

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

UMI[®]

**NUCLEAR PROLIFERATION IN PROTRACTED
CONFLICT REGIONS: A COMPARATIVE STUDY
OF SOUTH ASIA AND THE MIDDLE EAST**

**Saira Khan
Department of Political Science
McGill University
Montreal**

April, 1999

**A thesis submitted to the Faculty of
Graduate Studies and Research in partial
fulfilment of the requirements for the
degree of Doctor of Philosophy**

**© Saira Khan
1999**



National Library
of Canada

Acquisitions and
Bibliographic Services

395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale
du Canada

Acquisitions et
services bibliographiques

395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-55346-9

Canada

ABSTRACT

One of the most critical tasks facing the world in the post-cold war era is to eliminate nuclear proliferation. With the recent nuclear tests by India and Pakistan, the subject of nuclear proliferation has returned to the forefront of international politics. Taking issue with the complacent belief that only a few states unnecessarily jeopardize international peace by acquiring nuclear weapons, I argue that many states in territorial protracted conflict are generally proliferants because of their specific security concerns. Demonstrating how individual and domestic level motivations are not the key determinants of the nuclear choices of the South Asian and Middle Eastern states, I emphasize the role of systemic level motivation, particularly security, in their nuclear decisions. Through a close examination of these states' nuclear weapons choices, I develop a new appraisal of the territorial protracted conflict states' potential to proliferate. While high war-probability has provoked virtually all of these protracted conflict states to seek nuclear deterrent capability and become proliferants, the variations in the type of conflict, regional power structure and geographical proximity have brought about variations in the pace of proliferation among these states. Finally, I expand the implications of this study for IR theory, especially with regard to Realist theory, nuclear deterrence, post-cold war world order, and nuclear arms control treaties. I conclude that the resolution of the roots of regional conflicts will most effectively ensure that more states do not embark on a nuclear weapons program. It is, however, naive to expect the new nuclear states to roll back their weapons programs.

RÉSUMÉ

Un des défis les plus importants dans le monde de l'après Guerre froide est l'élimination de la prolifération nucléaire. Les tests nucléaires de l'Inde et du Pakistan ont ramené cette difficile réalité à l'avant-plan de la politique internationale. En réponse à la croyance complaisante voulant que seul un petit nombre de pays menacent indûment la paix internationale en faisant l'acquisition d'armes nucléaires, cette thèse avance que plusieurs États en situation de conflits territoriaux prolongés ont tendance à accroître leur arsenal nucléaire pour des raisons liées à leurs préoccupations de sécurité nationale. En démontrant que les motivations individuelles ou internes ne sont pas les déterminants principaux des choix en matière nucléaire des gouvernements d'Asie du sud et du Moyen-Orient, les motivations liées au système international, particulièrement en ce qui a trait à la sécurité, sont mises en relief dans l'analyse de la prolifération nucléaire. À travers un examen minutieux des politiques d'armement nucléaire, la thèse développe une meilleure évaluation du potentiel de prolifération nucléaire lié aux conflits territoriaux prolongés. Alors que des probabilités élevées d'interaction militaire amènent presque tous les États impliqués dans ces conflits à acquérir une capacité nucléaire de dissuasion, les variations observées dans le type de conflit, la structure régionale du pouvoir, et la proximité géographique génèrent des différences dans le rythme de prolifération. Enfin, la thèse utilise les résultats de cette étude pour enrichir le champ théorique des relations internationales, en particulier l'approche réaliste, l'étude de la dissuasion nucléaire, la notion d'ordre mondial post-Guerre froide, et les traités sur le contrôle des armes nucléaires. La résolution des conflits régionaux est décrite comme le moyen le plus prometteur d'assurer que le plus grand nombre possible d'États n'entrent pas dans la course au nucléaire. Cependant, il serait naïf de penser que les nouveaux arsenaux nucléaires vont être détruits par les pays qui les ont développés récemment.

ACKNOWLEDGMENTS

I would first like to thank my supervisor, T.V. Paul, for his ceaseless support and encouragement in completion of this dissertation which could not have been written without his unstinting support and key advice at every stage. From advising to editing--he has done everything with the special attention that was necessary to complete this thesis. He not only guided me through the dissertation process, but has also given me the moral support that was often needed. I consider myself extremely fortunate to have been able to complete this dissertation under his supervision.

Special thanks to Philip Oxhorn, who guided me through my graduate studies at McGill. He has been my advisor and mentor on whom I could depend at all times. His confidence in me helped me at every stage in the graduate program. Thanks also to Mark Brawley, whose sound advice, useful comments and suggestions have helped me throughout the writing process. He has been extremely kind to read all the thesis drafts, help in editing and constructing diagrams.

I would also like to thank Baldev Raj Nayar, Cris Manfredi, Elizabeth Gidengil, Hudson Meadwell and Naren Subramanian for their valuable comments on specific issues at the preliminary stage which helped me sharpen my ideas. During the research work, I built up debts to many people. I would like to express my gratitude to the following individuals who provided vital assistance during my research work: Akbar Ali Khan, Shafi Sami, Khalilur Rahman, Najam Rafique, K. Subrahmanyam, K.K. Nayyar and Ahmed Abdel Halim. Special thanks to Michael Brecher for his useful comments and assistance in conducting research work.

The dissertation was made possible through the generous financial support of the McGill University Social Science and Research Grants Sub-Committee and the University of Montreal-McGill Research Group in International Security (REGIS). I also wish to thank T.V. Paul, Mark Brawley and Philip Oxhorn for providing financial support during my graduate studies.

Finally I turn to my family. I thank my mother, Nargis Khan, for inspiring me at every stage of my academic life, especially in completing my dissertation. She never failed to encourage me to accomplish my goals. There are no words to adequately express my thanks to my husband, Jalal Ahmed. This dissertation could not have been written without his endless cooperation. His love and understanding in the face of innumerable sacrifices have been an ongoing source of inspiration. My son, Andaleeb Ahmed, has been a constant source of love and joy in my life. From a very young age he understood about family compromises necessary for the completion of this dissertation. I thank him for being a very understanding and

loving child. I owe a debt of thanks to my brother, Mahmudul Huq Khan, and sisters, Munira Khan and Zakera Khan for their constant encouragement.

I dedicate this thesis to the memory of my beloved father, Shafiullah Khan, who was the greatest inspiration of my life, but who passed away only a year before its completion.

CONTENTS

Abstracts

Acknowledgments

INTRODUCTION 1

PART I:THEORY

CHAPTER I : The State of Scholarship On Nuclear Proliferation 8

CHAPTER II: Understanding Nuclear Proliferation 49

CHAPTER III: Non-Traditional Nuclear Deterrence Among Protracted Conflict Adversaries 88

PART II: CASE STUDIES

THE SOUTH ASIAN PROTRACTED CONFLICTS 116

CHAPTER IV: The Indian Nuclear Weapons Acquisition 119

CHAPTER V: Pakistan's Search for Nuclear Deterrence 179

CHAPTER VI: Non-Traditional Nuclear Deterrence in the India-Pakistan Protracted Conflict 232

CHAPTER VII: India's Deterrent Needs and the Sino-Indian Protracted Conflict 255

PART III: CASE STUDIES

MIDDLE EAST: THE ARAB-ISRAELI PROTRACTED CONFLICT **295**

CHAPTER VIII: Israel's Opaque Nuclear Weapons **297**

CHAPTER IX : Arab States And Nuclear Weapons **333**

CHAPTER X: Arab-Israeli Protracted Conflict And Non-Traditional Nuclear Deterrence **410**

CONCLUSION **427**

BIBLIOGRAPHY **I**

INTRODUCTION

With the end of the cold war nuclear proliferation¹ has emerged as a significant international security relations problem. Although control of the spread of nuclear weapons has been an aspect of the international agenda since 1946, the cold war rivalry prevented much serious attention being paid to it. After the end of the cold war and again at the conclusion of the 1990-91 Gulf War, when Iraq's secret nuclear weapons program was discovered, nuclear non-proliferation became the number one priority of the leading western nations. Within the first five years of the post-cold war era, the Nuclear Non-Proliferation Treaty (NPT) was extended indefinitely. It was followed by the conclusion of the Comprehensive Test Ban Treaty (CTBT) which has been signed by a majority of states. India, Pakistan and Israel--three key regional states--have remained non-signatories of the NPT, while the first two have yet to sign the CTBT.

The conclusion of the CTBT has been a remarkable achievement in the history of arms control. The treaty is unique not because 152 countries have signed it, but because, unlike the NPT which was opposed by two nuclear powers initially, all the five declared nuclear powers--the USA, Russia, Britain, France and China--have committed themselves to abide by the CTBT. Although ratification of

¹Although the term "acquisition" seems more appropriate than "proliferation," the "spread" of nuclear weapons, I use the latter for consistency. The term "proliferation" arose largely because the original nuclear weapon states prefer the new nuclear states to be identified as proliferators.

the treaty still remains to be done, the most important western concern appears to be that India and Pakistan--two of the 44 nations with nuclear power or research reactors--have not been part of the treaty. Ratification of the treaty by these two countries along with the remaining 42 countries is essential for it to come into force. Western policy for the last two years has thus been to pressure these two crucial South Asian states to sign the CTBT. While this has remained the West's principal occupation, India and Pakistan continued their own secret nuclear weapons development. Twenty-four years after its first nuclear tests, India, in May 1998, conducted five underground nuclear tests; within two weeks Pakistan, for the first time performed six nuclear tests. These nuclear tests have not only alarmed the world, but they have also returned the subject of nuclear proliferation to international attention.

The central concerns now include several scenarios: that some states secretly develop their nuclear weapons program, that some are reluctant to join the nuclear treaties whose goal are to bring peace to this new world, while others conduct nuclear tests in an otherwise peaceful post-cold war world. In essence, some regional states are reluctant to remain non-nuclear states. Who are these states? What do they have in common? And, what makes them so determined to acquire nuclear weapons?

Before looking at the specific states seeking nuclear weapons, it is important to note that a number of regional states have backed away from developing nuclear weapons programs. Major regional states in Latin America and Africa, including Brazil, Argentina and South Africa, have reversed their nuclear

weapons programs. Brazil and Argentina continue to compete against one another in Latin America for status and power, but have not been involved in any coercive military interaction or war for several decades. They have not been engaged in any protracted conflict that might be of major security concern to them. South Africa has been involved in a protracted conflict in the region and had been developing a secret nuclear weapons program. With the end of the conflict, it has set an important precedent by dismantling its nuclear weapons.

Most states involved in developing nuclear weapons--India, Pakistan, Israel, Iraq and Iran--or states that have shown some interest in developing nuclear weapons--Syria, North Korea and Taiwan--are states belonging to the protracted conflict regions--South Asia, the Middle East and East Asia. These regional states are actively involved in protracted conflicts within or outside their own regions. The commonality of these states being in protracted conflict settings along with their search for nuclear weapons begs the question: why do protracted conflict states seek nuclear weapons? What is even more intriguing is that there are also protracted conflict states that have not demonstrated the need to acquire nuclear weapons, such as Cyprus, Turkey, and Angola. Why do only some protracted conflict states seek nuclear weapons?

The basic premise of this study is then that proliferation propensities are most salient among some states involved in protracted conflicts (PCs). Consequently, the central purpose of this study is to explain the causes of nuclear proliferation in specific PC states. The primary questions addressed in the study are: 1) Why are proliferation incentives limited only to a few PC states? 2) What

factors might have triggered the move towards nuclear proliferation in the protracted conflict regions? 3) Do the nature of security problems and adversarial relationships determine whether proliferation occurs or not? 4) When, and under what conditions, do security incentives dominate nuclear choices of these states? 5) Under what conditions would proliferation be less salient for states engaged in protracted conflicts?

Although these questions arise from real-world events and problems, after over forty years of research the dynamics of proliferation are still puzzling. Moreover, scholarly work has generally been confined to policy-relevant prescriptive studies. We still do not know why a few countries have acquired nuclear weapons while the majority of states have renounced nuclear options. Against the backdrop of these concerns this study is an attempt to understand the dynamics of proliferation. It assesses the body of hypotheses addressed in the proliferation literature and identifies the urgent questions and problems that remain unanswered after decades of research. Thus, the study is both retrospective and prospective--assessing what has already been accomplished by scholars in the last few decades while simultaneously identifying the most important unanswered questions on the subject.

In this study I argue that the 'higher-than-normal' probability of war in a protracted conflict region encourages states to search for a deterrent capability that ultimately leads to nuclear proliferation. I propose a new definition of protracted conflict in which the relationship between the issue/source of the conflict and war-probability among participants is addressed.

To test this argument,² this dissertation looks at the proliferation incentives of the key states in two regional sub-systems: South Asia and the Middle East.³ Key states in South Asia under study are India and Pakistan; in the Middle East Israel, Iraq, Iran and Syria are studied. China is studied as an extra-regional nuclear power to better understand the Indian threat perceptions. Egypt, a major

² Although I test the argument against the two PCs, this thesis can be tested against cases of all regional PCs (e.g. those in East Asia and Africa). I use the term regional PCs to make a distinction between global PCs and major power PCs. Clarification is needed about first generation proliferators and second generation proliferators; they are different not only in terms of acknowledgment of the possession of nuclear weapons, testing, or strategies pertaining to these weapons, but, to a certain extent, also with regard to their incentives to proliferate. The first generation proliferators have been the major powers, and as such, their great power politics have differed from regional powers. This is not to deny the fact that the first generation proliferators have also been primarily motivated by security threats to acquire nuclear weapons as have most second generation proliferators, but just to point out that the cold war bipolarity had a major role in these states' decision to go nuclear. Gaining international prestige was also important to some, viz: Britain and France. Concerns over nuclear proliferation began in the 1960s and became more acute after the five declared powers had acquired nuclear weapons and when there seemed to be a spread of these weapons which is commonly known as "horizontal proliferation." The literature on proliferation clearly distinguishes between them--vertical and horizontal proliferation. I, however, make a distinction between global power proliferators and regional proliferators based on the fact that while the former in PCs proliferate under all circumstances, since PC by definition is a high conflict situation and war-probability is higher than in non-PC situations, most regional PC states proliferate under specific circumstances. My concern in this study is not with the declared nuclear club or vertical proliferators (PC or non-PC), but with the horizontal PC proliferators (though a comparison between systemic and sub-systemic proliferation has been done as a matter of requirement in the theoretical chapters of the dissertation).

³ Although it would be useful to test a case where a non-territorial PC state does not acquire nuclear weapons, since these states are unlikely to proliferate, testing may not be possible. Moreover, I am looking at only PC proliferation, not non-proliferation.

state in the Middle East which has renounced a nuclear weapons option, is studied as a control case.

The dissertation comprises ten chapters and is organized in the following manner. The first chapter provides a review of the state of the proliferation literature. It examines the utility of the scholarly work for a theoretical understanding of proliferation in protracted conflict regions. It also justifies the importance of the present study given the absence of scholarly work on proliferation in the PC regions. The second chapter provides the conceptual and analytical framework for the empirical study of PCs in South Asia and the Middle East. This includes the hypothesis, sub-hypotheses, explanatory variables, causal connections between these variables, and an analysis of my arguments. I also explain and justify the methodology undertaken in the research. The third chapter is a theoretical chapter on non-traditional nuclear deterrence in protracted conflict states which are presently or have been opaque nuclear states. It discusses how and why nuclear deterrence may work under opacity. As part of the case study section, the next four chapters are case studies of PC states in South Asia. The fourth and fifth chapters examine Indian and Pakistani nuclear weapons acquisition respectively, while the sixth chapter focuses on non-traditional nuclear deterrence within the context of the India-Pakistan protracted conflict. Chapter seven investigates India's security concerns against the backdrop of the Sino-Indian protracted conflict, and is followed by an examination of the Sino-Indian nuclear deterrent relationship. The three final chapters are case studies of Arab-Israeli PC states in the Middle East. Chapter eight focuses on Israeli nuclear weapons

acquisition in the context of the Arab-Israeli PC, while chapter nine examines the Arab motivations for acquiring nuclear weapons. The motivations of Iraq, Iran, Syria and Egypt are presented. Finally, the tenth chapter evaluates non-traditional nuclear deterrence in the Arab-Israeli PC. The final section of this dissertation offers a summary of the findings and their implications.

PART I: THEORY

CHAPTER I

THE STATE OF SCHOLARSHIP ON NUCLEAR PROLIFERATION

This chapter examines previous scholarship on nuclear proliferation and evaluates their utility for a theoretical understanding of the problem. This is followed by a series of critical questions pertaining to the problems which must be addressed, and justification for undertaking the present research work.

Within the nuclear proliferation literature scholarly works can be grouped into two sets: studies on the causes of proliferation, and studies on the consequences of proliferation. The first group focuses on states' motivations or incentives and disincentives for acquiring nuclear weapons, while the second has concentrated on the type of impact the spread of nuclear weapons could have on international and regional security. Although both groups of scholars have, by and large, written since the 1950s, serious works on proliferation motivations began with the conclusion of the Nuclear Non-Proliferation Treaty (NPT) in 1968.¹ This

¹ Although the US tried to stop other countries from developing their own nuclear weapons, it did not really oppose all states from proliferating. Despite other views, the US in fact, supported the British and French nuclear weapons acquisition. Additional nuclear weapons states in the world became a major US concern as soon as the NPT came into existence. Therefore, soon after NPT was concluded, proliferation scholars devoted much time to anticipate motivations that could drive states to go nuclear. Although this was the case in the 1950s and 1960s scholars were still aware of the spread or the chain reactions to nuclear weapons possessions. See, Leonard Beaton and John Maddox, *The Spread of Nuclear Weapons*, London: Chatto & Windus for the Institute for Strategic Studies, 1962; Richard N. Rosecrance, ed., *The Dispersion of Nuclear Weapons*, New York and London: Columbia University Press, 1964; Leonard Beaton, *The Struggle for*

does not mean that the spread of nuclear weapons did not become a concern until after 1968; the Baruch Plan, Atoms-for-Peace Plan, and International Atomic Energy Agency (IAEA) developed as part of the attempt to stop additional countries from acquiring nuclear weapons. The Baruch Plan was presented to the United Nations Atomic Energy Commission (UNAEC) in June 1946 and was designed to have monopoly ownership and management of atomic energy activities regulated by an international agency under the aegis of the United Nations. The Plan ultimately failed because of the lack of consensus among member states.² Later, in 1953, the Eisenhower Administration proposed the Atoms-for-Peace Plan to allow the transfer of nuclear materials and facilities to other countries only if an agreement was reached that these materials would be used for peaceful rather than military purposes. Consequently, the second part of the Atoms-for-Peace Plan called for the establishment of a new international agency to promote the peaceful uses of atomic energy. The statute of IAEA was adopted in 1956 and came into force in 1957.³ The French nuclear explosion of 1960, followed by the successful Chinese nuclear test of 1964, made the West more concerned that other countries

Peace, New York, Washington: Frederick A. Praeger Publishers, 1966; Leonard Beaton, *Must the Bomb Spread*, Harmondsworth, MDDX: Penguin Books, 1966

² Allan D. McKnight, *Nuclear Non-Proliferation: IAEA and Euratom*, New York: Carnegie Endowment for International Peace, June 1970, p.10

³ Statute of the International Atomic Energy Agency, *United Nations Treaty Series* (UNTS), No. 3988, Vol. 276, 1957. The objectives of the agency were: a) to seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world, b) to ensure, so far as it was able, that assistance provided by it, as its request, or under its supervision or control was not used in such a way as to further any military purpose. (Article II). This agency was also authorized to establish a safeguards system. (Article III).

might follow in the footsteps of the first five nuclear weapon states. The NPT therefore was the result of a strong determination by the nuclear states that the nuclear club could not be allowed to increase and that further proliferation of nuclear weapons had to be resisted by all means. Western scholars began to show an interest in finding ways to arrest the spread of nuclear weapons. Scholarly efforts between 1968-1989 focused primarily on identifying the possible incentives/disincentives for states going nuclear. During the cold-war years, because of the US-Soviet rivalry and the superpowers' lenient attitude towards their client states' aspirations for acquiring nuclear weapons, mainstream International Relations (IR) scholarship devoted less time to studying the consequences of further proliferation. The focus was on the impact of US/Soviet nuclear arms race on global stability.⁴ From the late 1960s to the 1980s terms like "nuclear haves" and "nuclear have-nots," "vertical proliferation" and "horizontal proliferation," "declared nuclear states" and "undeclared nuclear states," "first generation proliferators" and "second generation proliferators," and "nuclear weapon states" and "opaque nuclear states" were in the forefront of the proliferation literature. With the end of the cold war, scholarly attention was redirected towards the consequences of nuclear proliferation, and terms such as "problem states" and "rogue states," which were relatively unknown during the

⁴During this period the primary security concern for the two superpowers became mutual nuclear deterrence. How far and to what extent mutual nuclear deterrence could work and ensure world stability was the central debatable issue among the scholars.

cold war period, began to be used in the proliferation literature.⁵ The end of the cold war was instrumental in bringing about this new scholarly interest in the consequences and ramifications of further proliferation. The subject of new states acquiring nuclear weapons and, inevitably, increasing the size of the nuclear club was not only vexing, but the effects of this spread also became a matter of great scholarly concern -- especially in the West. Table 1 is an illustration of the general dichotomy that exists in the nuclear proliferation literature.

Table 1 Here

⁵Nuclear non-proliferation has remained in the security interest of the US since the beginning of the NPT. However, US/Soviet rivalry prevented the US from devoting much time, money or even diplomatic effort to discouraging states from acquiring nuclear weapons. Sometimes it has even overlooked nuclear activities of states that were strategically important to it, such as the case of Pakistan and Israel. The point is that as soon as the cold war ended and the East-West rivalry came to a close, the US, once largely indifferent to the problem of regional proliferators, now made the proliferation issue the centerpiece of its new strategic outlook. Moreover, nuclear developments in countries such as Iran and Iraq have prompted greater attention to non-proliferation efforts. For more information in renewed US interests on emerging regional nuclear powers, see, among others, Michael Klare, *Rogue States and Nuclear Outlaws*, New York: Hill and Wang, 1995.

TABLE 1

NUCLEAR PROLIFERATION LITERATURE

Causes of Nuclear Proliferation	Consequences of Nuclear Proliferation
Mostly Between: 1968-1989 Cold War Years (Pre-NPT-End of the Cold War)	Mostly From: 1989 onwards (After the Cold War to Present Time)
Motivations pertaining to three levels of analysis	Views pertaining to the impact of proliferation
1) Systemic Level Motivations 2) State Level Motivations 3) Individual Level Motivations	1) Optimistic View 2) Pessimistic View

Although the present study is focused primarily on an examination of the causes of nuclear proliferation in protracted conflict states, to some extent it also deals with the consequences of proliferation, since it demonstrates the effectiveness of non-traditional nuclear deterrence in the protracted conflict states. Consequences of proliferation, may not in some cases be instability as is depicted by some scholars. It is more important to find out the causes of proliferation and to offer prescriptions accordingly, rather than to dwell on what might or might not happen with a few more nuclear weapons-capable countries or new nuclear states in this world of already existing nuclear states. Prescription without an understanding of causation is unacceptable; and the association between the two must be taken seriously. Therefore, the primary objective should be to identify what motivates states to go nuclear and which kind of states are most nuclear-weapons prone. Only then is a more comprehensive understanding of the consequences of such states' acquisition of nuclear weapons possible. Where states aspire to possess nuclear weapons for deterrent purposes, the consequences of proliferation may be limited to the same kind of stability that the world had witnessed in relation to US/Soviet nuclear acquisition. The difference is that the world would witness a sub-systemic stability and not a systemic one as was the case in the cold war period.

Before reviewing scholarly works specifically about motivations for nuclear weapons acquisition and beginning a more focused discussion, it is important to state the rationale for the present study. Despite the scholarly attention given to nuclear proliferation (both causes and consequences), the endeavors have been

generally descriptive in nature. Barring a few works,⁶ there has been little substantial theoretical contribution to the proliferation literature. A theoretically-driven explanation is necessary to explain why some countries have, until recently, acquired nuclear weapons opaquely while others are pursuing the nuclear option in a limited way. It is also important to note that there has not been any work on proliferation in the protracted conflict regions which I am examining. I am also connecting variables that have not been looked at in depth.⁷

Scholarly works on proliferation incentives have made no distinction between motivations for vertical proliferators and motivations for horizontal proliferators, while two distinct general patterns of nuclearization--“visible” and “opaque”--have been clearly recognized by some scholars. Even though a clear distinction is made when identifying the five nuclear states and the undeclared nuclear-weapons-capable countries, such distinction is absent when identifying the motivations for nuclear weapons acquisition of the former and the latter group of states. This is interesting because it could mean that today’s “undeclared nuclear states,” “new nuclear states,” or “the problem countries” may, in fact, have the

⁶For example, see, Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, Chicago: University of Chicago Press, 1984; Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate*, New York: W.W. Norton, 1995

⁷Protracted Conflict theorists, such as Edward Azar, Michael Brecher and Jonathan Wilkenfeld, have been more concerned about the characteristics of protracted conflicts in general rather than how they are expected to behave in the realm of policy choice such as, nuclear proliferation. Although other policy choices such as war are central in their discussion, they have not looked at the association between PCs and war-probability which, in turn, affects nuclear weapons acquisition.

same incentives that the five nuclear weapons states had with regard to their possession of nuclear weapons. Consequently, more new nuclear weapon states in today's world may not mean a disruption of peace and stability. Just as system stability and balance was enhanced with nuclear weapons possession by the first generation proliferators, sub-systemic stability and balance may be reinforced by the second generation nuclear weapons states.

Scholars have identified several motivations or incentives for states going nuclear. They comprise a combination of military, political, economic, and leadership concerns and motivations. This study reviews these proliferation motivations and groups them into three categories--systemic, state and individual actor--- in accordance with the levels of analysis framework used by International Relations theorists.⁸ Simply put, scholars have identified three levels of explanations for the acquisition of nuclear weapons. Table 2 provides the list of motivations for nuclear weapons acquisition at the systemic, state, and individual levels.

⁸Levels of analysis has been the most common framework used by International Relations theorists. By using this framework, a researcher makes it clear at the outset which variable from which level of analysis exactly explains the research puzzle. In other words, whether the explanatory variable is to be found in the anarchic nature of the international system, or the internal structure of the states in question, or the personalities and pre-dispositions of individual decision-makers, is spelled out at the outset. See, Stephen J. Andriole, "The Levels of Analysis Problems and the Study of Foreign International and Global Affairs: A Review Critique and Another Final Solution," *International Interactions* 5, 2-3, 1978, pp.113-133; Joseph S. Nye, *Understanding International Conflicts*, New York: Harper Collins College Publishers, 1993, chapter 2

TABLE 2
PROLIFERATION MOTIVATIONS AT THREE LEVELS
OF ANALYSIS

Systemic-Level Motivations	State-Level Motivations	Individual-Level Motivations
1. Quest for Security 2. Seeking Regional Hegemony 3. Gaining International Prestige 4. Obtaining Bargaining Advantages	1. Domestic Turmoil 2. Economic Motivation 3. Public Opinion 4. Scientific/ Technological Momentum 5. Bureaucratic Politics	1. Attitudes and Beliefs of Leaders

In the section below, all of the explanatory motivations arising from different levels of analysis provided by proliferation scholars are put forward and then followed by a systematic evaluation of each motivation. I argue that even though the security incentive--a system-level factor--is a critical variable for the present study, it is not sufficient to explain the phenomenon. It is better understood as an intervening variable. Independent variables from the two other levels of analysis cannot provide a satisfactory explanation for the dependent variable (proliferation in the PC regions) which I am examining.

SYSTEMIC MOTIVATIONS

Within this category it is argued that explanations for the possession of nuclear weapons are to be found within the anarchic relations that exist between states. The motivations from this level of analysis are, basically, explanations of nuclear proliferation from a Realist theoretical perspective. At the systemic level many scholars treat security calculation as the most important incentive to acquire nuclear weapons. Seeking regional hegemony, gaining international prestige, and obtaining bargaining advantages have been other systemic related motivations to proliferation.

a) Quest for Security

As regards security, scholars have argued that in most cases a state's effort to attain nuclear weapons capability can be explained in terms of its quest for

security.⁹ The simple logic is that a state would be inclined to acquire nuclear weapons if it were insecure. William Epstein writes that:

The dominant positive and negative incentives to go, or not to go, nuclear are those involving a country's military security...Whether the disincentives to go nuclear can be reinforced and made to outweigh the incentives will, to a large degree, depend on whether satisfactory alternatives can be found to the possession of military power as a means of ensuring security.¹⁰

This quest for security is further enhanced when a country desires an effective deterrent capability against a hostile nuclear power.¹¹ If the adversary is a nuclear power, there is more reason for a country to go nuclear. The reasoning is that the devastating nature of a possible nuclear weapons retaliation would dissuade any hostile state from committing aggression against the other. Therefore, with the acquisition of nuclear weapons, a state could increase its security margin

⁹Security has been identified as the most important incentive to proliferate by theorists such as Stephen Meyer, William Epstein, William Potter, Ashok Kapur among others. They also consider the security dilemma to be a crucial imperative for a state to go nuclear. Other domestic motivations, however, have also been listed by these and other scholars. See, George Quester, *The Politics of Nuclear Proliferation*, Baltimore: Johns Hopkins University Press, 1973; Ted Greenwood, *Nuclear Proliferation: Motivation, Capabilities and Strategies for Control*, New York: McGraw Hill, 1977, p.57; William Epstein, "Why States Go and Don't Go Nuclear," *Annals*, 430. March 1977, p.17; William C. Potter, *Nuclear Power and Nonproliferation: An Interdisciplinary Perspective*, Cambridge, Mass: Oelgeschlager, Gunn and Hain, 1982, p.136; Stephen M. Meyer, *Dynamics of Nuclear Proliferation*, pp.46, 56-57; Ashok Kapur, *Pakistan's Nuclear Development*, London: Croom Helm, 1987

¹⁰William Epstein, "Why States Go and Don't Go Nuclear," p.17

¹¹Ibid., p.18

and deter any existing or would-be adversary from attacking. At the very least, a state that possesses such weapons effectively deters most unacceptable actions of another state.¹² Epstein argues that it is, essentially, to meet these kinds of vital security challenges that most countries want to acquire nuclear weapons.¹³

Along the same line, Strong argues that the apprehension that an enemy has, or might have, nuclear weapons is perhaps the most important motivation for nuclear proliferation.¹⁴ This implies that the security motivation becomes more important when a state's national security is threatened with the possibility of an adversary's possession of nuclear weapons. The drive to acquire the capability and thereby match the capability of the adversary becomes crucial. A security dilemma is thus created because the additional security obtained by one state results in a sense of insecurity by the other, which, in turn, tries to increase the margin of its security by means which the first state perceives as a threat. Both the US and USSR acquired nuclear weapons because of security concerns. In the case of the US, scientists and decision-makers strongly believed that the US should acquire this devastating weapon before Germany obtained it. The Manhattan Project scientists agreed with President Harry Truman regarding the original reason of American nuclear research:

¹²George Quester, "Reducing the Incentives to Proliferation," *Annals* 430, March 1977, p.71

¹³William Epstein, "Why States Go and Don't Go Nuclear," p.20

¹⁴Robert Strong, "The Nuclear Weapon States: Why They Went Nuclear?," in W.H. Kincade and C. Bertram, eds., *Nuclear Proliferation in the 1980s*, New York: St. Martin's Press, 1982, p.7

The compelling reason for creating this weapon with such speed was our fear that Germany had the technical skill necessary to develop such a weapon.¹⁵

From this it is clear that security has always been one of the most important systemic motivation for states going nuclear. Whether it is for deterrence, bolstering military capabilities, or matching the capabilities of an adversary, the acquisition of nuclear weapons seems to represent a viable answer to a variety of military threats.¹⁶

b) Seeking Regional Hegemony

In terms of regional hegemony it is argued that states which wish to dominate a region will be more inclined to develop nuclear weapons.¹⁷ According to Lloyd Jensen, “nuclear status may enhance power and prestige in relations with smaller states. A state that acquires nuclear status may assume a position of increased importance within its particular geographical region.”¹⁸ This is important because if nuclear weapons can turn a state into a regional power, it will not have

¹⁵Quoted in Robert Gilpin, *American Scientists and Nuclear Weapon Policy*, Princeton: Princeton University Press, 1962, p.46

¹⁶See, Geoffrey Kemp, “Nuclear Forces for Medium Powers, Part I: Targets and Weapons Systems,” *Adelphi Papers*, no. 106, 1974, pp.1-41

¹⁷See, George Quester, *The Politics of Nuclear Proliferation*; William Epstein, “Why States Go and Don’t Go Nuclear,” p.18; Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p.50

¹⁸Lloyd Jensen, *Return from the Nuclear Brink: National Interest and the Nuclear Nonproliferation Treaty*, Lexington Mass: Lexington Books, 1974, p. 37

to engage in regional war to demonstrate power and status in its geographical region.

c) Gaining International Prestige

Some proliferation scholars have argued that in acquiring nuclear weapons a state may bolster its international prestige.¹⁹ Epstein argues that:

It has become obvious to all countries that the acquisition of nuclear weapons and technology for making them enhance a nation's prestige and status in the world, not just in military terms, but also in other ways. States possessing these arms are given greater weight in the entire range of foreign policy matters. They are brought into more top level international discussions of all kinds, and their views are treated with greater respect.²⁰

Similarly, Meyer writes that nuclear weapons have been perceived as consonant with global power status and that the nuclear status of the permanent members of the United Nations Security Council has been the most obvious illustration of this.²¹ Thus, achieving international prestige and international

¹⁹Quester writes about the indirect advantages that a state could obtain from the possession of nuclear weapons. He considers obtaining security with nuclear weapons as a straightforward advantage and acquiring world prestige as an indirect advantage derived from the possession of nuclear weapons. According to him, China would not have received so much world attention after the Great Cultural Revolution had it not been for its nuclear weapons possession. See also, Lloyd Jensen, *Return from the Nuclear Brink*, pp.35-36; William Epstein, "Why States Go and Don't Go Nuclear," p.21; William C. Potter, *Nuclear Power and Nonproliferation*, p.139

²⁰William Epstein, "Why States Go and Don't Go Nuclear," p. 21

²¹Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, 1984, p.52

status/position may also drive states to pursue the nuclear option. Although international prestige motivations and international status motivations are not exactly the same, they fall into a single category because international prestige is derived from international status and so they overlap. Unless a country gains its rightful status in international politics, gaining international prestige is unlikely. Under the international power/ prestige incentive category, a country may pursue its nuclear option to enhance its status and position in the eye of other world powers. It is believed that nuclear weapons "somehow magnifies a nation's image."²² With regard to the British nuclear incentives Rosecrance writes:

The existence of a major enemy, Nazi Germany was not the only spur to the development of a nuclear weapon. The British also intended the bomb for post-war purposes, presumably to enhance or confirm their station in world affairs. Prestige or general power factors then combined to reinforce the primary motivation of dispatching a dangerous foe.²³

Similarly, China's acquisition of nuclear weapons may partly be explained by this incentive; it was determined to achieve great power status and global recognition of the Peoples Republic of China (PRC) as the only legitimate government of China.²⁴ Quester writes that the world took Britain and France

²²Ibid., p. 46

²³Richard N. Rosecrance, "British Incentives to Become a Nuclear Power," in Richard N. Rosecrance, ed., *The Dispersion of Nuclear Weapons*, p. 53

²⁴Robert M. Lawrence and Joel Larus, eds., *Nuclear Proliferation Phase II*, Lawrence: Published for the National Security Education Program, University of Kansas, 1974, p.5

more seriously because they possessed nuclear weapons.²⁵ In the case of India--the new nuclear state--it has often been argued that the Pokhran test of 1974 was conducted to obtain a major power status in the world.²⁶ All these scholars uphold the view that states may very well have gone nuclear and might acquire nuclear weapons in the future to enjoy an enhanced international prestige and status.

d) Obtaining Bargaining Advantages

A number of scholars have also argued that occasionally countries are inclined to possess nuclear weapons because these weapons can be used as bargaining chips where needed.²⁷ Quester comments that a nation possessing nuclear weapons may be able to compel other nations to make concessions.²⁸ This could be of particular importance for countries that do not have alternative means of bargaining or acquiring concessions from the major powers. States could use the threat of nuclear acquisition to obtain diplomatic leverage or force the world to take notice of their concerns (for example, South Africa and North Korea).

²⁵George Quester, "Reducing the Incentives to Proliferation," p.71

²⁶Lewis A. Dunn, "India, Pakistan, Iran...A Nuclear Proliferation Chain?," in William H. Overholt, ed., *Asia's Nuclear Future*, Boulder, Colorado: Westview Press, 1977, p. 201

²⁷George Quester, "Reducing the Incentives to Proliferation," p. 71; William C. Potter, *Nuclear Power and Nonproliferation*; and Michael Mazarr, "Going Just a Little Nuclear: Nonproliferation Lessons from North Korea," *International Security*, vol.20, no.2, fall 1995, p.100

²⁸See, George Quester, "Reducing Incentives to Proliferation," pp.70-81

STATE-LEVEL MOTIVATIONS

State-level proliferation motivations are found within the internal structure of states. It is argued that why states go nuclear may have more to do with states' domestic politics and economics than with the anarchic structure of the international system. This is a liberal view in which scholars express the belief that state-level explanations are ultimately more important in any policy choice.

It is believed that an increase in domestic turmoil or unrest would move national leaders to consider the nuclear option. It has been suggested that national leaders may consider the nuclear option as means of diverting domestic attention away from internal/domestic problems.²⁹ A domestic-level economic explanation would state that, given the increasing cost of conventional weapons, states are more inclined to develop nuclear weapons to obtain defense at a low cost.³⁰ According to some views, domestic public opinion motivation suggests that it is the public pressure that drives states to acquire nuclear weapons.³¹ Scientific/technological momentum also propels a state with the potential capability to develop nuclear weapons.³² Finally, bureaucratic imperatives are

²⁹Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p.63 ; Lewis A Dunn, "A Widening Nuclear Circle: South Asian Choices in Broader Perspective," in Francine R. Frankel, ed., *Bridging the Nonproliferation Divide: The United States and India*, Lanham, New York, London: University Press of America, 1995, pp. 78-79

³⁰Robert Strong, *The Nuclear Weapons States*, p.14; William C. Potter, *Nuclear Power and Nonproliferation*, p.141

³¹See Robert Strong, *The Nuclear Weapon States*, pp.19-21

³²William C. Potter, *Nuclear Power and Nonproliferation*, p. 8; Ziba Moshaver, *Nuclear Weapons Proliferation in the Indian Subcontinent*, Basingstoke:

responsible for nuclear weapons acquisition.³³ It is pertinent to look at these factors more closely.

a) Domestic Turmoil

Scholars have often argued that domestic political considerations may enter into nuclear decision-making-- since going nuclear may serve the political interests of particular individuals or groups.³⁴ It has been suggested that the nuclear option can be exercised as a strategy to divert public attention away from domestic turmoil. International Relations theorists have long argued that often leaders who are engulfed in a domestic turmoil look for opportunities to become involved into international conflicts so that the population ultimately "rally around the flag."³⁵ Similarly, proliferation scholars argue that in times of internal crises or unrest, leaders may find it useful to go nuclear so that domestic energies are diverted away from internal problems such as civil strife, ethnic hostility or other kinds of

Macmillan, 1991, p.48; Jonathan D. Pollack, "China and Asia's Nuclear Future," in Francine R. Frankel, ed., *Bridging the Nonproliferation Divide*, p.104

³³Mitchell Reiss, *Without the Bomb: The Politics of Nuclear Non-Proliferation*, New York: Columbia University Press, 1988, p. 217

³⁴Robert Strong, *The Nuclear Weapon States*, p.19

³⁵Diversionary theory or Scapegoat hypothesis has often been used by scholars in International Relations, especially, when they wanted to prove that it is ultimately the domestic situation that explains most major state policies like war. The important thing that needs to be stated is that scapegoat theory is not always easy to prove. There has to be an existing enemy for this theory to work. See, Jack S. Levy, "Domestic Politics and War," *Journal of Interdisciplinary History*, vol. 18, 4, spring 1988, pp.666-672

unrest.³⁶ In India, Shastri's decision to start the nuclear weapons program after the Chinese nuclear test in 1964 and Indira Gandhi's decision to test nuclear weapons in 1974 are often used examples by scholars to argue that in times of political instability at home, leaders tend to make critical decisions.³⁷

Others have argued somewhat differently. Here the subjects of the domestic problem are the leaders and the governments rather than the public. When leaders lose popularity and political weakness predominates in the domestic political structure, they may have the impetus to go nuclear, to divert public attention away from domestic problems.³⁸ Here, the leaders' ambition may not only be to provide the public with diversion, but to regain popularity. Under such circumstances, it is assumed that nuclear weapons will restore or strengthen popular support for a government or regime. In the Indian case, it was believed that Indira Gandhi had lost popularity in the early 1970s at a time when domestic internal troubles were persistent. Under such circumstances, the leader tested nuclear weapons to divert domestic attention and gain back her popularity.

The domestic turmoil-diversion motivation of proliferation thus remains one of most important incentives provided by proliferation scholars to the extent that it has little to do with nuclear weapons per se, and more to do with obtaining relief from current domestic troubles. This motivation, if demonstrated to be a

³⁶Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p.63

³⁷See, Bhabani Sen Gupta, "Dilemma without Anguish: India, Moraji and the Bomb," in T.T. Poulouse, ed., *Perspectives on India's Nuclear Policy*, New Delhi: Young Asia Publications, 1978, p. 232

³⁸Robert Strong, *The Nuclear Weapon States*, p.19

practiced, proved useful tool, is alarming because all states--in some way or other-- face domestic turmoil and may have the need to adopt the nuclear option.

b) Economic Motivation

Simply stated, the argument is that nuclear weapons may after all be cost-effective and that a country could reduce its defense expenditures with the possession of such weapons.³⁹ When the cost of conventional forces in a country becomes too high and the state is no longer able to maintain such high defense expenditures, "acquiring nuclear weapons would permit the nation to maintain (or increase) its military capability with less of an economic burden."⁴⁰ The acquisition of nuclear weapons would eventually result in a reduction in the quality and quantity of conventional forces and, consequently, reduction in defense expenditure.

Scholars including Quester write about the extreme version of this economic incentive. He argues that nuclear bombs could become very cheap and that time may arise when avoiding nuclear weapons could be expensive.⁴¹ Whether the bombs are cheap or not, most of these scholars argue that Britain and France have reduced their defense expenditures and have also become secure with the acquisition of nuclear weapons. Others believe that countries like India or Iran may

³⁹William Epstein, "Why States Go and Don't Go Nuclear," p.23; Robert Strong, *The Nuclear Weapon States*, p. 14

⁴⁰Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p.65

⁴¹George Quester, "Reducing the Incentives to Proliferation," p.71

not have to spend millions on such bombs and that ultimately they may be able to reduce their defense cost by going nuclear.⁴²

c) Public Opinion

With regard to domestic politics, scholars have occasionally discussed public opinion as one of the motivations for a state's nuclear choice. There are countries where public enthusiasm remains high for their state going nuclear for various reasons and they pressure their governments to undertake the nuclear option. Thus, scholars argue that public pressure to go nuclear has sometimes played an important role in states' nuclear decisions.⁴³ Robert Strong writes that sometimes public pressures may nuclearize the country and the concerned leaders may resist such pressures to a certain point.⁴⁴ Pressure may also develop from

⁴²Ibid.

⁴³Scholars, especially when writing about regional powers, have stated that the public has a role in nuclear decisions. In the case of India between 1966-1971 majority of the Indians supported the development of nuclear weapons by India. In 1971, another survey found that the Indian public was even more enthusiastic about their country having nuclear weapons. Others, like Stephen P. Cohen, stated in 1984 that Pakistan's nuclear weapons would be greeted with widespread support at home. In fact, that is what happened in Pakistan after the nuclear tests in May 1998. For more information on these, see, Akhtar Ali, *Pakistan's Nuclear Dilemma*, Karachi: Economic Research Unit, 1984; Stephen P. Cohen, *The Pakistan Army*, Berkeley: University of California Press, 1984.

⁴⁴Robert Strong states that according to some observers, the Indian Prime Minister Indira Gandhi did not want India to go nuclear and thus resisted the option to a certain point. She, according to this view, could not overlook the pressures from the parliament, public opinion and the government officials after a certain point and finally gave in.

specific interest groups within the countries for going nuclear.⁴⁵ According to this view, when such pressures continue, governments have no choice but to embark on a nuclear weapons option.

d) Scientific/Technological Momentum

When a country makes progress in nuclear technology a momentum is generated which spurs further advancement. It is argued that when scientists succeed in developing a particular technology, they often have an incentive to develop more sophisticated, but related technology.⁴⁶ Developing nuclear weapons is, itself, a great technological achievement for a country and therefore, if a country has the ability to do so and possesses the nuclear technology, it will eventually acquire the weapons. These scholars believe in the “existence of a technological determinism.”⁴⁷ Others, like Greenwood, have argued that nuclear weapons could be used by the elite as a symbol of modernity and technological competence.⁴⁸ Stephen Meyer states, “Nuclear technology itself is the driving force behind decisions to acquire nuclear weapons --that a technology imperative pushes

⁴⁵Robert Strong, *The Nuclear Weapon States*, p.19

⁴⁶See, Brij Mohan Kaushik and O.N. Mehrotra, *Pakistan's Nuclear Bomb*, India: Sopan Publishing House, 1980.

⁴⁷Technological determinism here means that “political decisions are dictated by the material progress of time.” If this is true, then very little can be done about proliferation. Nations follow the same path of military development--even though moving at various speeds--and always leading to the acquisition of the best available equipment and strategy.

⁴⁸Ted Greenwood, *Nuclear Proliferation*, pp. 50-51

nations from latent capacity to operational capacity.”⁴⁹ The decision to acquire nuclear weapons is made because the technology is available.

Other scholars have argued about the technological motivation differently. Here the argument is not about technological momentum per se, but about the spill-over effects of using nuclear energy for peaceful purposes. Quester, for example, argues that the production of electricity by nuclear reactors makes perfect sense in the modern world. The operation of such reactors, however, puts countries into contact with the materials needed for bombs, namely, plutonium and enriched uranium. He maintains that “staying away from the bomb might require staying away from the most cost-effective source of energy.”⁵⁰ Nuclear energy programs, he believes, are a powerful incentive towards nuclear weapons proliferation.

e) Bureaucratic Politics

This motivation concerns the decision-making process itself. Decision-making authority in some countries may be highly compartmentalized and nuclear behavior may be shaped by the strategic, technical or the bureaucratic level.⁵¹ Where countries are ruled by a military regime, it is likely that the military’s special interest in these weapons will drive these states to acquire nuclear weapons. Even

⁴⁹Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p.9

⁵⁰George Quester, “Reducing Incentives to Proliferation,” p.72

⁵¹Jonathan D. Pollack, “China and Asia’s Nuclear Future,” in Francine R. Frankel, ed., *Bridging the Non-proliferation Divide*, pp.105-107

where democratic political institutions are present, the military may play a vital role in nuclear decisions. Similarly, the scientific community's role should not be underestimated in any nuclear choice.

