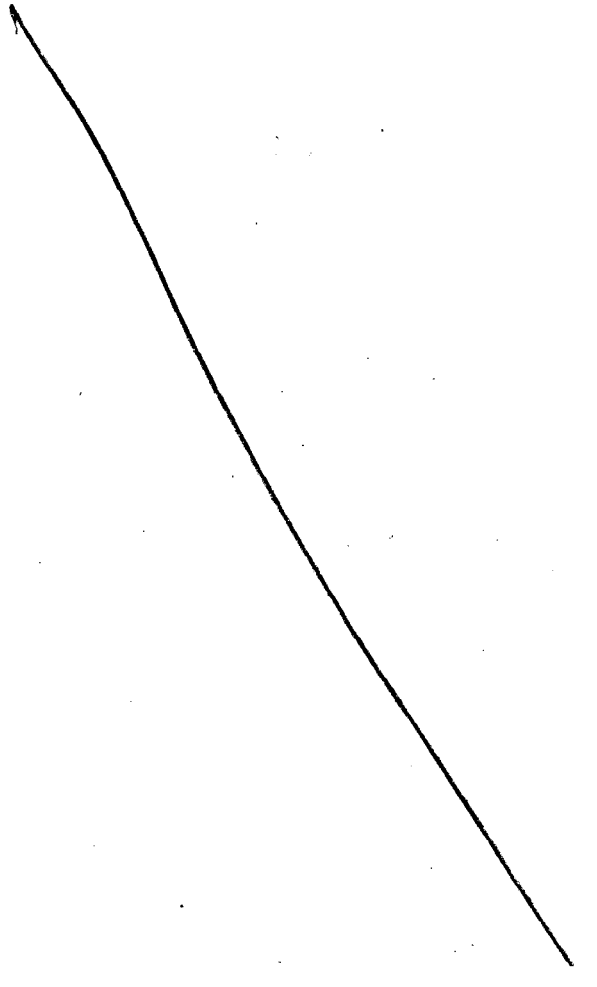
[34] Tariq Ali, p.266
[35] **Ibid, p.275**
[36] Scott D. Sagan (ed.), *Civil-Military Relations and Nuclear Weapons*, (Center for International Security and Arms Control, Stanford University, June 1994)

Last Word

The military's interests interpreted as Pakistan's interests can be said to be the crux of the problem of the Pakistani state's nuclear decision-making. This merger of the army and the state and the army's infiltration into all layers of society and institutions prevents this myth from being discredited. While the dominance of the military in Pakistan has been well documented, the result of this dominance in nuclear decision-making is largely sketchy and marginal. But the evidence presented in this dissertation leads me to conclude that the strident nature of the Pakistani nuclear policy results from the dominance of the military in all spheres of life. Given that civilian governments have gradually lost their leverage in Pakistan's nuclear decision-making, tensions on the subcontinent will remain far less amenable to confidence building and will continue to evade any lasting resolution of Pakistan's security dilemma.



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