INDIVIDUAL-LEVEL MOTIVATION

Individual-level explanations of nuclear proliferation deal with the personalities, attitudes and beliefs of decision-makers in nuclear choices. According to the motivations from this level of analysis, cognitive beliefs and the perceptions of decision-makers play an important role in any policy choice, nuclear choice being no exception.

a) Attitudes and Beliefs of Leaders

At the individual level in single case studies, scholars have argued that the attitudes and beliefs of key leaders and their personalities have often shaped nuclear decisions.⁵² This is especially stated in the context of Indian and Pakistani nuclear decisions involving the attitudes of Indira Gandhi and Zulfikar Ali Bhutto respectively. In the Middle East, the leadership roles of Ben Gurion of Israel, the Shah of Iran, and Saddam Hussein of Iraq have been specifically associated with the Israeli, Iranian and Iraqi nuclear weapons programs respectively. Meyer has argued somewhat differently; but he too emphasized the role of individuals. He

⁵²Ashok Kapur, *Pakistan's Nuclear Development*, p.120; Ziva Moshaver, *Nuclear Weapons Proliferation in the Indian Subcontinent*, pp.62-70; Lewis A. Dunn, "A Widening Nuclear Circle," p.91

contends that countries go nuclear because specific individuals come to power at specific times and create the proper conditions for nuclear proliferation.⁵³ Although he does not write about the beliefs and attitudes of these key individuals, he states clearly that these individuals play a decisive role in creating an atmosphere that favors pro-nuclear decisions.

EVALUATING THE MOTIVATIONS

Having stated the above motivations discussed in the existing literature, I argue that the individual and domestic level motivations are inadequate to explain nuclear proliferation in protracted conflict regions (which is the focus of the present study). Systemic arguments, except for security motivation, also have questionable value in explaining PC proliferation. Although the security motivation is important, it needs to be well-explained for an understanding of nuclear proliferation in protracted conflict states. An evaluation of each of these motivations is provided below.

INDIVIDUAL-LEVEL MOTIVATION

a) Attitudes and Beliefs of Leaders

With regard to individual-level explanations of nuclear proliferation, specifically the attitudes of leaders, the most important problem appears to be that it is not just one single leader who is responsible for a state going nuclear. To say that a single leader's attitude propels a state to acquire nuclear weapons is to deny

⁵³Stephen M. Meyer, *The Dynamics of Nuclear Proliferation*, p. 9

the existence of the nuclear program that involves so many key actors.⁵⁴ Nuclear weapons program requires years of preparation from the development of an infrastructure to the development of the weapons grade material. Throughout these stages, in most cases, one individual does not provide leadership in a country. Regimes or governments change, and with these changes come different political parties and leaders. Indira Gandhi, for example, was not in power in all the stages of the Indian nuclear weapons development. This case shows that a leader who enthusiastically made the decision to launch a nuclear weapons program may not have much say at a later stage of the program when the country is, in fact, ready to make the nuclear bomb. Even if a leader tries to influence the final decision to acquire the bomb, it is hard to prove that it was due to this leader's strong determination or drive that a country had gone nuclear because there are many key players involved in the program. Scientists play a vital role in the nuclear programs of all countries and they can enhance or reduce the speed of the program based on their best interests.

Individual-level theories contribute little to the understanding why India and Pakistan continued their nuclear programs even after these prominent individuals--Indira Gandhi and Zulfikar Ali Bhutto--departed from the respective governments and why often less-enthusiastic leaders--Moraji Desai and Benazir Bhutto--have been obliged to continue the program. It is clear that this explanation is inadequate

⁵⁴ This is not to undermine the important role leaders generally play in their states' nuclear decision, especially when they are the ones who finally have to approve it, but to point out that other key actors are involved.

for an understanding of the nuclear decisions of countries with leadership changes that have not resulted policy change with regard to the nuclear weapons issue.

Finally, what is important to consider is that, overall, this explanation is inadequate for the present study because it does not consider why all leaders with different personality traits in a PC state would want their country to go nuclear. Moreover, the attitudes of individuals are often difficult to generalize and thus have limited relevance in theory formulation, which is the central purpose of this study.

STATE-LEVEL EXPLANATIONS

a) Bureaucratic Politics

Bureaucratic politics explanations of nuclear decisions cannot explain why militaries should be interested in weapons that are essentially for deterrence. In most countries the military has not been keen to acquire nuclear weapons because expenditures on non-conventional defense mean less expenditure on conventional defense. Moreover, militaries are concerned about budget cuts related to huge nuclear expenditures, and they are unlikely to tolerate such cuts. The Pakistani military has occasionally shown little desire to develop nuclear weapons for budget reduction.

Finally, if the military as an institution wanted to acquire nuclear weapons, they would want their countries to go openly nuclear. They would not be satisfied with the capabilities that most of the new nuclear countries appear to have possessed for a long time. After all, it is the weapons that bring the power and

might, and not the capability that has to be assembled in times of need. In other words, nuclear capabilities that still require assembly, as is the case in an opaque proliferation, are not the same as nuclear weapons that are ready for use.

b) Scientific/ Technological Momentum

Technological incentive remains a weak argument because, except for India, none of these new nuclear states has performed a test for several decades which is the ultimate way to demonstrate technological development. Although India and Pakistan tested their weapons in 1998, they kept their option open for decades. If technological momentum had anything to do with nuclear weapons acquisition within the PC states, then the possession would not have been opaque for this long in South Asia and until today in the Middle East. How can a country prove its technological development without conducting open tests? Within the technological motivation, as far as the spill-over effects of a peaceful nuclear program are concerned, it would be naive to imagine that a country acquires nuclear weapons capability without actually having the intention to possess it. Specific decisions must be made to possess nuclear weapons capability; even if weapons-materials exist, it does not necessarily mean they will be used for weapons purposes. Several countries, including Japan and Canada possess nuclear materials, but have not followed the weapons path. The possession of nuclear materials and technology alone does not induce a country to develop nuclear weapons. There must be specific intentions to make these weapons. Thus, it is evident that technological spill-over effects may not necessarily compel a country

to acquire nuclear weapons unless specific aspirations are there, and simultaneously, efforts are made to go nuclear.

c) Public Opinion

As regards public opinion, it is difficult to find any country that has gone nuclear due to public pressure alone. It is certainly possible for the public in a democratic country to influence vital policy-decisions, but it is highly unlikely that in the realm of nuclear proliferation--where there are few key players--public opinion would be a central motivating factor. Leaders certainly use public opinion when it is in their best interest to do so in any policy choice and disregard it as much as possible when the opposite is the case. The extent that the public plays a role in nuclear weapons acquisition is not only hard to say, but also uncertain because of a lack of proper statistical evidence. Public opinion surveys only demonstrate public desires on a policy choice, but they certainly cannot infer that leaders have given consideration to these public opinions. It is unlikely that public pressure would automatically bring about nuclear weapons possession by a country. Moreover, leaders may mold public opinion in favor of their decision.

What is more interesting about public opinion as a motivating factor to go nuclear is that it is very unlikely that the population of any country would want their state to possess nuclear weapons opaquely. Simply put, if public pressure plays a role, open nuclear possession would be the end result. Most regional protracted conflict states are still undeclared nuclear states. If public pressure was the central motivating factor in India and Pakistan's nuclear choices, then these

two countries would have been openly nuclear a long time ago. It is, therefore, unlikely that public opinion influences nuclear weapons acquisition much even if leaders pay attention to public pressure.

d) Economic Motivation

The domestic economic motivation is often inadequate since nuclear weapons do not replace a country's conventional forces. Empirical evidence does not suggest that any of the five original nuclear weapons countries has reduced its conventional defense expenditures. A country does not stop developing its conventional forces just because it has the nuclear bomb. In fact, a country may have to allocate additional funds for its defense budget for the nuclear weapons program. China has been spending heavily on conventional forces during the 1990s even though it is a declared nuclear-weapon country. This has also been the case with the former USSR and the US. The new nuclear states are not exceptions and cannot stop their conventional expenditures. An economic incentive is thus unlikely to have driven PC states to proliferate.

e) Domestic Turmoil

Domestic incentives also have limited significance as they do not explain why some states, such as Israel, are still undeclared nuclear states, or why others, such as India and Pakistan, have maintained that status for many years. As far as the domestic turmoil motivation is concerned, it is hard to imagine a country diverting domestic attention by the possession of nuclear weapons alone,

particularly if the possession is an opaque one. What do nuclear weapons have to do with diversion? When countries are involved in international wars, domestic or civil wars may subside; consequently one could argue that scapegoat theory has worked. When there is a common external enemy, internal enemies may unite temporarily to fight against it. The scapegoat theory, however, has very little relevance in the realm of nuclear proliferation. Why would a civil unrest stop--even temporarily--with the possession of a nuclear weapon? It is only a technological achievement that can hardly unify the internal rivals unless there is a war or intense external pressure. The Kashmiris did not stop fighting after India detonated its nuclear device in 1974; nor did they stop fighting after India conducted a series of nuclear tests in May 1998. They did not rally around the Indian flag at that time, nor are they doing so now. Similarly, the ethnic problems within Pakistan--the secessionist sentiments among Baluchis and Pashtuns--did not stop after 1987 when Pakistan officially declared the possession of nuclear weapons capability. With Pakistan's first nuclear tests in May 1998, the internal conflicts did not rest. The Mohajirs are still fighting in Pakistan and internal civil strife continues.

Even though both declared and undeclared possession of nuclear weapons are unlikely to divert domestic turmoil, the undeclared possession has a slim chance when compared to the former. Therefore, I argue that the new nuclear states--mostly undeclared or ones which have very recently become openly nuclear--do not seem to have been motivated to go nuclear by domestic considerations.

SYSTEM-LEVEL ARGUMENTS

The system-level incentives, which include obtaining bargaining advantages, gaining international prestige and seeking regional hegemony, are of limited value as long as a state does not officially declare its possession of nuclear weapons.

a) Obtaining Bargaining Advantages

With regard to increasing bargaining advantage with nuclear weapons acquisition, one has to consider the extent that world powers could be manipulated using the possession of nuclear weapons as the stick. Other means of getting concessions must exist. Are the expensive and risky endeavors of going nuclear to get concessions or political leverage worth it? How many countries would take the risk of having sanctions imposed rather than concessions or political leverage? These are crucial questions to ask because the answers will facilitate an understanding that unless other critical motivations exist, a state--especially a developing one--can not be expected to take such major risks by acquiring nuclear weapons.

Rather than increasing bargaining advantages, Iraq had military and economic sanctions imposed by the West as a result of the discovery of its nuclear weapons program during the 1990-91 period. The country has not been successful in convincing the West to withdraw the sanctions to date. Although it has consistently attempted to halt the UN weapons inspectors from investigating its weapons of mass destruction until the UN lifted the economic sanctions, its tactics

have not worked. In South Asia, Pakistan was subjected to economic sanctions once its nuclear program was officially disclosed in the post-1987 period. India and Pakistan received major economic sanctions after their nuclear tests in 1998. It is also interesting to note that the Prime Ministers of both countries, during their speeches immediately after the tests, made it clear to their citizens that they would have to accept economic hardship because economic sanctions from the West were inevitable. This indicates that the leaders anticipated sanctions rather than an increase in their country's bargaining power before they tested nuclear weapons.

b) Gaining International Prestige

In terms of gaining international prestige by possessing nuclear weapons, history provides no evidence of states attaining international prestige through the possession of the bomb alone. Other attributes, especially economic capability, are necessary for increased prestige.⁵⁵ It is unlikely that a state could bolster its prestige in relation to the major powers by the possession of nuclear weapons alone. It is also unlikely that states could acquire more international prestige by keeping their nuclear option open. When a state's nuclear status is ambiguous, gaining prestige also remains a remote possibility. As stated earlier, the key

⁵⁵In an article written after the cold war, Robert Jervis has argued that with the end of the cold war, it is not clear whether we are entering a world of bipolarity because of the number of nuclear weapons owned by the US and Russia, or multipolarity because Germany and Japan are also economic powers in addition to the US, or unipolarity because the US has it all. What this means is that nuclear weapons alone cannot give prestige to a country and that ultimately even with vast stockpiles of nuclear weapons, Russia cannot be considered as an equal power

protracted conflict states in the Middle East are undeclared nuclear states, although Israel is the most significant one in that sense, while Iran and Iraq are pursuing the nuclear weapons option in a limited way. In South Asia, both India and Pakistan had maintained a similar nuclear status until May 1998. If international prestige were important, all of these countries would be nuclear states.

The point is that the opaque status of the PC proliferators appears not to serve the purpose of achieving prestige in relation to the major powers or obtaining concessions from them but that it may serve other purposes that are more important and do not require an open nuclear posture. This means that there are other primary interests which are promoted through the acquisition of opaque nuclear weapons which this study discusses later in this chapter and more specifically, in the chapter on nuclear deterrence of the new nuclear states.

c) Seeking Regional Hegemony

On the motivation of regional hegemonic ambition, an official declaration of possession of nuclear weapons could be one way of gaining the regional hegemonic status. This is something most PC proliferators have refrained from doing, with the exception of India and Pakistan. What is interesting is that a regional power can play a dominant role even with superior conventional capability alone, as has been the case of India, Iran, and Egypt. Going nuclear to dominate

when compared to the US. See, Robert Jervis, "The Future of World Politics: Will it Resemble the Past?," *International Security*, vol. 16, winter 1991-92, pp. 39-73

the region is not logical if conventional weapons can do the job just as well. In South Asia, India could take care of its regional hegemonic ambitions very well without nuclear weapons. Although Pakistan could not do so, its aim has never been to dominate the region.

d) Quest for Security

The search for security is the significant variable in proliferation literature that could be used to develop a theory of PC proliferation. However, it, too, needs to be properly specified and clarified. The problem remains not with security motivation per se, but with the way it has been used to generalize proliferation. Why is security the most salient motivation for obtaining a nuclear weapon capability? Which kind of states are most worried about security? Why do PC states differ in their quest for security? What is the role of war-probability in this whole security/proliferation equation? These are extremely important questions that need to be addressed to understand similar states' differing proliferation propensities.

It is important to mention here that system-level explanations of nuclear proliferation are Realist in nature and, therefore, in evaluating the security motivation, it is also pertinent to understand Realism within the context of proliferation. It is essential to put forward how proliferation is understood by the Realist theoretical paradigm because it sets the stage for the exploration of the research problem. As soon as it is demonstrated that some states proliferate according to the tenets of Realism and that there are others that do not, a puzzle

needs to be addressed. A plausible explanation of the dichotomous situation is required. With this, the study also evaluates the utility of realist approaches to an understanding of proliferation in protracted conflict regions.

In the international system, states co-exist in a situation where anarchy prevails. Under such conditions, states attempt to ensure their survival,⁵⁶ and generally military capability can keep a state secure from external attack. Nuclear weapons are especially useful in this respect. Structural realist Waltz argues that:

nuclear weapons deters nuclear weapons... The temptation of one country to employ increasingly larger amount of force is lessened if its opponent has the ability to raise the ante. Force can be used with less hesitation by those states able to parry, to thrust, and to threaten at varied levels of military endeavor.⁵⁷

For Waltz, the mere possibility of nuclear use requires extreme caution all around, so the likelihood of war decreases as more countries acquire nuclear weapons.⁵⁸ He further contends:

Over the centuries great powers have fought more wars than minor states, and the frequency of war has correlated more closely with a structural characteristic--their international

⁵⁶The survival motive is taken as the basis of action in a world where security of states is not assured. The drive for security is fundamentally the drive for self-preservation and true security is obtained by ensuring that the territorial and political boundaries of the homeland cannot be changed by others. See, Kenneth N. Waltz, *Theory of International Politics*, New York: Random House, 1979.

⁵⁷Kenneth N. Waltz, *Theory of International Politics*, p.188

⁵⁸Waltz's argument has been straightforward: that deterrence between the new nuclear states is possible and that the problems pertaining to deterrence instability, that some proliferation scholars (namely Sagan and others) seem concerned about with regard to new nuclear states, have generally been unimportant.

standing--than with unit-level attributes. Yet, because of a change in military technology, a change at the unit level, waging war has increasingly become the privilege of poor and weak states. Nuclear weapons have banished war from the center of international politics.⁵⁹

For Realists, war is always a probability and states must be prepared to face it. Although some of them consider conflict to be inevitable because of the imperfectability of human nature and the scarcity of material resources,⁶⁰ others believe that the anarchic structure of the international system causes uncertainty regarding other states' intentions and consequently, a security dilemma is created.⁶¹ To many Realists only military force is the final arbiter of disputes between states. As Carr suggests, "war lurks in the background of international politics,"⁶² therefore, "for each state its power in relation to other states is ultimately the key to its survival."⁶³ From the above Realist assumptions, it follows

⁵⁹Kenneth N. Waltz, "Origins of War in Neorealist Theory," in Robert I. Rotberg and Theodore K. Rabb, eds., *The Origin and Prevention of Major Wars*, Cambridge: Cambridge University Press, 1988, pp.50-51

⁶⁰See Hans J. Morgenthau, *Scientific Man Vs. Power Politics*, Chicago: University of Chicago Press, 1946; Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, New York: Knopf, 1948

⁶¹See; Robert Gilpin, "The Richness of the Tradition of Political Realism," in Robert Keohane, ed., *Neorealism and Its Critics*, New York: Columbia University Press, 1986, p.304; Robert Jervis, "From Balance to Concert: A Study of International Security Cooperation," in Kenneth A. Oye, ed., *Cooperation Under Anarchy*, Princeton: Princeton University Press, 1986; Kenneth N. Waltz, *Theory of International Politics*, 1979

⁶²E. H. Carr, *The Twenty Years' Crisis, 1919-1939: An Introduction to the Study of International Relations*, New York: Harper and Row, 1946, p.109

⁶³Kenneth N. Waltz, *Man, the State and War: A Theoretical Analysis*, New York: Columbia University Press, 1959, p.210

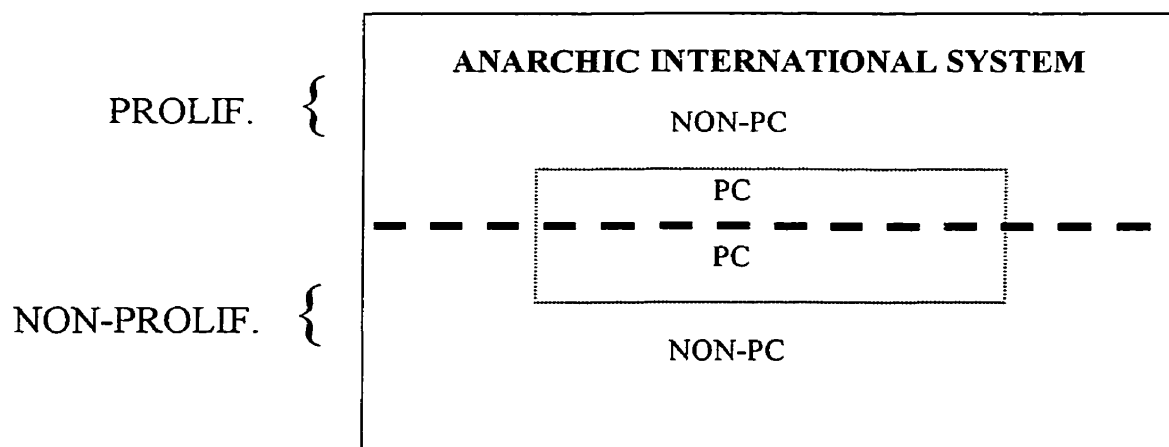
that nuclear weapons would be the choice for states deeply concerned about security and war while living under the negative effects of the anarchic international system.

Nuclear weapons have made warfare less likely among the states that possess them. Given the utility of nuclear weapons in the above sense then, all states facing security threats from their adversaries should be expected to acquire nuclear weapons. PC states are more likely to acquire such weapons because war is always a possibility and deterring war is important for antagonists. It, however, is not the case in international security relations. As figure 1 demonstrates, within the PCs there are states which tend to proliferate and others that do not. Similarly, we see states with nuclear weapons in non-PC situations, and a majority of the states in the international system in non-PC situations are non-nuclear.

Figure 1 Here

FIGURE 1

NUCLEAR PROLIFERATION/NON-PROLIFERATION IN
ANARCHIC INTERNATIONAL SYSTEM



PC= Protracted Conflict

NON-PC= Non-Protracted Conflict

PROLIF.= Proliferation

NON- PROLIF.= Non-Proliferation

The figure clarifies the fact that being under an anarchic structure and in a threatening security environment do not automatically motivate states to acquire nuclear weapons--and that not all states in long-term conflicts aspire to attain nuclear weapons. This figure also demonstrates that there are basic problems with the most popular Realist theoretical argument since not all PC states are proliferation-prone. This brings us to the central research puzzle and it begs the following question: Why, then, do some protracted conflict states acquire nuclear weapons while others do not? In other words, when are protracted conflict states most likely to be nuclear weapons acquirers?

As far as the military/security motivation of nuclear proliferation is concerned, three related questions are crucial: 1) why are security threats so important to only a few states within the protracted conflict regions; 2) what is the relationship between war-probability and search for security; and 3) what kind of security is derived from the possession of nuclear weapons. This means that the linkage between security and deterrence dynamics needs to be explored. The perceived role of minimal deterrence for the opaque proliferators is central in this context. It is also important to examine the association between regional power structures and proliferation intensity of the PC states to understand why some PC states proliferate faster than others, even though they face similar security threats. Geographical settings of the PC states and the type of conflicts (dyadic/non-dyadic) are also important factors to consider. The study takes up these tasks and makes an argument that can be generalized across protracted conflict regions. To

this end, the next chapter lays out the hypotheses, explanatory variables, the arguments, and methodology of the present study.

SUMMARY

This chapter has reviewed nuclear proliferation incentives provided by scholars for the purpose of examining the adequacy or inadequacy of the existing literature to explain the proliferation propensities of protracted conflict states. The intent has been twofold: to show the underdeveloped state of the proliferation literature in terms of theory-building, and to demonstrate that security motivation--though important--needs further clarification and specification for a more comprehensive understanding of proliferation in the protracted conflict states.

CHAPTER II

UNDERSTANDING NUCLEAR PROLIFERATION

Against the backdrop of the previously enumerated inadequacies of the scholarly work, this chapter provides a comprehensive analysis of the central argument of the study. As stated earlier, the central questions are: why do some protracted conflict states proliferate while others do not? When do PC states proliferate and under what conditions would they be most prone to proliferation? In other words, why do some PC states proliferate faster than others? In the first section, the central hypothesis and sub-hypotheses as well as operationalizations of the basic concepts and variables of the study are presented. A causal connection of the variables is also provided. The next section presents a comparative analysis of the definitions of protracted conflicts as studied by the scholars. I furnish a new, more comprehensive definition of PC. Finally, I state and justify the methodology used in the study. The inquiry is focused on nuclear proliferation in the protracted conflict regions and the explanatory variable examined is the 'higher-than-normal war-probability' in protracted conflicts. The intervening variable is the 'search for a deterrent capability.' I begin by explaining how these variables are operationalized.

Nuclear Proliferation refers to the spread of nuclear weapons. “Acquisition” is a more appropriate term than proliferation because proliferation is generally used in the West to discriminate against second generation nuclear weapons possessors. However, since scholars have commonly used the term “proliferation” in the literature, I use it in this study. The focus here is on horizontal proliferation rather than vertical proliferation. More specifically, although the study involves nuclear weapons proliferation, opaque proliferation¹ is central to the study. The study concentrates on opaque proliferation since the key countries in the two protracted conflict sub-systems under investigation such as India, Pakistan (until 1998) and Israel have been opaque nuclear states. An opaque status differs from an open nuclear posture in the sense that in opaque proliferation countries are presumed to have the bomb but have not officially declared their possession of nuclear weapons. A comprehensive understanding of proliferation includes nuclear aspirants such as Iraq, Iran, and Syria because these countries are presumed to have an interest in acquiring nuclear weapons.

Protracted Conflict (PC) Regions are regions where conflict between two or more adversaries continues for a very long period of time without termination points and in which the probability of war occurrence is dependent on the

¹Opaque proliferation means “proliferation without referring to the sequential, observable steps constituting the nuclear weapons acquisition ‘ladder.’ The adoption of the term ‘opacity’ expresses the recognition that the ladder concept— itself a product of first generation proliferation—is no longer suitable, conceptually or empirically, to describe the nuclear behavior of second generation proliferators.” See, Avner Cohen and Benjamin Frankel, “Opaque Nuclear Proliferation,” *Journal of Strategic Studies*, vol.13, 3, 1990, p.21

issue/source of the conflict. Conflict is not ephemeral, crises are embedded in such conflicts, and war may or may not occur depending on the issue of the conflict.

Higher-Than-Normal War-Probability means that there is a qualitatively higher probability of war among involved states than the normal probability. Theorists of conflict² use the terms because they provide a clear expression of the chances of war and the intensity of the conflict. In any PC war is always likely, but the likelihood may be normal and not higher-than-normal. However, the probability is more than normal in a “higher-than-normal” probability sense. For example, if there is 1 in 5 chances of war in a normal situation, there are a minimum of 3 in 5 chances of war in a higher-than-normal war-probability. ‘War’ is defined as a militarized conflict involving at least one member of the interstate system on each side, resulting in a total of 1,000 or more battle deaths.³

Deterrent Capability refers to the capability necessary to dissuade a state’s adversary from initiating an attack. Nuclear weapons are assumed to deter wars in both a general and an immediate sense. A general deterrent capability is possessed by states to regulate their adversarial relationships when neither of the opponents is seriously considering an attack. Possession of such a capability is generally expected to make resorting to force unattractive to the adversary.⁴ However, an immediate deterrent capability, which a state could use as a threat to retaliate when

²See, Michael Brecher, *Crises in World Politics*, Oxford: Pergamon Press, 1993

³David J. Singer and Melvin Small, *The Wages of War 1816-1965: A Statistical Handbook*, New York: John Wiley, 1972, p.381

⁴ Patrick Morgan, *Deterrence: A Conceptual Analysis*, Beverly Hills, London: Sage Publishers, 1977, pp.40-43

one side is considering an attack, is also included in the study. More specifically, the study focuses on the nuclear deterrent capability used in a non-traditional manner. This is because this study examines the utility of a war-avoidance strategy of deterrence for cases of the second generation proliferators or opaque proliferators.

The Central Hypothesis of this Study is: In protracted conflict regions, where war-probability is higher-than-normal, the search for an effective deterrent capability is high; where search for a deterrent capability is high, the likelihood of proliferation is high.

Figure 1 demonstrates the relationship between the independent, intervening and dependent variables in the study.

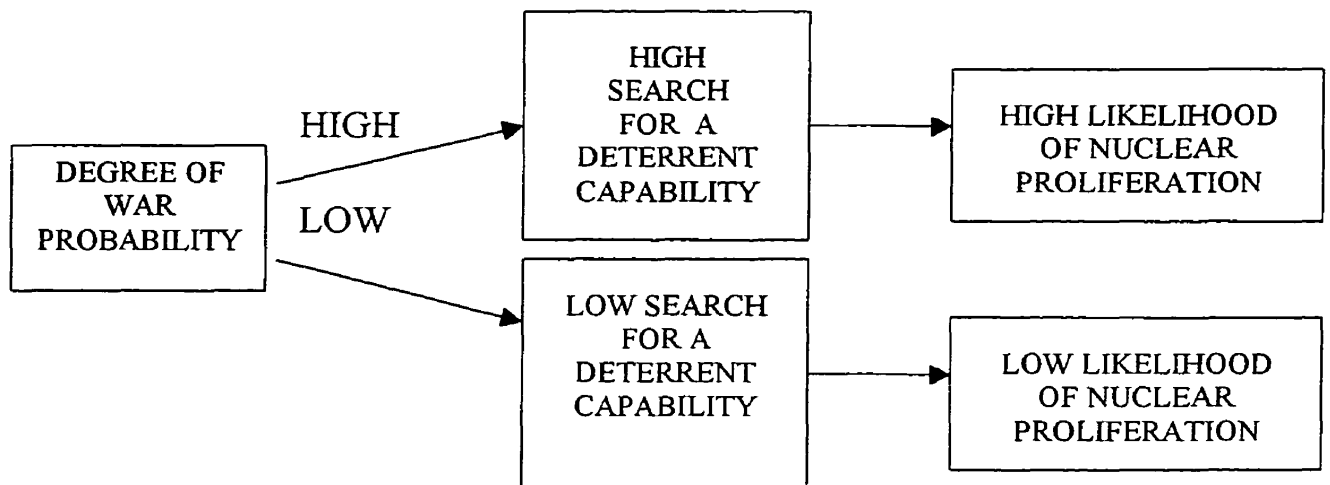
Figure 1 Here

Sub-Hypotheses

1. Proximate PC states are most proliferation prone.
2. States in a two-power PC region are expected to proliferate faster than states in a multi-power PC region.
3. Dyadic PCs are more proliferation prone than non-dyadic PCs.
4. States involved in twin protracted conflicts simultaneously are highly proliferation prone.
5. PC states facing a nuclear weapon state are highly proliferation prone.

FIGURE 1

CAUSAL CONNECTIONS BETWEEN THE VARIABLES



Explaining Nuclear Proliferation in Protracted Conflict Regions

Before analyzing the central arguments of the present study and explaining the causal connections between the variables stated, it is pertinent to ask what protracted conflict has meant to scholars in International Relations.

Azar et. al.⁵ define protracted conflicts as:

hostile interactions which extend over long periods of time with sporadic outbreaks of open warfare fluctuating in frequency and intensity. They are conflict situations in which stakes are very high ... While they may exhibit some breakpoints during which there is a cessation of overt violence, they may linger on in time and have no distinguishable point of termination.

Protracted social conflicts tend to be a combination of interstate conflicts and ethnic conflicts according to Azar et.al.. PCs are characterized by a high-conflict normal relations range (NRR) of long duration, fluctuation of interactions, spill-over into other domains, the absence of a distinct termination, and strong “equilibrating forces” that constrain interactions within the existing NRR.⁶

Michael Brecher and Jonathan Wilkenfeld follow Azar in defining a protracted conflict as a process of hostile interaction over time, with high stakes, involving whole societies, and spilling over into a variety of areas, lingering on in time with no specific point of termination. However, they argue that sporadic warfare is not a necessary condition of the PC because a number of protracted

⁵Edward E. Azar, et.al., “Protracted Social Conflict: Theory and Practice in the Middle East,” *Journal of Palestine Studies*, 8, 1, 1978, p.50

⁶Ibid., pp.51-53

conflicts lack a violent component (e.g. the East/West in the cold war era).⁷ According to Brecher, in the East/West conflict from 1945 to 1990 direct violence between the principal adversaries was absent, but such non-war conflicts have been protracted in all other senses – the extended duration of hostile interaction, high stakes, spillover to many domains, and conflict processes over a period of time rather than specific events.⁸ Others, like Goertz and Diehl, found that approximately half of the interstate wars since 1816 have occurred between enduring rivals.⁹ On the other hand, Vasquez¹⁰ considers wars of rivalry as wars between equals¹¹ where the presence of a long-term rivalry determines that the pre-war relationship be prone to mutual hostility. Rivals usually go to war after a series of 2 or 3 crises with the behavior and outcome of one crisis having an escalatory effect on the subsequent one.¹² Although Vasquez seems to be more concerned about equals and unequals in terms of capability, his understanding is

⁷Michael Brecher and Jonathan Wilkenfeld, *Crises, Conflict and Instability*, Oxford: Pergamon Press, 1989, p.127; Michael Brecher, *Crises in World Politics*, p.5

⁸Michael Brecher, *Crises in World Politics*, p.5

⁹Gary Goertz and Paul F. Diehl, "Enduring Rivalries: Theoretical Constructs and Empirical Patterns," *International Studies Quarterly*, 37, 1993, p.148

¹⁰John Vasquez, *The War Puzzle*, Cambridge: Cambridge University Press, 1993, p.65

¹¹John Vasquez measures differences in capability as a dichotomous variable that would demarcate dyads according to their relative capability. Capability is defined as the resource base an actor can utilize to attain certain ends.

¹²John Vasquez, *The War Puzzle*, p.316

that enduring rivals are expected to experience war at some point in their hostile relationship. This means, he believes that in any enduring rivalry, intense mutual hostility will at some point provoke war.

Although a general consensus exists among scholars with regard to the characteristics of the PCs such as high conflict, extended duration, and spill-over to other domains, they disagree on the question of war frequency or likelihood of war in a protracted conflict situation. Each scholar shares a number of common characteristics of PC, but one minor difference in their definitions tends to create major problems. These definitions exhibit two weaknesses. First, these scholars do not look at the same list of protracted conflicts, making it difficult to do further research on the subject and creating problems pertaining to case selection. Second, without a conceptual understanding of war among PC states, it is difficult to make further assessments of a state's behavior in the realm of weapons proliferation and war-avoidance strategies such as deterrence.

The above definitions fail to address the issue of war in PCs. Brecher's definition is, however, more comprehensive than Azar's in the sense that even though Brecher eliminates "sporadic warfare" as a necessary condition of protracted conflict, he does include conflicts with persistent and intense violence in the list of protracted conflicts when other characteristics of PCs are present. Azar totally rejects non-war cases as PCs. Therefore, the list of protracted conflicts Brecher provides is far more comprehensive and useful for further research on the subject. Brecher and Wilkenfeld list 31 protracted conflict cases between 1918 to

1994.¹³ Brecher's definition does not, however, inquire a central question: why some PCs are war-prone while some others are not?

A major concern of this study is to determine when war becomes a necessary characteristic of the PC. This is not to undermine the importance of some definitions compared to others, but to clarify and underline that both definitions may be equally useful in understanding different kinds of PCs. The question that always needs to be raised is: why do we find a variation in the incidence of war among PC states? This study attempts to bridge the gap between the two views provided by scholars by indicating that it is the issues around the PCs that indicate whether or not war will be a necessary characteristic of that particular PC. In other words, understanding the source of the PC is necessary to explain war-probability. To use the idea of Mansbach and Vasquez, the concern here is with the power of issues.¹⁴

We can divide the protracted interstate conflicts into two--one in which there is a higher-than-normal probability of war, and the other in which war probability is normal. When protracted interstate conflicts originate from territorial

¹³Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997, pp.65-66

¹⁴However, for them, issues include objectives under contention, values to be satisfied by their allocation, proposals, and stakes and values. Issues may involve several stakes and values, including status, prestige, security, honor, and the like. To them, issues are the "contention among actors over proposals for disposition of stakes among them." See, Richard W. Mansbach and John A. Vasquez, *In Search of Theory: A New Paradigm for Global Politics*, New York: Columbia University Press, 1981 p. 59.

issues,¹⁵ there is a higher-than-normal probability of the occurrence of war between them during the entire period of protracted conflict. I refer to this kind of conflict as "Territorial Protracted Conflict." These conflicts encompass other issues (such as religious, ethnic, and commercial issues), but as long as one of the issues remains a territorial concern, war becomes a necessary condition of the conflict. Although wars are fought over other issues, not all issues are resolved¹⁶ by wars. It has been argued that concerns over territory have been the underlying and fundamental source of conflict that ends in wars.¹⁷ Territorial issues have dominated warfare during the history of the modern international system. Holsti considers that the percentage of wars involving territory in the period between 1648-1991 has been very high.¹⁸ Most rivalries which have erupted into wars have

¹⁵Territorial issue relates to territory and boundary, as well as to strategic territory. It also includes other issues that have a territorial dimension, such as creation of a national state, unification of the state, maintaining the integrity of a state, dynastic rights/succession/a basic principle for transferring territory, national liberation, and national consolidation.

¹⁶The primary question to ask is: What are states fighting over? The issues are important in any war. But how far issues are resolved by wars is another matter. Some issues never get resolved even with frequent war-fighting, while others are easily resolved. The point is that where territorial issues are conflict-producers, there is a higher chance of war between the adversaries to resolve the matter because negotiations are quite impossible and thus, chances of accommodation are remote. If we look at history, wars have only somewhat resolved conflicting territorial matters. Whether or not the winning party deserved the right to have the territory is another matter. This is often not the case when states have non-territorial matters at stake. Resolution of other conflicting issues has been accomplished in history by means other than wars and negotiation seems to be a primary means in these cases.

¹⁷John Vasquez, *The War Puzzle*, p.124

¹⁸Kalevi J. Holsti, *Peace and War: Armed Conflicts and International Order, 1648-1989*, Cambridge: Cambridge University Press, 1991, pp.51-52

concerned competing claims to territory or the tangible resources within it. The Realist vision situates power as a central concept in describing and explaining the behavior of states. Power is considered to be a tangible resource based on territory, industrial capacity, population and the like. To H. J. Morgenthau,¹⁹ all state interests are defined in terms of power, and international politics is depicted as a “struggle for power,” an endless search for safety and superiority, where resources, population, and especially territory provide the wherewithal for success.

Territorial disputes lead to wars. This is because: 1) territory and national power are linked; 2) territory has a finite nature; 3) there is a psychological or emotional attachment to territory; and 4) a zero-sum mentality prevails between adversaries in territorial PCs. Hence, coercive military power is more likely to be used by such states to hold on to land or to seize territory from opponents. States cannot expect to use “cooptive power”²⁰ or convince others to want what they want when there is any territorial problem. In other words, when one state claims a territory that another one also claims, neither of these states can expect that the other party will willingly give up its claim. Consequently, military force is often used to settle the claims. Whether or not the territorial claim is settled with the use of military force is not our concern here, but that military force is expected to be used is what matters for the present purpose. This is because, as soon as there is

¹⁹Hans J. Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, New York: Knopf, 1956, pp.102-137

²⁰Joseph Nye, *Bound to Lead*, New York: Basic Books, 1990, p.188

the probability that force will be used to settle disputes, the need to acquire a deterrent capability for avoiding such military hostilities becomes pertinent.

In protracted conflicts that originate from ideological differences such as the East/West PC or any issue that is non-territorial,²¹ the probability of war occurrence may be normal. Such conflicts are considered as “Non-Territorial Protracted Conflicts.” In Non-Territorial PCs, especially in ideological or commercial conflicts, cooptive power can be used rather than coercive military power and war can be avoided. PC states may structure a situation so that other states develop preferences or define their interests in ways consistent with their own state. What needs to be clarified here is that the term “normal” should not indicate a normal probability of war between non-PC dyads or group of states. For a pair of PC states, the normal war-probability is higher than what is normal for non-PCs. A probability of war between Canada and Spain over fishing rights would be an example of a normal war-probability between non-PC states. It is the ‘norm’ in these particular adversarial relationships that is important. For a PC dyad or a group of states, the expectation or probability of war is normally high, and that is precisely why it is a “high conflict situation.” Force may be used as an arbiter of conflicting non-territorial issues in any PC situation. However, the war probability is qualitatively higher than the normal probability when the PC states

²¹As for the non-territorial issues, I refer to issues that have nothing to do with territory per se--such as, protecting ethnic confreres, ideological problems, religious matters, and commercial issues.

are concerned about territorial issues. PC rivalry over the issues that are considered to be “high politics” such as territorial issues leads to warfare and others such as trade issues that are regarded as “low politics” are less likely to lead to the use of force.

With the end of the cold war, some liberal theorists believe that ²² “high politics” such as military security interests are losing pre-eminence and are being replaced by “low politics” such as trade. The distinction between high politics (vital interests affecting national security) and low politics (questions of economic dispute) may be disappearing, and low politics is escalating into high politics. Others, like K.J. Holsti, have argued that as some issues become less contentious, others will replace them.²³ This may be true only in the cases of non-PC states that are advanced industrial countries, highly interdependent and with no enduring rivalry or most importantly, territorial dispute to be concerned about. The point is

²²“High politics” is a term that International Relations scholars have been familiar with since the beginning of the cold war. But even prior to that period, states have always been concerned about survival and security. The cold war scholars have made most use of the term. It has been used to mean that the anarchic international structure had everything to do with state policies and that security remained the ultimate goal for all states in a state of anarchy. Therefore, issues like trade were no match for security during that period. In the hierarchy of issues, security was at the top. The end of the cold war seemed to change it all. Since 1989, scholars have started to write more about security being replaced by trade and commerce as high politics and security taking its place of low politics. Although some, like J. Goldgeier and M. McFaul, have written about how the center and periphery differ on issues relating to high and low politics in the post-cold war period, the general scholarly understanding is that security and territory are no longer important in this changing global reality. They could at best be regarded as low politics. See J. Goldgeier and M. McFaul, “Core and Periphery in the Post Cold War Era,” *International Organization*, vol. 46, no.2, spring 1992, pp. 467-491

²³K.J.Holsti, *Peace and War: Armed Conflicts and International Order*, p.325

that, in protracted conflicts, issues still generate wars and as far as territory is concerned, it is likely to predominate as war-producer. In the hierarchy of issues, territory is still conceptualized as high politics where the stakes are high, and over which two or more parties contend and war remains a higher-than-normal probability. Issues pertaining to trade, ideology and the like are still low politics as far as PCs are concerned, and consequently the use of military force to resolve such conflicts is less likely. The logic is simple--protracted conflict over a tangible, non-negotiable piece of territory which is crucial to national security, is more likely to lead to war than the one that is over a belief system or commerce which can otherwise be settled.²⁴ Peace theories that proliferated after the end of the cold war and the obsolescence of war thesis of John Mueller²⁵ are no doubt useful, but not as relevant for the territorial protracted conflict cases. What has changed for the regional PC states with the end of the cold war is an important question to ask.

²⁴Territory is something that states rarely want to part with. Obviously, ideological or ethnic issues are also important to states, but these issues could still be settled by other means. The Soviet Union gave up the East-West conflict perhaps because it was essentially an ideological conflict and not a territorial conflict. States may even tend to realize that rigid ideological beliefs may not be healthy for their survival and that cultural and ideological exchanges may be helpful in this regard. This realization may come late, but there is always a possibility that it may happen. With regard to territory, it is a possession--a tangible capability-- and something, when taken away, could affect state power. In addition to the above, history does not give evidence of states fighting more wars over ideological/ commercial issues when compared to wars over territorial matters, although Holsti thinks that territorial issues generating wars have declined between 1945-89 period compared to the previous period, 1918-41. See K.J. Holsti, *Peace and War*, pp.218-219, 280-282

²⁵ John Mueller, *Retreat From Doomsday: The Obsolescence of Major War*, New York: Basic Books, 1989; Francis Fukuyama, *The End of History and the Last Man*, New York: Free Press, 1992

War is still a reality for territorial PC states and only war-avoidance strategy of deterrence may keep peace within the territorial PC dyads or group of states. Essentially, the motivation to acquire nuclear weapons in territorial PC countries had little to do with the cold war, consequently the end of the cold war could not, and perhaps will not, change the nuclear acquisition tendencies of such states.

Geographical proximity between PC states could further enhance the probability of war in a PC region where territorial matters are at stake. Proximity results in frequent adversarial contacts which, in turn, enhances tensions. Proximate adversaries are well within each other's military range and so vulnerabilities and insecurities abound. Armed forces can easily invade the adversary's territory and border crises and low-intensity conflicts have a probability of escalating to full-scale wars if not checked at the initial stage.

Moreover, each protracted conflict is composed of several crises and the threat of war remains the central crisis management mechanism²⁶ in the absence of a deterrent capability. Crises may or may not end in warfare, but a foreign policy crisis, in most cases of territorial PCs, has the high probability of turning into an international crisis,²⁷ and with hostile interactions between the adversaries, there is

²⁶Crisis in a PC with territorial issues has a tendency to be managed by war if there is no capability to deter such a war. This suggests that even though crisis may not be eliminated or replaced by wars, adversaries tend to use war to manage crisis in a PC region with territorial disputes. Brecher considers war to be one of the several crisis management techniques in any PC/non-PC crisis situation, others being verbal, political, economic, and non-violent military activity. See, Michael Brecher, *Crises in World Politics*, pp.6-7

²⁷A foreign policy crisis may or may not turn into an international crisis depending on the nature of the adversarial response with respect to the foreign policy crisis. When state A does something to create a foreign policy crisis for state B, if the

always a high probability of crisis escalating to warfare. To avoid a direct warlike confrontation, crisis management becomes essential at the initial point. Only the presence of a deterrent capability can foster successful management of crises.

Thus, I define protracted conflict as **a high conflict situation between two or more rivals that endures for decades without termination points, in which a number of crises are embedded and where war remains a higher-than-normal probability due largely to the territorial nature of some of these conflicts.** This definition is used interchangeably to include enduring rivalry.²⁸ The definition does not rule out the probability of war in PCs when they originate from non-territorial issues.²⁹ It posits that war-probability is less in such situations.

The thesis statement is: in PC regions, where the degree of war-probability is 'higher-than-normal,' the search for a deterrent capability is high, and where

latter does not take the matter seriously and takes no action, the crisis may simply end there. However, as soon as state B responds to the crisis and acts in such a way so as to threaten state A, an international crisis has been created. See, Michael Brecher, *Crises in World Politics*. Where states fight over territorial issues, a foreign policy crisis has a tendency to turn into an international crisis since both countries in question are fully aware of the utility of the territory and the power that is associated with it. No state is expected to stay calm while the other is making threats in a territorial conflict.

²⁸Although Vasquez (1993) makes a distinction between enduring rivalry and protracted conflict in the sense that the former is between equals in terms of capabilities and the latter is between unequal states, I consider them to be the same for the purpose of this study. This is because they are both long-term conflicts, competition prevails over tangible/intangible issues, and there is a possibility of open violence in both cases depending on the issues involved.

²⁹Protracted Conflict by definition is a high conflict situation where war is always a probability. Therefore, to say that PCs over religious, ideological, and other non-territorial issues have normal/low probability of war occurrence does not mean that there is no probability of war there. Chances of wars are less in those PC states

search for a deterrent capability is high, proliferation propensities are high. PC states may have a higher-than-normal or normal war-probability depending on the issues (territorial/non-territorial) pertaining to the conflicts. I argue that only territorial PC states have a higher-than-normal war-probability, which encourages them to search for a deterrent capability based on weapons of mass destruction such as nuclear weapons. It is this high search for a deterrent capability that leads to nuclear proliferation in these states. Non-territorial PC states have a normal war-probability, consequently they are less likely to search for a deterrent capability; thus, their low likelihood to proliferate is a function of their low search for a deterrent capability.

This analysis explains why some PC states are more prone to obtain a deterrent capability than others. It is necessary to take into consideration the perceived importance of issues in assessing the probability of proliferation. It is also important to understand that some states within the PC regions which expect a higher-than-normal war-probability may not go nuclear when they have a nuclear ally which might provide an extended deterrence to that state. Having a nuclear umbrella from an ally is as good as --or sometimes even better than³⁰-- having ones

compared to others involving territorial disputes. Wars may or may not occur in the non-territorial PCs.

³⁰ Japan and Canada are good examples of countries that have been able to prosper economically because of not having to worry much about nuclear defenses. They are under the US nuclear umbrella. Similarly, in the regional case, South Korea is a good example of a state having a nuclear ally. It has been in a much better position (economically) than North Korea because the latter spent more on defense, including nuclear capability, which the former could avoid due to US nuclear support. Although one could argue that all three countries spent large amounts of money in support of US force deployments on their territories, the point is that not

own capability. As long as a country can deter the enemy's attack, it is secure and that deterrence does not always have to come from its own possession of deterrent capability.

However, since protracted conflict, by definition, is a high conflict situation, major powers in protracted conflict (even ones originating from non-territorial issues) have a natural tendency to obtain a deterrent capability to avoid wars. Powerful and economically secure states may want to be equipped with nuclear weapons to deter wars as long as there is a war probability. This explains why the Soviet Union intensified its efforts to obtain nuclear weapons after the US acquired nuclear weapons (this subject is beyond the scope of this study).

All protracted conflicts (territorial/non-territorial) can further be grouped into two--dyadic PCs and non-dyadic PCs. In the former, conflict is between one state on each side, meaning that the protracted conflict is between a pair of states like the India-Pakistan PC. A non-dyadic PC can be between one coalition on each side such as the East/West PC, or between a coalition on one side and a single state on the other side, such as the Arab/Israeli PC.

Each regional protracted conflict occurs within different regional power structures, two-power or multi-power. Even though proliferation is generally likely in any territorial PC, the pace of proliferation may vary with the type of PC--dyadic/ non-dyadic--as well as with the regional power structures, two-power or multi-power. The geographical location of the conflicting states may also have an

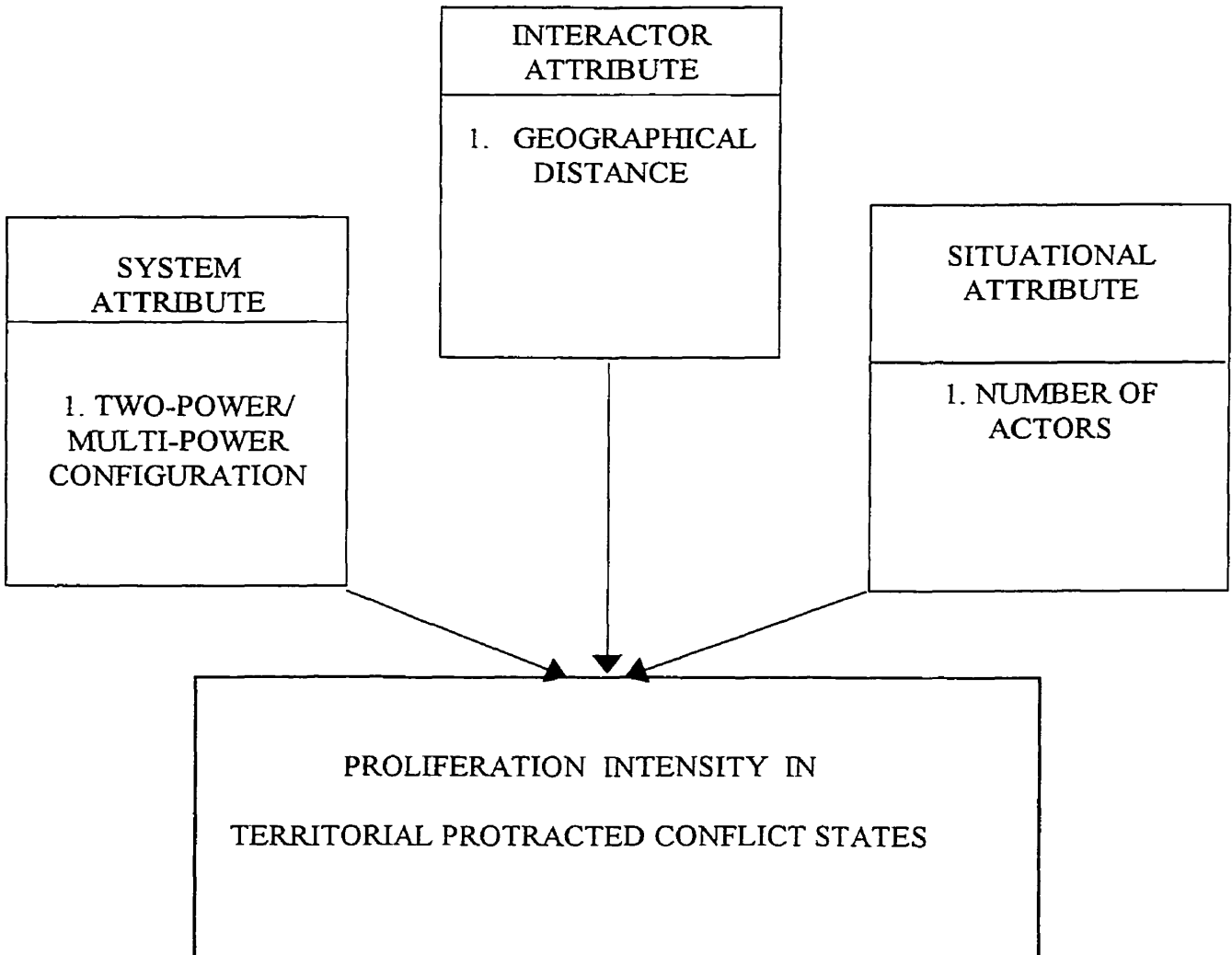
many PC states are given such extended nuclear protection and consequently have to depend on their own capabilities.

impact on how fast the states are likely to proliferate. The effects of the attributes (structural, interactor and situational) on the intensity to proliferate is depicted in figure 2.

Figure 2 Here

FIGURE 2

**EFFECTS OF SYSTEM/INTERACTOR/SITUATIONAL
ATTRIBUTES ON PROLIFERATION INTENSITY**



The following discussion illustrates which states are expected to proliferate faster than the others in the territorial PCs and why:

1a. In dyadic PCs, states are likely to take nuclear acquisition very seriously because each state must depend on its own capabilities to check the other power from attacking it (e.g. India and Pakistan). Therefore, having defensive or retaliatory capability to fend off an opponent's attack becomes the number one priority of the state elite. In the hierarchy of concerns, security remains the dominant concern and acquiring a deterrent capability becomes essential. Since nuclear weapons are absolute weapons and are best as deterrents, these states have the motivation to possess such weapons to deter their adversary from launching an attack, especially in times of acute interstate crisis.

These states also want to match the development of the capabilities of their opponents. This is related to the fact that this conflict is between two states, and no other state is involved which could deter the adversary. Each country has itself to count on so calculating its adversary's capabilities and matching the opponent in terms of capability becomes essential. This implies that when one country in a dyadic territorial PC goes nuclear, the adversary in that conflict invariably has a great incentive to follow suit.

Under the above circumstances the opponents develop a tendency to over-estimate the capabilities of their adversaries, and in the nuclear scenario, if there is any indication of one state's possession of the capability--even if it is a mere speculation in the world media--the opponent takes it very seriously. Although

both parties in the dyadic PC generally overestimate the capabilities of their opponents, the state that is conventionally superior may not be as obsessed in this respect compared to the state that is conventionally inferior in the dyad. The latter state may develop an “opponent-centric nuclear policy.” It always has a tendency to over-react at any news of the adversary’s military advancement. This state cannot leave anything to chance as the balance in the conventional capability is already not in its favor and it is fully aware that in case of a conventional war between the dyad, it is expected to be defeated. Every step that the opponent takes or is expected to take in the future towards the acquisition of nuclear weapons capability is invariably exaggerated and efforts are made to match such projected acquisition, at any cost. This does not necessarily imply that the state that is conventionally superior will not notice its adversary’s acquisition of nuclear capability, or that it will not try to have a nuclear balance between the conflicting states, but it explains why one state in a dyadic conflict may be more willing to have an opponent-centric security policy than the other.

It is also important for the conventionally inferior state to acquire nuclear weapons capability because such weapons can close the military gap between it and its conventionally superior opponent. This would be impossible with only the possession of conventional weapons. In other words, nuclear weapons can neutralize or at least mitigate the superior adversary’s strategic advantage. Therefore, the inferior state is most likely to acquire nuclear weapons even if it means spending money on nuclear acquisitions that could otherwise be spent on problems requiring immediate attention including poverty, health and education.

Moreover, states like this are so determined to attempt to reduce the conventional gap between the two parties in the conflict that they rarely consider that a chain reaction might start with their acquisition--or even the attempt to acquire nuclear weapons capability--and that it could precipitate a nuclear arms race in the region. This, however, is not to say that the state with the conventional advantage does all of its nuclear spending rationally, or that it takes care of all other immediate concerns (health, poverty, education, etc.), but it points out that it is not the desperate state in this situation, although it has all the intentions and motivations for acquiring nuclear weapons capability as its opponent.

1b. Non-dyadic PCs can be of two types--one in which the conflict is between two coalitions, and the other in which one side is a coalition and the other side is one state alone. In non-dyadic PCs, where one side comprises a group of states (whether it is groups conflicting against groups or a conflict where only one side is a group or a coalition), proliferation incentives may not be the same for all states within the coalition (such as the Arab states). This is because in a coalition responsibilities are unclear and the vital interests of each member state are not easily understood. If some states in the coalition have the deterrent capability, most other states consider that their rival can be effectively checked by that state and consequently, their desire to proliferate may be less intense. At that point, they may overestimate the power of their existing capabilities because a number of states together control a large percentage of the military resources in the conflict. This is more common when the coalition has one single state as their adversary. In

other words, underestimating the capabilities of the adversary becomes common in such situations.

In the nuclear scenario, response by the coalition states to the adversary's probable possession of nuclear capability is often muted. Since states are in a coalition, the "probability" aspect of the acquisition of nuclear capability is not taken as seriously as would be the case in a dyadic PC. These states have a natural inclination to doubt the acquisition of nuclear weapons capability by their adversary unless there is an open declaration of possession. It is thus possible to take most of the signals of the opaque adversary with regard to the possession of nuclear capability as "false alarms."

Where an adversary's opaque status is somewhat believed, if each side in a coalition has one or two states suspected of having nuclear capability, the other states in each side may take time to acquire nuclear weapons and their proliferation pace may not be as fast as the states in dyadic PCs. This does not mean that these states will not proliferate at some future time, but that their proliferation may come later when the time is right for them. The reason is obvious: they can afford to wait since there are other states in the coalition which can take care of the immediate balancing problem in the conflict, or, for the present study, of deterring the adversary with nuclear weapons capability. Besides, these states may possess other weapons of mass destruction, such as chemical or biological weapons, for deterrence.

However, in non-dyadic PCs the single state on one side has the desire to proliferate as fast as any other dyadic PC state because there is no other power on

whom it can depend to resist its adversary (which is a coalition) from going to war (such as Israel). Furthermore, it is also only one state against a group of states which makes it the most vulnerable state in the particular PC. This state considers its adversary as the overwhelming danger and is always attempting to upgrade itself in terms of capabilities. Here, having conventional military advantage or disadvantage may not be as important as the states in a dyadic conflict. This is because this state is the only one in the conflict that has to face several states simultaneously, with different military powers and positioned in different parts of the region. Even if it is a conventionally strong power, it is still vulnerable because it is a single state surrounded by hostile neighbors. From this it is evident that this state will be inclined to possess nuclear weapons capability whether or not it is a conventionally superior adversary in any particular non-dyadic conflict.

Moreover, resorting to nuclear weapons capability may become the best option for such a country which cannot easily calculate the capabilities of its adversary because there are many states involved in the adversarial coalition. The problem of overestimating or underestimating the conventional capabilities of these states in the coalition no longer exists once this single country in the non-dyadic conflict has the absolute weapon that can work as the best deterrent against future wars with the adversary. The psychological and emotional vulnerability of the single state is also taken care of with the possession of nuclear capability. Therefore, this type of a state in a non-dyadic PC generally has the motivation to adopt war-avoidance strategies similar to states in dyadic PC situations.

2a. PC states in a two-power region where the top stratum consists of two states that are roughly equal (even though some degree of unbalanced power or disequilibrium exists in most two-power structures), and stand above the rest, are likely to be more inclined to acquire nuclear weapons quickly because their rivalry is structurally determined.³¹ With two leading powers and where coalition dynamics are absent, competition for influence is the greatest. The logic of their situation makes them rivals who are destined to oppose each other. In this kind of a power configuration, mutual antagonism, belligerence, and rhetorical hostility are common. There is reciprocal fear that escalates state-concerns about survival and security. These two states often develop a zero-sum mentality, so that each perceives that any gain by the other is a loss for itself. Each has an incentive to block the other from making any gains. Each power considers the other as a danger in the region and, consequently, each has the desire to check the other from making advancements in military capabilities. In the realm of nuclear weapons capability, one state's acquisition of the capability inevitably motivates the other to follow the same steps to hold and to maintain the balance of power. No power would want to see the other obtaining a margin of military superiority over the other; so the acquisition of nuclear weapons capability remains the best alternative for such powers since it somewhat maintains the balance, at least in terms of both

³¹Waltz argues that in a two-power system, the two powers consider each other as dangerous since each can damage the other to an extent that no other state can match. Similarly, Mearsheimer states that in a bipolar system the only two major powers automatically contend with one another. See, Kenneth N. Waltz, "The Stability of a Bipolar World," *Daedalus*, vol. 93, 1964, pp.881-886; John J.

powers possessing the ultimate war-detering capabilities, in the region (for example, India and Pakistan).

2b. Incentives for PC states in a multi-power region to proliferate may vary. This is because in a multi-power region there are more than two roughly equal regional powers and the pattern of conflict is not structurally determined. There are many dyads in such a region and there may be other dyadic conflicts in addition to the PC. Each state may have several rivals in the region and friends and enemies are not always clear. In a multi-power region major states may cooperate on some issues and oppose each other on others. The major powers are most often divided among themselves, creating a situation where deterring the PC adversary may be just one of many concerns in their subsystem. In most cases these powers have conflicting interests and it may not be in all of these states' best interest to be concerned only with the PC rival when other hostile powers in the region also need to be checked. There are conflicts involving different sub-sets of states in such a region which create a situation where some states are fighting one another in one particular conflict, while they are allies in another conflict. The incentive to be deeply concerned about all changes that affect the military balance and respond to all of them with serious effort is generally expected, but is often muted (for example, Syria and Egypt). Sometimes, even response is procrastinated unintentionally. The adversary's acquisition of nuclear weapons capability may not be extremely alarming to these states as there may be other adversaries in the

Mearsheimer, "Back to the Future: Instability in Europe After the Cold War," *International Security* vol.15, no. 1, summer 1990, pp.5-56

region as hostile and need to be taken care of too. These concerns also need to be addressed at the same time as the PC adversary's nuclear advancement. In such circumstances these states may be late proliferators compared to the states in a two-power region. This, however, does not indicate that the PC adversary's acquisition of nuclear weapons capability will go unnoticed or will not be responded to, but that the response may not be immediate.

However, in a multi-power region, where one state is involved in two or more regional PCs, the incentive to go nuclear is expected to be high (for example, Iran and Iraq). This is because if a country is involved in protracted conflicts with two or more powers, it could be attacked by a majority of the states in the region simultaneously.

Finally, all states in territorial protracted conflicts are more likely to acquire nuclear weapons if they are involved in more than one PC within or outside their own region because under such circumstances, states have to worry about the possibility of being attacked from different fronts by different opponents. This is applicable to all states within the dyadic and non-dyadic protracted conflicts, and PCs occurring in two-power regions or multi-power regions.

What is more important to mention here is that if and when a state is involved in two protracted conflicts, and where in one PC it has a nuclear power as an adversary, acquiring nuclear weapons could become all the more essential to it (for example, India). Under such circumstances, this state becomes more conscious of its position and status vis-à-vis the nuclear adversary, and its concern for the other rival within the other PC--which does not belong to the nuclear club--may

be secondary. In other words, problems of status-inconsistency, power, and prestige-- to some extent-- become blurred with the security motivation. Other systemic motivations relating to proliferation then become part of the “security motivation” as a whole. Relative gains vis-à-vis the nuclear adversary in all senses become important. Obviously, if a state is involved in two PCs and has two nuclear power adversaries in these two PCs, then this state’s impetus to go nuclear is exacerbated. Even though deterring adversaries is critical for this state, consideration is also given to prestige, power and status vis-à-vis adversaries. This is because, the problem of “haves” and “have-nots” becomes more obvious to the non-nuclear adversary in the PC, which is something it wants to address and alter in its favor.

Considering the above, a proliferation hierarchy is created. There are states that are at the top of the proliferation hierarchy in territorial PCs and others situated below them as follows:

1. At the top are the states within the two-power region, PC is dyadic, states are proximate (e.g. India/Pakistan). These states are the “Most-Likely Proliferators.”
2. The second stratum consists of states which are within the multi-power region, PC is dyadic, and states are proximate (Iran/Iraq). They are considered as the “Likely Proliferators.”
3. The third category of states are those within the multi-power region with non-dyadic conflict and proximate states (e.g. Arab states: Syria, Egypt --proximate to Israel). The states in this category are regarded as “Less-Likely Proliferators.” The states within the coalition in a non-dyadic conflict are expected to fall in this

category, while the single state confronting the coalition will consider the conflict as a dyadic one and will be situated at the top of the proliferation hierarchy (e.g. Israel) and is expected to be a “Most-Likely Proliferator.”

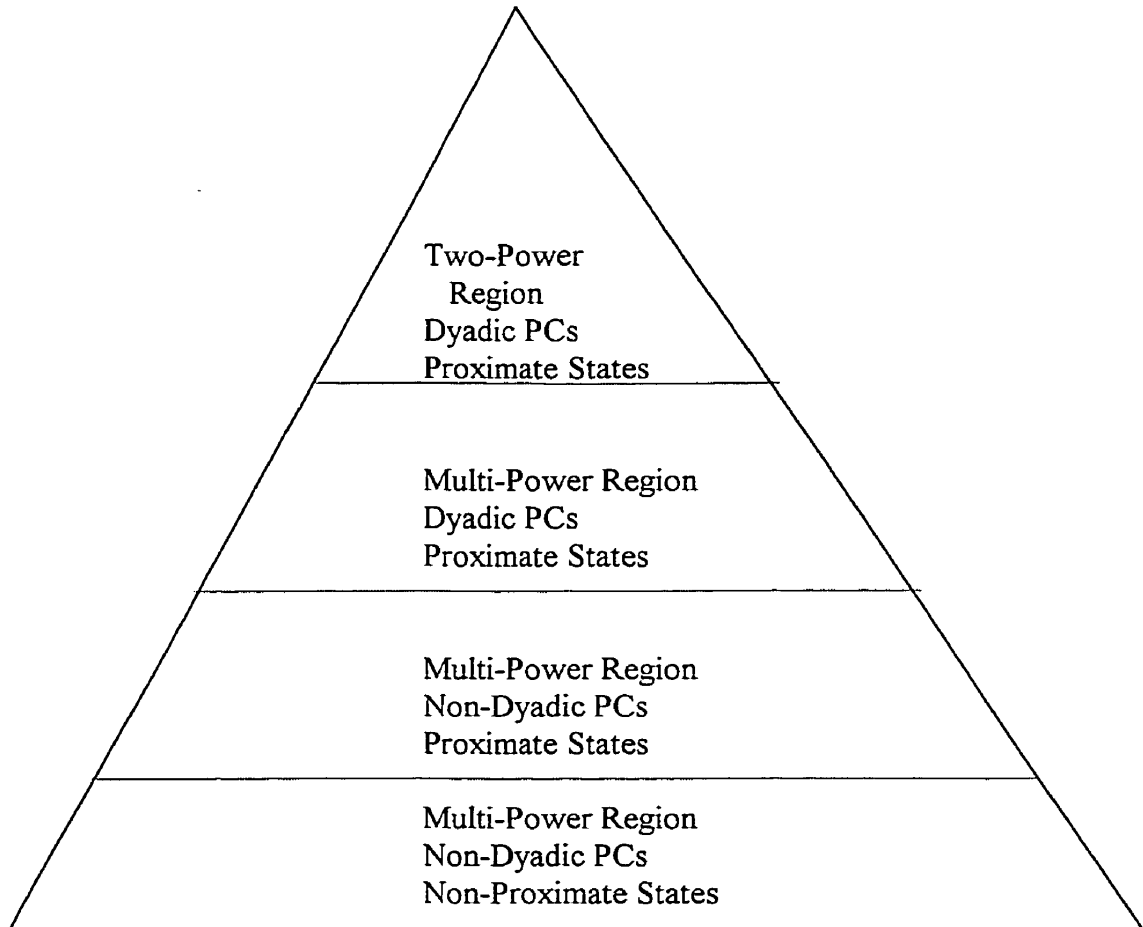
4. At the bottom are the states within the multi-power region, the conflicts are non-dyadic and states are non-proximate (e.g. Arab states not proximate to Israel). These states are the “Muted Proliferators.”

Figure 3 demonstrates the proliferation hierarchy in a territorial PC.

Figure 3 Here

FIGURE 3

**PROLIFERATION HIERARCHY OF THE TERRITORIAL
PROTRACTED CONFLICT STATES**



Methodology

This section lays out the research methodology undertaken in this study. The purpose is to not only present the research strategy used, but also to explain and justify reasons for employing the particular methodology. The objective is twofold: to provide the logic of using the research method, and to demonstrate the process by which research work has been performed.

This research work employs deductive theorizing and uses a comparative case study analysis to evaluate the hypotheses of the study. This begs the following questions: why does a specific kind of theorizing have priority, and what best explains the use of the comparative case study method in the study?

In order to answer the above questions from the outset it is important to make a few points of qualification. First, as stated in chapter 1, in the realm of nuclear proliferation there exists an extensive body of literature which has dealt with the issue by focusing on the nuclear incentives and disincentives of states in general, most often in the context of individual case studies. Despite the scholarly attention given to the subject, their focus appears to have been on descriptive work, and consequently they have very little to do with theorizing. Moreover, since most scholarly works are case studies, though unique in being case-specific, it is not possible to generalize from them. These descriptive works, however, have broadened the horizon of factual knowledge and have in addition, generated basic theoretical problems. To the extent that this is the state of the literature, the subject of nuclear proliferation is still very much in the infancy of its theoretical development. In other words, it cannot be denied that these studies provide a great

deal of insight with respect to the motivations, but they tend to be descriptive and policy-oriented works, pointing to the need for theory-building which remains the primary concern of the present study.

Second, on the value of using many cases as opposed to a few in the attempt to falsify hypotheses, although aggregate data analysis and in-depth case study methods are both complementary,³² and comparative case studies can yield valid causal inferences,³³ it is pertinent that the research approach be chosen by the researcher on the basis of at least two extremely important criteria:

- 1) The state of the theoretical development in the study;³⁴
- 2) The nature of the question that the researcher wants to answer.³⁵

³²Alexander George, "Case Studies and Theory Development: The Method of Structured Focused Comparison," in Paul Gordon Lauren, ed., *Diplomacy: New Approaches in History, Theory, and Policy*, New York, London: The Free Press, Collier Macmillan Publishers, 1979, pp.43-68; James N. Rosenau, "Toward Single-Country Theories of Foreign Policy," in Charles Hermann, Charles Kegley and James N. Rosenau, eds., *New Directions in the Study of Foreign Policy*, Boston: Allen Unwin, 1987, pp.54-55

³³Gary King, Robert O. Keohane and Sidney Verba, eds., *Designing Social Inquiry: Scientific Inference in Qualitative Research*, Princeton: Princeton University Press, 1994, p.45

³⁴ Neil R. Richardson, "Dyadic Case Studies in the Comparative Study of Foreign Policy Behavior," in Charles Hermann, Charles Kegley and James Rosenau, eds., *New Directions in the Study of Foreign Policy*, Boston: Allan Unwin, 1987, p.168; Bruce Russett, *Power and Community in World Politics*, San Fransisco: W.H. Freeman and Co., 1974, p.14

³⁵Robert Jervis, "Models and Cases in the Study of International Conflict," *Journal of International Affairs*, vol. 44, no.1, spring-summer, 1990, p.87; Morton A. Kaplan, "The Great Debate: Traditionalism Vs. Science in International Relations," *World Politics*, vol. 19, 1966, p.12

Working from these two criteria, I intend to provide a deductive causal explanation which is lacking in the current literature. Comparative case study is the preferable method which the research question demands.

Deductive theory has a higher status than its inductive counterpart within the scientific enterprise.³⁶ The problem in International Relations is not that we do not have adequate facts to explain, but rather that we cannot explain them adequately. Our goal should not be to collect facts, but to be informative, based on causal explanations. Deductive theory-building will assure that observations do not lead to theory, which is the inherent danger in inductive theory-building. Theory built in an attempt to explain the observation or occurrence does not answer the fundamental question of how the linkage actually operates. The difference between correlation and causation is crucial in theory-building. I believe it is important that theory take precedence over empirical investigation.³⁷ This study is designed to enumerate the causes of proliferation and to test the hypotheses against two protracted conflict cases. The purpose is to get a generalizable valid 'causal inference.'³⁸

³⁶Theory invariably occupies a central place--whether deductively or inductively derived. Even though deductive theorizing has been given a higher status than its inductive counterpart, the evidence in the study of world politics is somewhat mixed to date. Basically, the choice depends on a researcher's disposition.

³⁷I believe in having a hypothesis and then testing the hypothesis because of the belief that a causal connection of the variables will enable us to understand the problem better than coming to a conclusion by simple observation. The problem of correlation is at the core here.

³⁸Gary King, Robert Keohane and Sidney Verba, *Designing Social Inquiry*, p.45

There is an ongoing debate over quantitative vs. qualitative methods in an attempt to generate knowledge which is also an extension of the large n vs. small n debate. Generally, those who generalize from a large number of cases use statistically based quantitative analyses and those who examine only a few cases use qualitative approaches. There are advantages and disadvantages to both types of analysis. Qualitative research has the advantage of being able to carefully analyze one or a few cases for the purpose of extracting relationships between variables. It is particularly useful for theory generation in that sense. Such work tends to focus on one or a small number of cases, yet such researchers can obtain enormous information from their studies.³⁹ Quantitative analysis, on the other hand, can test or falsify a generalization better than a qualitative approach, but it offers little more. According to George and McKeown, the method of 'structured focused comparison' is one in which the investigator "defines and standardizes the data requirements of the case studies by formulating theoretically relevant general questions to guide the examination of each case."⁴⁰ In other words, 'structured focused comparison' requires collecting data on the same variables across units.

In qualitative research, the single observation, according to some, is not a useful technique to test hypotheses or theories⁴¹ while others believe that in-depth

³⁹King, et.al., *Designing Social Inquiry*, p.4

⁴⁰Alexander L. George and Timothy J. McKeown, "Case Studies and Theories of Organizational Decision Making," *Advances in Information Processing in Organization*, 2, 1985, p.41

⁴¹ See, King, Keohane and Verba, *Designing Social Inquiry*, pp. 208-212. They do, however, consider one qualification. Single observation can be useful if it is

case studies enable intensive analysis by which critical variables and/or causal relationships between variables can be found.⁴² Comparative case study is the best choice even though, as King et.al. write, in most case studies the predictions about the different social relationships may only be probabilistically accurate.

The possibility that a result is due to chance can never be ruled out in any sort of study; even in wide comparative study it is only more or less likely...The real difference between crucial observation study and comparative study, therefore, is that in the latter case, but not the former, we can assign by various conventions a specific number to the likelihood of chance results.⁴³

This study intends to make a focused comparison of the key states in the protracted conflict sub-systems to determine whether the theory can be generalized across units. The theory is tested against the two protracted conflict regions.

On the question of case selection in a research strategy it is pertinent to select cases on the basis of certain criteria so that the selection bias is minimized. The present study attempts to test the hypotheses by studying PC cases from South Asia and the Middle East. It is believed that a comparison of two cases, where each case comprises an instance of the same class of events, can be an

part of a research program. If there are other single observations--gathered by other researchers-- against which this observation can be compared, it is no longer considered a single observation. What this means is that single observation could be used in a research strategy if it is compared with other single observations and thus, in any case, a comparative analysis is required to make it useful.

⁴²Harry Eckstein, "Case Study and Theory in Political Science," in Fred I. Greenstein and Nelson W. Polsby, eds., *Handbook of Political Science*, vol. 1, *Political Science: Scope and Theory*, Reading, Mass: Addison-Wesley, 1975

⁴³King, et.al., *Designing Social Inquiry*, p.211

excellent research strategy for the cumulative development of theory.⁴⁴ In the present study the reason for selecting the two regions, South Asia and the Middle East, is that they are comparable for the following:

1. They have been protracted conflict regions since late 1940s; therefore, the duration criterion is fulfilled.
2. The key states within these two regions (India, Pakistan, and Israel) have been opaque proliferators for many years (although India and Pakistan changed that status in 1998 by conducting nuclear tests) and more specifically, have been vehemently opposed to the almost universally adhered to Nuclear Non-Proliferation Treaty (NPT). Other states like Iraq and Iran in the Middle Eastern sub-system, have also shown strong interest in possessing nuclear weapons despite being signatories to the NPT. Syrian interest in nuclear weapons acquisition has also been evident at certain times.

The research for this study has been conducted through primary materials as well as published secondary sources on nuclear proliferation in the two PC regions. However, field research has been conducted in the key countries (India, Pakistan and Egypt) of the two regions. These are the only countries it was possible to visit.

During the field research, I interviewed defense analysts, former army officers, and scholars who have worked extensively on the subject in each of these countries. Interviewing scholars and knowledgeable people is accepted as a standard method for understanding the dynamics of nuclear proliferation in

⁴⁴Alexander L. George, "Case Studies and Theory Development: The Method of Structured Focused Comparison," p.52

undeclared nuclear countries. Personal interviews with military and political decision-makers and scholars were conducted to verify published accounts. The views and thoughts of scholars who have written on the subject have been incorporated in the analysis. Information from the research has been used to determine whether or not the variables which I am focusing on are actually critical in nuclear decisions within the protracted conflict states.

SUMMARY

In this chapter I have proposed an alternative explanation of nuclear proliferation in the protracted conflict regions and put forward the central hypothesis of the research. This was followed by the operationalizations of the dependent, independent and intervening variables. Other sub-hypotheses pertaining to the central hypothesis have also been analyzed. An assessment of the definitions of PC provided by scholars was provided and scholarly disagreements over the inclusion of 'war' as a required condition of the PCs have been examined. The purpose has been to understand that both views are correct under different circumstances and to provide a better definition of PC in which the association between war-probability and PC has been addressed. This also allows for an understanding of why only war-prone PC states want to proliferate for deterrence. In the final section of the chapter I argued that a deductive theory is necessary for a better understanding of the causes of PC proliferation, and that a comparative

case-study offers the best methodology to test the hypotheses. The selection of the PC cases from South Asia and the Middle East has also been justified.

CHAPTER III

NON-TRADITIONAL NUCLEAR DETERRENCE AMONG PROTRACTED CONFLICT ADVERSARIES

This chapter analyses the kind of deterrence nuclear weapons could provide in an opaque situation. It also examines the association between deterrence and opaque proliferation. The purpose is to present the reason why non-traditional deterrence is expected to work for opaque proliferators and how deterrent stability becomes a possible and acceptable outcome for these kinds of states. To this end the central questions that this chapter addresses are the following: What is non-traditional deterrence? Does non-traditional deterrence in the PC states resemble the Soviet-American pattern of stability? Does it need to follow the traditional pattern of nuclear deterrence and stability? What are the similarities and dissimilarities between traditional nuclear deterrence and non-traditional nuclear deterrence in terms of the conditions and consequences of deterrence? Finally, how do opaque proliferators pursue non-traditional nuclear deterrence and achieve deterrence stability?

I argue that PC proliferators acquire nuclear weapons to deter future wars with their adversaries, but in these cases, they practice “non-traditional nuclear deterrence.” Nuclear deterrence (e.g. deterrence between the superpowers) rests

on the assumption that the integration of an invulnerable force structure with credible deployment tactics will influence the potential behavior of an adversary to the point of precluding offensive actions against the vital interests of the deterring country. As Bernard Brodie pointed out more than half a century ago, the military utility of nuclear weapons is their value in promoting the avoidance of war rather than the actual fighting of war.¹ Similarly, Waltz argues that nuclear weapons are war-deterring, not war-fighting instruments and that the mere presence of these forces in a conflict-prone region creates a situation of such obvious danger that neither side in a dispute would dare to threaten the vital interests of the other.² Along the same lines--but moving a step further--I argue that many PC proliferators practice non-traditional nuclear deterrence. Since their proliferation is opaque or undeclared, the deterrence which they pursue is also tacit or opaque, but their intentions of war-avoidance are communicated to each other by means that are understood by the adversaries in question³ and consequently, a stable

¹Bernard Brodie, et.al., *The Absolute Weapon*, New York: Harcourt Brace, 1946

²See Kenneth Waltz, "More May Be Better," in Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate*, New York: W.W. Norton, 1995, pp.1-45

³This is something unique in the case of opaque proliferators. Declared proliferators, once out in the open, are unlikely ever to prefer ambiguous communications again. Understanding the adversary's real intentions is part of the opaque deterrence strategy even though they are not explicitly stated or documented. Rather, adversaries mutually understand implicit intentions of each other. Although Thomas Schelling believes that communication is incomplete and impossible under opacity (Thomas Schelling, *The Strategy of Conflict*, New York: Oxford University Press, 1963, p. 53), I believe that only the adversaries in question are able to understand the mutual signals which are so important for deterrence.

deterrent relationship is maintained. The point being made here is that it is not merely the possession of nuclear weapons (as Waltz suggests) that enables deterrence to work between the PC adversaries with undeclared nuclear weapons, but that they follow the same conditions for deterrence to work--only in a somewhat different manner--when compared to the traditional nuclear powers. Opaque proliferation should not necessarily imply deterrence instability. These proliferators are the same as established nuclear powers in terms of their motivations for acquiring nuclear weapons; they consequently have the same goal with regard to keeping deterrence stability. The difference lies in the fact that most new nuclear states have decided to remain opaque proliferators instead of declared nuclear powers and they practice non-traditional nuclear deterrence instead of traditional nuclear deterrence. Where the intention to proliferate exists for the purpose of deterrence, the consequence of proliferation also becomes deterrence stability. Therefore, the intermediate stage between the causes and consequences of proliferation --the process of how deterrence works--may not be as important an aspect to maintaining stability as deterrence pessimists might portray.⁴ This should not imply that the simple possession of deterrent capability will do the job of keeping deterrence as existential deterrence proponents would believe. It is important for the adversaries to communicate to each other about their weapons

⁴Obviously, the process by which deterrence works has to be followed and does not have a substitute, but one has to understand that where proliferation itself is a function of deterrence, states have a built-in incentive to make sure that deterrence works between the opponents. This does not imply that states can jump these deterrence steps and have deterrence anyway, but it is important to believe in these

and their intentions to retaliate in case of an adversarial attack. As long as the conditions for deterrence work, nuclear or opaque nuclear states may not be much different with regard to the peace-keeping. To recap: non-traditional deterrence is deterrence pursued by the new nuclear states with the intention of ensuring deterrent stability between the adversaries where the traditional kind of nuclear testing, strategy, and doctrines pertaining to deterrence may not be necessary, and the number of weapons is not important. Conditions for deterrence to work are required and observed by the opaque proliferators in a less transparent manner than the declared nuclear weapon states. Even when some of these new nuclear states test their nuclear weapons they may still not follow the traditional method of adopting nuclear doctrines and strategy; and the number of nuclear weapons needed for deterrence may be limited.

This chapter comprises several sections that deal with the above mentioned points. It has been organized as follows: first, I look at how deterrence has been understood by the traditional deterrence theorists. This is followed by explanations of the four most salient and fundamental conditions for deterrence to work. I then review recent works by theorists who have attempted to comprehend nuclear deterrence under opaque proliferation. Finally, I provide an analysis of my argument with regard to deterrence for PC opaque proliferators and present how, why, where, and whether this type of deterrence differs from the traditional conception of deterrence. I analyze the major line of disagreement between

states that they will abide by the conditions of deterrence since there is an association between their proliferation and deterrence in the first place.

scholarly work on deterrence under opacity and non-traditional deterrence for PC states as understood in this dissertation. I outline a theoretical basis for the argument that non-traditional nuclear deterrence can operate between opaque nuclear proliferators within the PCs.

A standard definition of deterrence describes an adversarial relationship between two states in which “leaders in at least one would consider resorting to force” to alter the status quo, and where “the other side, precisely because it believes the opponent would be willing to consider resorting to force, maintains forces of its own and offers warnings to respond in kind to attempts to use force contrary to its interests.”⁵ However, in the case of general deterrence, the adversaries are not using or actively threatening to use military force. By contrast, in immediate deterrence, one of the adversaries is considering an attack on the other and the latter state is aware of this and has made threats to retaliate in order to prevent the former from attacking.⁶ Deterrence is said to have worked when no military attack takes place. When an adversary fails to initiate an attack due to fear of retaliation by the other, deterrence has been successful. The next question then remains: under what conditions would general and immediate deterrence fail? Since a challenge is generally what the general deterrent is intended to prevent, threats posed by a challenger to change the status quo can simply make general deterrence fail. As for immediate deterrence, it fails when the challenger decides

⁵Patrick Morgan, *Deterrence: A Conceptual Analysis*, Beverly Hills: Sage Publishers, 1983, pp.42-53

⁶Ibid., p.38

not to retreat--and in fact, to advance--even after receiving the immediate deterrent threat by the defender.

In the nuclear scenario, nuclear deterrence became the basis for East-West stability and security because of the unique and destructive power of nuclear weapons. As Bernard Brodie, Thomas Schelling and many others have noted, what is significant about nuclear weapons is not "overkill" but "mutual kill."⁷ Nuclear weapons have brought international stability because they generated a framework for avoiding actions that might cause crises and for quelling them before they escalate to nuclear war. Nuclear deterrence has encouraged the reasoning that "if you attack me, I may not be able to prevent your attack, but I can retaliate so powerfully that you will not want to attack in the first place."⁸

With regard to the conditions required for deterrence to work, classical deterrence theory specifies that deterrence will work as a strategy except when the deterrer lacks the capacity or resolve to make commitments clear to an adversary. Failures in deterrence are not inconsistent with deterrence theory, provided that they can be attributed to the absence of a clear commitment or sufficient credibility or capability. The four most salient conditions of classical deterrence theory are the following:

⁷Bernard Brodie, et.al., *The Absolute Weapon*; Thomas C. Schelling, *Arms and Influence*, New Haven: Yale University Press, 1966

⁸Joseph S. Nye, *Understanding International Conflicts*, New York: Harper Collins College Publishers, 1993, p.123

A defender has: defined a commitment; communicated this commitment to the adversary; established that the commitment was defensible; and demonstrated his willingness to defend the commitment.

The fundamental concern for deterrence theory is then how to assure that commitments are formulated strongly and clearly communicated to the adversary which will make deterrence work. In nuclear deterrence, however, the very destructive power of these weapons means that all calculations by a potential adversary would be dominated by the expected loss if it came to a nuclear war. If this is correct, all nuclear adversaries (whether declared or opaque) would be deterred from waging war against their opponents because of the real possibility of getting into a nuclear war. This is the point of departure of my argument. Before analyzing my argument, I will look at how more recently theorists have understood deterrence for opaque proliferants.

In the regional context, deterrence pessimists have developed a variety of reasons for why deterrence may not function between opaque nuclear-armed adversaries. Most scholars tend to believe that the new nuclear states may start preemptive attacks against their adversaries because they fear being subjected to a surprise attack by the said adversary.⁹ It has been argued that the stability of deterrence between two nuclear powers varies depending on individual factors which include the types of weapons that a state deploys, the strategies a state adopts for the use of nuclear weapons, the degree to which calculations are

⁹Thomas C. Schelling, *The Strategy of Conflict*, pp.207-229

clouded by uncertainty, etc. Among others, Scott Sagan believes that most new nuclear states will not be able to fulfill the essential operational requirements for deterrence stability. Sagan believes that these states will be prone to fight preventive wars, build vulnerable second-strike forces, and construct nuclear arsenals that are prone to accidental or unauthorized use. His central concern is with the inadvertent use of nuclear weapons. Secrecy creates a situation where safety measures are absent. Military regimes are more dangerous than the civil ones because military officials are more focused on readiness than safety.¹⁰ Others, like Bruce Blair and Rodney Jones, provide somewhat different views with regard to why a successful deterrent relationship cannot prevail between the opaque nuclear states or the new nuclear states. Their arguments have more to do with financial and technological developments in these states than with the weapons per se. They argue that opaque nuclear proliferation is dangerous because these new countries lack the financial resources and technical capabilities necessary to develop safe and secure nuclear forces. Bruce Blair further argues that the superpowers were at one time more vulnerable to crisis instability than is commonly understood, implying that the lesser technological capabilities of the new proliferants make them more subject to preemptive war pressures.¹¹

¹⁰Scott Sagan, "Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons," *International Security*, vol. 18, no.4, spring 1994, pp.66-107

¹¹Bruce G. Blair, *The Logic of Accidental Nuclear War*, Washington D.C.: Brookings Institution, 1994; Rodney Jones, "Small Nuclear Forces," in Rodney Jones, ed., *Small Nuclear Forces and US Security Policy*, Lexington Mass: D.C. Heath, 1984, pp.1-15

The more optimistic perspective has scholars who perceive that nuclear deterrence may well function among opaque nuclear states. In the context of the two regional opaque states (until 1998) in South Asia, Peter Lavoy has argued that the possession of nuclear weapon capabilities by countries like India and Pakistan “creates a situation where serious political crises, heated religious and ethnic tensions, and frequent border clashes do not escalate to full-scale warfare” according to the conditions of existential deterrence and/or non-weaponized deterrence.¹² He argues that unlike the superpowers, these countries do not need to place their nuclear arsenals under military control during peacetime, neither do they need to employ large arsenals worldwide on land, sea, or underwater. As crises evolve, each country should have enough time to prepare for a possible nuclear exchange.

Along the same lines, but with differences, Waltz considers the ramifications of nuclear weapons acquisition by new nuclear states. His main argument is that the possibility alone of nuclear use causes extreme caution all around, so the likelihood of war decreases as more countries acquire nuclear weapons. The spread of nuclear weapons to new powers will tend, over time, to induce caution and to moderate conflict. Second strike forces do not require states to possess a

¹²Peter R. Lavoy, “Nuclear Deterrence and the New Nuclear States: Speculations on the Sources of Nuclear Doctrines in India and Pakistan,” Paper presented at the conference on Nuclear Weapons in a Transformed World, McGill University, Montreal, Canada, November 4, 1995, p. 6

large number of weapons. He also considers that the upside of possessing fewer weapons is that their small numbers make accidents less likely.¹³ Moreover, Waltz considers that preemption (as mentioned by deterrence pessimists) is possible only “if the would-be-attacker knows that the intended victim’s warheads are few in number, knows their exact number and locations, and knows that they will not be moved or fired before they are struck. To know all of these things, and to know that you know them for sure, is exceedingly difficult.”¹⁴ Bueno De Mesquita contends that the logic of deterrence assumes that, beyond some point, each addition of nuclear capability diminishes the threat of nuclear war.¹⁵ In a similar vein, Van Creveld believes that nuclear weapons could prevent regional states from fighting one another.¹⁶ In the context of the Middle Eastern region, scholars including Paul Jabber, Steven Rosen, and Shai Feldman have argued that nuclear arsenals can promote peace in the Middle East through mutual deterrence.¹⁷ In the South Asian regional setting, Devin Hagerty and former Indian and Pakistani army

¹³Kenneth N. Waltz, “More May be Better,” and “Waltz Responds to Sagan,” in S. Sagan and K. Waltz, *The Spread of Nuclear Weapons: A Debate*, pp.8-17, 97

¹⁴Kenneth N Waltz, *The Spread of Nuclear Weapons: More May Be Better*, Adelphi Paper no.171, London: International Institute for Strategic Studies (IISS), 1981, pp.16

¹⁵Bruce Bueno de Mesquita, “Nuclear Peace Through Selective Nuclear Proliferation,” undated manuscript, p.30

¹⁶Martin Van Creveld, *Nuclear Proliferation and the Future of Conflict*, New York: Free Press, 1993, p.92

¹⁷See Paul Jabber, “A Nuclear Middle East: Infrastructure, Likely Military Postures and Prospects for Strategic Stability,” ACIS Working Paper no. 6, University of California, Los Angeles: Center for Arms Control and International Security,

chiefs K. Sundarji and Aslam Beg respectively, as well as several Indian defense analysts argued before the 1998 nuclear tests that nuclear capabilities in South Asia made India and Pakistan less likely to fight one another.¹⁸ Military attack by either India or Pakistan carries a high risk of nuclear retaliation. Waltz writes that nuclear weapons are revolutionary because they “reverse or negate many of the conventional causes of war.”¹⁹ Thus, for him, what matters is not the number of weapons, but that neither side can contemplate launching a disarming attack with high confidence of success.

The debate on the regional nuclear deterrence is incomplete without a full understanding of whether or not the conditions of deterrence work under opacity. The arguments relating to preemptive nuclear attacks, irrational leadership in the developing countries, the problems associated with the civil-military rulers, abiding by the norms of deterrence and the financial and technological backwardness of these new nuclear states appear to be less convincing empirically. One could easily argue that deterrence under opacity has worked in the two most volatile regions of

September 1977; Steven J. Rosen, “A Stable System of Mutual Nuclear Deterrence in the Middle East,” *American Political Science Review*, 71, no.4, December 1977, pp.1367-1383; Shai Feldman, “A Nuclear Middle East,” *Survival*, 23, no.3, May-June 1981, pp. 107-115

¹⁸Devin T. Hagerty, *Consequences of Nuclear Proliferation: Lessons from South Asia*, Cambridge, Mass: The MIT Press, 1998; Devin T. Hagerty, “Nuclear Deterrence in South Asia,” *International Security*, vol. 20, no.3, winter 1995-96, pp. 79-114; General K. Sundarji, *Blind Men of Hindustan: Indo-Pak Nuclear War*, New Delhi: UBS Publishers, 1993; General Mirza Aslam Beg, *Development and Security: Thoughts and Reflections*, Rawalpindi: FRIENDS, 1994

¹⁹Kenneth N. Waltz, “War in Neorealist Theory,” *Journal of Interdisciplinary History*, 18, no.4, spring 1988, pp.625

South Asia and the Middle East for more than two decades. The empirical evidence corroborates the optimistic scholarly belief in deterrent stability. That, however, is not enough and, in fact, it is extremely important to understand the theoretical basis for regional nuclear deterrence. For deterrence to work, specific conditions have to be met first; that is what this study intends to elaborate on. Before continuing with the analysis of my argument, a conceptualization of deterrence under opacity provided by different scholars is required.

In an attempt to understand deterrence under opacity scholars have used different terms for deterrence--virtual deterrence, non-weaponized deterrence, existential deterrence, and minimal deterrence. Michael Mazarr²⁰ has attempted to write about the advantages and disadvantages of virtual deterrence. Virtual arsenals identify a situation in which no nuclear weapon exists assembled and ready for use. Nuclear weapon states would dismantle all assembled nuclear devices and place the component parts--warheads, delivery vehicles, and fissile materials--under international inspection. The weapons would be separated from delivery systems so that any attempt to associate the two could be discovered. In a regime of virtual nuclear deterrence, nuclear weapons--disassembled, not ready for use, but still nuclear weapons--would provide the backdrop for interstate relations. Nuclear coercion might still be possible, but obviously limited and in an indirect form. The upside is that day-to-day accidents might not happen; unauthorized use and illegal sales would be reduced; no state would be allowed to assemble nuclear

²⁰Michael Mazarr, "Virtual Nuclear Arsenals," *Survival*, vol.37, no.3, autumn 1995, pp.7-26

weapons and all states would be required to allow verification procedures sufficient to demonstrate that this goal has been achieved; the proliferation/non-proliferation divide would be eliminated and a global virtual arsenal regime might succeed.

Non-weaponized deterrence is a concept used by George Perkovich. According to him, non-weaponized deterrence is obtained when the capabilities to make nuclear weapons exist but not the weapons themselves, along with the presumed ease with which these forces could be manufactured and delivered, combined with the view that each is prepared to use them in war.²¹ In essence, non-weaponized deterrence derives from the power of each country to construct nuclear weapons quickly.

According to Ashok Kapur there are several salient and definable characteristics of non-weaponized nuclear deterrence. They include the official denial that nuclear materials have been assembled into weapons; the delivery system is kept separate from nuclear weapons; and nuclear weapons capability is not integrated into military forces and strategic doctrine. Therefore, there is a certain level of nuclear restraint among the involved countries. Officials, however, do acknowledge the possession of weapons capability, the existence of delivery systems that can be used as a nuclear weapons carrier, and staff college study of nuclear warfare presumes near-weaponization. Official denial creates ambiguity, but it also creates de facto boundaries in official behavior, and provides negotiating

²¹George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy*, no. 91, summer 1993, pp.85-104

opportunities or tacit bargaining between regional enemies as well as between regional states and international powers. He also outlines the following conditions present in this type of non-weaponized deterrence: 1) IAEA verification is ruled out; 2) Informal freezing or capping of nuclear weapons program is accomplished; 3) No formal agreement exists not to produce or deploy nuclear weapons; 4) There is also no agreement to destroy completed nuclear weapons cores. Non-weaponized deterrence allows a country to maintain and develop technical capacity to use a nuclear threat in an emergency or to use nuclear arms as a weapon of last resort. It also fosters arms control.²²

The term, “existential deterrence,” as coined by McGeorge Bundy, refers to a situation where the presence of nuclear weapons provokes caution in military and political decision makers irrespective of the geographic location, political regime, or political culture in question.²³ Bundy argued that during the cold war existential deterrence remained strong in “every major crisis” because the superpowers could massively retaliate.²⁴ Similarly, under conditions of opacity, any deterrence derived from nuclear capabilities is naturally expected to be existential because each side has only very limited information about the other’s nuclear forces. As Devin

²²Ashok Kapur, “India and Pakistan,” *Nature and Elements of Nuclear Deterrence Between Two Regional Rivals*, Paper prepared at a workshop on “The Future of Nuclear Deterrence” by the Centre for Defense and Security Studies, Gimli, Manitoba, May 1995, pp.10-13

²³McGeorge Bundy, “The Bishops and the Bomb,” *New York Review of Books*, June 16, 1983; McGeorge Bundy, “Existential Deterrence and Its Consequences,” in Douglas MacLean, ed., *The Security Gamble: Deterrence Dilemmas in the Nuclear Age*, Totowa, NJ: Rowman and Allanheld, 1984, pp. 3-13

²⁴McGeorge Bundy, “Existential Deterrence and Its Consequences,” pp. 8-9

Hagerty states, “opaque proliferants deny having nuclear weapons, declare no public nuclear doctrines, and know relatively little about each other’s force postures; consequently, nuclear deterrence between them is based primarily on the perceived existence of the technology itself, not on relative capabilities or announced intentions.”²⁵

Others have argued about the number of nuclear weapons a country requires for deterrence. According to George Quester, it is possible to have deterrence with a minimum number of nuclear weapons. Reducing the arsenals to the levels of minimum deterrence could be important because it might erase the possibility of nuclear winter and lower the temptation to escalate conventional war to a nuclear one. Moreover, rivals might not be so provoked by each other and de facto détente might occur and arms control might save money. However, as retaliatory forces become too small, crisis stability could decline--a major argument against minimal deterrence.²⁶ For minimal deterrence the number of weapons does not matter; the desire by each side to avoid war is more important. For deterrence to work, as it had worked before, enough of the adversary’s cities have to be vulnerable to a second-strike to make it very unrewarding for one side to launch a first-strike.

Minimal deterrence has been used by France, Britain and China as well as by the new nuclear powers such as India, Pakistan (until recently) and Israel. China

²⁵Devin Hagerty, *Consequences of Nuclear Proliferation: Lessons from South Asia*, p.3

²⁶George Quester, “The Continuing Debate on Minimal Deterrence,” in T.V.Paul, Richard J. Harknett and James J. Wirtz, eds., *The Absolute Weapon Revisited*, Ann Arbor: The University of Michigan Press, 1998, pp. 167-188

has been maintaining a no-first-use policy and given emphasis to counter-value retaliation rather than counter force applications of such weapons. China has accumulated several hundred, rather than several thousand, warheads. India probably has enough plutonium for more than 100 nuclear warheads, Pakistan has enough enriched uranium for 10-15 nuclear warheads and Israel may have about 100 bombs.²⁷ For financial, technical, or political reasons, these countries have restricted their programs and have practiced minimal deterrence. The bombs that exist in the basement for assembly on short notice are assigned to a purely counter-value role-- and aimed at adversary's cities.

In a nut-shell, all deterrence arguments presented by scholars are somewhat similar in the sense that, although the focus has generally been on "deterrence" for all of them, and most of them have used specific terms to understand deterrence under opacity, they seem to be more concerned with the steps constituting the nuclear weapons acquisition ladder. Their focus has been on how weapons could remain disassembled, how they could later be assembled, and how these could, in turn, ensure deterrence. This does not mean that they have not considered deterrence per se, but that the process concerning how deterrence is expected to work has mostly been overlooked. Both virtual deterrence and non-weaponized deterrence are concerned with how weapons should remain disassembled and still ensure deterrent stability. Obviously these are Western theories of deterrence under opacity and it is in the best interest of the West to keep the new proliferators

²⁷ George Quester, "The Continuing Debate on Minimal Deterrence," pp.183-184; George Perkovich, "A Nuclear Third Way in South Asia," pp.85-104

“opaque,” so these theories make sense in the present post-cold war period. Similarly, existential deterrence has been focused closely on how the mere presence of nuclear weapons could dissuade the adversary from waging a war and enable adversaries to maintain a stable deterrent relationship. The concept of minimal deterrence is somewhat different from the above three types of deterrence; it deals with the number of weapons required for nuclear deterrence to work and not with the actual weaponization of the capabilities. However, it does not deal with the subject of the conditions of deterrence.²⁸

What is indicated is not that any part of the above argument is incorrect, but that more understanding is required about how states with opaque nuclear weapons are expected to follow the conditions of deterrence to maintain deterrence stability. In rational deterrence theory, a formulation emphasizing capability and will is embedded which assumes that the adversary will be able to make a well-informed means-end calculation of the damage which the deterrer can inflict and of the likelihood that the deterrer will actually carry out his threat. In other words, the question is: what deters? Effective deterrence requires both the

²⁸These deterrence terms have more to do with the nuclear weapons themselves (whether relating to the actual weaponization or the number of weapons that states possess) and not with communication per se, which is more central to the proper functioning of deterrence. Only few scholars have worked on the conditions of deterrence. See, Devin T. Hagerty, “The Power of Suggestion: Opaque Proliferation, Existential Deterrence, and the South Asian Nuclear Arms Competition,” in Zachary S. Davis and Benjamin Frankel, eds., *The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results*, London: Frank Cass, 1993

capability to do damage and credibility of the threat that weapons will be used.²⁹ Given that these are important factors for any kind of deterrence to work, where adversaries are not sure about each other's possession of nuclear weapons in an opaque situation, the central question then is: how can deterrence be expected to work? If it is not clear that the opponent possesses the capability to do damage, why would a state be deterred in the first place? Secondly, where states are opaque proliferators, how can opponents know whether or not their threats are credible and that the state in possession of the weapons, will in fact use them if needed, and would in fact inflict unacceptable damage? To answer both questions, it is pertinent to look at communication between the adversaries. In other words, one needs to understand what the adversaries know of each other's possession of opaque capabilities and of their willingness to use them.

As far as the opaque possession is concerned, in most cases it is the news media which provides communication lines between the adversaries. Opaque nuclear states, because of outside pressure, avoid any open claim to possession of nuclear weapons, and let the rumors do the job of transmitting their deterrent message. It is true that one cannot depend solely on the media when such devastating weapons are concerned, but at the same time, one also cannot take chances with nuclear weapons. Thus the argument for existential deterrence comes in. Even if a state believes that its adversary may possess such weapons, even the possibility of the possession would dissuade the attacker from contemplating an

²⁹Credibility may depend on the stakes involved in a conflict. For an illustration on this see, Joseph Nye, *Understanding International Conflicts*, pp. 119-124

attack. It is also difficult to know the exact location of weapons in the adversary's possession. Obviously, in an opaque situation, this is not possible. Since opacity means, essentially, a lack of transparency, the adversaries do not know the exact number of weapons or their locations. So no state would be willing to take a chance with regard to failing to eliminate even one deliverable weapon which would risk catastrophe.³⁰ Even if these countries are not officially declaring their possession of nuclear weapons, the leadership in each country is fully aware of each other's nuclear capability and wants deterrence to work. The point, however, is that even though the logical nature of nuclear deterrence under opacity is "existential deterrence," opaque nuclear states follow the steps that are necessary for deterrence to work.

As for the willingness to use the weapons, once again the Western media always portrays how each of these Nth countries could use their nuclear weapons in case of an attack (conventional or nuclear) by their opponent. Besides, these adversaries also have got their own hot-line communication links and use special communication methods with each other in crisis situations. These do not resemble the East-West deterrence construct, consequently, achieving deterrence under these circumstances seems less believable and less logical to the traditional deterrence theorists.

³⁰John Weltman, "Nuclear Devolution and World Order," *World Politics*, vol.32, no.2, January 1990, p.190

As far as the number of weapons and deterrence doctrines are concerned, three assumptions pertaining to non-traditional nuclear deterrence are stated below:

First, PC proliferators do not need to possess a large number of deliverable warheads to be able to deter an adversary. On the contrary, a small number of such warheads in an undisclosed location can provide a state with a second-strike capability. What these states need is a 'minimal deterrent'³¹ capability which not only keeps the number of weapons small, but is also highly beneficial for financial reasons. Since the regional proliferators are economically less secure than the five major nuclear powers, keeping the number of nuclear weapons low is imperative while at the same time allowing them to accrue the advantages of nuclear deterrence. Regional PC adversaries are deterred from going to war against each other and they do not need to match the major nuclear powers in this respect to deter their adversaries. Forces designed for deterrence need not be comparable.³²

Second, to understand whether nuclear weapons mean the same for weaponized and opaque states, it is pertinent to assume that nuclear weapons impose a logic of their own³³ which can be applied to existing nuclear weapons states and the opaque states alike. Nuclear weapons dominate strategy and their only use is deterrence. Therefore, I argue that deterrence could hold between two

³¹ George Quester, "The Continuing Debate on Minimal Deterrence," pp.167-188

³²Kenneth N. Waltz, "More May Be Better," in *Spread of Nuclear Weapons*, p.30

³³P.R. Chari, "The International Nuclear Regime and the Near Nuclear Countries," in Kanti Bajpai and Harsh C. Shukul, eds., *Interpreting World Politics*, New Delhi: Sage Publications, 1995, p.142

nuclear-armed adversaries whether these adversaries are declared or non-declared proliferators, although declared possessions have certain advantages.

Third, for non-weaponized nuclear deterrence, regional PC states do not have to match the superpowers with regard to the following:

1. Declaration of the possession of nuclear weapons, although some may declare in accordance with the security interests of those states;
2. Strategy: test nuclear weapons and declare military strategy or targeting strategy, although some may test or develop strategies as may be required by the state security interests;
3. Nuclear doctrine: for use of nuclear weapons as first strike weapons, second strike forces, or as weapons of last resort, although at some point some of these states may develop nuclear doctrines.

Regardless, there is no reason to believe that these states will follow the former superpowers with regard to the testing, strategy and doctrine of nuclear weapons. There is also no reason to think that they will not do so at some point. What is more important is that deterrence may work without following the traditional pattern of nuclear testing, strategies and doctrine.

Acknowledgment of the possession of nuclear weapons capability is not a necessary condition in non-traditional nuclear deterrence. Tacit bargaining between regional PC rivals³⁴ and formal arrangements like 'confidence-building measures'

³⁴It has been argued that opaque proliferants, due to the secrecy associated with their proliferation, have used a mode of discourse between adversaries which is tacit. See, Neil Jocek, "Tacit Bargaining and Stable Proliferation in South Asia," *Journal of Strategic Studies*, vol. 13, no. 3, September 1990, pp. 77-91

could facilitate deterrence and restraint. Tacit bargaining is something that is understood by the adversaries in question, but obviously, not articulated. When each country is aware of the other's ability to assemble weapons and deploy them in case of necessity along with the willingness to do so, deterrence is workable. This understanding comes from communication achieved in a variety of informal ways. It can also be "signaled through state-controlled or state-influenced media organs."³⁵ Thus, regional PC states are deterred from going to war with each other by the tacit understanding of mutual possession of nuclear weapons capability (as in the rational deterrence models), and proliferation in these states is essentially a function of the search for deterrence.

Superpowers had nuclear weapons whose possession they have officially acknowledged, tested these weapons and ultimately made them "believable weapons." They, further, took the step of communicating to each other their intention of using these weapons if attacked by adversaries. The existence of the weapons and the threats of retaliation--both were made credible. Under these conditions deterrence became a workable strategy to avoid wars between the superpowers. These same steps could be taken by the opaque proliferators in a different way.

PC opaque proliferators, in terms of the proliferation ladder, have kept their weapons possession a secret. However, they have officially made it clear that they possess the weapons capability. In most cases one must take special account of

³⁵Devin T. Hagerty, "Nuclear Deterrence in South Asia," p. 90

official statements which relate to the possession of nuclear weapons capability. Obviously, statements as well as suspicions made public by officials of the United States, the International Atomic Energy Agency (IAEA), or the United Nations, have, in fact, spread the news of their possession of nuclear weapons capability. Nuclear capabilities of these opaque proliferators are sometimes credibly demonstrated by the non-proliferation community as well. Testing the weapons to confirm to the adversary that such weapons exist is not always necessary for these states. Instead, for practical reasons, they use third parties to transmit the information. Sometimes third parties do the job of communication unconsciously. Devin Hagerty writes that, "there are three main agents: two opaque nuclear powers and a mediator, the international community. The interaction between the agents is captured by two processes: bargaining between the two proliferants, largely of an indirect or tacit nature, which signals their resolve vis-à-vis another; and transparency-building, the unconscious function of the mediator, which effectively certifies the capabilities of the opaque proliferants."³⁶ Thus, the opaque states make a point of providing enough clues to these third parties so that the countries that they expect to be deterred by their possession of these weapons do take these news items seriously. Since they are looking for an alternative to testing with respect to making their possession credible, they generally make sure that the third party communication link via the media receives a very good picture of their existing nuclear situation. Since it is in the security interest of these states to inform their adversaries that they have the deterrent capability, they work to

³⁶Ibid., p.52

communicate their situation to their opponent. Communication in opacity is done via works, not words. This is done by all adversaries hoping to attain a deterrent relationship and so there is a kind of understanding between them in this regard. All matters pertaining to the nuclear issue of the adversary are taken seriously by the PC opaque proliferators whether or not it interests other countries. From this, it is almost clear that even though these proliferators have not officially declared their possession of nuclear weapons, they create a situation that is no less than officially declaring the existence of the capability they have. Thus, as far as the existence of nuclear weapons is concerned, the opaque proliferators within the PCs are no different from the superpowers. They make their nuclear capability believable one way or another and thus abide by the first and fundamental condition for deterrence to work.

With regard to the second important condition of deterrence--the intention of using these weapons--once again, these countries assure that their intentions are communicated by believable means to their adversaries. Often the function is performed by the major powers such as the US, and frequently, by the informal discussions of each country's officials with the other. Diplomatic visits of the officials in each other's countries also make communication possible, feasible and, sometimes easier. Intentions are also communicated by tacit bargaining and other confidence-building measures.

One of the most important problems is that because these countries may only have the weapons capability and not the weapons themselves, it might be possible

for a country to make a preemptive strike with the expectation that an appreciable amount of time might be required for its adversary to assemble weapons. Given this possibility, adversaries make sure, either through media or interviews provided by officials related to nuclear weapons in the scholarly literature, that their opponent understands that weapons could actually be assembled by them within a matter of days. They also want their opponent to calculate how much time would be required for assembling their weapons. Since adversaries are, in most cases, aware of the fact that weapons could be made and assembled on a short notice they refrain from taking the first step of attacking.

Opaque proliferation within the PC states is primarily meant to deter war between adversaries. Where this is relevant, states have a basic interest to make sure that the heart of the deterrence strategy of war-avoidance-- communication-- is done effectively. Since these states are opaque proliferators, they are also aware of their new situation, and that for deterrence to work between them, constant communication is necessary. Communication is present between them, but is usually of a less formal and tacit type. As long as some amount of understanding³⁷ exists between the contending parties in a conflict with regard to deterrence, opacity or no-opacity should not make a difference. There is no question that open communication is better than tacit communication, the latter is nonetheless an alternative that could be used for deterrence to function.

³⁷“Some amount of understanding” refers to the kind of tacit understanding between the protracted conflict opaque proliferators that this dissertation is concerned about. Therefore, it is necessary to take all “understandings” between the PC opaque states as “tacit,” but nonetheless, important.

Obviously, a country that does not officially declare the possession of nuclear weapons --or one that has not tested the weapons--should not be expected to discuss deterrence doctrine or strategy with regard to the use of these weapons. The idea of opaque proliferation becomes meaningless if a country adopts a nuclear doctrine or deterrence strategy. The purpose is to make the best of the opaque situation so that deterrence can work. Since traditional weapons acquisition has been open and declared, the strategies have also been open, formal and declared. However, since PC states' weapons proliferation has been mostly opaque and undeclared, the nuclear strategies they have adopted have also been opaque, informal and undeclared. This factor remains the major difference between the traditional and new nuclear states.³⁸ The similarities between them which scholars are not yet ready to comprehend are primarily within the realm of deterrence conditions. As I have argued, both types of proliferators have aspired to deterrent capabilities and have consequently tried to obtain deterrence stability. Both types have also made deterrent relationships, which revolve around the aspect of "communication," work. Although the traditional nuclear powers have maintained formal and clear communication links with each other; opaque states, nonetheless, have less formal links with each other. This is obvious and

³⁸This argument is debatable since US/Soviet nuclear deterrence also had a lot to do with matching nuclear weapons in terms of numbers, weapons-grade, sophistication, and the like--which are absent between the PC opaque proliferators. However, I believe that acknowledgment of the possession in the former case and undeclared possession in the latter case provide the major difference between them.

intentional³⁹ and thus has nothing to do with an improper functioning of opaque nuclear deterrence.

Finally, although the opaque proliferators within the PCs do not have to resemble the US/Soviet pattern of deterrence in terms of nuclear testing, strategy, and doctrine, they certainly must assure that they follow the key conditions for deterrence to work. Obviously, even here the conditions are followed in an opaque way.

What is important is that opaque nuclear states might change their nuclear status for security requirements and would consequently change their mode of communication for deterrence. However, they may also continue to maintain their non-traditional deterrent strategy with respect to nuclear strategy, doctrine, deployment or number of weapons.

Having written the above, I believe that PC opaque nuclear proliferators are capable of achieving nuclear deterrence in a non-traditional way by following the steps of deterrence which are based on mutually-satisfying means of communication unknown to the traditional deterrence theorists using empirical studies of previous nuclear weapon states. The deterrence strategy they pursue is as intentional as any other traditional nuclear weapon state's strategy but it is less formal. Since these states have been concerned primarily with their security and

³⁹Peter Lavoy considers deterrence under opacity to be unintentional. On the contrary, I believe it to be very much intentional. Since opacity has been a matter of choice and an "intentional" choice, opaque deterrence has also been an intentional choice for the PC proliferators. See, Peter R. Lavoy, "Nuclear Deterrence and the New Nuclear States: Speculations on the Sources of Nuclear Doctrines in India and Pakistan", 1995

have gone nuclear opaquely to avoid wars, keeping deterrent stability between the adversaries is their primary goal. In the next few chapters, I test the argument by looking at PC cases from South Asia and the Middle East.

SUMMARY

This chapter focused on the issue of nuclear deterrence in protracted conflict regions. It examined the relationship between deterrence and opaque proliferation. How opaque proliferators expect to make use of the strategy of deterrence is addressed. I have argued that opaque states are able to deter their adversaries with the possession of their nuclear weapons because they tend to communicate their resolve and intentions to their adversaries using non-traditional, informal, and tacit methods. They differ from the traditional nuclear states with respect to testing, strategy, doctrine and number of weapons, but the conditions of deterrence still must be met for deterrence to be successful.

PART II: CASE STUDIES

THE SOUTH ASIAN PROTRACTED CONFLICTS

In the first three chapters an examination of the existing literature on nuclear weapons acquisition and the theoretical arguments of this study were presented. The next two chapters provide a case study of the India-Pakistan protracted conflict, with special attention paid to the motivations for the acquisition of nuclear weapons capability by these two countries. A chapter on India-Pakistan nuclear deterrent relationship follows. Finally, a chapter on the China-India protracted conflict discusses India's desire to acquire nuclear weapons in the context of this extra-regional protracted conflict setting. The chapters begin with the Indian case which is followed by the case study of Pakistan. I begin by introducing the South Asian protracted conflict, the issues pertaining to the conflict, and the present nuclear status of the two regional adversaries.

In the South Asian region India and Pakistan have been in protracted conflict since 1947. The territorial dispute over Kashmir remains one of the central issues of the PC.¹ Two of the three wars between the two countries in the last fifty-one have been fought over Kashmir. For Pakistan, the Kashmir issue takes precedence as the outstanding issue in its conflict with India, while for India, a multinational state with regional tensions, self-determination of the

¹Kal Holsti, *Peace and War: Armed Conflicts and International Order, 1648-1989*, Cambridge: Cambridge University Press, 1991, pp.274-278

Kashmir is not a viable option. Given its Muslim majority and common border, Kashmir's accession to Pakistan seems justified to Pakistan. The conflict is also a matter of ethnic and religious unification. India, however, considers Kashmir to be an issue of national consolidation. Although territorial, religious and ethnic issues dominate the India-Pakistan conflict, territory remains the most important contentious issue between these two adversaries.

South Asia is a region of seven states, India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan and Maldives. India and Pakistan are the major regional powers while the others are small states on the sub-continent. The PC is between the two major powers in the region and none of the other states are involved in the conflict. The India-Pakistan protracted conflict has been a territorial and dyadic conflict in the two-power South Asian region where the two major states are geographically contiguous.

Even though India detonated a peaceful nuclear device in 1974, until 1998 the country maintained the position that it did not possess any operational nuclear weapons. Great progress had been made with regard to delivery vehicles. The test of its Prithvi missile, which has a range of up to 250 km, was carried out in January 1996. This missile is described as "Pakistan Specific." India's other concern has been China, an extra-regional nuclear weapon state with which it has an extra-regional protracted conflict. India and China have been in a protracted conflict since 1953.² On the other hand, Pakistan, which has always perceived a threat from a powerful India in the region, lost no time in developing its own

²Michael Brecher, *Crises in World Politics*, Oxford: Pergamon Press, 1993, p.72

nuclear weapons, especially once the Indian test was conducted. India and Pakistan have been undeclared nuclear states since the 1980s, they did not join the NPT and have refused to join the Comprehensive Test Ban Treaty (CTBT) since the treaty negotiations began in 1995.³ Despite their undeclared nuclear status, I argue that nuclear deterrence has been successful in the South Asian PC region. Both preferred to avoid wars after 1971, and wanted to continue with the limited confidence-building measures to assure a stable deterrent relationship in the PC region.

Twenty-four years after its first nuclear detonation, in May 1998 India conducted five underground nuclear tests and Pakistan followed suit. The nuclear tests revealed their serious determination to acquire nuclear weapons.

³India's refusal to join the NPT was based on the treaty's discriminatory nature, and it stood by its position when the treaty was extended indefinitely in 1995. Pakistan refused to join the Treaty because India had not. According to India, the CTBT was neither comprehensive nor a test-ban. It was a discriminatory treaty. Therefore India refused to be part of the CTBT in 1996 and Pakistan followed in India's footsteps. It is likely that the two countries might join the CTBT before September 1999 because both conducted nuclear tests in May 1998.

CHAPTER IV

THE INDIAN NUCLEAR WEAPONS ACQUISITION

This chapter focuses on India's motivations to acquire nuclear weapons using the systemic, domestic and individual levels of analysis. I start with individual level of analysis and follow with domestic level arguments. Finally, systemic motivations are examined.

INDIVIDUAL LEVEL MOTIVATIONS

a) Attitudes and Beliefs of Leaders

India's leaders--nuclear proponents and non-proponents--have all given serious thought to the country's nuclear weapons program. There has not been a single leader who contemplated relinquishing the nuclear option even when his/her personal traits were inconsistent or in conflict with the general nature of such devastating weapons. All political leaders who have ruled and guided the country, whether soft-line or hard-line politicians, have had some inclination towards the possession of nuclear weapons because of India's major security considerations in relation to its nuclear neighbor, China, or to nuclear-capable, Pakistan.

India detonated its peaceful nuclear explosion in 1974 when Indira Gandhi was the Prime Minister, an acknowledged determined leader in the history of Indian rulers. The belief has prevailed in the academic community that it was on her personal initiative that the country went nuclear. Her desire to demonstrate

India's power to the world and to India's neighbors was well-known both within and without India. Indira Gandhi declared in the Indian Parliament in April 1968, when the Non-proliferation Treaty was being drafted, that "while nuclear weapon states insist on their right to continue manufacturing nuclear weapons, India would be unable to accept the obligation of not manufacturing or acquiring nuclear weapons for her own defense. That India in her decision making was being guided solely by her enlightened self-interests, and considerations of national security."¹ Her statement in 1970, to the Rajya Sabha, the Upper House of the Indian Parliament, echoed her earlier statements on the atomic question: "whenever we have considered this matter and taken a decision it has not been taken on any other consideration except on what is in the best interest of the country, including those from the defense point of view."² Her position on nuclear weapons was clear. However, all successive Indian governments have maintained the same position even though their leaders' personal characteristics and traits have differed sharply from Indira Gandhi's.

Jawaharlal Nehru, Indira Gandhi's predecessor, and Moraji Desai, one of her successors, were two prominent leaders known to oppose the Indian nuclear weapons program. Rajiv Gandhi, V. P. Singh, Narasimha Rao, and I.K. Gujral's basic principles and attitudes also differed from Atal Behari Vajpayee's, who was

¹Quoted in S.K.Singh, "CTBT-- A Ready Reckoner," *Strategic Digest*, vol. 26, no.8, August 1996, p. 1169

²K.Subrahmanyam, "The Role of Nuclear Weapons: An Indian Perspective," in Johan Jorgen Holst, ed., *Security, Order, and the Bomb*, Oslo, Bergen, Tromso: Universitetsforlaget, 1972, p.141

the Indian Prime Minister for a short period in 1996 and has been India's Prime Minister since 1998. Finally, the entire world knows about Mahatma Gandhi's non-violence propaganda and his desire to face enemies with 'peaceful coexistence.' But all the leaders have demonstrated a similar position on nuclear weapons (excluding, of course, Gandhi, Nehru and Shastri who ruled before the first explosion).

In the Indian nuclear debate, scholars have often presented the argument that the nuclear weapons program is un-Gandhian. However, an argument has been put forward that what India has done with the nuclear issue is something Gandhi advocated during his movement against the colonial rulers. K. Subrahmanyam argues that, while Gandhi discovered non-cooperation was the best answer to colonialism, non-cooperation with nuclear imperialism is the best strategy for India today. Thus, the Indian nuclear weapons program and its stand on NPT and CTBT are not inconsistent with Gandhian philosophy.³ Similarly, Brahma Chellaney believes that Gandhi's strategy was one of fighting the imperial powers through non-violence. In the contemporary world nation-states are the main actors and, consequently, national security has become their central focus.⁴ From their perspectives, India's current nuclear weapons program is not un-Gandhian.

³K.Subrahmanyam, "Nuclear Imperialism: A Gandhian Response to NPT and CTBT," *Times of India*, New Delhi, January 1996

⁴Personal interview with Brahma Chellaney, New Delhi, February 1, 1997

Gandhi's views of India and its relationship to arms acquisition are on record. He asserted in August 1920:

I would rather have India resort to arms in order to defend her honor than that she would, in a cowardly manner, become or remain a helpless witness to her own dishonor.⁵

Although Gandhi intended that India be able to defend itself, he did not specifically indicate that he would have wanted India to acquire nuclear weapons. He may have wanted India to acquire small conventional arms for defense. There is controversy about what Gandhi would have done. Although it is difficult to prove, one view is that Gandhi would probably have agreed if the exigencies of national security required so.

Nehru, one of the key figures in India's struggle for independence and the first Prime Minister of independent India, like Gandhi had views based on moral principles. He argued that nuclear violence could not be countered by the threat of nuclear retaliation because such brinkmanship would eventually spell suicide for humanity.⁶ However, Nehru stated that India could not foreclose the option for all time. He understood the dual nature of technology and the importance of nuclear weapons technology for military reasons.⁷

Former Vice Admiral K.K. Nayyar states that after the death of Gandhi,

⁵Gandhi quoted in S.K.Singh, "CTBT-A Reckoner," p.1169

⁶ "Atom Bomb and Ahimsa," Poona, July 7, 1946, reprinted in India and Disarmament, pp.13-15

⁷Personal interview with Kanti Bajpai, New Delhi, January 28, 1997

Nehru and his successor Prime Ministers have all preached the philosophy of a nuclear-weapons-free world based on moral principles. However, in deference to their understanding of human nature and the irreversibility of the release of the nuclear genie, they have kept open India's right to exercise the nuclear option to safeguard the supreme national interest.⁸

Lal Bahadur Shastri, India's second Prime Minister, was personally opposed to building nuclear weapons because it would mean sacrificing India's cherished principles of non-violence and world peace.⁹ After the Chinese explosion in 1964, Shastri requested the British Prime Minister, Harold Wilson, to provide an extended deterrent to India. When that was not provided, even Shastri supported pursuit of the nuclear option. K. Subrahmanyam states that, during that time, Shastri "sanctioned the proposal put forward by Dr. Homi Bhabha on investigating a "Subterranean Nuclear Explosion Project"(SNEP) which was not public knowledge at that time."¹⁰ Thus, Shastri's term of office was the most critical period for the change in India's nuclear policy.

Muchkund Dubey argued that Moraji Desai was also against nuclear weapons during his tenure as Prime Minister,¹¹ while Dharendra Sharma believed

⁸K.K. Nayyar, "India's Security, Economy and Diplomacy," *Katari Memorial Lecture*, New Delhi, October 9, 1995; Also, K.K. Nayyar, "India's Security, Economy & Diplomacy," *Agni*, vol.1, no. 2, November 1995, p.104

⁹*The Statesman*, October 31, 1964

¹⁰K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, New Delhi: Knowledge World, 1998, p.27

¹¹Personal interview with Muchkund Dubey, New Delhi, January 20, 1997

that neither Moraji Desai nor his personal advisor, Atma Ram, was in favor of nuclear weapons.¹² However, one cannot deny the fact that even Moraji Desai had left the nuclear option open¹³ since he did nothing to stop it. In fact, it was Desai who, in his speech to the first UN Special Session on Disarmament in June 1978, argued that a nuclear-weapon-free zone would not provide security to non-nuclear states such as India as long as the nuclear states continued to have their weapons¹⁴--an argument that India had used in 1996 for not signing the CTBT.

Rajiv Gandhi, India's Prime Minister who advocated an "Action Plan" to eliminate nuclear weapons from the world, also kept open the nuclear option. According to Muchkund Dubey, Rajiv Gandhi took an important step towards nuclear disarmament when he suggested at the Third UN Special Session on Disarmament, that India would sign a treaty if the nuclear weapon states would be willing to eliminate their weapons within twenty years. This was an important proposition because it would insure a consistent policy regardless of changes in government.¹⁵ The implication is that Rajiv Gandhi, unlike his mother Indira Gandhi, held a soft-line attitude towards nuclear weapons, and that nuclear weapons were not crucial to his personal charisma. Despite that, Rajiv Gandhi did not allow India to give up its nuclear option. In fact, when the nuclear powers did

¹²Interview with Dharendra Sharma, New Delhi, January 22, 1997

¹³Interview with T. T.Poulose, New Delhi, January 25, 1997

¹⁴K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, p.35

¹⁵Muchkund Dubey, interview, New Delhi, January 20, 1997

not commit themselves to a total elimination of nuclear weapons, and when Pakistan's possession of nuclear weapons capability became known in 1987, it was Rajiv Gandhi who agreed to continue India's nuclear weapons program. K. Subrahmanyam states that Rajiv Gandhi gave the "go-ahead" signal to proceed with the nuclear weapons program during that time.¹⁶

V.P. Singh and Narasimha Rao, as Prime Ministers, have also maintained the "option open" nuclear policy. It has been argued that V.P. Singh appointed Raja Ramanna, one of the two scientists involved in the 1974 test, as the Minister of State for Defense when India was confronted with the Pakistani nuclear threat. Narasimha Rao provided more funds for the Indian nuclear program and ordered tests in 1995 and 1996,¹⁷ which did not occur because of world pressure.

Atal Behari Vajpayee, the leader of the Bharatiya Janata Party (BJP), and a strong advocate of nuclear weapons and the bomb, during his two weeks term enquired about the possibility of testing nuclear weapons. According to the BJP election manifesto, "the BJP will reevaluate the country's nuclear policy and exercise the option to induct nuclear weapons."¹⁸ All leaders, regardless of their political beliefs, have maintained a similar nuclear option in India since the first nuclear explosion. This consistent policy-choice has not been a function of any individual leader's beliefs.

¹⁶K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, p.44

¹⁷*India Today*, May 25, 1998

¹⁸Bharatiya Janata Party, *Election Manifesto*, 1996, p.37

Deve Gowda, the leader of India's first coalition government, also indicated publicly during the CTBT negotiations that India would not yield to outside pressure and would not sign the CTBT in its present form, although it had advocated it in 1954. I.K. Gujral, while Foreign Minister, had resolved a long-standing water dispute with India's neighbor Bangladesh in 1996, and was a considerate, non-threatening and friendly Indian leader in South Asia. As the Indian Prime Minister, even he stated clearly in 1997 that India would keep its nuclear option open to face its security threats.¹⁹

If Indira Gandhi's personal attitude were the sole reason for the Indian nuclear weapons acquisition, other governments would not have pursued the same strategy.²⁰ It is the security consideration that had driven all post-Indira Gandhi governments to take a similar stand on the nuclear matter. Interestingly, Prime Minister A. B. Vajpayee, immediately after the May 1998 nuclear tests, stated in an interview, "Since 1968, all governments in India have acknowledged the need for keeping India's nuclear option open in view of the regional security environment."²¹

Although India has finally tested its nuclear weapons in 1998 under the leadership of A. B. Vajpayee, a strong proponent of India going openly nuclear, it was in India's best security interests to test the weapons before CTBT came into force. Moreover, as T.V. Paul states, "the BJP could not have prepared a nuclear

¹⁹*Holiday*, Dhaka, October 3, 1997

²⁰Personal interview with Muchkund Dubey, New Delhi, January 20, 1997

²¹*India Today*, May 25, 1998

testing program from a scratch, barely seven weeks after gaining power... the BJP clearly only completed a program for which previous governments had prepared the way...long-term systemic considerations had already brought India to the brink of testing.”²² Nuclear testing was inevitable for India. Given India’s security predicaments, any leader, regardless of strong ideological belief, was expected to test nuclear weapons at the appropriate time. Why all the leaders from different political dimensions, maintained the nuclear weapons option still remains unanswered.

STATE-LEVEL MOTIVATIONS

a) Bureaucratic Politics

Is there a bureaucratic explanation for India’s nuclear choice? The question may be significant in a country whose government is heavily influenced by the military, but that has not been the case in India. India is the most populous democracy in the world and its military plays a limited role in government decision-making. However, it is pertinent to determine whether any other bureaucratic organs influenced the government’s nuclear policy.

Bhabani Sen Gupta has argued that the military does not influence nuclear decisions in India even though officers at the United Services Institute meet, discuss and publish on the nuclear issue. Unlike India, Pakistan’s military is strong as a political institution, and plays an important role in decisions pertaining to

²² T.V. Paul, “The Systemic Bases of India’s Challenge to the Global Nuclear Order,” *The Nonproliferation Review*, vol.6, no.1, fall 1998, p. 7

nuclear policy. Fifty-one years of civilian democracy in India has prohibited the military from being a political institution. Even in conventional defense policy the Indian military plays a limited role. Military officers support nuclear weapons after retirement. An obvious explanation is that they want to avoid budget constraints while in the military. They are fully aware that bombs have no use for warfare, so they want their government to avoid possessing them²³ and focus on conventional forces. Kanti Bajpai also believed that the Indian army did not want bombs because of budget cuts.²⁴

The military-scientific lobby demanding the bomb exists in India, but scientists are simply researchers and whether or not nuclear weapons would be made has always been a political decision.²⁵ Others, like K. Subrahmanyam, argue that the chiefs of staff have occasionally proposed action to further develop India's nuclear option. Their proposals have also been ignored.²⁶ This was also evident in the statement by K.K. Nayyar, the vice-chief of Naval Staff during Indira Gandhi's rule. He asked Indira Gandhi to go for the bomb and she replied, "it is none of your business."²⁷ This confirms the limited role bureaucrats could play in India's nuclear decisions, regardless of their wishes.

²³Bhabani Sen Gupta, interview, January 24, 1997

²⁴Kanti Bajpai, interview, New Delhi, January 28, 1997

²⁵Bhabani Sen Gupta, interview, January 24, 1997

²⁶K.Subrahmanyam, "Middle Path to Nuclear Security," *Strategic Digest*, vol. 26, no.8, August 1996, p.1164

²⁷Personal interview with Vice Admiral, K.K.Nayyar, New Delhi, January 31, 1997

Subrahmanyam has stated in 1996 that in India, bureaucrats including top military officials, have not focused on the issue, though most would deny it. Secrecy has kept Foreign Secretaries, Defense Secretaries and Chiefs of Staff removed from the nuclear subject. The recently retired bureaucrats “have no idea about the status of our nuclear option.”²⁸ There may be more to it. The military and the bureaucrats are not encouraged to take part in nuclear decisions and there is minimal legislative control over the program. The nuclear program is remarkably free from the “interexecutive controls.”²⁹ In the context of the 1998 Indian nuclear tests, Subrahmanyam has argued that the military not only did not know about the tests, but also that nuclear weapons are not presently under the jurisdiction of the military.³⁰ The Indian military has thus not been interested in nuclear weapons acquisition, nor were they allowed to take part in the secret program. Over-all, a bureaucratic explanation of the Indian nuclear weapons acquisition is not valid.

b) Scientific/Technological Momentum

Although Indian nuclear technology had its own civilian-needs logic,³¹ many Indians believe that Homi Bhabha, the founder of the Indian atomic program,

²⁸K. Subrahmanyam, “Middle Path to Nuclear Security,” p.164

²⁹Brahma Chellaney, “India,” in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, Washington D.C.: The Woodrow Wilson International Center Press, 1994, p.167

³⁰K. Subrahmanyam, personal interview in Montreal, February 16, 1999

³¹Onkar Marwah, “India’s Nuclear Program: Decisions, Intent and Policy, 1950-1976,” in William H. Overholt, ed., *Asia’s Nuclear Future*, p.168

intended to build the bomb from the very beginning.³² In the early 1960s Bhabha asserted that Indian scientists were capable of making a bomb within eighteen months, if the governments approved.³³

Although Bhabha started the nuclear program in India with peaceful civilian intentions, he became nuclear weapons advocate after the Chinese nuclear test in 1964.³⁴ Although “conceived originally as a purely civilian effort, India’s program nevertheless acquired a ‘dual’ character after the 1950s under specific leadership that was keen to preserve the weapons option despite the Nehru era policy of permanent nuclear abstinence.”³⁵ Bhabha organized the Indian nuclear effort in a way that would enable him to keep the weapons option open indefinitely and to “sustain and develop it to the point of being able to stockpile unsafeguarded weapon-grade material.”³⁶ Others, like Dhirendra Sharma, contend that at one point the Chairman of India’s Atomic Commission had the absolute power to “initiate, formulate, plan and execute India’s nuclear program in total secrecy” and was responsible only to the Indian Prime Minister.³⁷ Apsara, India’s first nuclear

³²K.Subrahmanyam, *Security in a Changing World*, New Delhi: B.R. Publishing Corporation, 1990, p.122

³³Brij. Mohan Kaushik, *Pakistan’s Nuclear Bomb*, India: Sopan Publishing House, 1980, p.12

³⁴K.Subrahmanyam, *Security in a Changing World*, p.123

³⁵Achin Vanaik and Praful Bidwai, “India and Pakistan,” in Regina Cowen Karp, ed., *Security with Nuclear Weapons?* Oxford: Oxford University Press, 1991, p.261

³⁶Ibid.

³⁷Dhirendra Sharma, *India’s Nuclear Estate*, New Delhi: Lancers, 1983, p.149

reactor, was portrayed by Indian scientists as a symbol of self-reliance in technological development, especially in the nuclear sphere. According to Raja Ramanna, Apsara was extremely important in terms of modernization and technological development in India. He states:

Though a lot of equipment for the reactor had been designed and made entirely by ourselves, there will still be many people not willing to believe that we could establish a modern technology in the country by ourselves. The country seemed to be covered on a cloak of non-self-reliance. People in general felt that everything had to be imported from abroad, be it idea or equipment. It seemed to many in India that nothing worthwhile was possible by ourselves.³⁸

The nuclear explosion may have been the scientists' declaration of technological maturity.

In the Indian Republic Day parade of January 1997 the indigenously developed Prithvi missiles were displayed before thousands of people from rural India. The Indian government takes tremendous pride in displaying such home-made weapons to the public to demonstrate India's technological advancement. Development and modernization have been a part of the nuclear program with power vested in "science and technology, and nuclear weapons are a symbol of that power,"³⁹ Is there an association between the imperatives for technological

³⁸Raja Ramanna, "Development of Nuclear Energy in India: 1947-73," in T.T. Poulouse, ed., *Perspectives of India's Nuclear Policy*, New Delhi: Young Asia Publications, 1978, p.1

³⁹Dhirendra Sharma, interview, New Delhi, January 22, 1997

development and nuclear weapons acquisition in India? Are scientists responsible for the nuclear weapons acquisition?

There is a general consensus among scholars and bureaucrats that although technological capability has to be taken into consideration and the scientific community is consulted, nuclear decisions in India--as in most countries--are mostly political decisions. This does not mean that the scientists do not play any role in pressuring their political leaders.

Indian security specialist T.T. Poulouse believed that although most Indian scientists have favored nuclear weapons, the scientific community does not decide nuclear weapons policy. If scientists held a determining role, another seven or eight tests would have been conducted immediately after the 1974 explosion. Scientists are interested in making sure that their nuclear weapons designs work, and confirmation requires tests, which India did not conduct for 24 years. Similarly, Savita Pande has argued that the "nuclear decision is ultimately political," and that the scientists' hawkish attitudes towards demonstrating technological development of nuclear weapons are irrelevant. Others have argued that not all scientists support nuclear weapons acquisition and that scientists are often not united on this issue.⁴⁰ K. Subrahmanyam has stated that the scientific community plays an important role in the peaceful nuclear energy program. He added that Homi Bhabha supported the military objective, but that succeeding heads of the nuclear

⁴⁰Interview with Savita Pande, New Delhi, January 29, 1997; Interview with R.R. Subramanian, January 30, 1997

program lacked his influence with the government.⁴¹

Scholars have debated the Indian intentions in its refusal to join the CTBT in 1996. Kanti Bajpai argued that India required a series of nuclear weapons tests so the country did not sign the CTBT. This may be the case, but the scientists are not a part of the decision on whether or not India should conduct a test. Bajpai even admitted that the younger scientists wanted the tests done, but they lacked the political power to force the issue.⁴² The scientists wanted to conduct tests since 1974, but political leaders refused. After the 1974 nuclear test, the Indian scientists worked on an improved version of the nuclear device used in the first test and were ready with a boosted fission device. P.K. Iyengar, a former Atomic Energy Commission chairman, confirmed that Indira Gandhi had okayed more nuclear tests in 1982-83 and that three shafts were also dug, but the tests were called off for some reason.⁴³ Similarly, in 1995 and 1996, the Indian Prime Minister, P.V. Narasimha Rao, ordered the scientists to carry out nuclear tests, but called them off under international pressure.⁴⁴ Consequently, on both occasions the scientists had to accept the Indian government's nuclear decision.

The 1998 nuclear tests not only made India a declared nuclear state, but they also publicized Indian scientific achievements. R. Chidambaram, the chief

⁴¹Personal interview with K.Subrahmanyam, New Delhi, January 28, 1997

⁴²Kanti Bajpai, interview, January 28, 1997

⁴³See, Raj Chengappa, "The Bomb Makers," *India Today*, June 22, 1998

⁴⁴K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, p.51; *India Today*, May 25, 1998

designer of the “Shakti” nuclear tests, and Anil Kakodkar, the Director of the Bhabha Atomic Research Center (BARC), played leading roles in the 1998 nuclear tests. For them, each of the five nuclear devices posed a challenge in terms of both design and construction. The hydrogen bomb, according to Chidambaram, was “vintage ’98.”⁴⁵ Although they had perfected the technology in mid-1990s,⁴⁶ they were unable to conduct the tests until permitted to do so by the Indian government.

Nuclear weapons acquisition was not a bi-product of the peaceful nuclear energy program--although the plutonium came from the civilian program. Diversion from the energy program into a weapons program requires specific decisions involving extra expenditures, and the Indian case was no exception. Bhabani Sen Gupta stated that the Indian nuclear program has many dimensions with 30 to 40 thousand people working on a variety of interconnected programs. Similarly, the space and satellite programs, which the scientific community supports, have a positive impact on the missile programs. There are spill-over effects because the programs are interrelated, however, a decision to make weapons is necessary. Scientists are researchers and do not have the power to be the decision-makers.⁴⁷ Although the nuclear program, formulated by the Indian Atomic Energy Commission, was devoted totally to civil applications of nuclear and space technologies, the program had the basic elements needed to start a

⁴⁵ Raj Chengappa, “The Bomb Makers,” *India Today*, June 22, 1998

⁴⁶ Ibid.

⁴⁷ Bhabani Sen Gupta, interview, New Delhi

balanced nuclear weapons program. The decision to launch such a scheme would involve considerable separate investment costs.⁴⁸

The spill-over effects from technological development did not provoke India's nuclear weapons acquisition since the availability of the elements required for a weapons program does not imply the possession of weapons capability or weapons. A choice supporting a weapons program has essentially been a political one.

c) Public Opinion

It is necessary to understand the association between public opinion and India's nuclear weapons acquisition because India has been a democracy for the past fifty-one years and that may have been a critical factor motivating the Indian government to consider nuclear weapons acquisition. While there have been no regular public opinion surveys on the Indian nuclear issue, the few that are available provide a picture of public opinion concerning the Indian nuclear weapons acquisition. Two questions are relevant: what public opinion is on the nuclear subject, and whether or not public opinion matters. Both are interrelated. The first is important because it clarifies whether or not the Indian government's nuclear policy has public support. The second is more crucial to this study because it focuses on whether or not population has motivated the government to pursue a

⁴⁸K.Subrahmanyam, "The Role of Nuclear Weapons: An Indian Perspective," p.141

nuclear weapons acquisition policy, rather than on what people think about what the government should and should not do.

Between 1966 and 1971 a majority of the Indians are believed to have supported the development of nuclear weapons in India.⁴⁹ When China launched its first satellite in 1970 a survey carried out by the Indian Institute of Public Opinion found that two-thirds of the respondents wanted India to develop its own nuclear weapons.⁵⁰ Another survey in 1971 concluded that the Indian public was extremely interested in their country going nuclear, even if that resulted in a drastic cut in other developmental expenditures.⁵¹ Most public opinion polls conducted in the Indian urban centers have revealed that a large majority of the elite supported India maintaining the nuclear option.⁵² A 1996 Kroc Institute opinion survey found substantial support for the Indian government's pre-1998 nuclear policy. Fifty-seven percent of those polled (N=563) favored New Delhi's policy of neither confirming nor denying a de facto nuclear capability while espousing global nuclear disarmament. Thirty-three per cent (N=326) were nuclear advocates, favoring weaponization and outright acquisition of nuclear weapons capability. Only eight per cent (N=83) supported a renunciation of nuclear weapons option.⁵³ The factors

⁴⁹Akhtar Ali, *Pakistan's Nuclear Dilemma*, Karachi: Economic Research Unit, 1984, p.37

⁵⁰*The Indian Express*, August 14, 1970

⁵¹Akhtar Ali, *Pakistan's Nuclear Dilemma*, pp.37-38

⁵²*The Times of India*, April 10, 1996

⁵³David Cortright and Amitabh Mattoo, "Indian Public Opinion and Nuclear Weapons Policy," in David Cortright and Amitabh Mattoo, eds., *India and the*

motivating public favor or opposition to a nuclear weapons option have primarily been “the perception of a nuclear threat from Pakistan and the possibility of a time-bound plan for global disarmament.”⁵⁴ This study confirms that among nuclear advocates the primary justification for going nuclear was the perceived threat from a nuclear-capable Pakistan. Although perceived threats from China were also considered, a majority of those supporting official policy believed that renouncing the nuclear option would be possible if the international community were to adopt a time-bound plan for global nuclear disarmament.⁵⁵

Air Commodore Jasjit Singh commented on public opinion in India before the 1998 nuclear tests. He argued that approximately 92% of the Indians believed that unless there was total nuclear disarmament, India should keep its option open.⁵⁶ Others have contended that a diversity of opinion existed in India on the nuclear question since the country itself has always been diverse.⁵⁷ In the wake of the May 1998 nuclear tests, an opinion poll was conducted which assessed public approval for the Indian government’s decision to test nuclear weapons. According to this poll, 87 per cent of the Indians approved of the nuclear tests, and 86 per

Bomb: Public Opinion and Nuclear Options, Indiana: University of Notre Dame Press, 1996, p.11

⁵⁴Ibid.

⁵⁵Ibid., p.14

⁵⁶Personal interview with Air Commodore Jasjit Singh, New Delhi, January 29, 1997

⁵⁷Brahma Chellaney, interview, New Delhi, February 1, 1997

cent believed that India should develop nuclear weapons.⁵⁸ Public support for nuclear weapons acquisition appears to have been consistent for more than two decades.

A critical question for this study is: does public opinion matter on the issue of nuclear choice by the government of India? Specifically, is there democratization in India's nuclear decision-making process?

K. Subrahmanyam stated in 1997 that if public opinion had been pivotal in the decision to go nuclear, it would have happened long ago.⁵⁹ This view is shared by others who believed that decisions regarding India's nuclear program are made in secret by a few decision-makers.⁶⁰ The question is: does the Indian government pay attention to public views favoring nuclear weapons?

Kanti Bajpai commented in greater detail. He has stated:

In most cases the Indian government says that public opinion constrains government on the nuclear question, but if it is asked to educate the public on the matter, they say the public do not understand strategic issues. If the public has no understanding of nuclear issues, then how can government say public opinion constrains them from doing something about

⁵⁸See, "Org-Marg Poll," *India Today*, May 25, 1998

⁵⁹K. Subrahmanyam, interview, New Delhi, January 28, 1997

⁶⁰For India's nuclear decision-making, see Ashok Kapur, *India's Nuclear Option: Atomic Diplomacy and Decision-Making*, New York: Praeger, 1976; Onkar Marwah, "India's Nuclear and Space Programs: Intent and Policy" *International Security*, vol. 2, no.2, fall 1977, pp.96-121. Similarly, C. Raja Mohan, an Indian security analyst, stated that Indian public opinions exist, but what the political establishment thinks is the deciding one. Interview with C. Raja Mohan, New Delhi, January 31, 1997

the nuclear issue? Even the hawks use it all the time as far as it suits them.⁶¹

He, however, believed that the Indian government is more concerned about other political parties, important journalists, and key former government officials, though others are manipulated.⁶² Essentially, the Indian government does what it feels is right on the nuclear matter ignoring public opinion, and very often uses public opinion to justify its nuclear stand when it corresponds with government decisions.

There is also another aspect to this subject: public opinion has also been molded in India by the political elite. Muchkund Dubey's argument details how Indian public opinion on the nuclear matter has been shaped by the ruling Indian policy-makers over the long term. He believes that public opinion is very much a function of education and propaganda. What is important is not public opinion today, but how that public opinion was developed. If India had followed Nehru's policy of not acquiring nuclear weapons at any cost (which he held till 1963), then the assumption is that the entire apparatus of the government and the political parties would have focused on educating the population to believe that nuclear weapons were not worth acquiring. There would have been a very different kind of public opinion in the country today. But, Dubey argues that after 1964 there was a vacillation in the Gandhian/Nehruvian line of thinking. Government publicly disavowed nuclear weapons acquisition, but secretly prepared for it. There was no concerted effort to dissuade the population from their importance. Presently the

⁶¹Kanti Bajpai, interview, January 28, 1997

⁶²Bajpai, interview, January 28, 1997

government would overwhelmingly—at least 95 % support it, while three quarters of the intellectual community would follow suit. The middle class follows public opinion and would support, while the poor do what they are told. Overall, the population supports nuclear weapons.⁶³

An overwhelming majority of the Indian public favor nuclear weapons--whether nuclear ambiguity or not--but since Indian nuclear decisions were taken by a virtual “nuclear sub-government,”⁶⁴ it has not mattered. Nuclear policy options were not discussed in democratic India. It has been the opinion of a very small number of people constituting the strategic community which matters. There was a small, vocal bomb lobby in India centered in Delhi and other large cities. The vast majority of the population did not understand the bomb or the meaning of acquiring the bomb.⁶⁵

In 1997, Admiral K.K. Nayyar argued that the Indian nuclear decision-making is entirely political. Only a few people advise the Prime Minister and that with consultations with Foreign Minister nuclear decisions are made.⁶⁶ He further maintained that, “nuclear issues are treated as holy cows with little if any information trickling down to parliamentarians leave alone the public. There is no visible checks and balances in this area. Parliamentary debate is nonexistent thereby

⁶³Muchkund Dubey, interview, New Delhi, January 20, 1997

⁶⁴Dhirendra Sharma, *India's Nuclear Estate*, p.2

⁶⁵Bhabani Sen Gupta, interview, January 24, 1997

⁶⁶Vice Admiral (Retd.) K.K.Nayyar, interview, New Delhi, January 31, 1997

leaving the nuclear program in the hands of a limited few.”⁶⁷ Although considerable information on India’s nuclear program exists in government publications and budget papers, even within the government there is no coordinated thinking and the nuclear matter has overall been a secret of the Indian government.⁶⁸

In the context of the CTBT negotiations, the Indian public opinion was completely in favor of India not signing the treaty, which the country followed through. It is important to understand how much of this was a coincidence. The government’s decision was already made and public response also favored their decision. The pro-nuclear strategic analysts in India advise policy-makers regularly, but government decision-making bodies are not influenced by this academic community either. The government of India cultivates the academic community and generally accepts information from the pro-nuclear strategic analysts. The decision-makers, however, always took a middle ground, the “owl’s perspective” of keeping the “option open policy”⁶⁹ until 1998. Although the Indian government finally advanced from the “option open policy,” if the academic community or public opinion had influenced the government’s nuclear choice, the country would have been a nuclear state many years ago. Neither the pro-nuclear academic community, nor the public sentiments determine nuclear policy. The government of

⁶⁷K.K.Nayyar, “India’s Security, Economy and Diplomacy,” p.104

⁶⁸K.Subrahmanyam, “Middle Path to Nuclear Security,” p.1164

⁶⁹Kanti Bajpai, interview, January 28, 1997

the day makes the choice for reasons that are extremely important for the country's national interests.

d) Economic Motivation

An important motivating factor to go nuclear may be economic. It is natural for any government to undertake a weapons program if it will reduce other military expenditures. The nuclear weapons program was never considered an expensive proposition by the Indian bomb-lobbyists.⁷⁰ As early as 1964, the founder of the Indian Atomic Energy Commission, Homi Bhabha, stated that a "10-KT Hiroshima type A-bomb would have cost Rs.17.5 Lakhs and a stockpile of 52 megaton bombs, something of the order of Rs.15 crore which, was peanuts, keeping in view the total expenditure on defense establishment."⁷¹ The Indian scientists further reported that the Pokhran test in 1974 cost Rs. 3.2 million.⁷² This indicates the cost of the bombs, not how that relates to the conventional expenditure cuts. Indian scholars and officials believe that no matter how less expensive producing a bomb might be, it was not a factor in the decision in choosing the weapons option. Nor do they accept that economic incentives could be a motivation for acquiring nuclear weapons.

⁷⁰Akhtar Ali, *Pakistan's Nuclear Dilemma*, p.35

⁷¹Ibid.

⁷²Hari Bansh Jha, "Security Dimension of South Asia," Paper presented at the *Bangladesh Institute of International and Strategic Studies*, December 1989, p. 14

The general context of the relationship between nuclear weapons acquisition and the reduction of conventional capabilities prompted Muchkund Dubey to argue that no country has demonstrated the capacity to reduce military expenditure by nuclear weapons.⁷³ T.T. Poullose stated that in the US alone, approximately 75% of the defense budget went towards conventional weapons -- even with the US' sophisticated nuclear weapons. How can India spend less on conventional weapons by having nuclear capability?⁷⁴

On the more specific subject of whether the Indian government decided to acquire nuclear weapons to cut conventional defense expenditure, scholars agreed that it was not a calculative step from that perspective. The Indian defense analysts also agree that the Indian government never considered the economic motivation for going nuclear, but their reasonings differ. Jasjit Singh argued that conventional expenditures are not reduced because a country possesses nuclear weapons. The conventional weapons have to be maintained since nuclear weapons are not for war-fighting.⁷⁵ From the military point of view, R.R. Subramanian maintained that conventional expenditures were never reduced with the possession of nuclear weapons. Only the Chinese claimed that they reduced conventional expenditures with nuclear weapons possession. In India the army will never accept a reduction of conventional weapons and the Indian government is aware of that.⁷⁶

⁷³ Muchkund Dubey, Interview, January 20, 1997

⁷⁴ T.T. Poullose, interview, January 25, 1997

⁷⁵ Jasjit Singh, interview, January 29, 1997

⁷⁶ R.R. Subramanian, interview, January 30, 1997

After the 1998 nuclear tests in India strategic analysts began to take a closer look at the costs of a nuclear weapons program. Although there are two opposing views about the cost associated with the nuclear weapons program, a consensus exists among these analysts that nuclear weapons do not substitute for conventional weapons.⁷⁷ Jairam Ramesh, an economist, argues that developing a nuclear deterrent is expected to cost India about \$750 million per year for the next ten years.⁷⁸ Therefore, there seems no association between economic factor and nuclear proliferation in the Indian case.

e) Domestic Turmoil Diversion

Indian domestic problems started with its independence from British rule and do not show any sign of improving any time soon, although some language conflicts have been resolved. The country comprises many states and ethnic groups, each with its own problems which the Indian government has tried to solve by different means. In some instances they have succeeded, in others the governments have failed and new problems emerged, exacerbating the old ones.

Indian unity has been threatened by the conflicts between the central government and the regions asserting their separate cultural identities, and by interregional conflicts, particularly between the Hindi-speaking region of North

⁷⁷ Manoj Joshi, "Marginal Costing," *India Today*, June 1, 1998; Jairam Ramesh, "Big Bombs, Bigger Bills," *India Today*, June 1, 1998

⁷⁸ *The Bulletin of the Atomic Scientists*, vol. 54, no.4, July/August 1998, p.33

India and the non-Hindi-speaking regions of the country.⁷⁹ Paul Brass states that “Linguistic and cultural differences also continue to provide strong support for regional political parties, persistent pressures for cultural pluralism, and demands for regional autonomy in states such as Tamil Nadu, Punjab, and West Bengal.”⁸⁰ India has often been confronted with the problems of national integration and consolidation as most other developing countries. Indira Gandhi’s term of office was most notable for India’s problems of internal security. India, for the first time in its history, was faced with an All India Railway strike between May 1- 20, 1974. Due to all the internal troubles which had not been addressed properly by the central government, Gandhi began to lose popularity. According to Waltz, when a state is no longer considered capable of maintaining external security and internal order, the legitimacy of the state and the loyalty of its citizens may dissolve.⁸¹ Since India experienced such conditions in 1974, scholars considered the possibility that Indira Gandhi, who was not so inclined to consider India going nuclear, acquiesced to a series of decisions that resulted in a nuclear test.⁸² It is

⁷⁹Paul R. Brass, “Pluralism, Regionalism and Decentralizing Tendencies in Contemporary Indian Politics,” in A. Jeyaratnam Wilson and Dennis Dalton, eds., *The States of South Asia: Problems of National Integration*, London: C. Hurst and Company, 1982, p.226, fn. 14

⁸⁰Ibid. p.256

⁸¹Kenneth N. Waltz, “Towards Nuclear Peace” in Dagobert L. Brito, Michael D. Intriligator and Adele E. Wick, eds., *Strategies for Managing Nuclear Proliferation*, Massachusetts: Lexington Books, 1983, p. 120

⁸²Robert A. Strong, “The Nuclear Weapon States: Why They Went Nuclear,” in W. H. Kincaid and C. Bertram, eds., *Nuclear Proliferation in the 1980s*, New York: St. Martin’s Press, 1982, p.19

argued that the nuclear explosion of 1974 was made to reassert the vitality of the central government, and to gain some internal political support. "The Indian explosion was motivated...by the need of that government to gain popular support"⁸³ that had been lost because of internal political reasons.

In 1971, India won the Bangladesh war with Pakistan and Indira Gandhi won the election that followed the conflicts. She was able to state proudly that her government had helped its neighbor, East Pakistan, to become an independent country. Thus, Indira Gandhi "was at the height of her popularity when she took the decision for the test."⁸⁴ In South Asia, India became a big power friend to the smaller states faced with crises situations at home rather than a dominating hegemon in the region. Pakistan, a disintegrated country, was the only state in South Asia that was dissatisfied with India, which pleased the Indians. The war confirmed that India was the strongest conventional military power in the region and that Pakistan's capabilities vis-à-vis India were weak. Why would Indira Gandhi need more to prove India's military might? In fact, she lost power after the nuclear detonation which indicates that the people did not vote for her because of the test explosion.

Politicians do whatever is required to get what they want and Indira

⁸³William Epstein, "Why States Go and Don't Go Nuclear," *Annals*, 430, March, 1977, p.25

⁸⁴K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, p.33

Gandhi was no exception.⁸⁵ Some Indians believe that Indira Gandhi was a leader interested in fighting and demonstrating her power to the world.⁸⁶ It has been argued by S.K. Singh that in 1974 she did not lose popularity as much to have exploded the weapons.⁸⁷ It is also important to note that she had lost the elections three years later.

One must understand that the decision to have a nuclear test does not come in a day or weeks. Scientists have to prepare for years to get to the stage before bombs could be exploded. It is thus unlikely that even when Indira Gandhi was losing popularity in 1974, she would be able to give orders for the test and have them conducted quickly.

Can leaders test nuclear weapons without the scientific preparations? Air Commodore Jasjit Singh noted that the 1974 test explosion took eighteen months from the time it was ordered to the time it was actually tested.⁸⁸ This means that we should not only think of the internal situation of India in 1974, but we must go beyond that and understand India's domestic situation about 18-20 months before the test was conducted. In similar vein, but in a more recent context, this view was supported by Dhirendra Sharma who stated that when A. B. Vajpayee was in power for thirteen days in 1996, he called a meeting with the scientists of the

⁸⁵Muchkund Dubey, interview, January 20, 1997

⁸⁶Dhirendra Sharma, interview, January 22, 1997

⁸⁷Interview with S.K. Singh, New Delhi, January 25, 1997

⁸⁸Jasjit Singh, interview, January 29, 1997

Atomic Energy Commission and enquired about nuclear tests and was informed by scientists that it would take a lot of time to prepare for tests.⁸⁹

The government of India was fully aware of the fact that an underground nuclear explosion would require considerable data on underground water stream, and all other environmental impacts before it could be attempted.⁹⁰ The implication is that arranging a test according to the needs of the leaders or the internal political situation is not possible.

The most recent example is the Indian nuclear tests in May 1998 which were conducted only three months after the Bharatiya Janata Party (BJP) came to power in India. The BJP had just emerged as the largest party in the parliament winning a total of 270 of the 547 seats. There is no reason to believe that this government needed to increase its popularity by testing nuclear weapons. There had been no major internal political turmoil which needed to be addressed by diversionary methods. In other words, there was no need to demonstrate the government's ability to carry out nuclear tests and its viability. The government of India tested nuclear weapons for other, more important reasons.

⁸⁹Dhirendra Sharma, interview, January 22, 1997. Similar views were given by C. Raja Mohan, who considers that the 1974 explosion decision was made in 1965 just after the Chinese explosion. K. Subrahmanyam also shares the view that Indira Gandhi could not do the tests overnight. All these views have been taken from the personal interviews with these prominent scholars.

SYSTEMIC-LEVEL MOTIVATIONS

a) Status/Bargaining Power

Have Indian decision-makers been convinced that nuclear weapons could effectively give them a level of power to enable them to bargain better with great power states that would otherwise dominate them? With the end of the cold war, the United States is the only dominant power in the world and a state needs bargaining tools or it is likely to be exploited by the US. It is believed that nuclear weapons can be used as a currency of power by states possessing them. Despite being a great civilization India has experienced three hundred years of political and economic domination by the West. India does not have much hard power resources with which to negotiate with the West. Japan and Germany are economic powers so they do not need nuclear weapons to bargain. China can bargain with the West because of its nuclear weapons and missiles. Nuclear weapons are “a symbol of power in modern times and this aura is difficult to overcome.”⁹¹

K. Subrahmanyam stated:

Nuclear weapons are not for fighting a war. They are to intimidate, to dominate, to blackmail. They are there as a currency of power. They could be used to dominate or resist domination.⁹²

⁹⁰K.Subrahmanyam, “The Role of Nuclear Weapons: An Indian Perspective,” p.141

⁹¹Dhirendra Sharma, interview, January 22, 1997

⁹²K. Subrahmanyam, interview, January 28, 1997

Subrahmanyam considered the overall utility of nuclear weapons in the international system. However, when asked specifically about Indian motivation he stated that the central concern was security and deterrence, even though he believed that nuclear weapons should not be the monopoly of just a few powers.⁹³

Although security is the central motivating factor, sovereignty is also important since the ability to defend India will give it the ability to bargain with other major countries.⁹⁴ In this case, status/ bargaining power is a spill-over effect from the possession of nuclear weapons rather than a cause for the acquisition, which is also important. K. K. Nayyar argued in 1997 that if China claims parts of India, the latter can only ask China to come to terms if it possesses nuclear weapons. He stated that, "if China uses it as a bargaining chip, India can do so too."⁹⁵ His view has been that although India's primary concern in going for nuclear weapons was security, the same weapons can be used to increase bargaining power vis-à-vis enduring rivals. In other words, although nuclear weapons are acquired primarily for security reasons, one of the benefits is that the country's bargaining position with hostile countries would be improved.

Most of these scholars and officials who believe in the association between bargaining power and nuclear weapons, however, also comprehend that only nuclear weapons, and not the potential capability, can give India such an

⁹³Interview with K. Subrahmanyam, January 28, 1997

⁹⁴Jasjit Singh, interview, January 29, 1997

⁹⁵K.K. Nayyar, interview, January 31, 1997

advantage. Before 1998, they wanted India to go openly nuclear to take maximum advantage of the weapons possession. An opaque posture that India maintained for 24 years has other system-level motivations that go beyond these reasons.

b) Gaining International Prestige

Many of the arguments for the bomb based on prestige came to prominence in India because the leadership thought India had never received the world recognition and status it deserved. India believes that China obtained its legitimate status and influence in the world because of its possession of atomic weapons, and that the United States recognized China as a powerful nation only after it had acquired nuclear weapons.⁹⁶ China was not allowed to occupy its United Nations seat until after it had nuclear weapons and missiles. This drive for international recognition is said to have made India go for a nuclear test in 1974.⁹⁷

Muchkund Dubey argued that even though the prestige motivation has a perverse logic which should not be used, it nonetheless has been in the minds of the policy-makers, especially with regard to the Sino-Indian problem. He stated:

On the border issue, China has a vested interest in maintaining the status quo because it is sitting on an advantage. It has no intention to open negotiations to solve the border dispute. If India becomes a nuclear weapon power, the entire Chinese perspective or bargaining on the

⁹⁶Lewis A Dunn, "India, Pakistan, Iran: a Nuclear Proliferation Chain," in William H. Overholt, ed., *Asia's Nuclear Future*, Boulder, Colorado: Westview Press, 1977, p.201

⁹⁷Ibid.

border issue might change. China might think it worthwhile to start negotiations with India.⁹⁸

When countries have nuclear weapons they tend to gain status and are taken seriously by other states, especially their adversaries. Moreover, under such circumstances, these states--whether or not they are developing or developed states-- are then consulted in most important security issues of the world. There has not been a single nation-state not concerned about prestige. India also relates security considerations to prestige. Power and force are at the heart of international relations and regional states may wish to increase their power through nuclear possession.

The crucial question is not the kind of prestige which is derived from the possession of nuclear weapons, but what role it might have played in the Indian nuclear policy and whether only nuclear capability would provide prestige or other elements are necessary to acquire it. One can also argue that prestige and power can be obtained without paying the price of openly declaring oneself a nuclear weapons state.⁹⁹ Even if that is true, it is also important to understand that India started serious nuclear research during the 1950s and with a fairly good scientific research base. It was capable of making nuclear weapons even before China was. Consequently, it may be argued that if prestige and status were the major motivations, India would have gone for nuclear weaponization prior to the Chinese

⁹⁸Muchkund Dubey, interview, January 20, 1997

⁹⁹Brahma Chellaney, interview, February 1, 1997

tests.¹⁰⁰ In similar vein Jasjit Singh argued that “India is not and has not been concerned about prestige or a seat in the Security Council. Prestige motivation would have made India go nuclear openly.”¹⁰¹ In the context of CTBT negotiations, Bhabani Sen Gupta argued that “With NPT indefinitely extended and the CTBT signed by virtually all members of the UN, India standing alone with its “option” will not impress anyone...The “option” will have to be exercised not by a solitary test but by a series of tests proclaiming convincingly to the world India’s arrival as a full-fledged nuclear power.”¹⁰² In reality, India refrained from becoming a nuclear state until 1998. Now that the world knows that India could test its nuclear weapons anytime, if impressing the world was important, India would not have waited this long. Other motivations were more important so India delayed testing these weapons.

As for the Chinese, although they possessed nuclear weapons and joined the nuclear club in 1964, they did not have a seat in the United Nations until the early 1970s. Moreover, China regained its seat in the context of improved relations with the United States. All nuclear states are unlikely to become permanent members of the United Nations. The time has passed when regional powers like India and Pakistan could have such status or prestige with nuclear weapons.

¹⁰⁰ Krishnaswami Sundarji, “Changing Military Equations in Asia: The Relevance of Nuclear Weapons,” in Francine R. Frankel, ed., *Bridging the Nonproliferation Divide*, Lanham, New York, London: University Press of America, 1995, p. 123

¹⁰¹ Jasjit Singh, interview, January 29, 1997

¹⁰² Bhabani Sen Gupta, “India’s N-Option: The Question of Consensus,” in *The Tribune*, Chandigarh, April 10, 1996

Bhabani Sen Gupta stated that “these states would be known as proliferators and would get only junior nuclear status-- not major power status.”¹⁰³ It is not possible to predict whether or not India will obtain a higher status in the world as a result of testing its nuclear weapons.

Although the Indian government believes that it cannot increase its prestige simply by possessing nuclear weapons, this motivation has, to some extent, propelled India to go nuclear. India has nuclear China as its adversary and the prestige/status question automatically comes to the minds of the Indian policy-makers. The country must constantly compare its status vis-a vis China in the world. If Pakistan were India’s only adversary, Indian concerns would have been security alone. Security and prestige become simultaneously important when the Indian motivations are considered in the context of the China-India protracted conflict. That is also why the Indians have often pointed to the fact that China receives more international attention in the world. Prestige becomes part of nuclear motivation only when immediate adversaries are nuclear states with increased international status due to their military prowess.

c) Seeking Regional Hegemony

India has been a dominant power in the South Asian region since its independence and continues to have a dominating role in the region regardless of whether or not smaller countries approve. Nehru explained his reasoning in 1949, “in regard to any major problem of a country or group of countries of Asia, India

¹⁰³Bhabani Sen Gupta, interview, January 24, 1997

has to be considered. Whether it is a problem of defense or trade or industry or economic policy, India cannot be ignored. She cannot be ignored, because ...her geographic position is a compelling reason. She cannot be ignored also, because of her actual or potential power and resources.”¹⁰⁴ Therefore, that India has been a regional power or a regional hegemon has been a reality since independence, and there was no reason to prove it to Asia or the world. Its geographic position, population and resources have all contributed and not only the states in South Asia, but the entire world recognize the region to be one where India is extremely powerful. As Baldev Raj Nayar states:

India does not have to aim for preponderance in the region; its preponderance is given by its geopolitical situation. India almost constitutes the region of South Asia, holding as it does three-fourths of its territory and population. While none of the other countries in the region border on each other, they all share borders with India. The region is, indeed, overwhelmingly Indo-centric.¹⁰⁵

Not only Nehru believed that India had a dominant position in Asia, Indira Gandhi, under whose leadership the first nuclear test was conducted, also believed that “if law and order breaks down in any South Asian state, it should seek India’s help from within the region but not to the exclusion of India.”¹⁰⁶ She never

¹⁰⁴Jawaharlal Nehru, *Independence and After: A Collection of Speeches*, 1946-1949, New York: John Day, 1950, p.248

¹⁰⁵Baldev Raj Nayar, "Strategic Culture or Strategic Orientalism: Scholarship in the Service of Western Hegemony," *Canadian Consortium on Asia Pacific Security (CANCAPS) Bulletin*, no. 14, August 1997, p.11

¹⁰⁶S. M. Mujtaba Razvi, "Conflict and Cooperation in South Asia," *The Round Table*, no. 299, July 1986, p.276

underestimated India's dominant power in the region during the 1970s.

With regard to the military aspect, India has been a conventionally superior power in the region. Between 1955-60 estimates indicate that Pakistan had a qualitative military edge over India due to the flow of US arms into that country.¹⁰⁷ As T.V. Paul states that in the context of the 1965 war initiated by Pakistan, the country had "a limited qualitative advantage in its possession of 200 M-47/48 Patton tanks, twelve high performance F-104A Starfighter and F-86 Sabre aircraft, and twelve T-33 jet trainers, although India had more aircraft in its arsenal." However, he states that even the Pakistanis realized then that this was a "short-run qualitative edge in armor, artillery, and aircraft" and that it would change in a year or two.¹⁰⁸ By the late 1960s the equation had started to change. India was in a favorable position as an air-power while Pakistan had the edge on the ground (in tanks). Conventional military superiority, along with its geographical position and demography, have been enough for India to be a regional hegemonic power. How did nuclear weapons enhance its hegemonic role is the question to ask. Did the intention to dominate the region have anything to do with the acquisition of the Indian nuclear weapons capability?

In the South Asian two-power region of India and Pakistan, where Pakistan has always been concerned about Indian domination and its hegemonic ambitions, India's intention to dominate the region with nuclear weapons seems

¹⁰⁷International Institute for Strategic Studies, *The Military Balance*, 1955-60

¹⁰⁸T.V. Paul, *Asymmetric Conflicts: War Initiation By Weaker Powers*, Cambridge: Cambridge University Press, 1994, pp. 115-116

unrealistic because they are irrelevant to India's relations with the small states in the region.

d) Quest for Security

One important incentive scholars have repeatedly cited, especially with respect to Indian and Pakistani nuclear aspirations, has been the military security motivation. India's important strategic concern in South Asia has been Pakistan. India, a dominant power in the South Asian region, has been attacked by Pakistan, a conventionally inferior power in the region, on three different occasions -- in 1948, 1965 and 1971. The three attacks make it convenient for India to believe that Pakistan could launch a military attack at any time, especially in periods of political disturbances within India. India won the 1971 war, but a country cannot invite wars hoping to eventually win, and a country cannot be sure of winning, especially when powerful allies are there to assist the attacking country. Nuclear weapons are not war-fighting, but war-detering instruments. The best war-avoidance strategy for a country in such circumstances is, perhaps, deterrence by possession of nuclear weapons.

Security Threat, Territorial Conflict and War

The territorial conflict with Pakistan over Kashmir has always been a concern for India not only because of possible war over the issue, but also because Pakistan might create a situation to disintegrate India. This will not only be a territorial loss for India, but disrupt its national unity which is unacceptable to the

Indians. Therefore, Kashmir has been the focus of India's foreign policy since its independence. Pakistan's desire to win Kashmir by military means has not been overlooked, even though India has maintained a military edge over Pakistan for most of the time.

From 1974 until 1998, the Indian government policy was that India had not acquired nuclear weapons, and that it wanted to keep the nuclear option open for security reasons. Since India is preoccupied with another protracted conflict with China, it is hard to have an accurate understanding of India's interest in nuclear weapons by focusing on only one bilateral conflict relationship. India's superiority in conventional capabilities in South Asia makes one wonder why this country would want nuclear weapons in the context of this regional protracted conflict. In other words, why should Pakistan be a factor in India's nuclear choice?

Although this may be the accepted understanding, Pakistan has always been a security threat to India, and continues to be one because territorial conflicts are highly war-prone. Where Pakistan has shown a tendency to consider war as the best mechanism to win strategic territory, India cannot wait and hope for the best each time a war occurs. The possession of a deterrent capability was required to avoid future wars with Pakistan.

At the outset a discussion of the importance of Kashmir to the Indians and war likelihood over this issue is pertinent. Kashmir has always been a strategically important territory to India. To understand its significance to India, Jawaharlal Nehru's position is relevant. In 1948 Nehru sent a cable to the British Prime Minister and the US President explaining the Kashmir issue: "Kashmir's Northern

frontiers...run in common with those of three countries, Afghanistan, the USSR, and China. Security of Kashmir...is vital to security of India.”¹⁰⁹

In the post-Nehru period again, the Indian national interest was India-centric and directed towards defending Kashmir.¹¹⁰ India’s main strategic aim was territorial defense and border security. This meant defense of the Indian Union and an injunction against territorial expansionism beyond its borders.¹¹¹ However, from 1947 onwards, the Indians have believed that Pakistan’s claims over Jammu and Kashmir--whether justified or not--were always grounds for the use of force, as was evident from the invasions of 1947 and 1965.¹¹² Sudhakar Jee states that,

The threat from Pakistan has always been and is a continuance of the proxy war and at an opportune moment, its escalation into an offensive by regular forces with the aim of separating Kashmir from the rest of the country.¹¹³

The point is that war-probability between India and Pakistan remains higher-than-normal because “there is little possibility that disputes over South Asia’s colonially

¹⁰⁹White Paper on Jammu and Kashmir, 1948, pp. 445-446

¹¹⁰Ashok Kapur, *Foreign Policies of India and Her Neighbors*, Great Britain: Macmillan Press Ltd., 1996, p.105

¹¹¹*Ibid.*, p.107

¹¹²Major General Afsir Karim, “The J & K Problem: An Interpretative Study,” *Forum for Strategic & Security Studies*, 1996, p.9

¹¹³Sudhakar Jee, “Affordable Defense Within Budget Constraints,” *Trishul*, vol. viii, no. 1, autumn, 1995, p. 59

demarcated borders can be resolved in a satisfactory manner.”¹¹⁴ For Pakistan, Kashmir has always been a disputed territory and making gains by military intervention has been acceptable.¹¹⁵ “Military risks could be taken to induce or force India to concede Kashmir to Pakistan.”¹¹⁶ Scholars even believe that Pakistan may attempt to take Kashmir using a nuclear threat.¹¹⁷

India was always less threatened by Pakistan than Pakistan was by India. Pakistan’s attitude towards the Kashmir problem and its military resolutions, its allies with the world’s military powers, have threatened India to such an extent that Kapur writes, “India’s perception of threat revealed a fear of the consequences for the Indian Union of a theocratic solution of the Kashmir issue, a fear of the implications of the US-Pakistan military alliance for Pakistan-India relations, a fear that the cost of increased militarization would be detrimental to Indian developmental activities and priorities, and concern about the effect of a militant Pakistan on India’s regional and international influence.”¹¹⁸ Similarly, Thom A. Travis also argues that in South Asia India pursues a status quo policy, and seeks to preserve its preponderance and territorial boundaries, including keeping

¹¹⁴Brahma Chellaney, “India,” in Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation After the Cold War*, p.171

¹¹⁵Ashok Kapur, *Foreign Policies of India and Her Neighbors*, p. 98

¹¹⁶*Ibid.*, p.100

¹¹⁷Stephen P. Cohen, *The Pakistan Army*, Berkeley: University of California Press, 1984, p. 154; T.V. Paul, *Reaching for the Bomb: The Indo-Pakistan Nuclear Scenario*, New Delhi: Dialogue Publishers, 1984, p.29; also see Sudhakar Jee, “Affordable Defense Within Budget Constraints,” p.59

¹¹⁸Ashok Kapur, *Foreign Policies of India and Her Neighbors*, p.101

Kashmir within India. Pakistan, however, is more of a revisionist power and wants to wrest Kashmir away for geo-strategic, religious and irredentist reasons.¹¹⁹

Others, including Neil Jocek have argued that “India’s conventional superiority was substantial but the local terrain in Kashmir could allow for a sudden, successful Pakistani thrust. It was precisely this Pakistani local advantage that made India decide to widen the war in 1965.”¹²⁰ Moreover, Cohen contends that in time of extreme crisis Pakistan has always employed heavy use of force to gain an initial advantage.¹²¹

Under conditions where Pakistan has always been convinced that the Kashmir territorial dispute could be solved by military means, and where Pakistan might have a conventional military edge over India due to US/Chinese military help, India could not ignore a future war-probability with Pakistan. Consequently, deterring war became the primary concern and possessing nuclear weapons was important because they have the ultimate war deterring capability.

The Indian Search for a Nuclear Guarantee

The Indian government’s efforts to secure guarantees from the major nuclear powers have not worked. There are, however, several reasons for that.

¹¹⁹Thom A. Travis, *India, Pakistan and the Third World in the Post-Cold War System*, New Delhi: Har Anand Publications, 1997, p.63

¹²⁰Neil Jocek, Nuclear Proliferation and Security in India and Pakistan, *Ph.D. Dissertation*, University of California Los Angeles, 1986, p. 210

¹²¹Stephen P. Cohen, “Identity, Survival, Security: Pakistan’s Defense Policy,” in Surendra Chopra, ed., *Perspectives of Pakistan’s Foreign Policy*, Amritsar Gurunank Dev University Press, 1983, p.61

India was a founding member of the non-aligned movement in 1954, and was thus prohibited from joining either of the two cold war blocs. So even when India desperately wanted to have security guarantees after the Chinese explosion or the Pakistani nuclear program, its demand was unclear due to its involvement with non-aligned movement. The Western countries were unsure of India's intentions and needs. However, it is important to note that India has known it since the Chinese explosion that it would not have any nuclear guarantees from any of the nuclear powers. It is also doubtful if the West would have provided credible guarantees. Nonetheless, it is necessary to look at the Indian effort to seek a nuclear guarantee.

In 1965 Shastri went to the West to let them know about India's security position and its standing on the nuclear issue. Most of the leaders, including the British Prime Minister, wanted India to support the world non-proliferation efforts currently underway. India knew exactly that none were willing to provide nuclear security assurances to it. A report reads:

US officials do not see why they should go beyond the pledge made by President Johnson on October 18, 1964, to support any country that felt threatened by China's nuclear test. They felt that countries desiring a more specific or different form of assurance should approach the United States directly.¹²²

The United States knew that India was committed to non-alignment and would not seek a direct guarantee from the US and become part of the cold war rivalry.

¹²²*Hindusthan Times*, December 27, 1964

There was no question of India seeking a nuclear guarantee again from the same countries when Pakistan began developing its own nuclear weapons in the 1970s.

Although the Indian nuclear test occurred in 1974, New Delhi observed what Pakistan did with its nuclear program and how the United States handled the situation. According to a US State Department Memo, by 1983 there was “unambiguous evidence that Pakistan was actively pursuing a nuclear weapons program.”¹²³ However, the US had failed to act and India realized the need for its own preparedness.

In the dyadic protracted conflict between India and Pakistan, Pakistan had military support from the US and China which they provided to balance off India in the region. Moreover, the 1962 war with China and the 1965 war with Pakistan were proof that the USSR and the US respectively did nothing to help India in wars that they did not initiate. Instead, in the 1965 war Pakistani forces were equipped with more than \$700 million worth of military assistance from the US.¹²⁴

Although India won the Bangladesh war in 1971 and dismembered Pakistan, the US tilted towards Pakistan and dispatched the US Enterprise to the Bay of Bengal. Subsequent Pakistani nuclear weapons efforts were strong reasons for India to develop its own weapons program. The US aircraft carrier Enterprise in the Indian Ocean in 1971 confirmed that India had to depend on itself for its security needs and that nuclear weapons were required. Brahma Chellaney stated

¹²³State Department Memo of June 23, 1983

¹²⁴K. Subrahmanyam, “India: Keeping the Option Open,” in Robert Lawrence and Joel Laurus, eds., *Nuclear Proliferation Phase II*, p.133

that US-Pakistani relations and the US's intentions in the South Asian region was demonstrated from 1971 onwards in a manner that India could not ignore.¹²⁵ This does not mean that India was concerned about US intentions or a conflict with the US, but it was clear to the Indians that the West favored Pakistan in the South Asian protracted conflict. Pakistan was supported because the US considered it to be a front-line country against Soviet communism. This enabled Pakistan to receive millions in financial and military aid from the United States, and to avoid severe US pressure to give up its nuclear weapons program. The US considered that it was more in its own security interest to assist Pakistan--a country bordering on Afghanistan which was invaded by the Soviet Union in 1979--than to persuade Pakistan to give up its nuclear ambition and sign the NPT. Why the US favored Pakistan in the South Asian PC is not the point, but the fact that India was not favored is important here.

Pakistan and China formed an anti-status-quo alliance against India by 1962.¹²⁶ India has always been aware of the China-Pakistan relationship and that China uses Pakistan for its own benefits and Pakistan allows China to do so. It has also been clear that only India has been pressured by the US on arms races and not Pakistan or its ally, China.¹²⁷

¹²⁵Brahma Chellaney, interview, February 1, 1997

¹²⁶Sisir Gupta, in M.S. Rajan and S. Ganguly, eds., *India and the International System*, New Delhi: Vikas, 1981, p.1

¹²⁷S.K. Singh, interview, January 25, 1997

India's efforts to acquire security guarantees did not work, nor did the United States make sure that Pakistan did not acquire nuclear capability. As Subrahmanyam stated, "India needed a deterrent capability. It sought security assurances, but did not receive any guarantee from other nuclear weapon powers. Since guarantee was unavailable, deterrent capability was developed."¹²⁸ What is interesting is that instead of receiving assurances from the West or other nuclear states, India had to be more concerned about newly developed relations between US and Pakistan and, more importantly, China and Pakistan. Pakistan's cordial relations with the two nuclear states were a threat to India. The situation was even worse because China was India's other adversary in the China-India PC. It was impossible for India to overlook the development of its two most immediate adversaries' bilateral security relations. China had directly assisted Pakistan with nuclear weapons technology in the 1980s and continued to do so in the 1990s. According to the Reagan Administration officials and Congressional sources, in the 1980s China helped Pakistan with the development of centrifuges used to enrich uranium for nuclear weapons and to design a bomb.¹²⁹ Throughout the 1990s China continued to assist Pakistan in the latter's missile program. Although transfers of Chinese M-11 surface-to-surface missiles to Pakistan were reported in 1996 (when Pakistan had 30 M-11 missiles in the country),¹³⁰ these had been

¹²⁸K. Subrahmanyam, interview, January 28, 1997

¹²⁹Leslie H. Gelb, "Pakistan Tie Imperils U.S.-China Nuclear Pact," *The New York Times*, June 22, 1984

¹³⁰According to a US National Intelligence Estimate, China had not only transferred more than 30 M-11 missiles, but had also sent technicians to provide

received by Pakistan as early as 1992.¹³¹ China was subjected to trade sanctions by the Bush and Clinton Administrations in 1991 and 1993 for the missile transfers to Pakistan, but they were lifted in 1994.¹³² India's concerns about China-Pakistan nuclear cooperation became acute over the years.

India's Need for a Nuclear Deterrent Capability

Under conditions where extended nuclear deterrence was unavailable and Pakistan continued to be a major security threat in the region, India needed a nuclear deterrent capability. K.Subrahmanyam stated, "India's nuclear policy is partly shaped by security concerns. To the extent you think of [the association between] nuclear proliferation and development of nuclear military capability, it is security."¹³³

Although Indian security motivations cannot be fully understood looking at the India-Pakistan PC alone, I argue that Pakistan has been a crucial factor in India's security considerations pertaining to the possession of nuclear weapons. India's security concerns about Pakistan include Islamabad's intention to breakup India by intensifying the Kashmir problem, its proclivity to initiate war with India

the required training and to assemble these missiles. See, Bill Gertz, "Pakistan Deploys Chinese Missiles," *Washington Times*, June 12, 1996; R. Jeffrey Smith, "Report Cites China-Pakistan Missile Links," *Washington Post*, June 13, 1996

¹³¹R. Jeffrey Smith, "Spy Photos Suggest China Missile Trade," *Washington Post* July 3, 1995; R. Jeffrey Smith, "An M-11 Missile Violation By Any Other Name," *Washington Post*, August 3, 1995

¹³²Douglas Waller, "The Secret Missile Deal," *Time*, vol.149, no.26, June 30, 1997

¹³³K. Subrahmanyam, interview, January 28, 1997

at the first possible opportunity, and its relations with India's other adversary, China. India has been more concerned about China than Pakistan when one compares the two PCs. This is obvious because India is powerful compared to Pakistan in the South Asian region, but that is not the case in the China-India PC. Additionally, China has been a nuclear state since the 1960s while India waited until 1998. There is a belief within the Indian academic community that Pakistan is India's second concern--when compared to China. That may not necessarily be the case, though there may be some logic to it. Muchkund Dubey argued that the primary motivation behind India's acquisition of nuclear weapons capability has been to ward off threats to its security, including the immediate threat to its security from Pakistan. So nuclear capability became a deterrent against what Pakistan could do with its nuclear capability against India.¹³⁴ According to K. Subrahmanyam, although India tested its nuclear weapons in 1974, its nuclear weapons program remained dormant until 1988 and was resurrected in the context of Pakistan's nuclear weapons acquisition in 1987.¹³⁵ This reveals that Pakistan has been a major security threat to India and the Indian nuclear weapons acquisition has been a function of that threat

Pakistan has been an important security concern, sometimes even more intensely than China because of its tendency to manage crisis with wars or threat of war. India may not necessarily have been concerned about Pakistan's nuclear

¹³⁴Muchkund Dubey, interview, January 20, 1997

¹³⁵K. Subrahmanyam, "Indian Nuclear Policy--1964-98," in Jasjit Singh, ed., *Nuclear India*, pp.44-46

weapons capability which had existed for a decade, but its war-like behavior threatened India more in the South Asian PC setting. Former Indian army chief, General K. Sundarji, stated that Pakistan and India fought three major wars and had not resolved the Kashmir problem, that the United Nations could not credibly assure the national security of its member-states, and that big power guarantees have not been credible. India thus needed to ensure its national security, especially in the face of a nuclear and conventional threat from Pakistan that required deterrence.¹³⁶ Although he mentioned the Chinese threat which India also had to consider, he believed that Pakistan was as serious a threat to India as China.

If geographical location is taken into account, the Pakistani threat becomes all the more crucial. When adversaries are geographically contiguous, the probability of crisis and war is increased. Under such circumstances possession of a deterrent capability such as nuclear weapons becomes important. According to Brigadier Vijay Nair, Pakistan must be deterred because its physical/strategic capabilities are such that it is important to take it seriously. Because of geographical proximity, Pakistan can easily pull out an Indian town,¹³⁷ which India worries about continually in the India-Pakistan PC. The proximity of major border towns and social and cultural bonds of the people across the two borders, as well as the radiation effects of a possible nuclear war would prompt Pakistani

¹³⁶K.Sundarji, "India's Nuclear Weapons Policy," in Jorn Gjelstad and Olav Njolstad, eds., *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996, pp. 178-179

¹³⁷Interview with Brigadier Vijay K. Nair, New Delhi, February 2, 1997

strategists to rely on a strategy of destroying heavily populated Indian cities.¹³⁸ Proximate adversaries must take the nuclear weapons acquisition for deterrent purposes more seriously. As long as nuclear weapons are possessed by both adversaries, wars--conventional and nuclear--are expected to be avoided.

Bhabani Sen Gupta argued that India, armed with its conventional capability, would have an upper hand over Pakistan and that India did not need nuclear weapons vis-à-vis Pakistan. But even he believed that only nuclear weapons could provide security for India in the India-Pakistan and India-China PC settings, and that nuclear capability has introduced a certain restraint in India-Pakistan's low conflict situations.¹³⁹ These arguments make it clear that Pakistan has been a critical factor in the Indian search for a nuclear deterrent capability.

It is important to note that when Pakistan demonstrated an interest in acquiring nuclear weapons it was obvious that the weapon would be directed against India. There has never been scholarly disagreement over what Pakistan's intentions have been vis-à-vis India, or which country constituted a security threat to Pakistan. That, however, was not the case when India tested its nuclear weapons in 1974 or in 1998. There is still argument in the academic community over the question of which country has been a greater threat to India. There was, however, no question about the need for a deterrent capability, but the controversial point was over which country needed to be deterred more--Pakistan or China. Since China is a nuclear weapon state, the obvious conclusion was that

¹³⁸T.V. Paul, *Reaching for The Bomb*, p.45

¹³⁹Bhabani Sen Gupta, interview, January 24, 1997

India needed nuclear capability to deter China. This argument seems realistic when considering India's conventional edge over Pakistan. However, the Indian concern over Pakistan and the need to deter that country from waging wars to resolve the Kashmir dispute have not been any less important to the Indians, especially since the early 1980s. The Indian motivation in this respect did not need to be explicitly stated--it was an implicit understanding. As Savita Pande stated, "Pakistan is definitely a threat to Indian security and Pakistan-China nuclear linkage is one of India's security concerns. India, however, automatically takes care of Pakistan by taking care of China. If China can be destroyed once, Pakistan can be destroyed many times. So, India primarily has always intended to take care of the Chinese threats which would also give it the ability to address India-Pakistan security concerns."¹⁴⁰

The point is that India has been concerned about the Chinese nuclear threats from the beginning and carried out the nuclear tests in 1974 to address that threat. In the 1970s and 1980s, when Pakistan developed its nuclear weapons capability, India addressed that threat by developing its own nuclear weapons, though it appeared that India was trying to catch up with the Chinese nuclear weapons. In reality, India has taken care of both threats simultaneously since the early 1980s when Pakistan's nuclear development was becoming public knowledge. This puts the country in a unique situation. India's recent nuclear tests have confirmed that it has been attempting to obtain a credible deterrent capability vis-à-vis China in the context of the China-India PC, and that Pakistan did not

¹⁴⁰Savita Pande, interview, January 29, 1997

figure in India's security calculation at this time. This may be true since India and Pakistan both had nuclear weapons capability since late 1980s. Perhaps there was no reason to become nuclear when Pakistan was not, but for the need to address the Chinese nuclear threats. Even when Pakistan tested its nuclear weapons in 1998, India had nothing to lose because it had already become a nuclear state.

India's strategic and diplomatic agenda has always been broader than the issue of managing India-Pakistan relations. Its nuclear and missile program have not been limited to Pakistan alone but Pakistan became a threat since the 1970s. The country sought, and acquired, a nuclear equalizer against India and fomented insurgency in Kashmir. Pakistan's nuclear developments and the determination in Islamabad to acquire the bomb introduced the Pakistani factor into Indian nuclear planning and profoundly altered the policy debate. As Abha Dixit stated,

The finding of the Kroc Institute poll that Indian concern about a Pakistani nuclear threat far outweighs other security considerations reflects the evolution of a trend in public perception that began in the 1970s. The emergence of a de facto arms competition in South Asia obscured India's traditional commitment to global disarmament and added new force to the pro-bomb lobby...The Pakistani factor served as a constant distraction from Gandhian/Nehruvian ideal.¹⁴¹

Along the same lines, Brahma Chellaney also noted that Pakistan has always been of secondary importance to India because India had conventional

¹⁴¹Abha Dixit, "Status Quo: Maintaining Nuclear Ambiguity," in David Cortright and Amitabh Mattoo, eds., *India and the Bomb*, p.62

superiority over Pakistan. However, India has definitely been worried about Pakistan's capabilities--what they are buying, making and producing. The supply of non-conventional technology to Pakistan by China has been a crucial concern of India.¹⁴² India's concern over every step Pakistan takes in weapons acquisition has also been confirmed by perspectives of the Indian elites in recent years. A Kroc institute study in 1996 confirmed that Pakistan was not only an important motivating factor for Indian elites in considering a nuclear option, but also that they strongly favored the acquisition of nuclear weapons if Pakistan were to test its nuclear weapons.¹⁴³ Although this survey was taken before the 1998 Indian nuclear tests, the intention of matching capability of the adversary in a dyadic India-Pakistan conflict and a two-power South Asian region seems evident. The power structure of the region and the protracted conflict creates a situation where relationship is a zero-sum game. The Indian and Pakistani leaders "view Indo-Pakistan relations as a zero-sum game...The rivalry is too deep-seated either to disappear easily or to be capable of a rational solution."¹⁴⁴ Throughout the 1990s the Indians have been happy that their country had a more advanced nuclear program than Pakistan. Bhashyam Kasturi stated that "India's stand vis-à-vis

¹⁴²Brahma Chellaney, interview, February 1, 1997

¹⁴³David Cortright and Amitabh Mattoo, eds., *India and the Bomb*, p.17

¹⁴⁴G. Rizvi, in Barry Buzan and G. Rizvi, *South Asian Insecurity and the Great Powers*, London: Macmillan, 1986, p.93

Pakistan has always been reactive, but on the nuclear issue for once, we are ahead...”¹⁴⁵

Indian missile capabilities may provide a better understanding of how important Pakistan is to India's nuclear deterrence consideration. India's indigenous missile development began in the 1970s and was accelerated by an integrated development program in early 1983. The Prithvi and Agni surface-to-surface missiles (SSMs), Trishul and Akash surface-to-air missiles (SAMs), and the Nag anti-tank missile (ATM)--were all developed under the Defense Research and Development Organization's (DRDO) Integrated Missile Development Program in 1983.¹⁴⁶ What seems interesting is that the government of India had developed the Prithvi Missiles with the Pakistani threat in mind. This missile is 'Pakistan-specific' and had user trials in 1994 and the development was completed in 1998.¹⁴⁷ The 150 km and 250 km Prithvi SSM variants are reported to be in production while the 350km variant is now in development.¹⁴⁸ This proves that India has been working on one of its missile programs based on concerns outside the India-China conflict, something the Pakistanis have been fully aware of.

¹⁴⁵Bhashyam Kasturi, "Pakistan's Nuclear Bomb: An Appraisal," *Trishul*, vol. 8, no.2, spring 1996, p.104

¹⁴⁶W.P.S. Sidhu, "Enhancing Indo-U.S. Strategic Cooperation," *Adelphi Paper*, 313, International Institute of Strategic Studies, 1997, pp.23-27

¹⁴⁷International Institute for Strategic Studies, *The Military Balance*, 1998-99, pp.148, 151

¹⁴⁸*Ibid.*

Another important point is whether or not India was totally a conventionally superior power in the South Asian region, and what has been the Indian perception about its position in the region. There is a crucial link between military superiority and war in the conventional sense. Ashok Kapur argues that in the 1948 war Pakistan had a military edge over India and wanted to make territorial gains in Kashmir. In 1965 Pakistan still maintained an edge over India in certain crucial areas such as having the tanks, and it fought an irredentist war in Kashmir. The most effective way to defend one state is by possessing nuclear weapons which establishes military equalization. Until about 1965 Pakistan was, in certain respects, conventionally superior to India which provided the incentive to wage a war with an otherwise preponderant power, India. Moreover, from 1955 onwards Pakistan had good military relations with US and later with China and had taken full advantage of the situation. India had strong reactions to the changed reality. Military solutions to bilateral territorial problem by Pakistan seemed possible, even in future. Therefore, after the 1965 war, both India and Pakistan increased their defense spending to match each other's capabilities.¹⁴⁹ The action-reaction became an integral part of the arms build-up game. Pakistan attempted to catch up to India in the acquisition of sophisticated weapons.¹⁵⁰

The Indian perceptions also changed over time about Pakistan's military ability in wars and the Pakistani army's better preparedness for war in recent years

¹⁴⁹Ashok Kapur, *Foreign Policies of India and Her Neighbors*, p.109

¹⁵⁰T.V. Paul, *Reaching for the Bomb*, p.28

than in 1965 or even 1971.¹⁵¹ Was India unsure about its conventional status vis-à-vis Pakistan? K. Subrahmanyam has argued that depending on conventional superiority might not be the best solution for war-prone protracted conflict states. According to him, countries can no longer win by attacking with conventional weapons. The US could not do it in Vietnam, neither could the USSR in Afghanistan.¹⁵² I argue that whether or not wars can be won with conventional weapons is not the issue, but that wars must be avoided, especially where wars are highly probable. Because wars may result in winners and losers, and because territories might be lost especially when fought over territorial matters, deterrent capabilities are needed to avoid wars and the consequences of those wars in terms of territorial losses.

There is also the downside of the possession of nuclear weapons by both states in an asymmetric power relationship, because nuclear weapons provide a capability-equalizer and so inferior countries can be at par with the superior ones by going nuclear. Kanti Bajpai argued that India was perfectly capable of winning another war with Pakistan. Once both sides achieved nuclear capability, India's capability in the conventional sense declined. He maintained that if India had not conducted the original test in 1974 and allowed mutual verification, then Pakistan would not have followed and India would still be a superior conventional power. India could no longer punish Pakistan conventionally once both countries

¹⁵¹Sudhakar Jee, "Affordable Defense within Budget Constraints," p.59

¹⁵²K. Subrahmanyam, interview, January 28, 1997

possessed nuclear capability.¹⁵³ Thus, with its nuclear weapons acquisition Pakistan derived a strategic parity with India.

S.K. Singh said that when Pakistan's Prime Minister Bhutto advised the scientists to build nuclear weapons after 1972, India was not concerned and he, as Ambassador to Pakistan, told the Pakistanis, "you have every right to make the bombs and India is not threatened by that."¹⁵⁴ Nonetheless, the Indian government has always been determined to maintain its military and diplomatic edge over Pakistan and to control pressures on its borders and border provinces. Furthermore, in the South Asian region India was determined to avoid the impression that Pakistan had the bomb while India did not, and thus causing a diminution of India's leadership in the region.¹⁵⁵ This is the basic characteristic of the insecurity and balancing behavior inherent in the enduring rivalry in the South Asian region. The rivalry is structurally determined; India has never been able to consider Pakistan obtaining a military edge because that would immediately imply its inferiority with the game as a zero-sum.

In a world where military power dominates the resolution of vital issues pertaining to national security, the case for India acquiring nuclear weapons was very strong.¹⁵⁶ General Sundarji believed that India could not allow itself to be

¹⁵³Kanti Bajpai, interview, January 28, 1997

¹⁵⁴S.K. Singh, interview, January 25, 1997

¹⁵⁵Ashok Kapur, "Nuclear Development in India and Pakistan," in Jorn Gjelstad and Olav Njolstad, eds. *Nuclear Rivalry and International Order.*, p.148

¹⁵⁶Ravi Kaul, *India's Strategic Spectrum*, New Delhi: Chanakya Publishing House, 1969, p.200

caught up in a situation of nuclear asymmetry vis-à-vis Pakistan.¹⁵⁷ The need for nuclear weapons was exacerbated because of Pakistan's connections with China, the nuclear states' indifference with regard to India's security needs, and the deep-rooted rivalry caused by the two-power regional structure.

When the five underground nuclear tests were carried out on the 11th and 13th of May 1998, they were justified on the grounds that China was a major threat to India,¹⁵⁸ and that the nuclear weapons states should have anticipated them when they did not take into account the security interests of India when signing the CTBT. India, however, was also concerned about the China-Pakistan nuclear relationship and the nuclear tests were partly a function of that threat. Although nuclear testing was apparently not necessary in the India-Pakistan deterrent relationship since both were nuclear-capable states before the 1998 tests, new revelations about China-Pakistan nuclear collusion made India rethink its nuclear standing. Moreover, when Pakistan test-launched the 1,500 km range Ghauri surface-to-surface missile in April 1998, which is capable of carrying a nuclear warhead,¹⁵⁹ India perceived a serious threat to its security. Therefore, K. Subrahmanyam states that when, in 1998, new information surfaced about China-

¹⁵⁷*India Today*, March 31, 1987, p.77

¹⁵⁸After the nuclear tests India's defense minister, George Fernandes, stated the strategic rationale for the tests. He stated, "If we had to go nuclear, it was for the purpose of possessing a nuclear deterrent that would enable us to tackle some of the threats that we faced and only that." Even the Prime Minister said that India's tests were conducted for defense and deterrence. See, *Hindusthan Times*, June 19, 1998; *India Today*, May 25, 1998

¹⁵⁹*The Times of India*, April 7, 1998; *The Hindu*, April 7, 1998

Pakistan nuclear cooperation under which China continued to provide nuclear technology and components to Pakistan, “the Indian nuclear tests became inevitable and they were triggered by the Ghauri missile test by Pakistan on April 6, 1998.”¹⁶⁰ Thus, Indian tests were required not only to have a credible nuclear deterrent against China, but also to counter the Pakistani nuclear threat in the region. India needed and still needs nuclear deterrents to ward off its twin security threats from Pakistan and China.

SUMMARY

This chapter presented an analysis of the Indian motivations for acquiring nuclear weapons. Motivations from the three levels of analysis have been evaluated to explain India’s nuclear weapons acquisition. I argued that systemic motivations, especially security, explain India’s nuclear choice. India has been propelled towards acquiring nuclear weapons to obtain a deterrent capability against Pakistan in the context of the India-Pakistan territorial protracted conflict. New Delhi has been fully aware of its limitations as far as security assistance from the nuclear states is concerned, and has been particularly concerned about the security relationship which has existed between China and Pakistan since the 1970s. The geographical proximity of the two countries and the structural constraints of the region have given it the additional impetus to obtain nuclear weapons.

¹⁶⁰K. Subrahmanyam, “Indian Nuclear Policy---1964-98,” p. 52

CHAPTER V

PAKISTAN'S SEARCH FOR NUCLEAR DETERRENCE

This chapter is a continuation of the India-Pakistan protracted conflict case study. It examines the motivations from the three levels of analysis to explain Pakistan's need for nuclear weapons in the context of the South Asian protracted conflict. The purpose is to determine which motivation best explains Pakistan's obtaining nuclear weapons. I start with the individual-level motivation, followed by domestic and systemic explanations.

INDIVIDUAL-LEVEL MOTIVATION

a) Attitudes and Beliefs of Leaders

A discussion of the Pakistani nuclear weapons program from an individual level perspective requires one to look into the country's former leader, Zulfikar Ali Bhutto's personal interest in acquiring a nuclear weapon for Pakistan. In 1972, after taking office, Bhutto held a meeting with a group of Pakistan's top scientists in Multan. He stated, "Look we are going to have a bomb...Can you give it to me? ... I shall find you the resources and I shall find you the facilities."¹ This statement, coming from the man who made the celebrated statement that Pakistanis would eat

¹Project 706: The Islamic Bomb, "*Panorama*" recording from a BBC transmission, June 16, 1980, p.2; Savita Pande, *Pakistan's Nuclear Policy*, Delhi: R.R. Publishing Corporation, 1991, n. 49 and 50, p.32

grass and leaves if that was what it would take for them to have a bomb is not very unusual. How far he was able to decide by himself is the pertinent question.

It has been argued that after Bhutto became the leader the time was right for him and he had the power to “put into practice what he had lobbied for so many years--acquiring the weapon capability.”² Bhutto “reinvigorated Pakistan’s nuclear establishment and authorized R&D activities.”³ Several writers have stated that the chief architect of Pakistan’s nuclear policy was Bhutto, who gave new direction to the nuclear program of the country.⁴ Ashok Kapur, however, has argued that Bhutto had very little power or role in Pakistan’s nuclear decision-making. He believes I.H.Usmani, Chairman of Pakistan Atomic Energy Commission (PAEC), was most important in this respect. He also undermined Bhutto’s seriousness to the nuclear program in the 1960s and stated that a scientific-bureaucratic-political coalition emerged consisting of Usmani, Abdus Salam (chief scientific advisor to the President of Pakistan) and Z.A. Bhutto.⁵ However, with regard to the 1972-77 period, Kapur stated 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

²Savita Pande, *Pakistan’s Nuclear Policy*, p.32

³Akhtar Ali, *Pakistan’s Nuclear Dilemma*, Karachi: Economic Research Unit, 1984, n.19, p.46

⁴Leonard Spector, *Nuclear Proliferation Today*, New York: Vintage Books, 1985, p.71; B.M Kaushik and O.N. Mehrotra, *Pakistan’s Nuclear Bomb*, India: Sopan Publishing House, 1980, p.34

⁵Ashok Kapur, *Pakistan’s Nuclear Development*, London: Croom Helm, 1987, pp.54-55

Pakistani nuclear activities during 1956-71. In this sense the Bhutto era marks a turning point in Pakistani nuclear activities.”⁶ Kapur’s argument is that Bhutto’s era was unique not because Bhutto was successful in gaining the bomb, but because the pattern of nuclear activities which occurred during the 1972-77 period had a clear anti-India direction.⁷ Thus, although Bhutto’s role in Pakistan’s nuclear weapons program is undeniable, the India factor became part of the strategic calculation in the 1970s, after Pakistan’s defeat in the 1971 war. Bhutto’s statement, “if India developed an atomic bomb, we too will develop one ‘even if we have to eat grass or leaves or to remain hungry’ because there is no conventional alternative to the atomic bomb”⁸ indicates that he did consider Pakistan’s security interests.

In acknowledging Bhutto’s contribution to the nuclear weapons program General Aslam Beg stated, “Bhutto rightly decided that Pakistan needs a capability--a major strategic decision and Pakistan started working on it after 1975,”⁹ but he also maintained that Pakistan’s nuclear research program had a dual purpose only after India’s 1974 nuclear explosion even though the research program started as a peaceful one during the 1960s. Therefore, although Bhutto’s contribution to the program cannot be denied since “the program received

⁶Ibid. p.146

⁷Ibid.

⁸Z. A. Bhutto, *Awakening the People: Speeches of Zulfikar Ali Bhutto 1966-69*, Rawalpindi: Pakistan Publications, 1970, p.21

⁹Interview with General Aslam Beg, Pakistan’s former Army Chief, Islamabad, February 13, 1997

importance after 1972 and when placed under the charge of the Prime Minister,” Bhutto was not the central reason why Pakistan became interested in the weapons program.¹⁰

Two points are important in this regard: a) who makes the nuclear decisions in Pakistan? and, b) did the decisions remain consistent with different governments in power? According to Pakistan’s former Foreign Secretary, nuclear decisions in Pakistan are made within a coordinated policy framework. The Prime Minister, the three chiefs of the armed forces, the chief of joint services headquarters, the Foreign Minister and a few other Ministers are actively involved in the nuclear decision-making process. The Defense National Security Council was created by the caretaker government to make the nuclear decision.¹¹

With regard to the second point, it must be acknowledged that Pakistan’s nuclear program “survived the overthrow of Bhutto in 1977,”¹² and Bhutto’s fall did nothing to change the direction of the program.¹³ All successive leaders with their different attitudes, temperaments and beliefs kept the nuclear option open for their country’s security considerations. These leaders had to face world pressure to join the nuclear arms control agreements, and each time there was a chance to end

¹⁰Aslam Beg, “Pakistan’s Nuclear Program,” in Jorn Gjelstad and Olav Njolstad, eds., *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996, pp.160-163

¹¹Interview with Niaz-A-Naik, Islamabad, February 11, 1997

¹²Robert G Wirsing, *Pakistan’s Security Under Zia, 1977-1988*, New York: St. Martin’s Press, 1991, p.113

¹³Ibid.

the weapons program.¹⁴ Obviously, Ziaul Haq, Benazir Bhutto, and Nawaz Sharif have had their differences, but on the nuclear issue they all opted to continue the nuclear buildup. This is perhaps the only commonality Pakistan's leaders have had in their decision-making strategies. It is interesting to note that Bhutto was not alone in making controversial statements, and that even General Zia-ul-Haq stated that "we shall eat crumbs but will not allow our national interest to be compromised in any manner whatsoever."¹⁵ Similarly, although Benazir Bhutto maintained that she was not well-informed about Pakistan's nuclear weapons program,¹⁶ she refused to unilaterally abandon the nuclear weapons program in 1993, and her refusal became more adamant when the Clinton Administration tried to negotiate with Benazir's government on the matter in 1995.¹⁷ It is intriguing that Abdul Qadir Khan continued to direct the uranium enrichment facility at Kahuta¹⁸ from 1975 to 1998, a task originally he had been assigned by Bhutto in 1975. None of the subsequent political leaders removed him from his position and

¹⁴Pakistan was under tremendous pressure to join the Nuclear Nonproliferation Treaty when it was extended in 1995, and during CTBT negotiations in 1995-96 Pakistan was faced with similar world pressure to unilaterally join the CTBT ignoring the Indian stand on it. All Pakistani governments, however, have been consistent on this matter.

¹⁵*The Pakistan Times*, Lahore, July 28, 1979

¹⁶"Pakistan's Atomic Bomb," *Foreign Report*, January 12, 1989, p.2

¹⁷*The News*, January 15, 1995

¹⁸Robert G. Wirsing writes about Khan's work in Kahuta from 1975-1988. See, Robert G. Wirsing, *Pakistan's Security Under Zia*, p.113

in fact, Khan was the top scientist in Pakistan who tested Pakistan's nuclear weapons in 1998.

Bhutto played a critical role in Pakistan's nuclear weapons program, but if Bhutto's personal traits were solely responsible for it, there would be no justification for Bhutto's successors to continue the program so seriously, nor for Nawaz Sharif to be the first Pakistani leader to test nuclear weapons in 1998. Therefore, individual-level motivation seems inadequate to explain Pakistan's need for nuclear weapons.

STATE-LEVEL MOTIVATIONS

a) Bureaucratic Politics

Pakistan has been ruled by military dictators for three quarters of its existence and the military's influence in the overall administration, development and decision-making has always been tremendous. Military rulers from Ayub Khan, Yahya Khan to Zia-ul Haq have had various agendas with regard to the country's development, but they had one thing in common--to not dissatisfy the country's military, unlike the Indian case. Even civilian governments under the leadership of Zulfikar Ali Bhutto, Benazir Bhutto and Nawaz Sharif have always paid special attention to the demands of the military. Whenever a government had taken a measure unpopular with the army, it has had to face negative consequences. Pakistan's constitution was designed so that the President, under the eighth amendment, has had the right to overthrow any government whom he believed to be corrupt. However, the President also has hesitated to do anything about the

leaders when they have been military men. Such has been the role and power of the military in this country. Given the Pakistani military's standing in the country, it is possible to assume that it was military-bureaucratic politics which made it go nuclear.

Although the military is the strongest bureaucratic institution in the country, Pakistan's nuclear decisions have always been made in a coordinated fashion with the military, civil bureaucracy, the President and Prime Minister--all being involved.¹⁹ Benazir Bhutto's comments about her innocence in the nuclear decision and placing blame on the army was not believed by the US, nor is it a convincing argument for the Pakistanis. Pakistan's former Foreign Minister argued that Benazir was fully aware of what was going on with the nuclear program and pledging ignorance was only a strategy she used to deflate the US pressure.²⁰ There is no doubt that the army alone did not have full control of nuclear weapons decisions.

More importantly, like all countries, even Pakistan's military has sometimes been less than enthusiastic about nuclear weapons. Steven Cohen wrote in 1984 that, "the military in Pakistan does not like nuclear weapons--no soldier really likes them. A few active and retired generals have spoken and written in opposition to a

¹⁹See Ayesha Siddiqua-Agha, "Ad hococracy, Decision-Making and Pakistan's Arms Production and Nuclear Projects," *Indian Defense Review*, vol. 11, no.3, July-Sept, 1996, especially, pp.25-27

²⁰Interview with Niaz-A-Naik, February 11, 1997

Pakistani nuclear program; most have come to accept with varying degrees of enthusiasm the idea of a nuclear weapon.”²¹ Even though it is generally believed that the Pakistani military has always been enthusiastic about possessing nuclear weapons, this has not always been so. The possession of these weapons brings them no benefit and most believe that a large chunk of the defense budget going towards the nuclear program is unacceptable to the army. Budget cuts are something that no army likes. Nor are they happy about the possession of an expensive weapon that they cannot use. Armed forces personnel are weapons-lovers, but not the ones that are unusable.

The importance of budgets and the associated reluctance to possess nuclear weapons because of the expense is more evident in Shirin Mazari’s statement. She stated that most army chiefs oppose nuclear weapons while in power, and only when they retire do they tend to support weapons development. They then become so concerned that they insist their government openly go nuclear. This is true for Pakistan’s military chiefs.²² The same chiefs of staffs who were not enthusiastic about a nuclear weapons program--not to speak of the bomb-- during their time of office based on budgetary constraints, after retirement are no longer worried about how cuts will affect them, and become interested in possessing nuclear weapons.

Although Pakistan has been under military rule for most of its existence, the military may not have been so concerned about acquiring nuclear weapons as is

²¹Stephen P. Cohen, *The Pakistan Army*, Berkeley: University of California Press, 1984, p.152

²²Interview with Shirin Mazari, Islamabad, February 14, 1997

understood by the academic community. It is difficult to explain why Pakistan maintained an opaque status for more than a decade if the military was responsible for its nuclear weapons acquisition. More importantly, Pakistan's nuclear tests were carried out in May 1998 under the civilian leadership of Prime Minister Nawaz Sharif. This cannot be fully understood by a unit-level explanation such as bureaucratic politics.

b) Scientific/Technological Momentum

Pakistan's progress on the route to the bomb using enriched uranium began with the Pakistan Atomic Energy Commission's (PAEC) Chairman, Abdul Qadir Khan's taking charge of the program. He would do anything for his country to obtain nuclear weapons and it is stated that he even smuggled the blueprints for a centrifuge plant to produce weapons-grade enriched uranium from Holland.²³ His job at Urenco, the Dutch-British-German consortium which runs a huge uranium enrichment plant in Holland helped him obtain the materials Pakistan needed for the weapons. The components used at Kahuta were bought in Europe through deals Khan arranged.²⁴

Others have argued that I.H.Usmani, as the chairman of the PAEC, laid the foundation for Pakistan's nuclear infrastructure and his role in the program cannot be denied. Ashok Kapur contends that "more than any other person, he set the

²³Ayesha Siddiqua-Agha, "Ad hococracy, Decision-Making and Pakistan's Arms Production and Nuclear Projects," p.25

²⁴*India Today*, March 31, 1987

direction of Pakistan's peaceful nuclear program. Pakistan's nuclear power production program today is what Usmani developed in the 1960s. Not only did Pakistan's nuclear power program get off the ground during this period but this was the high point in the development of nuclear energy in Pakistan."²⁵ He was a man who believed in the atomic energy's great potential for good and for evil.²⁶

Obviously scientists are important to the production of nuclear capability, and in Pakistan's case may have been extremely important, but political decisions in this matter have always been vital. Pakistan, with an institutionalized military, could not allow scientists to play a major role or decide on these issues. The country's rulers emphasized its importance, and if these scientists were not available, others would have done the job for national interest. It is not the scientists who make nuclear decisions, although they play a central role in terms of the technological aspect. Pakistan had a combination of civilian and military leaders and who were all involved in its nuclear choice. Z. A. Bhutto, Zia-ul Haq and Benazir Bhutto were involved in Pakistan's nuclear development, and because military leaders ruled the country for most of the period, its role was evident. Hence, Ayesha Siddiqua states that the army generals were closely linked to the administrative affairs of the nuclear weapons program even while Khan continued to hold an important position because of his technical expertise.²⁷

²⁵Ashok Kapur, *Pakistan's Nuclear Development*, p.53

²⁶Ibid. p.68

²⁷Ayesha Siddiqua, "Ad hococracy, Decision-Making, and Pakistan's Arms Production and Nuclear Projects," p.25

The nuclear program in Pakistan was started to resolve the country's energy needs, and it remained a peaceful one until the early 1970s when it was changed to a dual purpose program to build nuclear weapons. Although scientists like Khan have always been in favor of nuclear weapons, specific decisions had to be made to make the bomb. The production of large systems associated with nuclear weapons and their delivery systems involve a series of debates and difficult decisions about technical, economic, political and military issues.²⁸ In other words, technological spill-over or scientist's interest in demonstrating their achievements are important, but the most crucial element is having a coordinated decision to go nuclear, and even a semi-democratic country like Pakistan requires that. Although Pakistani scientists wanted to demonstrate how technologically developed their country was, and in 1987 they proclaimed that their country was far ahead of India in uranium enrichment capability, they stated that only if the government decided to make the bomb, would they do so.²⁹ The technological ability and political decision-making on the matter are both required.

Pakistan has been an opaque nuclear state for many years. Although the ultimate way to demonstrate technological development is to test nuclear weapons, Pakistan did not conduct nuclear tests until 1998. The scientists' aspirations may

²⁸Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*, Cambridge, Mass: MIT Press, 1977, pp.44-106

²⁹Eric A. Vas, "Pakistan's Security Futures," in Stephen P. Cohen, ed., *The Security of South Asia*, Urbana and Chicago: University of Illinois Press, 1987, p.96

have succeeded to a certain point, but ultimately, the decision to keep the “option open,” which scientists never want, was made for security interests of Pakistan.

Although Pakistani scientists were ready to test nuclear weapons since the early 1990s, they were tested only when the country felt it was in its best interests to do so for reasons that have little to do with the scientific community’s desires. On April 14, 1998 Abdul Qadir Khan announced on a national news broadcast that all he was waiting for was the government’s permission to develop a nuclear bomb. He added that for Pakistan to detonate a nuclear explosion, he would have to have permission from the government.³⁰ In other words, a government decision is crucial in any stage of nuclear weapons acquisition. When India tested its nuclear weapons in May 1998, Khan wanted Pakistan to immediately conduct nuclear weapons tests to match India’s,³¹ but the country waited two weeks to decide, taking its other major interests into consideration. The purpose is not to undermine the importance of the scientific community’s contribution to the overall nuclear weapons program in Pakistan, but to argue that scientific or technological explanation does not provide the best reasoning for Pakistan’s acquisition of nuclear weapons.

c) Public Opinion

A quasi-democratic, and sometimes authoritarian, country, Pakistan has not

³⁰*Dawn*, April 16, 1998

³¹ A. Q. Khan stated that Pakistan is ever ready to respond to Indian nuclear tests. See, *Dawn*, May 12, 1998.

accorded much weight to public opinion for most of its major decisions, nuclear choice being no exception. From Zulfikar Ali Bhutto's days to the present, Pakistan's nuclear decisions have been made in a 'hush hush' environment and public opinion hardly mattered to the decision-makers. Whenever global nuclear arms control treaty negotiations were underway, public opinion surveys were conducted and they showed that the popular demand was for the country to go nuclear rather than for signing these treaties.

An understanding of the relationship between public opinion and nuclear weapons acquisition requires that two important points be considered. The first is whether Pakistan's nuclear policy has been consistent with public opinion, and second, to what extent public opinion has been considered by decision-makers.

Where public choices and government decisions coincide, it is difficult to pinpoint what exactly had the greatest impact on the policy taken. Before the May 1998 Pakistani nuclear tests, a 1996 Kroc Institute for International Peace Studies survey reported that 61 % of the Pakistanis supported Pakistan's nuclear policy at that time (option open policy) and only 32 % supported Pakistan going openly nuclear, while 6% wanted Pakistan to renounce its weapons.³² Not only the policy-makers, but a majority of Pakistanis wanted an open nuclear option in 1996--which was Pakistan's nuclear policy at that time. Why was this the case? It was in response to the perceived security threat from India and the unresolved territorial

³²Samina Ahmed and David Cortright, *Special Report, A Study of Pakistan's Nuclear Choices*, The Joan B. Kroc Institute for International Peace Studies at the University of Notre Dame, Indiana: Notre Dame, August 1996, p.5

disputes with New Delhi, most importantly over Kashmir. According to the survey, a majority of respondents believed that Pakistan could renounce the nuclear option only if the Kashmir dispute was settled and India renounced its nuclear option.³³ As early as 1984 Stephen P. Cohen stated that “a Pakistani nuclear weapon would be greeted with widespread support at home,” and that this is the only issue which Pakistanis agreed to unanimously.³⁴

Pakistan is an interesting case where the obsession with India meant that people from across the spectrum wanted the country to go nuclear. In 1997 Zafar Iqbal Cheema argued that, over the years, public opinion in Pakistan changed. Pakistanis wanted to keep the option open and if India went nuclear, Pakistan would follow it. The few people against nuclear weapons were so for economic reasons. However, the military, political elites, civil administrators--all wanted to keep nuclear weapons option open. The Kashmir dispute had generated that opinion.³⁵

As far as the importance of the political parties in nuclear decision-making is concerned, in 1997 Pakistan's former Foreign Secretary stated that the “nuclear decision is a sensitive matter. Pakistan's public wants nuclear weapons...No political party wants to give up nuclear weapons unilaterally.” He believed that some political parties including Jamat-e-Islami party wanted the country to go

³³Ibid.

³⁴Stephen P.Cohen, *The Pakistan Army*, p.156

³⁵Interview with Zafar Iqbal Cheema, Islamabad, February 12, 1997

nuclear, but they were not given much importance.³⁶ These positions were held by the political parties before the 1998 tests.

Pakistan is a unique case because the population believes that the Indian threat has to be countered, and there is little difference of opinion on that. However, a country that was ruled by dictators did not pay much attention to what the public ever wanted. The 1971 civil unrest in then East Pakistan would not have begun if public opinion had been considered, nor would the provincial ethnic problems in Pakistan have been exacerbated if public opinion mattered to the central government. Governments never launched a public opinion survey to determine how the public felt about the country's nuclear policy. In a country like Pakistan, where the important administrative decisions are made by a few key players, nuclear decisions are secret and have little to do with the public's wishes. In Pakistan, nuclear decision-making is shared between the President and the Prime Minister. Although not all related decisions are taken entirely by the two office-bearers, they are taken jointly by the two heads in consultation with the army chief and the Director of the Kahuta Research Laboratory, who provide military and technical information.³⁷

The important point to consider is that the Pakistani population has always wanted their country to keep its nuclear option open, and if India tested weapons Pakistan should test as well. In reality, Pakistan did exactly what the public

³⁶Interview with Niaz-A-Naik, Islamabad, February 11, 1997

³⁷Ayesha Siddiqua-Agha, "Ad hococracy, Decision-Making, and Pakistan's Arms Production and Nuclear Projects," p.25

wanted. Pakistan maintained an “option open” nuclear policy for as long as India maintained a similar nuclear status and tested its nuclear weapons as soon as India did. Does this imply that public opinion was the major factor in Pakistan’s nuclear choice? I argue that it coincided, considering that the rulers of Pakistan have consistently ignored public opinion when making decisions. Since India and Pakistan have been rivals for more than half a century, it became natural for the public to want their country to match India’s capability in the nuclear scenario, and more so here because it demonstrates power in a non-conventional sense. This does not mean that public opinion has been considered when making nuclear weapons decisions. Nuclear decisions have been made in secret, and authoritarian and democratic rulers alike tended to ignore public opinion in Pakistan.

d) Economic Motivation

One of several motivations which might drive states to acquire nuclear weapons is economic. Countries want security with as little defense expenditure as possible. It has been argued that nuclear weapons are cost-effective defense, and are useful especially in countries needing to put budgets into pressing issues of poverty, illiteracy, or overall national development. Pakistan is such a case, needing to invest more for its overall development. If there is any scope of reducing conventional military expenditures by possessing nuclear weapons, that option should be used. Had Pakistan ever considered that option, and was the trigger to the weapons program an economic motivation?

The government of Pakistan had not thought seriously about economic factors since the beginning of the weapons program in the 1970s. Like many other governments, Pakistani governments have been convinced that no association can be made between the possession of nuclear weapons and the reduction of conventional expenditures. Agha Shahi stated, "conventional capability expenditures cannot be reduced even if you have nuclear weapons" and he added, "given the geographical configuration of India and Pakistan, forces are needed on the borders."³⁸ In fact, Pakistan's defense expenditures have increased since the time of Z. A. Bhutto, even though the nuclear weapons program started then. According to Niaz-A-Naik, the Pakistan army has always been of the opinion that nuclear weapons do not mean a reduction of the standing army, expenditure, etc. In 1997 he stated that although Pakistan uses 13% of the budget for health, education, etc., it spends approximately 65% of its budget on defense. That situation has not changed and it had nothing to do with the military rulers. In fact, even Bhutto wanted defense expenditures to be increased.³⁹

Others have discussed the matter from the Pakistani politicians' perspectives. Rashid Khaled stated that no politician in Pakistan would reduce conventional expenditures.⁴⁰ Pakistan's politicians have never been in a position to displease the army by proposing cuts to conventional expenditures and, as a

³⁸Interview with Agha Shahi, Islamabad, February 14, 1997

³⁹Interview with Niaz-A-Naik, February 11, 1997

⁴⁰A view shared by Rashid Khaled, Islamabad, February 12, 1997

consequence, reducing this spending did not figure in the nuclear weapons decision.

From various personal interviews it became apparent that Pakistan never considered economic motivation during its nuclear decision-making. That may be the result of Pakistan being ruled by the military for the most of its existence.⁴¹ While the nuclear weapons choice may have started in the 1970s, during the CTBT negotiations in 1996 some academics tried to present the argument that the bomb might be the best choice for Pakistan to reduce its conventional expenditures and invest on other important areas requiring more resources. They tried to convince the government using their own calculations. In 1997, Shirin Mazari stated that Pakistan could not afford not to have the bomb if it wanted to reduce conventional expenditures. She argued that it would be easier for Pakistan to cut conventional forces only if the country had the bomb and that to make nuclear deterrence more viable, conventional forces would have to be reduced. She stated that “huge defense budgets cannot be kept like this for long and domestic pressure will set in.”⁴² She cited examples from the five nuclear weapon states and affirmed that the smaller nuclear weapon powers (Britain and France) reduced conventional

⁴¹Pakistan’s military rulers, like most military men, have been very determined about increasing conventional defense expenditures. If an association is made between the conventional and nuclear capability in terms of expenditure, and it seems evident that conventional capabilities can be reduced with the possession of nuclear capabilities, it is ultimately the military that loses due to defense cuts. Therefore, the military has often ignored that aspect for their self-interests.

⁴²Interview with Shirin Mazari, February 14, 1997

expenditures by relying on nuclear weapons and the same would be possible for other countries as well.⁴³

This raises two important points: a) that the conventional/nuclear expenditure calculations started within Pakistan's academic community very recently, and b) that only actual possession of bombs could reduce conventional defense expenditures, something which Pakistan did not obtain until 1998.

The standing army and defense budgets were not reduced with nuclear weapons capability and no government in Pakistan appears to have considered that option. In 1997 General Aslam Beg provided a description of the cost of Pakistan's nuclear program. He stated that as for the cost of the nuclear program, the balance sheet for the last 15 years up to 1990 have to be seen. Pakistan had spent about \$250 million on the nuclear program, including the infrastructure, manpower, equipment, and everything else that had gone into the program. The total cost did not exceed \$250 million, while a French submarine purchased by Pakistan was \$300 million plus. Pakistan bought three submarines for \$900 million plus. So, the total nuclear program cost much less than each French submarine. He also stated that armed forces expenditures were \$800 million annually.⁴⁴ Therefore, he provided a comparative analysis of conventional and nuclear expenditures in Pakistan, and indicated that both expenditures were being made simultaneously. The conventional expenditures on which the government spent the most could

⁴³Ibid.

⁴⁴Interview with General Aslam Beg, Islamabad, February 13, 1997

perhaps be reduced.

This indicates that only in recent years have scholars and officials considered the matter, and that the government did not accept the conventional cost reduction aspect.⁴⁵ The 1998 nuclear tests may or may not change conventional expenditures in Pakistan. The future is unknown, but evidence to date indicates that nuclear weapons acquisition was not considered as a means to reduce conventional weapons expenditures.

e) Domestic Turmoil Diversion

The Pakistani political system has been among the most unstable in the world. Domestic unrest is inherent in the national experience. "Most of Pakistan's security problems, and the haunting sense of insecurity of the country's rulers are inherent in the nature of the Pakistani state and the relationship between rulers and ruled."⁴⁶

Post-1971 Pakistan has witnessed a resurgence of regional and ethnic identities. "Latent or arrested secessionist sentiments among the Baluchis and

⁴⁵Scholars like Shirin Mazari advocated the bombs and wanted the Pakistani government to go for them. To this end, they came up with convincing economic arguments to prove that conventional cuts would be possible if Pakistan had weapons and not only the capability. Although the governments had their own way of dealing with the issue, this suggests that Pakistani governments did not give much consideration to this motivation and scholars have been trying to convince the government to do so only in recent years.

⁴⁶K.Subrahmanyam, *Indian Security Perspectives*, New Delhi: ABC Publishing House, 1982, p.178

Pashtuns have resurfaced sharply.”⁴⁷ The 1971 India-Pakistan war and Pakistani defeat to the Indians, accompanied by the break up of the country into two parts, was simply unacceptable to the Pakistanis. This was not only a loss against India, but also economically and politically unacceptable. When ethnic problems in the provinces started to surface, the political climate had drastically changed. Pakistan’s case is exceptional because the rulers, instead of accommodating these ethnic groups, have neglected them⁴⁸ or resorted to coercive methods to quell them, exacerbating the country’s internal violence.

Bhutto’s new government in 1972, faced with such internal disturbances, might have considered the nuclear option hoping to give the nation something to hold on to. Although this may very well happen in countries considering the nuclear option during political unrest, Bhutto supported the program even before Pakistan was divided and while Ayub Khan was the dictator of the country. In fact, Pakistan could not progress in its nuclear program during Ayub Khan’s period because he was more interested in industrialization than nuclearization. When Bhutto proposed a nuclear weapons program to Ayub Khan, he responded: “what do we need a bomb for? Pakistan is a poor country... we can’t afford it...We should put money into schools, maybe hospitals and industry.”⁴⁹ So Bhutto’s

⁴⁷Ataur Rahman, “Pakistan: Unity or Further Division?,” in A Jeyaratnam Wilson and Dennis Dalton, eds., *The States of South Asia: Problems of National Integration*, p.216

⁴⁸Ibid.

nuclear aspirations and civil unrest cannot be related.

Although Bhutto's dream to see Pakistan as a nuclear power was a popular view, in 1977 he was thrown out of office by the military coup led by the military chief, Zia-ul Haq. This disproves the theory that a nuclear weapons program can bring confidence to the minds of the demoralized public. Even the military was not satisfied with Bhutto's administration although he had shown a strong interest in nuclear weaponization. Rebuilding public confidence requires an open nuclear weapons program.

It is important to understand which phase of the nuclear program is relevant when applying a diversionary theory. In Pakistan, Zulfikar Ali Bhutto's period was significant because the weapons program began.⁵⁰ However, it was Zia-ul Haq's administration that declared the possession of nuclear capability to the world. Therefore, Zia, whose regime was unstable and lacked legitimacy⁵¹ may have made the decision to declare nuclear capability to enhance the military government's legitimacy and prestige. Zia, however, had to face severe internal opposition, and the worst challenge was Benazir Bhutto's Peoples Party of Pakistan (PPP) which held extensive popular support.⁵² If popular support could

⁴⁹Steve Weissman and Victor Krosney, *Islamic Bomb*, New York: Times Books, 1981, p.49

⁵⁰See Savita Pande, *Pakistan's Nuclear Policy*, especially, pp.25-41

⁵¹See, Ashok Kapur, *Pakistan in Crisis*, London and New York: Routledge, 1991, pp.178-179

⁵²Sarbjit Johal, *Conflict and Integration in Indo-Pakistan Relations*, Centers for South and South East Asia Studies, Berkeley: University of California, 1989, p.209

be brought with the possession of nuclear weapons by the central government, or if the government could win legitimacy, why did Zia lose his popularity? In fact, “Zia’s government failed to integrate Pakistan.”⁵³ This demonstrates that gaining legitimacy, popularity or support is not necessarily associated with nuclear weapons possession.

Benazir Bhutto’s rule makes it more evident. In 1989, there was tremendous unrest in the country and provincial ethnic problems were exacerbated. It was, however, during that year Pakistan made the decision to cap its nuclear program rather than going ahead with resource stockpiling or moving to lead India in the weapons race. General Aslam Beg stated that within the first four months of Benazir’s administration the decision to cap the nuclear program was made,⁵⁴ and using scholarly writings and statements this nuclear decision was communicated to the public. If nuclear weapons were good diversionary instruments, Pakistan’s strategy should have been different. Additionally, Pakistan’s nuclear tests in May 1998 have not been able to stop domestic unrest. Ultimately this argument may have little impact on nuclear policy in Pakistan.

SYSTEMIC-LEVEL MOTIVATIONS

a) Obtaining Bargaining Advantages

Pakistan’s bargaining power vis-à-vis India in the region may not have been in its favor, but its strategic location provide enough bargaining advantage vis-à-

⁵³Ibid.

⁵⁴Interview with General Aslam Beg, February 13, 1997

vis the West. The country acquired sophisticated conventional military equipment from the United States during the cold war because of its geographic proximity to the former Soviet Union and Afghanistan. It also received military equipment from China and has become its long-time ally. Sino-Pakistani military relations serve the interests of both countries since both have India as a common enemy in the South Asian region. What more would a weapons capability give to Pakistan that it did not receive from the world's most powerful nations without having that status? Since the 1987 declaration of Pakistan's possession of nuclear weapons capabilities, the US has imposed sanctions and the Pressler Amendment has crippled Pakistan economically and militarily. As a result, all economic and military assistance to Pakistan from the US had been suspended.⁵⁵ It is unlikely that a country would be able to increase its bargaining advantage by mere possession of these weapons capabilities, and Pakistan's case has confirmed that. With the acquisition of the nuclear weapons capability or actual nuclear weapons, these new nuclear states have been subjected to sanctions rather than increasing their bargaining strength with the West. After Pakistan tested its nuclear weapons in May 1998, economic sanctions were imposed by the West and Pakistan, instead of gaining any bargaining advantage, lived with sanctions until the United States decided to withdraw them many months later.

Nuclear bombs might provide bargaining advantages under certain circumstances but Pakistan did not officially possess them until 1998, and there

⁵⁵General Aslam Beg, "Pakistan's Nuclear Program," in Jorn Gjelstad and Olav Njostad, eds., *Nuclear Rivalry and International Order*, p.169

seems to be no doubt that this was not one of the major considerations in the Pakistani nuclear decision-maker's minds. Officials and scholars alike agreed that Pakistan did not consider having the weapons capability to use as a bargaining tool.⁵⁶ Nazir Kamal, however, stated that people have thought of it as a bargaining chip, but the government of Pakistan may never have taken that into consideration. Of course, "in case of overall settlement with India, this could be used as a bargaining chip."⁵⁷

It is interesting that just as Pakistan held no bargaining advantage by declaring to possess nuclear weapons capabilities, neither did it agree when the US insisted that it renounce its option and receive the F-16 aircraft in a deal already concluded between Pakistan and the US before the possession of its nuclear weapons capabilities. Since Pakistan was adamant in keeping its option, it did not receive all of the F-16 aircraft it was supposed to. Similarly, in May 1998 when India tested its nuclear weapons, the West strongly urged Pakistan not to follow India's path, and was promised the F-16 aircraft if it refrained from testing its nuclear weapons. Pakistan's behavior was consistent and it did not let Western pressure and promises interfere with its nuclear decision. It proceeded with its nuclear tests, knowing full well that sanctions were coming. Therefore, Pakistan does not seem to be a case where gaining bargaining advantages through the possession of nuclear weapons was relevant.

⁵⁶This view was expressed by Agha Shahi, interview, February 14, 1997; Abdul Sattar, interview, February 12, 1997; Shirin Mazari, interview February 12, 1997; Nazir Kamal, interview, February 13, 1997

⁵⁷Interview with Nazir Kamal, Islamabad, February 13, 1997

b) Gaining International Prestige

Gaining international prestige through the possession of nuclear weapons should be important to a country that otherwise does not have prestige in its region, or in the world. Pakistan is a country lacking international prestige, not only because of its inability to win wars with India, but also because of its domestic political situation. Pakistan had military rule since independence and has had a very fragile democracy since the late 1980s. Although Zulfikar Ali Bhutto's period from 1972 is considered to be a civilian rule, he was strongly influenced by the military which had played a major role in preceding years. The country could perhaps have done better under a civilian environment. Compared with India, it has neither been self-reliant in industrialization, nor had democratic political institutions. Although military rule was what Pakistan experienced, the military could not win against the Indian military which, though not as institutionalized, could defeat Pakistan quite easily. The 1971 war ended the prestige Pakistan might have held before that war, since the world saw it divided into two countries because of its political failures.

When Pakistan attempted to acquire nuclear weapons after 1972 a natural thought was that the country must have been motivated to enhance its international prestige. That was not the case because it was more concerned about its security than prestige. Agha Shahi stated that the nuclear program in Pakistan was not for prestige reasons.⁵⁸ Ross Masud commented that "Pakistan's greatness being

⁵⁸Personal interview with Agha Shahi, February 14, 1997

exposed by nuclear weapons has never been a factor in Pakistan's decision-maker's minds. If that is derived out of having the capability, that is a spillover effect."⁵⁹ That prestige has not played a role in Pakistan's nuclear choice was a view shared by other Pakistani scholars and officials in different interviews.⁶⁰

There may be some Pakistanis who have considered that the "Islamic Bomb" concept might bring prestige to the entire Islamic world and not to Pakistan alone, but that has been a secondary consideration, and is in most cases, a spillover effect of weapons possession. In other words, prestige may be a consequence of nuclear weapons possession, but not a cause. As Nazir Kamal stated, "for some people who have considered the prestige angle to be important...this was certainly not the driving force. People who advocated going nuclear for prestige, even in their case, it is not the primary motivation. Islamic nuclear power could be important to some."⁶¹

The "Islamic bomb" idea has been prevalent in Pakistan and the Muslim world might have liked at least one Muslim country to have the ultimate weapon. For Pakistan, obtaining funds from other Islamic countries was important and its propaganda for the "Islamic Bomb" concept was probably to attract other Arab countries' financial support. If we look at reality, Pakistan has not shared the

⁵⁹Interview with Ross Masud Hussein, Islamabad, February 13, 1997

⁶⁰The view was shared by Niaz-a-Naik, interview, February 11, 1997; Abdul Sattar, interview, February 12, 1997; Shirin Mazari, interview, February 14, 1997; Nazir Kamal, interview, February 13, 1997; Zafar Iqbal Cheema, interview, February 12, 1997

⁶¹Interview with Nazir Kamal, February 13, 1997

nuclear weapons technology with other Islamic countries. If Pakistan had been determined to make an Islamic Bomb, it would have helped other Muslim countries develop their own nuclear weapons or shared its weapons with them.

There are people in Pakistan who strongly believe that the West, especially the US, opposes the idea of any Islamic country acquiring nuclear weapons. Even these prominent people do not believe that Pakistan's nuclear weapons acquisition was associated with the Islamic Bomb concept. Agha Murtuza Pooyah strongly believed that the US policy in South Asia was not motivated by benign considerations, but that it was to protect and perpetuate its designist agenda in the region. He argued that since 1979 the Israeli-Indian nexus was becoming more and more potent. Despite that, the central US concern was Pakistan's close ties with Iran. However, even he stated, "such superfluous considerations [like prestige] are not undertaken by Pakistan."⁶² In other words, even people who strongly believe in US intentions against Islamic countries do not accept the proposition that Pakistan wanted to have nuclear weapons to enhance the prestige of the Muslim countries.

If gaining international prestige was the goal of the Pakistanis who did everything in their power to acquire a deterrent capability against India, they would have gone nuclear long ago. Pakistan, unlike India, had, by 1987, declared that it had nuclear capability. For deterrence purposes Pakistan did not need to go, and had not gone any further than that until 1998. Even if nuclear weapons could

⁶²Interview with Agha Murtuza Pooyah, Islamabad, February 11, 1997

provide prestige, it had to be based on a declared nuclear weapons acquisition--not an ambiguous one that Pakistan possessed until 1998.

c) Seeking Regional Hegemony

In South Asia, regional domination by India has been a factor since 1947, and no Pakistani government could change it. No amount of development will enable Pakistan to match India in geographic or demographic terms. One thing that might reduce the dominance is nuclear weapons parity to equalize at least in one important area since countries can sometimes dominate or intimidate others with the possession of these weapons.

Scholars and officials in Pakistan believe that the Indian domination in the region is intolerable and it is time that India realized. "Domination," to most Pakistanis means India's hesitation to negotiate with Pakistan on the Kashmir problem. Pakistan's motivation to acquire nuclear weapons was not related to trying to dominate the region, but to avoid domination. Pakistan, according to some, has not considered to have the weapons for countering hegemonism of India, in fact, the real intention was to secure itself from the Indian hegemony. As Agha Shahi stated that "hegemonism cannot be tolerated by Pakistan. Unless we have a defensive capability, we can be overrun."⁶³ Others have argued that "India harbors regional ambitions and our security threats come from India."⁶⁴ But what does "harboring regional ambitions" mean? To Pakistanis, aside from the history

⁶³Interview with Agha Shahi, February 14, 1997

⁶⁴Interview with Shirin Mazari, February 14, 1997

of war between Indians and themselves, the events of 1971 were very important because they “showed how India could be a regional hegemon.”⁶⁵ Pakistan’s dismemberment was a real reminder that India could undo Pakistan and invade its territory without much difficulty. With Kashmir as the burning issue between them, India’s aspirations cannot be trusted.

As a former Foreign Secretary stated, “Pakistan has never aspired to play any big power game in South Asia. Pakistan has always only been concerned about security. Therefore, Western support was sought.”⁶⁶ If domination was the motivation, Western support would not have been crucial for Pakistan. Pakistan sought security from the West, and if the West had guaranteed that security against India, Pakistan would not have felt the need to possess nuclear weapons. If regional domination was important in Pakistan’s nuclear decision then it would not consider other option, such as nuclear guarantors. It did not intend to dominate South Asia with nuclear weapons, but to make sure that India could no longer dominate it. Thus, it tried to secure itself through the possession of a nuclear deterrent capability to avoid India’s alleged aggressive moves and territorial ambitions.

d) Quest for Security

Pakistan faces a major security threat from India, a giant neighbor along its border with which it has been involved in a half century old protracted conflict.

⁶⁵Interview with Nazir Kamal, February 13, 1997

⁶⁶Interview with Abdul Sattar, Islamabad, February 12, 1997

The country's foreign policy and security concerns have been overwhelmingly India-centric. Its nuclear weapons program was a response to the Indian nuclear program. Most people in Pakistan believe that their country does not have, nor does it need to have, a nuclear policy since its program began as a reactionary one and continues to be so. The country has always been dominated by India in the South Asian region with whom it fought three wars and did not win in any of them. The last war was most painful for Pakistan because India interfered in the internal affairs of Pakistan and helped to break apart the country. Pakistan lost against its opponent, its territory was partitioned, and its population was cut almost in half. Pakistan's belief has always been that India's intention was to undo Pakistan in every way possible and the 1971 war reinforced that perception. The territorial conflict with India over Kashmir has been extremely important for Pakistan because it believes that the Kashmiris want to be part of a Muslim Pakistan rather than India. Pakistan calls Kashmir a "political problem" while India calls it a "territorial problem." "Pakistanis consider Kashmir as the fifth province of Pakistan."⁶⁷ Consequently, this territory has been considered non-negotiable by all Pakistani leaders--military and civilian--since its independence in 1947. Most election campaigns in the country focused on the territorial issue and Pakistan's determination to integrate Kashmir into Pakistan by all means. In other words, Kashmir has always been at the center of foreign policy for all incumbent governments of Pakistan. It believes that India does not want to resolve the problem and has deviated from its earlier stand.

⁶⁷Interview with Zafar Iqbal Cheema, February 12, 1997

Pakistan's relentless efforts to acquire nuclear weapons capability has been motivated by its quest for security. "The rationale for the projected development of the bomb in Pakistan is its perception of a nuclear threat from India," write Brij Mohan Kaushik and O.N. Mehrotra.⁶⁸ The critical questions related to the security enhancement in this case remain: why does Pakistan consider India to be a security threat? What constitutes a threat in the minds of the Pakistanis? And, what is the source of the threat? The first point has already been addressed: being the only adversary in the protracted conflict with India evidently makes India a threat to a conventionally weak Pakistan. The second and third are related points and deal with the association between the issue of the conflict, Kashmir, and war probability--which constitutes a critical threat to Pakistan. Finally, Pakistan's inability to obtain security guarantees to counter growing Indian nuclear capability, and ultimately having to embark on its own nuclear weapon program, is significant to understanding Pakistan's nuclear weapons acquisition.

Security Threat, Territorial Conflict, and War

The India-Pakistan territorial conflict over Kashmir and higher-than-normal war-probability between the adversaries have always been a salient security threat to Pakistan. In 1995 Munir Ahmed Khan, a former Chairman of Pakistan Atomic Energy Commission, stated:

For Pakistan the security dilemma is very complex. It is a small country which has fought three wars with its larger neighbor. Rightly or

⁶⁸Brij Mohan Kaushik and O.N. Mehrotra, *Pakistan's Nuclear Bomb*, p.9

wrongly, it feels that it is not still accepted by India. There is a continuing strife in Kashmir. Pakistan believes that unless Kashmir dispute is resolved there can be no real peace in the region. Based upon the experience of the last 47 years and three Indo-Pak wars it feels threatened by India. In the past it sought to strengthen its security through alliances such as SEATO and CENTO and an informal bilateral security relationship with the United States... It is unable to sustain an adequate military build-up against a much larger unfriendly neighbor with a better military hardware in quality and quantity. In this situation Pakistan regards the nuclear option as vital for its security.⁶⁹

He further argued that for Pakistan the nuclear issue has been security-related and its solution was in the political rather than the technical domain. The key problem has always been Kashmir. If it remains unresolved, tensions and mistrust will continue. However, once that issue is settled, the atmosphere will dramatically change, enabling the resolution of all issues including nuclear, economic, technical and political cooperation, and so on.⁷⁰ This has been Pakistan's situation in South Asia, its perception of India as a hostile neighbor, its fear of a possible India-Pakistan war over Kashmir in the future, and the reason for the issue of the nuclear option in the country.

Agha Shahi stated, "security has been the central motivation for Pakistan going nuclear. It [the program] was done when I was the ambassador in UN. India had a reprocessing plant from France and Canada had helped it too and India never

⁶⁹*Dawn*, April 11, 1995

⁷⁰Munir Ahmed Khan, "Containing Nuclear Arms Race in South Asia," *Strategic Studies*, vol. 17, no.1 and 2, autumn and winter, 1994, p.193

allowed inspection. It had the capability so I advised the government that India was a concern for us. Military balance was heavily in favor of India and nuclear monopoly was something with which India could use its hegemonic ambitions. Ayub Khan had turned down my advise that we should get reprocessing plant from France. Ayub Khan was not security minded and wanted industrial development. This situation changed around late 1970s. Given the background--war in 1948, 1965, 1971--constant tension, concentration of Indian forces on the border, Pakistan became more concerned about its security."⁷¹ Although Pakistan did not make efforts to develop nuclear weapons in the 1960s it reconsidered its nuclear policy after the 1971 war.

Most scholars in Pakistan view Kashmir as the fundamental source of disagreement between India and Pakistan. Zafar Cheema contends that the existence of the Kashmir dispute creates an environment of tension which compelled Pakistan to have its own nuclear option.⁷² Pakistan's former President General Zia-ul Haq spoke about war: "knowing the background of the two countries, you cannot rule out another confrontation, whether it is deliberate or undeliberate."⁷³ On a more general note, Shirin Mazari stated that war has not been outlawed in the world and the United Nations charter itself has legitimized war and the use of military means. As long as wars are possible, nuclear weapons

⁷¹Interview with Agha Shahi, February 14, 1997

⁷²Interview with Zafar Iqbal Cheema, February 12, 1997

⁷³*Time*, March 30, 1987

are important.⁷⁴ On the subject of the India-Pakistan territorial dispute over Kashmir and high-war linkage, Ross Masud Hussein stated that “two extreme positions exist. Indian position is that Kashmir is a territorial problem and an integral part of India and a non-negotiable matter. Nehru committed that Kashmiris will be given their choice, but UN resolutions have not been implemented by the Indians. Pakistan wants a referendum in Kashmir. Simla agreement was that Kashmir will be resolved bilaterally, but Kashmir still remains a dispute... Pakistan still thinks about the burning issue of Kashmir and over which there can be a future war and deterrent capability is essential in that respect. All other problems --water and others--have been resolved. So if there is any problem left, it is Kashmir.”⁷⁵ Similarly, Agha Shahi believes that Kashmir has always been the main contentious issue between India and Pakistan and that a resolution of the matter will create better bilateral relations.⁷⁶ Niaz-A-Naik stated that Kashmir is a sensitive territorial issue over which war is always likely. Kashmir can open the door to war between India and Pakistan. “This is not a quiet border-line. There is always violence going on.”⁷⁷ A more straight-line association between Kashmir and a higher-than-normal war-probability was made by General Aslam Beg. He stated:

No Kashmir problem would mean no war
between the two countries.... If [the] Kashmir
problem is solved, a drastic reduction in the

⁷⁴Interview with Shirin Mazari, February 14, 1997

⁷⁵Interview with Ross Masud Hussein, February 13, 1997

⁷⁶Interview with Agha Shahi, February 14, 1997

⁷⁷Interview with Niaz-A-Naik, February 11, 1997

conventional forces is needed for both India and Pakistan and only then elimination of weapons of mass destruction can be achieved. As long as India has it, Pakistan will retain it.⁷⁸

Thus, the territorial conflict, along with the high probability of war between the two regional powers, has created a situation where Pakistan was compelled to acquire a nuclear deterrent. Shirin Mazari argued that the territorial problem was central in the India-Pakistan conflict and that hostility and rivalry had to be stabilized. Security and a minimum deterrent for Pakistan were essential for the purpose.⁷⁹ To elaborate on the value of deterrence for Pakistan Shirin Mazari further stated that Pakistan has been wrong to link its nuclear choices to the Indian nuclear decision. Pakistan's need for deterrence is so strong that it should never sign the NPT or the CTBT even if India does sign them. She continued that "for deterrence, Pakistan should never link its nuclear stance with India."⁸⁰ This view was shared by, among others, Ross Masud Hussain who commented in a 1997 interview that even if India signed the NPT or the CTBT, Pakistan would not do so for its own security concerns. Its security must be a consideration.⁸¹ In 1996, Rasul Rais stated that Pakistan must consider its security options carefully and make decisions in its own national security interests, independent of what India does. Pakistan's geo-strategic environment and the security predicament it faces

⁷⁸Interview with General Aslam Beg, February 13, 1997

⁷⁹Interview with Shirin Mazari, February 14, 1997

⁸⁰Ibid.

⁸¹Interview with Ross Masud Hussein, February 13, 1997

must be reflected in its refusal to sign the CTBT.⁸² Although these statements were made before Pakistan conducted its nuclear tests, they indicate that even Pakistan understood that the CTBT did not address its security needs so its own nuclear deterrent was essential.

These statements are interesting not only because they demonstrate Pakistan's need for a nuclear deterrent capability, but also because they have serious implications for the future. They indicate how important deterrence has been for Pakistan, and also that there was a time when the Pakistanis considered not being part of the nuclear arms control treaties even if India joined them. The prevailing belief in the West before the 1998 nuclear tests by India and Pakistan was that if India signed the NPT or the CTBT Pakistan would invariably follow suit, but that is not the impression these security analysts have given. If Pakistan could not join these treaties for its security needs, it would have done so whether or not India joined them. After the nuclear tests in 1998, Pakistan, like India, has given some indication that they may join the CTBT by 1999.

The Indian Nuclear Test and Pakistan's Bid to Obtain a Nuclear Security Guarantee

When the Indian nuclear test was conducted in 1974 Pakistan's first reaction was to seek nuclear guarantees from its allies and the major world powers, but it was refused by all of them. Pakistanis, however, were not surprised

⁸²*News*, September 17, 1996

by their allies' refusal to provide guarantees against the Indian nuclear threat because they had bitter experience in the past. Pakistan has initiated all three wars fought with India, but has never won one. The country had very little outside help during those wars, especially from the U.S. upon which it relied the most. Although the rest of the world believes that Pakistan has had military ties with China and the US since the 1950s and had greatly advanced in the conventional military field, Pakistanis have always been uncomfortable with India's close relations with the former Soviet Union, especially after 1971, as well as its relations with the United States. Their understanding is that India benefited most in military terms during the cold war years and continues to benefit now. Agha Murtaza Pooyah believes that the US relies a lot on India and allows it to play a major role in the region. The US does not want to build up Pakistan because it has a different dimension in the Middle East even though it could counter India.⁸³ The United States has allowed India to play a major role in the region because it is too big to ignore, something the Pakistanis have always disliked. As A.M. Pooyah states:

During the cold war years, the US and Soviet Union wanted to contain China, and India was used for that. After the 1979 Islamic revolution, India was again being used for the same purpose. The main pressure has always been on Pakistan, not India. Pakistan paid for the F16s but did not get them due to the Pressler Amendment. Even if Pakistan has access to Chinese capabilities, India has more

⁸³Interview with Agha Murtaza Pooyah, Islamabad, February 11, 1997

access to Israeli capabilities and Israel in turn
has on US capabilities.⁸⁴

The point is that Pakistan had no nuclear security guarantee on which it could depend. The China/Pakistan military relation is unofficial and there is no guarantee that Pakistan will or will not get Chinese military assistance in any future conflict. Private deals do not have the power of formal national treaty commitments and most often do not match the expectations of either party. India's 1974 nuclear detonation was a test of Chinese commitment to Pakistan. Agha Shahi stated, "when in 1974, India had the explosion, Pakistan sought a nuclear umbrella. I, as a Foreign Secretary, went to China and they could not do anything for us."⁸⁵ Pakistan was bitterly disappointed with the Chinese at that point. As for Pakistan's efforts to seek guarantee from its other military ally, the US, the former Foreign Secretary stated that the United States ditched Pakistan at a sensitive time and refused to provide a security umbrella in 1974 when the Indian explosion was conducted.⁸⁶ Pakistan not only sought bilateral security guarantees, it also went to the UN to have South Asia declared a nuclear weapon-free-zone. India did not accept and Pakistan had to do what it did. A series of proposals have been offered to make South Asia a nuclear weapons-free-region. These include: a nuclear weapons-free-zone, joint ratification of the non-proliferation treaty, a bilateral agreement on non-proliferation, and an agreement not to produce nuclear

⁸⁴Ibid.

⁸⁵Interview with Agha Shahi, February 14, 1997

⁸⁶Quoted in *News*, September 6, 1996

weapons. All of these proposals were rejected by India because of its own security needs involving China. Pakistan for its own security requirements has had to link its nuclear decisions to the Indian decisions.

Although these proposals were turned down by India, Pakistan did not abandon them. In 1979 Agha Shahi, then Foreign Minister, went to discuss the nuclear matter in the US on the Carter Administration's invitation. Washington, instead of providing any assurances, made three demands: 1) Pakistan should not carry out a nuclear explosion, 2) it should not transfer technologies, and, 3) it should sign the NPT. The Minister confirmed to the US that Pakistan had not reached that stage of explosion and that if and when they did, Pakistan would have to consider the pros and cons. On the NPT question, the Minister said that Pakistan could not do anything unilaterally.⁸⁷ Pakistan realized that even the US was unwilling to offer a deterrent capability to it.

Therefore, Pakistan's initial efforts to provide security for itself was not limited to having a weapons program of its own, but to convincing the major powers to provide a bilateral or collective guarantee to it. That was a remote possibility. Thus, Pakistan had little choice but to embark on a nuclear weapons program. As General Aslam Beg states:

The acquisition of dual-purpose nuclear technology came much later, when exploration of all other avenues like 'nuclear guarantees,' 'declaration of South Asia as a nuclear weapon-free-zone' and a host of other initiatives to meet a growing challenge to its security had been completely exhausted.

⁸⁷This was stated by Agha Shahi during interview on February 14, 1997

Pakistan found itself compelled to adopt a dual-track policy in the late 1970s, which meant peaceful exploitation of nuclear technology while keeping the options open to meet any unforeseen situation.⁸⁸

Under conditions where the major powers were unable to provide the nuclear umbrella Pakistan needed, and where the Pakistani leadership believed that a minimum nuclear deterrence was needed for the country against Indian aggression,⁸⁹ Pakistan began its nuclear weapons program.

Pakistan's Search for a Nuclear Deterrent Capability

Pakistan has inferior conventional military capability vis-à-vis its protracted conflict rival, India, nor is it a match on geographical, spatial and demographic terms. Every action by India required a response from Pakistan. Inevitably, the development of the Indian nuclear program required Pakistan to match it for its own security considerations. None of the wars has been a winning one for it and war-probability has always been high due to crises over the disputed territory of Kashmir. The search for a nuclear deterrent capability was extremely important for a country like Pakistan. It has a dyadic protracted conflict over territory-- along with religious differences exacerbating the conflicting relations--with India, a conventionally superior power and a dominating one with the power and position to undo any country in the South Asian region. After India's May 1974 detonation

⁸⁸General Aslam Beg, "Pakistan's Nuclear Program," in Jorn Gjelstad and Olav Njostad, eds., *Nuclear Rivalry and International Order*, p.161

⁸⁹Interview with Niaz-A-Naik, February 11, 1997

of a plutonium-fueled nuclear device, there was little question that Pakistan perceived its nuclear arms as providing a strategic deterrent against Indian conventional forces and its nuclear capabilities.⁹⁰

Pakistan's need for deterrence has not only been appreciated by Pakistani scholars and officials, many Indian academics and officials appear to understand Islamabad's security needs. This was explicitly stated by Bhabani Sen Gupta in 1997:

Pakistan does have a nuclear program, but it is much smaller than India's program. Pakistan has indulged in stealing, borrowing and creating nuclear technologies and acquiring materials to make the bomb. There is a certain element of desperation in the Pakistani situation arising from the fear that India is going far ahead. In an absolute situation, Pakistan has a much stronger case to have nuclear weapons against India than India has against China. The enmity is unending and no resolution is undertaken. The entire Pakistani nuclear policy is reactive to India. What India has done--so has Pakistan. Therefore, it is pretty difficult to imagine a situation in which Pakistan would have gone nuclear if India had not."⁹¹

This not only describes Pakistan's desperation, but also that while deterrence worked Pakistan had no reason to go beyond the opaque status it maintained until 1998.

⁹⁰Nuclear Weapons and South Asian Security, *Carnegie Task Force Report*, 1988, p.57

⁹¹Interview with Bhabani Sen Gupta, New Delhi, January 24, 1997

Pakistan's search for a deterrent capability thus seems natural. Obtaining a deterrent capability vis-à-vis Indian capability was Pakistan's only desire according to General Aslam Beg. He stated that Pakistan started working on its nuclear program from 1975 and within twelve years (in 1987) the country acquired the nuclear weapons capability. By then Pakistan had delivery vehicles including F-16 aircraft. Between 1987-88, Pakistan was trying to perfect its delivery systems and it was also capable of performing computer-simulated tests. As early as 1989, when General Beg was the army chief, the President, Ghulam Ishaq Khan, Prime Minister, Benazir Bhutto, and other members of the board made a major decision based on the reality that the objectives of the program were realized. "Pakistan had acquired a low-level, meaningful nuclear deterrence and it does not have to go beyond that. Stockpiling resources were not part of the program. The decision taken at that time was a policy of restraint to lower the level of enrichment of uranium from 95% to 5% and below. However, other phases of the program still continued like designing, refining, delivery systems and computer simulated tests, safety and protective safeguards that have to be provided to the program itself." He was certain that in 1997 it was continuing.⁹² This indicates that Pakistan's intention was only to obtain deterrence and when that was achieved, it had stopped moving any further. It also implies that if the Indian nuclear tests were not conducted in 1998, Pakistan would not have carried out its series of nuclear tests.

Linking Pakistan's nuclear issue to India's actions has been objected to by

⁹²Personal interview with General Aslam Beg, February 13, 1997

scholars including Mazari because Pakistan has always needed deterrence more than most other countries. Most Pakistani scholars and officials believed that Pakistan needed to match India's capability. Ross Masud argued that after 1974 a counter-program to the Indian nuclear program was required.⁹³ Similarly Nazir Kamal maintained in 1997 that the Pokhran I Indian test of 1974 sparked Pakistan's interest in going nuclear. Pakistan had to take into account India's growing preponderance--conventional and nuclear--in the region. As for Pakistan's nuclear standing, his view was that as long as India did not go full-fledged nuclear, Pakistan had no need to do so either. But if India did go nuclear openly, Pakistan had to follow.⁹⁴ In reality, two weeks after the Pokhran II nuclear tests, Pakistan carried out its nuclear tests. Although India conducted a test in 1974, this was the first time Pakistan conducted its nuclear tests.

The drive to match capability is more pronounced when territorial protracted conflict states are situated in a two-power region. As General Aslam Beg stated in the context of India-Pakistan PC in South Asia, "structurally determined rivalry is there and defending territory is essential. So, imbalance in conventional or nuclear capability will not be tolerated."⁹⁵ Under such circumstances states can only rely on themselves to check the adversary from making any gains. Pakistan, situated in a two-power South Asian region had to match India for the same reason. As Zafar Cheema argued, "matching capability is

⁹³Interview with Ross Masud Hussein, February 13, 1997

⁹⁴Interview with Nazir Kamal, February 13, 1997

⁹⁵ General Aslam Beg during a personal interview on February 13, 1997

important because of the two-power region. In all walks of life matching is important. When hostility remains, capability matching is more important. The size and magnitude of threat that Pakistan is facing is important to consider.”⁹⁶ As a weak power in the South Asian region, Pakistan’s security policies have always been opponent-centric. Over the last fifty-one years the country has made it clear that India has been the central focus of its South Asian foreign policy, and it is easy to understand why that is the case by considering the India-Pakistan history, rivalry and hostility. Zafar Cheema further argued that Pakistanis have been obsessed with India. Policies have always been India-centric. India’s large armed forces were of concern to Pakistan because it could not match them. Thus, the India-centric preoccupation remained central to the Pakistani decision-making.⁹⁷ Although India detonated a peaceful nuclear device in 1974, the Pakistanis have always doubted its intentions. They had suspicions about the Indian nuclear program since the early 1950s. Zafar Cheema stated that “Nehru has said that nuclear weapons will not be used for evil purposes, but he never said that they would not be used for military purposes.”⁹⁸ While it has never been within Pakistan’s means to match India’s military strength, it has not abandoned endeavors to bring its defense and deterrence up to an optimal level.⁹⁹ It is true that Pakistan is small compared to

⁹⁶Interview with Zafar Iqbal Cheema, February 12, 1997

⁹⁷Ibid.

⁹⁸Ibid.

⁹⁹Rasul Rais, “Pakistan in the Regional and Global Power Structure,” *Asian Survey*, vol. 31, no. 4, April 1991, p.380

India, and it needs to face realities, but that is not how the Pakistanis have perceived the situation. For them, obtaining security and a deterrent capability against India has always been crucial.

The South Asian two-power structure and the dyadic India-Pakistan conflict have placed Pakistan in a situation where each move has to be calculated in relation to India. With regard to the nuclear arms control treaties, Pakistan's desire to solve the Kashmir problem has also been evident. Pakistan's perception has always been that without Kashmir on the agenda, there cannot be any meaningful India-Pakistan dialogue. Pakistan's former Prime Minister, Benazir Bhutto, stated in 1996 that her country could not unilaterally sign the CTBT. She noted that Pakistan was ready to enter into dialogue with India provided Kashmir figured on the agenda.¹⁰⁰ Similarly, Maleeha Lodhi, Pakistan's Ambassador to the US stated that a resolution of the Kashmir dispute was critical to unlocking the problems of South Asia.¹⁰¹

How does the "matching capability" argument work? In other words, how do adversaries know when they have matched the capability of their opponent? Nuclear weapons are equalizers and numbers might not necessarily have to match. This is especially true from the perspective of regional nuclear powers, and today's nuclear deterrence-believers do not have to play super-powers' games. Matching capability in the nuclear sense is quite different from in the conventional sense. For example, when, in 1965 Pakistan had more tanks and India had more sophisticated

¹⁰⁰*Nation*, January 18, 1996

¹⁰¹*Pakistan Times*, June 16, 1996

aircraft, a comparison of the two in terms of conventional capabilities was difficult, but in the nuclear age that difficulty can be overcome. The value of nuclear capability lies in its possession, not its use. As Abdul Sattar stated, “nuclear weapons provide and deter unlike conventional weapons.”¹⁰² Before Pakistan’s nuclear tests, in 1997 Agha Shahi stated that even though India had enough plutonium to make about 200 bombs since only 4 to 5 grams of plutonium are required for a bomb, Pakistanis were not bothered.¹⁰³ General Beg argued that the “US needed two nuclear weapons to capitulate Japan in 1945. So, only a dozen or more will suffice to give a message to India that they will be used if attacked. It is a weapon of deterrence and not to use.”¹⁰⁴

Perhaps India has many more nuclear weapons than Pakistan and in that sense Pakistan still cannot level with its rival. However, the Pakistani government does not think of it from that perspective. There is more to this deterrence equation. The idea is that an adversary would not contemplate war because it will suffer even if its suffering differs from what it might cause to its adversary. Thus, the question is whether India would destroy Pakistan at the cost of destroying some of its key cities?¹⁰⁵

India can destroy Pakistan but will pay a heavy price if Pakistan has a retaliatory nuclear capability. Aggression would entail unacceptable cost. Abdul

¹⁰²Interview with Abdul Sattar, February 12, 1997

¹⁰³Interview with Agha Shahi, February 14, 1997

¹⁰⁴Interview with General Aslam Beg, February 13, 1997

¹⁰⁵A view expressed by Agha Shahi during interview on February 14, 1997

Sattar argued that the objective of having nuclear weapons is to stop wars, not fight them. Conventional warfare would also not occur, if nuclear weapons exist.¹⁰⁶ This seems to be the general understanding in Pakistan. Since weapons ultimately are useful for wars and wars can be avoided with the possession of nuclear weapons, the question of insecurity deriving out of an adversary's advanced quality or quantity of weapons does not arise. India-Pakistan nuclear factor has created such a stable situation that Pakistan appears not to be driven by the same urgency to establish a conventional arms equation with India, nor does it feel insecurity in the face of India's conventional military advantage.¹⁰⁷

As early as March 1987, Pakistan's prominent scientist, Abdul Qadir Khan was interviewed by the Indian journalist Kuldip Nayar and disclosed Pakistan's possession of nuclear weapons capability and ability to make the bombs anytime--statements which he later denied. Pakistan's President, General Mohammad Zia-ul-Haq, in his own interview also stated that Pakistan could make the bomb whenever it wished. He stated that "you can virtually write today that Pakistan can build a [nuclear] bomb whenever it wishes. What is difficult about a bomb? Once you have acquired the technology, which Pakistan has, you can do whatever you like."¹⁰⁸ His understanding was that because of the nuclear factor armed conflict with India was a distant possibility.¹⁰⁹ A. Q. Khan stated that "The Indians took twelve years

¹⁰⁶Abdul Sattar, interview on February 12, 1997

¹⁰⁷*Nation*, May 8, 1995

¹⁰⁸*Time*, March 30, 1987

¹⁰⁹*Time*, March 30, 1987

to make the bomb. We have managed to do it in only seven years...Nobody can take us for granted. Let it be clear that we shall use the bomb if our existence is threatened... India knows what price it will have to pay if it attacks Kahuta.”¹¹⁰ On the subject of how deterrence worked between India and Pakistan, President Zia-ul-Haq in an interview with an American political scientist in June 1988, stated: “with reference to their (Indian) nuclear capabilities, if they create ambiguity, that ambiguity is the essence of deterrence. The present programs of India and Pakistan have a lot of ambiguities and therefore in the eyes of each other, they have reached a particular level, and that level is good enough to create an impression of deterrence.”¹¹¹ Thus, the Pakistanis have continued to express their concern about the Indian threat and their need for a deterrent capability-- even an opaque one (before 1998)--against India.

Pakistan's insecurity vis-à-vis India is also evident in the area of missile capabilities. The country has always been concerned about the Indian missile capabilities which were advanced when compared to Pakistan's. Indeed, India's missile program is comprehensive which includes Trishul, a short-range surface-to-air missile; Akash, a medium-range surface-to-air missile; Prithvi, a battlefield support surface-to-surface missile; and Agni, an intermediate-range ballistic missile.¹¹² Compared to India, Pakistan's missile program, which originated in the

¹¹⁰A.Q. Khan, March 1, 1987, quoted in *India Today*, March 31, 1987

¹¹¹Quoted in Agha Shahi, “Nuclear Nonproliferation and Pakistan,” *Strategic Studies*, vol. 14, no.3, 1991, p.8

¹¹²Pervaiz Iqbal Cheema, “The Implications of Arms Buildup in South Asia,” *Regional Studies*, vol. 14, no. 1, winter 1995, p.32

1980s, was quite limited until 1997-98. Pakistan had two types of missiles namely, Hatf-I and Hatf-II, before 1997. Hatf-I and Hatf-II have a range of 80 km and 280 km respectively,¹¹³ which were tested on April 25, 1988.¹¹⁴ Geographical proximity and the range of missiles are extremely important in this context. The Prithvi, a Pakistan-specific Indian missile, can reach major Indian targets. Even Agni can be used to target Pakistan. Although Pakistan received 30 M-11 surface-to-surface missiles from China by the summer of 1995,¹¹⁵ Pakistanis believed that M-11 missiles did not match the Indian Prithvi. These are similar to the inaccurate Scud missiles. Moreover, India can easily reach Pakistani targets by placing a Prithvi missile close to the border, which Pakistan cannot do as easily because Delhi is far away from the border. M-11s have a 300 km range which cannot reach Delhi. India has a large territory while Pakistan's territory is small. India only needs 400 km range missiles to destroy Punjab and Karachi, while Pakistan needs at least 700 km range missiles to destroy any major Indian city. For this Hatf-III, which has at least a 600 km. range, has been important.¹¹⁶ Pakistan tested Hatf-III in July 1997.¹¹⁷ Although the Chinese transfers of M-11 missiles had created

¹¹³Ruchita Beri, "Ballistic Missile Proliferation," *Asian Strategic Review*, 1991-92, pp. 177-179

¹¹⁴"Pakistan in Missile Build Claim," *Jane's Defense Weekly*, February 18, 1989, p.267

¹¹⁵Rodney Jones, et. al., *Tracking Nuclear Proliferation*, Washington D.C.: The Brookings Institution Press, 1998, p.136

¹¹⁶Nazir Kamal, interview, February 13, 1997

¹¹⁷*Nation*, July 4, 1997

tension in the international community with regard to China's violation of the Missile Technology Control Regime (MTCR),¹¹⁸ Pakistan's concerns over the range of these missiles in their possession has continued.

The action-reaction game in South Asia over missile capabilities was more prominent between 1996-98. In early 1996, when India test-fired the Prithvi II, which is the air-force version and is capable of targeting almost all of Pakistan, and moved its Prithvi I missile systems from factories in the south to Punjab in 1997, Pakistan's major cities were within direct range of the missiles.¹¹⁹ Pakistan responded by testing its new ballistic missile, Hatf-III, which is capable of reaching New Delhi and other Indian targets. Within a year, in April 1998, Pakistan tested the 1,500 km range Ghauri missile (Hatf-V). Although Pakistan tested it in 1998, the Ghauri was first reported in the Western media in December 1997.¹²⁰ All these indicate that even in the missile area Pakistan has made serious efforts to match India's capabilities and consequently, meet its security needs.

Pakistan's reactionary nuclear policy persists and was evident during the CTBT negotiations in 1995-96, and more recently after the Indian nuclear tests in 1998. During the CTBT negotiating period Pakistan's Ambassador, Munir Akram,

¹¹⁸In August 1993, Pakistan's caretaker Prime Minister, Moien A. Querishi, stated that the M-11 missiles were well within the parameters of the MTCR because the Western definition of a medium range missile is one that has a range of more than 300 km range, which is not something the M-11s have. See, *Nation*, August 27, 1993

¹¹⁹Rodney Jones, et.al., *Tracking Nuclear Proliferation*, p.137

¹²⁰Barbara Starr, "Pakistan's New Danger Weapon is Confirmed," *Jane's Defense Weekly*, vol.28, no.21, December 3, 1997

told a UN Conference on Disarmament that Pakistan looked forward to categorical assurances that India was not contemplating a nuclear test and would not conduct one. He also warned that Pakistan would take appropriate measures if nuclear-capable missiles were deployed along its borders.¹²¹ In 1996 Benazir Bhutto said that there was an ambiguity in Pakistan's nuclear development plan and that although it had the knowledge, it did not make nuclear weapons. Another Indian test would, however, bring a serious response from Pakistan which would have horrible consequences on the subcontinent.¹²² Following India's underground nuclear tests in May 1998, Prime Minister, Nawaz Sharif said that the Pakistani government would have to take "any step necessary to protect the national security" of the country; while Pakistan's President, Muhammad Rafiq Tarar, stated that the country did have the capability to counter India's threats but that "proper reaction will come at some proper time."¹²³ On May 17, 1998 the Pakistani Foreign Minister, Gohar Ayub Khan, said that "it's a matter of when, not if, Pakistan will test."¹²⁴ Finally, on May 28, 1998 the Pakistani Prime Minister reported that Pakistan had conducted five nuclear tests and "had settled the score with India."¹²⁵ The Indian, followed by the Pakistani nuclear tests shocked the world, but it was very much a part of the two-power regional rivalry. Pakistan's

¹²¹*Dawn*, January 24, 1996

¹²²*Times of India*, January 20, 1996

¹²³*The Nation*, May 12, 1998

¹²⁴*CNN*, May 17, 1998

¹²⁵*New York Times*, May 28, 1998

nuclear tests were inevitable once India conducted its tests. Despite severe Western pressures not to test, Pakistan did not refrain from carrying out the tests. Since nuclear deterrence has been the primary motivation for Pakistan's nuclear weapons acquisition, testing weapons was important once India tested. Its 1998 nuclear tests proved once again that nuclear deterrence has always been, and still is, Pakistan's fundamental strategy of war-avoidance in the India-Pakistan protracted conflict.

SUMMARY

This chapter has discussed Pakistan's motivations for acquiring nuclear weapons in the context of the arguments from the three levels of analysis. Motivations from the individual and domestic levels of analysis do not adequately explain Pakistan's propensity to obtain nuclear weapons. Security, especially in obtaining a deterrent capability against India, triggered Pakistan to go nuclear.

CHAPTER VI

NON-TRADITIONAL NUCLEAR DETERRENCE IN THE INDIA-PAKISTAN PROTRACTED CONFLICT

In the India-Pakistan protracted conflict the proliferants have generally practiced a non-traditional nuclear deterrence, which differs from nuclear deterrence as understood in the context of the US-Soviet relations. Both Indian and Pakistani decision-makers perceived that this new form of deterrence provided them with the minimum deterrence they required. Since their proliferation differed from the five nuclear weapon states before 1998, the deterrence that functioned in the region between them has also been unique. These countries have had possession of nuclear weapons capabilities, but they did not declare themselves as nuclear states until 1998. However, all along both have been fully aware of each other's nuclear capability and the fact that each could assemble bombs on short notice. The capability and retaliatory intentions were communicated in a tacit way which the superpowers did not pursue. A stable nuclear deterrent relationship existed between them for many years before they openly tested their weapons.

Three important aspects must be analyzed to understand the India-Pakistan non-traditional nuclear deterrence:

- 1) Did the Indian and Pakistani leaders believe in this non-traditional nuclear deterrence within the protracted conflict setting?
- 2) Did they communicate the essential conditions of deterrence?

3) Has the non-traditional nuclear deterrence worked in the context of the India-Pakistan PC?

Non-Traditional Deterrence from the Indian and Pakistani Perspectives

In the India-Pakistan protracted conflict, it seems that a non-traditional nuclear deterrence has worked for decades. It is “non-traditional” because of the absence of nuclear tests for years until 1998, nuclear doctrine or declared strategy. It is, however, one where adversaries have been aware of each other’s possession of weapons capability, were willing to use it as a second-strike capability, and this deterrent threat was communicated to each other by a variety of means. Indian General Sundarji argued in 1996 that “both India and Pakistan have indeed weaponized and are deployed in as good a state of readiness as they would need for minimum deterrence to be effective against each other. ‘Weaponization’ need not mean that the nuclear warhead has already been married to the bomb-casing or placed in the missile’s warhead compartment. Likewise, ‘deployed’ need not mean that the completely assembled missile has to be in or very near its launch pad.”¹ He further stated that the absence of a visible strategic nuclear force or an articulated doctrine and elaborate C³ did not mean that a force able to carry out a first or second strike was not yet ready on a minimum deterrent scale.²

¹K.Sundarji, “India’s Nuclear Weapons Policy,” in Jorn Gjelstad and Olav Njolstad, eds. *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996, p.178

²Ibid.

Others believed the same argument, but conceptualized it as a form of “non-weaponized deterrence,” since bombs were not assembled. The understanding was once again that it was this non-weaponized deterrence that had kept the two countries from war. Muchkund Dubey argued that nuclear deterrence worked between India and Pakistan for a long period. He believed in non-weaponized deterrence and argued that if Pakistan believed that in 24 hours India could assemble weapons and in 48 hours it could deploy them, then Pakistan would be forced to do the same. Both countries needed to believe that the other would use it and they did so. Both had declared themselves as nuclear-capable states so that deterrence also worked.³ Air Commodore Jasjit Singh used the term “recessed deterrence” instead of non-weaponized deterrence, which meant that a state had to have a nuclear technological base and that it was more than adequate to achieve weaponization on short notice.⁴

The strategy of deterrence in the India-Pakistan case has been based on uncertainty. Since the adversaries did not know exactly how long it could take for their rival to assemble a weapon, neither state could strike first with any certainty that prompt retaliation would not be the consequence. Therefore, the question of surprise attack did not arise strongly in the India-Pakistan case. As K.Subrahmanyam stated in 1997 (before the Indian nuclear tests),

We may be able to have the weapons on short notice... Maybe a couple of days to couple of months...Pakistanis also do not know how

³Statement made by Muchkund Dubey in an interview on January 20, 1997

⁴Jasjit Singh, interview, New Delhi, January 29, 1997

long it will take for India to make the bombs...As tension grows, as India feels it may be used, it may even become two hours for it [the bomb] to be ready. The sheer uncertainty is keeping the two countries away from wars...I think mutual deterrence is working between India and Pakistan.⁵

This has not been the general understanding only among the Indians advocating for nuclear bombs or those wanting to keep the option open, but it was a generally accepted belief across the academic and bureaucratic spectrum before the recent nuclear tests. Even scholars like Bhabani Sen Gupta in 1997 believed:

Reality and perception of reality go together. Perception of reality is important in the India-Pakistan case. Information has not been exchanged, however, each has agreed not to attack each other's nuclear installations. Precautions have been taken to prevent accidents on the ground. Any objective analysis will show that the two countries have been managing their crisis and conflict very well. From 1989 to 1996, crisis escalations have been managed very well. The very concept of low-intensity conflict implies crisis control and management.⁶

It must, however, be noted that some analysts in India did not accept the concept of non-weaponized deterrence. Some did not want to accept it because it was a Western way of making sure that India and Pakistan did not test nuclear weapons. Others did not believe in the strategy per se. The first group of scholars did not like the idea of imposing a non-weaponized deterrence in South Asia because they might not be able maintain this kind of deterrence if security needs

⁵ K. Subrahmanyam, personal interview, January 28, 1997

⁶Statement Made by Bhabani Sen Gupta during an interview on January 24, 1997

required them to change their position, which in fact happened in 1998. As Brahma Chellaney argued in 1997, “non-weaponized deterrence is something the North Americans have come up with so that India and Pakistan do not go any more than where they are.”⁷ They did believe that deterrence--whether non-weaponized or not-- was working in the India-Pakistan protracted conflict before both became openly nuclear. Raja Mohan believed that there was enough evidence to prove that some type of deterrence was working between India and Pakistan. Neither was crossing the line. The Simla agreement had not done it. From 1990 onwards crises did not escalate because of nuclear capabilities.⁸ In a similar vein, Brahma Chellaney argued that tacit bargaining between India and Pakistan has always existed. The fact that there has not been war between them cannot be an accident.⁹ The point is crucial because we see most scholars basically maintaining the same position--that India and Pakistan’s no-war situation has been a function of their nuclear deterrence.

There are, however, others who are generally against any deterrence theory. Praful Bidwai, an Indian journalist, contends that “nuclear deterrence is a dubious doctrine. Nuclear accidents are possible. False warnings generate worse situations.” This, he says not only in relation to India-Pakistan deterrence, but also with regard to the superpower’s deterrence. He cites the example of the Cuban Missile Crisis that it is “one example of how states can come close to nuclear war.

⁷Interview with Brahma Chellaney, February 1, 1997

⁸C. Raja Mohan, interview, January 31, 1997

⁹Brahma Chellaney, interview, February 1, 1997

Enormous miscalculations are possible in this area as was the case during the cold war. Deterrence brings instability instead of stability.”¹⁰ He appears to be totally opposed to the theory of nuclear deterrence and his views are not limited to the India-Pakistan deterrence. Most Indians do not share his view and believe in mutual minimum deterrence between India and Pakistan. Savita Pande argued in 1997 that “a war cannot break out under present circumstances between India and Pakistan. Mutual deterrence of nuclear weapons is working between them.”¹¹

Pakistani arguments have been similar and occasionally even more relevant in the context of mutual non-traditional nuclear deterrence. In 1997 Agha Shahi stated that “we are in favor of non-weaponized deterrence.”¹² Non-weaponized nuclear deterrence is a crude form of deterrence in which the nuclear components exist but remain unassembled and can be assembled in a couple of days. It can also be described as an elementary form of deterrence.¹³

There was always a division within the Pakistani academic community on the question of whether or not Pakistan should go openly nuclear. Even though some scholars stressed the need for Pakistan to test its nuclear weapons, even they appeared to believe that on the non-weaponized level, India and Pakistan have been able to achieve a non-traditional, stable nuclear deterrence. Shirin Mazari in

¹⁰Interview with Praful Bidwai, New Delhi, February 2, 1997

¹¹Savita Pande, interview January 29, 1997

¹²Agha Shahi, interview, February 14, 1997

¹³Zafar Iqbal Cheema, interview, February 2, 1997

1997 believed that it was time for Pakistan to go nuclear because declaring itself a nuclear weapons state would make deterrence more workable. She, however, argued that deterrence had worked between India and Pakistan, and used the 1990 Kashmir crisis to substantiate her argument. She stated that “this is the first time there has been a full-blown insurgency in Kashmir and India has not come forward to fight a war with Pakistan.” She also mentioned that in the 1990 crisis too much uncertainty existed in the Indian minds so India could not take a chance. “Nuclear weapons allow you to get to the crisis stage and then back down and that is the pattern everywhere. Why should Pakistan and India be any different? The relevance of nuclear weapons is very much there.”¹⁴

In 1997 Pakistan’s former army chief explained how easily nuclear weapons could be assembled in India and Pakistan if required, because of the adequate time that these adversaries usually get before crises escalate to wars. As General Aslam Beg stated:

A low-level, non-weaponized deterrence is what is going on in between India and Pakistan. It takes a few days to make the weapons in Pakistan. It is not like the Star Wars program of the Reagan years. It is a different environment in India and Pakistan. There is a period of tension, a period of confrontation, and a period of mobilization--so India and Pakistan will have enough time to make the weapons.¹⁵

¹⁴Shirin Mazari, Interview, February 14, 1997

¹⁵Statement made by General Aslam Beg during interview on February 13, 1997

But what is minimum deterrence? How many weapons do states need for minimum deterrence to work? On the Indian side, Jasjit Singh said that “Matching capability is not a factor,” and, “equality is needed not in terms of the number of weapons--equal security is needed.”¹⁶ Describing the Indian perspective, he said, “Indians have been careful since 1989.”¹⁷

The Pakistani version was provided by General Aslam Beg who, in similar vein, stated, “in the case of weapons of mass destruction it is not the numbers that matter, but the destruction that can be caused by even a few... The fear of retaliation lessens the likelihood of full-fledged war between India and Pakistan.”¹⁸ Similarly, Niaz-A-Naik argued that one bomb was enough to deter the enemy. Pakistan needed superiority in at least one weapons system. The airforce was crucial for Pakistan so F-16s were important to them. For minimum deterrence they had to take the India-Pakistan area into consideration. Pakistan is small compared to India, so it can only destroy part of India.¹⁹ All this indicates that the Indians and Pakistanis have strongly believed in the functioning of non-traditional nuclear deterrence in South Asia.

¹⁶Interview with Air Commodore Jasjit Singh, January 29, 1997

¹⁷Jasjit Singh, interview, January 29, 1997

¹⁸Quoted in George Perkovitch, “A Nuclear Third Way in South Asia,” *Foreign Policy*, no.91, summer 1993, pp.88-89

¹⁹Niaz-A-Naik, interview, February 11, 1997

The Presence of Communication in India-Pakistan Non-Traditional Nuclear Deterrence

Although one of the major problems Western deterrence advocates see with the new form of deterrence is the communications aspect, most Indian and Pakistani officials, scholars and army chiefs believe that these countries have had a unique communication style which has been mutually understandable. Signals and tacit bargaining--informal communication--have been important in this form of deterrence. Communication in terms of intentions and capability demonstration was done in various ways. Brigadier Vijay K. Nair argued that parliamentary statements were one source of communication used by them. He used an example to explain how communication was usually arranged in the India-Pakistan deterrent relationship. Pakistan's Foreign Secretary spoke at the press conference and was responded to by Salman Haider, the Indian Foreign Secretary, who said that if Pakistan used nuclear weapons for Kashmir, then the damage India could cause would be phenomenal.²⁰ This indirect method has permitted India and Pakistan to inform each other about their nuclear capability and intentions during the pre-1998 period. Press statements have been a good communication tool between the two PC states.

In Pakistan, similar views have been shared by scholars and officials. According to Nazir Kamal, in India-Pakistan deterrence, intelligence services, newspapers, and foreign embassy information have all been used for

²⁰Interview with Brigadier Vijay K Nair, New Delhi, February 2, 1997

communication. The exact size of the fissile materials were certainly not known, but a reasonable idea existed. Both sides had reached to a limit and then stopped. Keeping track was not important.²¹ Pakistan's former Foreign Secretary, Abdul Sattar, believed that the CIA statements about India and Pakistan's nuclear capability and that they could both make weapons on short notice often did the job of deterrence communication between these two countries in their opaque situation. He also noted that each of these two countries have had their own assessments of their adversary's capabilities and that intelligence agencies were there in each country for this matter.²² Zafar Iqbal Cheema provided further examples of how communication was sometimes arranged. He stated that "government of Pakistan used the media to communicate to the Indians [for deterrence]". He cited the example of A.Q. Khan's interview to the Indian journalist, Kuldip Nayar, to demonstrate how Pakistan's possession of nuclear capability was communicated to India in 1987. Nayar's interview was a part of the Pakistani government's plan to inform India of Pakistan's nuclear capability. General Zia-ul Haq also had a personal interview with the Times, the best source of communication on the matter.²³ Similarly, General Aslam Beg stated in 1997 that communication was arranged through the media, publications, and the West. India and Pakistan both got the message straight²⁴ while they were opaque nuclear

²¹Nazir Kamal, interview, February 13, 1997

²²Abdul Sattar, interview, February 12, 1997

²³Zafar Iqbal Cheema, interview, February 12, 1997

²⁴General Aslam Beg, interview February 13, 1997

states. It is obvious that what is unreal and unacceptable for the declared nuclear states as far as deterrence communication is concerned, can be real and acceptable for opaque nuclear states practicing non-traditional deterrence.

South Asian Regional Stability through Non-Traditional Nuclear Deterrence

The success of non-traditional nuclear deterrence in the South Asian region is undeniable. Since 1971 there has not been any war between India and Pakistan, though crisis and low-intensity warfare have been common in the South Asian region.²⁵ The two countries have been independent for fifty-one years. During the first twenty-four years of their independence, India and Pakistan fought three major wars--in 1947, 1965 and 1971. In the post-1971 period, for more than twenty-seven years these two countries showed remarkable restraint in terms of not going to war against each other. Michael Brecher's crisis record indicates that there were two major crises between these two countries in the recent years.²⁶ Most crises are managed by wars when territorial issues are involved in any protracted conflict. In this context it is extremely important to note that crises did not escalate to wars in either of those situations. This is no accident. It was a

²⁵ C. Raja Mohan and Peter R. Lavoy, "Avoiding Nuclear War," in Michael Krepon and Amit Sevak, eds., *Crisis Prevention, Confidence Building, and Reconciliation in South Asia*, New York: St. Martin's Press, 1995, p. 34; T. V. Paul, "Power, Influence and Nuclear Weapons: A Reassessment," in T.V. Paul, Richard Harknett and James J. Wirtz, eds., *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order*, Ann Arbor: University of Michigan Press, 1998, p. 38

²⁶ Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997, pp.174-178

calculated step taken by decision-makers in India and Pakistan because both had possessed opaque nuclear weapons for many years. Even Western scholars find it difficult to explain why crisis management has become natural in this region and why wars seem a remote possibility. Although the South Asian powers--India and Pakistan-- regularly engage in low-intensity conflicts and crisis remain a reality in this protracted conflict, these states are not willing to risk a nuclear war to settle their territorial disputes. The stable situation suggests that Indian and Pakistani nuclear weapons capability have brought stability through deterrence in South Asia. As Ashok Kapur observed in 1995, "the trends show a parallel, tacit preference to avoid war after 1971; a policy to remain on guard militarily; a policy to maintain and to manage low risk intervention and pin-pricks in neighbor's border provinces, and a policy to manage stresses and strains in bilateral political and military affairs by limited confidence-building measures (CBMs)."²⁷

Although this is the prevailing situation in the region, it does not mean that warlike situations have not developed in the region since 1971. Some Indians believed that Pakistan did almost everything possible to provoke India to start a war, but nothing triggered a war because of the possession of opaque nuclear weapons by both states. If the same provocation had occurred before both possessed a nuclear weapons capability, India would not have tolerated Pakistan's behavior. As K. Subrahmanyam stated in 1997,

²⁷Ashok Kapur, "India and Pakistan: Nature and Elements of Nuclear Deterrence Between Two Regional Rivals," Paper presented for the workshop on "*The Future of Nuclear Deterrence*," Centre for Defense and Security Studies, Manitoba, May, 1995, p.17

In 1965 Pakistanis sent about 5000 armed intruders into Kashmir. We dealt with them and they continued to send some more. The Indian army crossed the cease-fire line and hit the areas... that escalated into the 1965 war. Now it is happening for 7 years, India has not crossed the cease-fire line. Therefore, [it shows] the chances of war occurring between India and Pakistan is low if it is compared to what happened in 1965 and 1971. This is because India is resisting itself because of Pakistan's nuclear weapons capability. It is quite obvious that there is not likely to be any war between India and Pakistan now unless one or the other is going to cross the line of control at the frontier."²⁸

Pakistan's ex-army chief explained in 1993 why wars were unlikely in South Asia even when both India and Pakistan were opaque nuclear states. He stated that "there is a general feeling that a nuclear stalemate in the subcontinent would subsist for some years. The balance has been determined by India having demonstrated its weapons capability through a nuclear test and by Pakistan for having acquired the requisite nuclear know-how of technology."²⁹ He further mentioned that "the threat of an open conflict breaking out is predicted periodically by outside observers of the South Asian scene (1986 and 1990), if such core issues as Kashmir are not amicably settled to the satisfaction of the

²⁸Interview with K.Subrahmanyam, New Delhi, January 28, 1997; Similar view was provided by K.Subrahmanyam in other articles. See, "Capping, Managing, or Eliminating Nuclear Weapons?" in Kanti Bajpai and Stephen P. Cohen, eds., *South Asia After The Cold War*, Boulder, Colorado: Westview , 1993, p.184

²⁹General Aslam Beg, "Pakistan's Nuclear Program: A National Security Perspective," Rjukan Conference on *Nuclear Technology and Politics*, Norway, June 1993, p.2

parties concerned. However, despite such tension, peace has been holding since 1971, though tenuously.”³⁰

Two of the most important crises which erupted between India and Pakistan since 1971 have been the Brasstacks Crisis of 1986-87 and the Kashmir Crisis of 1990. Both deserve serious study since neither of these crises escalated into war, although in both war was highly probable.

The Brasstacks crisis started when Indian army chief, General Sundarji, designed and conducted a large military exercise in 1986 in the Rajasthan desert. This triggered a foreign policy crisis for Pakistan, which in turn deployed its armed forces and triggered a crisis for India. The Indian response was to occupy defensive positions, thus turning the situation into an international crisis, known as “the Brasstacks Crisis.”³¹ It was the largest crisis in the post-independence period in terms of “manpower, equipment, the use of air force assets, and the deposit of additional ammunition in dumps near the exercise area, which was itself not very distant from the Pakistan border. Brasstacks was comparable to the largest NATO and Warsaw Pact exercises.”³² Although this was a crisis situation, it did not escalate into war, and in fact, the leadership managed “to de-escalate without

³⁰Aslam Beg, *Development and Security*, Rawalpindi: Friends, 1994, p.138

³¹For a detailed discussion on the Brasstacks crisis, see, Kanti Bajpai, P.R. Chari, Pervaiz Iqbal Cheema, Stephen P. Cohen and Sumit Ganguly, *Brasstacks and Beyond: Perception and Management of Crisis in South Asia*, New Delhi: Manohar, 1995

³²Ibid., p.3

violence.”³³ Why was such a crisis not managed by war?

It is important to consider that in 1986, even though the Indian nuclear capability was known to the Pakistanis, India was still unsure of the possession of Pakistan’s nuclear capability. India became more aware of Pakistan’s possession of nuclear weapons capability after this crisis had ended. However, the nuclear factor figured into the crisis when the Indian journalist, Kuldip Nayar, was contacted by Mushahid Hussein, the editor of the Pakistan newspaper, *The Muslim*, and was permitted to interview Pakistan’s principal nuclear scientist, Abdul Qadir Khan on January 28, 1987, during the height of the Brasstacks crisis. Khan stated in that interview, “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 exercise is threatened.”³⁴ The Indian security analysts interpreted this statement as a nuclear signal to bring an end to the crisis. Hussein stated that “the message given by A.Q. Khan...is directed against those detractors of the Islamic bomb. To the Indians, it is a ‘hands-off’ message at a time when New Delhi has been carrying out massive warlike exercises all along our eastern border.”³⁵ The statement not only communicated Pakistan’s capability, but its intentions as well.

³³C. Raja Mohan and Peter Lavoy, “Avoiding Nuclear War,” in Michael Krepon and Amit Sevak, eds., *Crisis Prevention, Confidence Building, and Reconciliation in South Asia*, New York: St. Martin’s Press, 1995, p.32

³⁴Kuldip Nayar, “We Have The A-Bomb, Says Pakistan’s Dr. Strangelove,” *Observer*, London, March 1, 1987

³⁵ “Bomb Controversy,” *The Muslim*, Islamabad, March 3, 1987

Some have argued that A.Q. Khan's interview was not published until March 1987 when the crisis had almost defused,³⁶ while others believed that it was also unlikely that Pakistan's leaders would ask someone from outside the government's "inner circle" to send a serious nuclear deterrent threat at the peak of the crisis.³⁷ First, the Brasstacks crisis did not end before Pakistan's nuclear status was confirmed by the published interview. It is quite possible that this message worked to help end the crisis without war. Second, in a non-traditional nuclear deterrence situation, it is only natural for governments to send signals this way when there is no other alternative. The Pakistani government wanted to avoid international sanctions--such as those it received after the disclosure of its nuclear weapons capability possession in 1987--and it had to be very careful in sending out nuclear messages. Therefore, A.Q. Khan's interview successfully did the job of informing the Indians about Pakistan's nuclear status. Besides, no other explanation adequately accounts for the non-war situation in this crisis. Although Brasstacks is one such crisis that proliferation scholars worry about because it could provoke a preemptive war, it is also important to remember that war did not occur (even if some are unwilling to give credit to nuclear deterrence). Moreover, both India and Pakistan were fully aware of each other's possession of nuclear weapons capabilities--making crisis escalation further unlikely.

³⁶C. Raja Mohan and Peter Lavoy, "Avoiding Nuclear War," in Michael Krepon and Amit Sevak, eds., *Crisis Prevention, Confidence Building, and Reconciliation in South Asia*, p.33

³⁷Devin T. Hagerty, *The Consequence of Nuclear Proliferation*, Cambridge Mass: The MIT Press, 1998, p. 111

In the South Asian region there is no evidence to prove that India and Pakistan have been at the verge of a nuclear war. Although this situation has existed in the region for decades, some Western journalists and analysts believe that South Asia was on the verge of a nuclear war in 1990 during a crisis over Kashmir.³⁸ According to Seymour M. Hersh, in the early spring of 1990, a reliable intelligence source reported to Washington that General Aslam Beg, then the army chief of Pakistan, had authorized the technicians at Kahuta to assemble the nuclear weapons and that he was prepared to use the bomb against India if needed. In essence, as the Kashmir crisis intensified because of India's build-up of conventional forces in Kashmir and Rajasthan, Pakistan, "openly deployed its armoured tank units along the Indian border and, in secret, placed its nuclear-weapons arsenal on alert."³⁹

Although this remains a central belief among some Western journalists, there is no controversy on the issue as far as Indian and Pakistani scholars and decision-makers are concerned. They contend that not only were nuclear weapons not a factor in the crisis, but that this crisis is the best proof of nuclear deterrence on the sub-continent.

General Aslam Beg, who, according to Hersh, was responsible for authorizing the technicians to assemble nuclear weapons, in a personal interview

³⁸Seymour M. Hersh, "On the Nuclear Edge," *New Yorker*, March 29, 1993, pp.56-67; William E. Burrows and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World*, New York: Simon and Schuster, 1994, pp. 61-82; James Adams, "Pakistan 'Nuclear War Threat'," *Sunday Times*, London, May 27, 1990

³⁹Seymour Hersh, "On the Nuclear Edge," p.56

described what happened during the Kashmir crisis of 1990. He stated that “people of Kashmir revolted against Indian authority. It created tension and confrontation along the line of control and fires had taken place. India accused Pakistan of interference and it created an intense situation of tension and hostility in terms of threats, basically from the Indian side. Forces had not been mobilized by both India and Pakistan. The hot line communication in both India and Pakistan was operative. To say that Pakistan was mobilizing its aircraft and nuclear capabilities was ridiculous.”⁴⁰ He went further and said if Pakistan ever has to use its nuclear weapons, it will do so “surely in a desperate situation where capitulation is a possibility or a defeat is expected--only then nuclear weapons could be used to reverse the defeat and capitulation. None of these situations existed in 1990.”⁴¹

Abdul Sattar agreed that in May 1990 Robert Gates was sent by President Bush to defuse the crisis so that it did not escalate into nuclear warfare. But Pakistan did not present any nuclear threat to India.⁴² Similar views were expressed by other Pakistani scholars. Nazir Kamal stated that in the 1990 crisis India and Pakistan were not moving towards a nuclear war, as the US believed. Military troop movements were made by the Indians but the Indians would not risk

⁴⁰Interview with General Aslam Beg, Islamabad, February 13, 1997. General Beg provided a description of exactly what happened in 1990 and stated that the crisis never brought the two countries to the verge of a nuclear war. It was an American story.

⁴¹Interview with General Aslam Beg, Islamabad, February 13, 1997

⁴²Abdul Sattar, interview, February 12, 1997

going to war with Pakistan--it never went that far. In fact, nuclear deterrence had worked.⁴³

On the Indian side, the Indian chief of Armed Forces in 1990, General V. N. Sharma argued that India never feared a Pakistani nuclear threat and that the Gates mission had nothing to do with defusing the nuclear crisis or averting a war in the region.⁴⁴ The key Indian decision-makers during the Kashmir crisis also disagree with the Western reports regarding the risk of a nuclear war in South Asia in 1990. K. Subrahmanyam discussed the 1990 crisis with them and stated, "Whatever Mr. Gates may have discussed with Pakistanis, no policy maker in India recalls his raising the issue of nuclear confrontation."⁴⁵

None of the above descriptions and arguments pertaining to the 1990 crisis corroborates the Western claim that South Asia could have been the first region to experience a nuclear war. On the contrary, it appears that the Kashmir crisis of 1990 has been the best proof to date of non-traditional nuclear deterrence in South Asia while India and Pakistan were opaque nuclear states. It is also a crisis that could have triggered a preemptive surprise attack by one of the adversaries because of the lack of nuclear technological sophistication in India and Pakistan, an ongoing concern of nuclear deterrence pessimists with regard to South Asia. Nor did that happen. The fragile political systems in both countries did not encourage

⁴³Nazir Kamal, interview, February 13, 1997

⁴⁴V.N. Sharma, "Its All Bluff and Bluster," *Economic Times*, New Delhi, May 18, 1993, p.13

⁴⁵K.Subrahmanyam, "Down Memory Lane," *Economic Times*, March 24, 1993, p.15

irrational behavior--the use of nuclear weapons--by either country's leadership. There was no accidental or inadvertent war.

In reality, during this crisis,⁴⁶ Pakistan had already acquired nuclear weapons capability and was ready for assembly on short notice, and India was well aware of this development through the scholarly publications, media, and by condemnation of the international community, especially, the US. As Devin Hagerty states, "Indian leaders perceived Pakistan to be an aspiring nuclear weapon state in 1987, but an actual nuclear weapon state in 1990."⁴⁷ Indian nuclear capability had also advanced qualitatively by this time, although Pakistan had no doubts about India's intentions and capability since the 1974 test. As far as nuclear capability is concerned, both India and Pakistan were fully aware of each other's nuclear resolve by 1990. The intentions were communicated by their leaders' public statements. Ross Masud Hussain argued that the Indians understood the message that Pakistan could drop nuclear weapons with their F-16 aircraft and that they could retaliate if India began a conventional war against Pakistan. Pakistan would use its nuclear weapons as a last resort, a message that was conveyed to the Indians through the press.⁴⁸ Neither India nor Pakistan could

⁴⁶For more information on the Kashmir Crisis, see Michael Krepon and Mishi Faruquee, eds., *Conflict Prevention and Confidence-Building Measures in South Asia: The 1990 Crisis*, Occasional Paper, no.17, Washington D.C.: Henry L. Stimson Center, 1994. For the background of the Kashmir Crisis, see, Sumit Ganguly, *The Crisis in Kashmir: Portents of War, Hopes for Peace*, New York: Cambridge University Press, Woodrow Wilson Center Press, 1997

⁴⁷Devin T. Hagerty, *The Consequences of Nuclear Proliferation*, p.166

⁴⁸Ross Masud Hussein, interview, February 13, 1997

contemplate war in the region when the nuclear capabilities and intentions were already known by both states.

As for confidence-building measures, General Beg argued that hotlines have existed between India and Pakistan since 1965. In April 1991 India and Pakistan signed two confidence-building agreements. The first was intended to prevent air space violations and to permit over-flights and landing by military aircraft on each other's territory. The second called for advance notice of military exercises and troop movements along their national borders. Both countries have pledged not to attack each other's nuclear installations. These agreements have been ratified and specific geographic coordinates of protected nuclear installations have been exchanged.⁴⁹ Opaque nuclear states--India and Pakistan--have been able to endure without a war for more than twenty-seven years and non-traditional nuclear deterrence has been successful in the South Asian region in bringing about peace and stability.

The nuclear tests by India and Pakistan in May 1998 have changed the opacity surrounding nuclear weapons acquisition. Both countries have now tested their weapons and there is no question of whether or not bombs can be made. Although this has changed one aspect of the non-traditional nuclear deterrence and turned it into a more traditional one, as far as doctrine, strategy and number of weapons are concerned, they may very well maintain their non-traditional pattern.

⁴⁹Aslam Beg, *Development and Security*, pp.138-39

The two countries have not yet confirmed weaponization, nor have they discussed nuclear strategy or doctrine at length. Within two weeks of the Indian nuclear tests, India's Prime Minister, A.B. Vajpayee, stated that India would not initiate a pre-emptive nuclear strike against Pakistan and was willing to discuss a "no-first-use" bilateral agreement,⁵⁰ but Pakistan has had reservations about such a strategy.

As far as confidence-building measures are concerned, India and Pakistan have made remarkable progress with the signing of the Lahore Declaration in February 1999.⁵¹ In the declaration the two countries agreed to take immediate steps to reduce the risks of accidental or unauthorized use of nuclear weapons and discuss "concepts and doctrines with a view to elaborating measures for confidence-building in the nuclear and other fields, aimed at prevention of conflict."⁵² They have also agreed that they will continue to abide by their unilateral moratorium on nuclear tests, unless overriding interests of either side are jeopardized by extraordinary events. Moreover, the two countries have also agreed to give advance notice to each other when conducting ballistic missile tests. It is expected that a bilateral agreement on missile test notification will be signed within the next few months. According to the joint statement issued on the occasion, the Foreign Ministers of the two countries will meet periodically to discuss all issues of

⁵⁰*Washington Post*, May 28, 1999

⁵¹*The Times of India*, February 22, 1999; *The Hindu*, February 22, 1999; *Dawn*, February 22, 1999

⁵²*The Hindu*, February 22, 1999

mutual concern, including nuclear-related issues.⁵³ The Lahore Declaration spelled out the confidence-building measures required to achieve a durable peace in the South Asian region. Thus, as far as peace and stability are concerned, South Asia can be expected to remain a peaceful region even in this transition phase.

SUMMARY

This chapter has examined non-traditional nuclear deterrence within the context of the India-Pakistan PC. It was argued that deterrence has worked in the South Asian region even though both India and Pakistan maintained nuclear opacity until 1998. The communication aspect of deterrence was not ignored by these opaque nuclear states even though they have, in essence, maintained a fewer number of nuclear weapons, refrained from testing their weapons and did not develop a strategy or doctrine with respect to the use of these weapons. The 1990 Kashmir crisis corroborates the argument that India and Pakistan have practiced non-traditional nuclear deterrence and have been able to keep the peace in this fragile region.

⁵³*Dawn*, February 22, 1999

CHAPTER VII

INDIA'S DETERRENT NEEDS AND THE SINO-INDIAN PROTRACTED CONFLICT

This chapter examines the Indian nuclear weapons acquisition in the context of the Sino-Indian protracted conflict. The chapter is an extension of the previous chapter since it examines only India's military/security motivation to go nuclear in the context of this conflict. Other motivations relating to India's nuclear weapons possession have already been examined in the chapter on India-Pakistan protracted conflict, so a reexamination of the same motivations is unnecessary. However, the systemic motivations (relational motivations) of prestige and status which may be related to India's concern over China are analyzed in this chapter. China's nuclear weapons acquisition is not examined because the study focuses on nuclear proliferation beyond the five nuclear powers. China is studied as an extra-regional nuclear weapon state to understand the Indian threat perception. A comprehensive study of India's nuclear behavior requires an understanding of India's security threats arising from China.

China as a Security Threat to India

India's nuclear weapons acquisition is directly linked to the Chinese nuclear weapons possession. China is a vast country in Asia which has not only emerged as "the real great power in Asia, but is already proving to be the only power that still

resists dictation from the US.”¹ China is also a major player in global politics. Although Pakistani scholars can state that “instead of attributing motives to China’s intentions, we should welcome only positive steps that this great country might like to take to improve her relations with any other country, particularly with her neighbors,”² unfortunately, India’s position in the region, and its long-standing territorial dispute with China, do not permit it to be as generous as Pakistan in this respect. From the Indian perspective, India cannot accept the supremacy of Chinese military power and position which might be used to make aggressive moves against India. Although it would be ideal to have China, a close-to-the-South-Asian region state, help to reconcile the India-Pakistan problem, China causes additional problems for India because it maintains close military relations with India’s key regional adversary, Pakistan. India has territorial problems with not only Pakistan, but also with China. In other words, India’s twin protracted conflicts have placed the country in a unique situation. China’s relations with Pakistan and the nuclear missile and technology transfers from Beijing are major concerns for India, which faces a higher-than-normal war-probability with both of these bordering states.

India’s protracted conflict with China began in 1953 over territorial claims. Since then they have fought a war in 1962 which was initiated and won by China.

¹M.R.Khan, “Sino-Pak Cooperation: Future Prospects,” *National Development and Security*, vol.5, no.1, August, 1996, Rawalpindi: Friends, p.76

²Ghulam Sarwar, “Sino-Pak Efforts to Maintain Peace and Promote Development,” *National Development and Security*, vol.1, no.1, August, 1996, Rawalpindi: Friends, p.96

The countries have had nineteen international crises over the past few decades,³ which never escalated to full-scale warfare. But Indians cannot forget how China, during the 1962 war, claimed a portion of Kashmir, enabling it to connect Xinjiang to Tibet and build a strategic highway to Pakistan. K. Subrahmanyam states: "In 1962, for example, 'Chinese border guards', claiming to defend themselves against 'aggressive Indians', invaded dozens of miles into the territory clearly under Indian control and administration, although the Chinese had made claims to such territory."⁴ Beyond that, China conducted its nuclear explosion in 1964 and since then has continued to test its weapons. Its last tests were conducted in 1996 prior to its joining the CTBT. Since 1964 China has conducted 43 tests--23 in the atmosphere and 20 underground.⁵ In 1996 it was reported that Chinese scientists were working on guidance systems to improve "reentry vehicle accuracy."⁶ China waited to join the Non-proliferation Treaty until 1992, and raised objections during the CTBT negotiations in 1996.⁷ China is capable of performing computer

³Michael Brecher, *Crises in World Politics*, Oxford: Pergamon Press, 1993, p.72

⁴K.Subrahmanyam, "India: Keeping the Option Open," in Robert Lawrence and Joel Laurus, eds., *Nuclear Proliferation Phase II*, Lawrence: University Press of Kansas, 1974, p.117

⁵*Bulletin of the Atomic Scientists*, vol.52, no.3, May/June, 1996, p.62-63

⁶*Ibid.*, p.63

⁷China has repeatedly expressed concerns pertaining to the CTBT. It wanted the term "Comprehensive" to be redefined so that minor blasts would be allowed. It also wanted CTBT to allow nuclear tests unrelated to nuclear weapons test explosions and raised objections regarding the treaty's On Site Inspections (OSI). It wanted OSI to be the last resort of the treaty's verification and not a routine undertaking. See, "Chirac Halts N-Tests, China wants CTBT Changed, *Indian Express*, New Delhi: January 31, 1996

simulated tests and possesses missiles and weapons enough to destroy India. Moreover, China's defense budget increased from \$9.7 billion in 1997 to \$11 billion in 1998.⁸ An Indian nuclear force can provide a long-term deterrent relationship with the Peoples Republic of China, while strengthening India's bargaining position vis-à-vis China should there be a Sino-Indian confrontation in the future.⁹

Chinese action has strong influences on the landscape of South Asian nuclear proliferation. The country has launched an ambitious program to expand its nuclear arsenal.¹⁰ As Brahma Chellaney states, "It has acquired MIRVed ground-to-ground missile capability and conducted its first successful ballistic missile launch from a nuclear submarine."¹¹ Therefore, in the near future, China might possess the largest armed force in the world with a significant nuclear weapons capability.

China's geographical location and the high altitudes of Tibet provide an added advantage in the India-China protracted conflict. As K. Sundarji puts it:

India has borders with Tibet in the western and eastern sectors that are in the high altitude mountains. The 'Line of Actual Control' in

⁸IISS, *The Military Balance*, 1998/99, p.168

⁹Lewis A Dunn, "India, Pakistan, Iran--A Nuclear Proliferation Chain," in William H. Overholt, ed., *Asia's Nuclear Future*, Boulder, Colorado: Westview Press, 1977, p.202

¹⁰*New York Times*, July 29, 1988, p.A27; Brahma Chellaney, "South Asia's Passage to Nuclear Power," *International Security*, vol.16, no.1, summer 1991, p.56, fn. 36

¹¹Brahma Chellaney, "South Asia's Passage to Nuclear Power," p.56; SIPRI Yearbook, 1988

Jammu and Kashmir lies for the most part in a mountainous terrain, parts of which are in high altitudes...--elevations at or above 11,000 feet that would demand the acclimatization of troops for effective functioning. While many countries have mountainous borders, very few have high altitude borders. Therefore, India has to develop theories, technologies, and tactics that a combination of mountains and high altitudes demands.¹²

China's possession of nuclear weapons has been a crucial concern for India, which it defeated conventionally. India has never trusted China--natural in a protracted conflict situation--and has tried to redress its military situation since the 1962 War. India's efforts to acquire nuclear weapons for war-avoidance were spurred by China's weapons, although it had initiated its nuclear program to address energy needs. India conducted one nuclear test for peaceful purposes in 1974 and did not test again until 1998. It has been a nuclear weapons-capable state which had officially chosen the [nuclear] "option open policy." India had consistently rejected all treaties forbidding nuclear proliferation and nuclear weapons testing, thus demonstrating its willingness to perform more tests or to keep its options open for the future. Its missile program is quite advanced. For geographical reasons the Agni missile was developed to reach targets in China. India has to depend on missiles to deter China. Indians have been concerned over Chinese nuclear deployment in Xinjiang, bordering Kashmir, and in Tibet, "whose annexation by Beijing in the 1950s removed an important buffer state between the

¹²*The Hindu*, New Delhi, November 23, 1996, p.58

world's two most populous nations. China's deployment strategy involves constant movement and concealment of nuclear forces in order to avert a surprise attack."¹³

India did not follow China in declaring its possession of nuclear weapons or by testing them until 1998, matching the number of weapons, and promulgating a nuclear doctrine or nuclear strategy. The Indians did believe that the possession of nuclear weapons-capability--where bombs could be assembled on short notice--gave them a deterrent capability against China until they went openly nuclear in 1998. Although the declaration of India's possession of nuclear weapons might have reinforced the deterrent relationship, the undeclared nuclear posture maintained stability in the China-India PC.

India needed nuclear weapons to meet the threat posed by Chinese nuclear forces. Arguments that India should acquire nuclear weapons have been made periodically since the 1964 Chinese atomic test.¹⁴ Proponents have always maintained that it should not ignore a nuclear China, especially because the two countries have had hostile relationships. Although China officially declared a 'no-first use' nuclear strategy,¹⁵ Indians mistrusted any Chinese doctrine based on memories of prior Chinese behavior. As Subrahmanyam stated:

It will, however, be a mistake to presume that Chinese nuclear war doctrine are immutable, and one can rely on China's 'no-first-use' pledge... The Chinese offered the 'no-first-use' pledge at a time when they were a weak

¹³Brahma Chellaney, "South Asia's Passage to Nuclear Power," p.56

¹⁴Raju G. Thomas, "Should India Sign the NPT?," in Pilat and Rendley, eds., *Beyond 1995*, New York: Plenum Press, 1990, p.139

¹⁵K.Subrahmanyam, "India:Keeping the Option Open," p.117

nuclear power and extremely vulnerable to a disarming strike. It will be unrealistic to assume that this posture will hold good when China has a large, diversified and invulnerable arsenal.¹⁶

Although China talked about no-first use, it had tested tactical nuclear weapons-- essentially first use weapons. For India, these situations could be altered in its favor only by acquiring nuclear weapons. India was strong in conventional force, if it was supported by a minimum nuclear deterrent, it could face any possible Chinese threat.¹⁷

Although some might say that India has over-played the China-card over the nuclear issue, it is important to comprehend that the country's worry over China has been consistent over time and was reflected in its stand vis-à-vis nuclear arms control treaties. India's anxiety over Chinese possession of nuclear weapons was expressed when the country refused to sign the 1968 NPT not only on the grounds of the Treaty being discriminatory in nature, but also because 'NPT and nuclear-free-zone' proposals did not resolve the problem of nuclear threat posed by China. For the same reason in 1995, India did not approve of extending the NPT indefinitely. The Indians believed that NPT extension would legitimize nuclear weapons possessed by the five nuclear states.¹⁸ More recently, Indian

¹⁶Akhtar Ali, *Pakistan's Nuclear Dilemma*, Karachi: Economic Research Unit, 1984, p.24, fn.2

¹⁷T.V. Paul, *Reaching for the Bomb: The Indo-Pakistan Nuclear Scenario*, New Delhi: Dialogue Publishers, 1984, p. 30

¹⁸ K. Subrahmanyam, "Indian Nuclear Policy—1964-98," in Jasjit Singh, ed., *Nuclear India*, New Delhi: Knowledge World, 1998, p. 51

objections to the CTBT were also based on the five nuclear powers' refusal to act on India's demand for the total elimination of nuclear weapons within a given time frame. India's concern has always been with a nuclear China on its border, based on its territorial conflict and the higher-than-normal probability of war between them. As R.R. Subramanian stated in 1997, "China is a great power, a nuclear country, with whom India fought a war. India should not sign the NPT or the CTBT because India could be attacked by China in the future."¹⁹ If the five nuclear powers would commit to nuclear disarmament, China's nuclear weapons would be eliminated and the Indian security in the Sino-Indian protracted conflict would be guaranteed. The Chinese nuclear threat was the main focus during the CTBT debate. Muchkund Dubey stated in 1997 that the elimination of nuclear weapons by all nuclear weapon states would give India a "kind of deterrence that goes beyond the present deterrence."²⁰ The Indian requirement for a nuclear deterrent capability for the China connection was evident in this statement.

Indian nuclear weapons acquisition must be understood by using three tier analysis. Bhabani Sen Gupta enumerated the stages:

- 1). Reaction to Chinese explosion 1964 - 68;
 - 2) no signature of NPT, 1968- to date; and
 - 3) Non-signature of the CTBT, 1996 onwards.
- In the meantime, a certain capability has been acquired in India.²¹

¹⁹R.R. Subramanian, interview, New Delhi, January 30, 1997

²⁰Muchkund Dubey, interview, New Delhi, January 20, 1997

²¹Bhabani Sen Gupta, interview, New Delhi, January 24, 1997

It is clear that in the three phases of the Indian nuclear stand a single factor was constant--the China connection. This also provides an insight into why, at each stage, India attempted to reject any treaty that did not consider its perceived Chinese nuclear threat.

China has remained a security threat to India since the early 1950s. Indian scholars, officials and policy-makers are all concerned about the border problem between the two countries, although the Chinese nuclear weapons possession itself is a cause for concern. Muchkund Dubey confirmed India perceives a security threat from China which is reinforced by the fact that China went to war while there was an unsettled, long-standing dispute. Recently it has displayed its missile power in dealing with situations on its borders. Given all of these factors, it is clear that an Indian strategic planner must consider the potential Chinese threat.²²

Vijay Nair distinguishes two major nuclear threats arising from China. The first is the threat from a nuclear weapon adversary with territorial dispute. So, India needs nuclear capability for deterrence. Secondly, nuclear weapons are also important for arms control.²³ Both are relevant in the context of India-China PC. The border problem has bothered India since the 1950s, and it remains a central security concern for the country. Most of the academic exercises reflected this concern, especially during the CTBT negotiations. It provides a sense of what India feels about its giant neighbor, and challenges the recent conception that the territorial dimensions of wars have somehow become less important over time.

²²Muchkund Dubey, interview, New Delhi, January 20, 1997

²³Vijai Nair, interview, New Delhi, February 2, 1997

Whenever India has mentioned its concern about China, it has made connection with the border dispute. Since 1953 India has referred to the territorial problem awaiting resolution for peace with China. That insistence exacerbated after the 1962 war. The 1964 Chinese nuclear explosion was the greatest threat to India in this protracted conflict.

Lieutenant General K.K.Hazari argues that the world's third largest nuclear weapons arsenal is deployed in the Xinjiang and Tibetan regions of China, geographically part of South Asia, so Indian concern is natural.²⁴ Others have stated that the Chinese nuclear deployments in Xinjiang province and Tibet have caused great concern in India prompting it to retain its own nuclear option primarily to counter the might of the Chinese.²⁵

Brahma Chellaney argues that, in terms of the nuclear issue, India has always been concerned about China. India can deliver a bomb by aircraft to any part of Pakistan, but not to China. India's missile-based nuclear posture is largely in relation to China.²⁶ The fighter-bomber aircraft and Prithvi missiles can only reach parts of Tibet and most strategic city targets would be out of their range. Therefore, K. Sundarji argues that for a second-strike capability against China, the Agni missiles must be available in sufficient numbers for deployment on short

²⁴K.K.Hazari, "Security and Development in India and Pakistan," *Agni*, vol. 1, no. 1, April 1995, p.11

²⁵M.J. Vinod, "Nuclear Proliferation in South Asia," *Strategic Analysis*, March, 1996, p.1612

²⁶Brahma Chellaney, interview, New Delhi, February 1, 1997

notice, but they need not be deployed until India received a first strike.²⁷ The Indian intermediate range ballistic missile, Agni, which has a range of 2500 km, completed all trials in 1996 according to A. Kalam, scientific advisor to the Defense Minister in India,²⁸ although they have not been deployed.²⁹

The Aspect of War in the Sino-Indian Territorial Conflict

Adversaries within protracted conflicts with territorial disputes are most likely to experience wars. The Sino-Indian conflict's territorial dimension is one in which both adversaries are aware of the possibilities of war in the conflict. A detailed description of the Sino-Indian territorial dispute and India's threat perception has been provided by D. Banerjee who argues that the China-India border question is so important for India that unless it is resolved, even bilateral relations may not improve. He identifies the major areas of Indo-Chinese divergence and discusses how they impinge on bilateral relations. He states that "till recently India's view was that improvement of bilateral relations can take place only after the border question had been satisfactorily resolved."³⁰ To understand the contentious issues between India and China which persist even

²⁷K.Sundarji, "Imperatives of Indian Minimum Nuclear Deterrence," *Agni*, vol.2, no.1, May 1996, p.19

²⁸*The Telegraph*, Calcutta, August 8, 1996

²⁹The development of Agni I is complete in 1999 while Agni II is still under development. See, IISS, *The Military Balance*, 1998-99, p.151

³⁰D. Banarjee, "India-China Relations and Chinese Military Capability," *Trishul*, vol.3, no.1, July 1990, p. 67

today, he continues, “it must not be forgotten that basic differences on the border still remain and that China continues to insist on Aksai Chin being its territory and claims that border here lies along Karakoram range; reject Sikkim’s accession to India; and claims entire Arunachal Pradesh.”³¹

Some scholars believe that China is no longer interested in its territorial gains, and the Sino-Indian conflict is possibly not as significant as the Indian government contends. Kanti Bajpai maintains that,

While the border dispute is unresolved in a formal sense, Beijing has already obtained most of what it wanted out of the issue. If its primary aim was to secure the route from Xinjiang to Tibet, it long ago accomplished its goal. China is the satisfied power on the border issue, and it did not need nuclear weapons then, and does not need them now, to achieve its purposes.³²

History, however, does not indicate that war will not recur over unresolved territorial issues. If China does not require anything more, why is it still unresolved? Over the years, the Indian government has mentioned this territorial problem to China, but the latter has never unilaterally and unconditionally agreed to give up its claim. It would be unrealistic for India to ignore Chinese expansionist ambitions, especially when this territorial matter is unresolved. The future cannot be foreseen, but territorial issues are easily connected to wars and the Sino-Indian case is no exception.

³¹Ibid.

³²Kanti Bajpai, “Abstaining: The Nonnuclear Option,” in David Cortright and Amitabh Mattoo, eds., *India and the Bomb: Public Opinion and Nuclear Options*, Indiana: University of Notre Dame Press, 1996, p.35

Why China will remain a major security threat to India in the future was explained by K.K.Hazari in 1996. He remarks that,

The threat from China has...diminished to some extent and there is scope for reducing commitments along the Northern border for the time being. However, China will remain the main adversary in the long term. A fast growing power in Asia, China has unresolved territorial differences with India and continues to occupy Aksai Chin and lays claim on the whole of Arunachal Pradesh. This will be exacerbated by proportionality of its growing dependence on Middle East Oil for sustained growth and ability to underwrite the security of strategic sea lanes in the Indian Ocean... The frictional effect brought about by competing interests could result in aggravating tensions between the two countries.³³

He further argues that it is possible that China has foreseen such eventuality and developed strategic alliances with Pakistan and Myanmar. It also maintains close relations with Middle Eastern states by providing them with cheap strategic missiles, and it is modernizing its strategic nuclear capabilities. Under these circumstances India cannot “afford to be lulled into a false sense of security only to be disadvantaged at a future time.”³⁴ Given China’s past and present ambitions, India should prepare itself to confront the Chinese threats.

Admiral K.K. Nayyar, in 1997, stated that considering a blatantly hostile Pakistan on India’s west and the unresolved territorial dispute with China to the

³³K.K. Hazari, “National Security: Future Threat & Challenges,” *Agni* , vol.2, no.1, May 1996, p.6

³⁴Ibid.

north, India needed to deter these elements to ensure its security.³⁵ The issue becomes more complex when the territories in question are strategically important to the adversaries. China has made it clear that all of its territorial claims are non-negotiable, another reason why India believes the issues will not be resolved in the near future. Chinese official reports state that “the Sino-Indian boundary has never been delimited and there is only a traditional and customary line between the two countries.”³⁶ From this perspective, China rejects the basis of the treaties which Nehru asserted in the case of Ladakh, between Jammu and Kashmir on the one hand and China and Tibet on the other. D. Banarjee states that “without any agreed set of principles, the very process of boundary settlement gets vitiated, and creates an impression that the issue is to be deliberately kept in a state of limbo, and resurrected at a time and place of one’s choosing to cause future mischief.”³⁷

The above point becomes more important when one considers how China has viewed the border issue in recent years, and how likely it is for war to result from these territorial issues. Deng Xiaoping had warned that China must increasingly be prepared to conduct border and local wars. The Chinese statements and writings confirm these strategies. In January 1988, *The Liberation Army Daily* stated that “border build-up of a country...is closely connected with the security of

³⁵K.K.Nayyar, “India’s Security, Economy and Diplomacy,” *Agni*, vol.1, no.2, November 1995, p.104

³⁶“Report of the Chinese Officials,” p.1, and “Report of the Officials of the Government of India and Peoples Republic of China on the Boundary Question,” Ministry of External Affairs, Government of India, February 1961

³⁷D.Banarjee, “India China Relations and Chinese Military Capability,” p.67

the country. It is pertinent to include the idea of strengthening border build-up” and to regard it as an important ingredient of national defense.³⁸ Several months later a similar report stressed the relationship between border problems and war. The report stated that although major power wars may be over for now, border wars and wars involving territorial disputes are still likely, so states must be prepared to face such wars if there are territorial issues involved in bilateral disputes. In 1988, *The Liberation Army Daily* quoted Jiang Siyi, Vice President of the Academy of Military Sciences: “It is true that there is relaxation in the international situation and that world war will remain preventable for a fairly long time. Yet the danger of war still exists. Various scales of local wars, border clashes and armed conflict keep occurring.”³⁹ This essentially means that recently China was convinced that a territorial dispute with India could lead to yet another war, when International Relations theorists started arguing that although territorial issues have dominated the causes of war in the past, this tendency has declined. Perhaps the decline is not based on the decreased importance of territorial issues in the current international system, but for the possession of deterrent capabilities by adversaries involved in these disputes.

Chinese views about disputed territories with India require an understanding of the strategic significance of Tibet and makes one realize whether

³⁸Sujit Dutta, “China and the Security of India,” *Strategic Analysis*, vol.12, no.2, May 1988, p.127; also D.Banarjee, “India-China Relations and Chinese Military Capabilities,” p.73, fn.25

³⁹FBIS--CHI--88--023, 4 February, 1988, pp.10-11; see also D.Banarjee, “India China Relations and Chinese Military Capability,” p.73, fn. 24

or not China is likely to reconsider its position in the near future. The importance of Tibet to China is obvious, while in the entire India-China border conflict, Tibet has figured prominently. As Ginsburg and Mathos state,

He who holds Tibet dominates the Himalayan piedmont; he who dominates the Himalayan piedmont threatens the Indian subcontinent; and he who threatens the Indian subcontinent may well have all of South Asia within its reach and with it all of Asia.⁴⁰

For all these reasons China remains central to India's security concerns. I argue that India considered acquiring nuclear weapons to address the higher-than-normal war-probability in the Sino-Indian PC. The significance of war-probability in this territorial conflict is undeniable and has been a primary concern of India.

Deterrence with China and India's Nuclear Weapons Acquisition

The territorial nature of the Sino-Indian conflict, the war-probability and search for a nuclear deterrent capability have all been aspects of the Indian nuclear choice. According to K. Subrahmanyam, India's nuclear weapons capability was mainly developed to deter China because it is a major power. India's longest border is with China, and it has waged and lost a war with that country. India attempted to receive guarantees from other nuclear states against possible Chinese

⁴⁰George Ginsburg and Michael Mathos, "Communist China and Tibet: The First Dozen Years," Martinus Nijhoff, *The Hague*, 1964, p.210

nuclear threats, but failed to get them. Thus, it made efforts to develop deterrent capability since the mid-1960s⁴¹

A closer look at the Indian security perspectives from 1947 onwards provides a better understanding of the relationship. India's primary security concern immediately after independence was Pakistan, not China. During the early years of its independence Jawaharlal Nehru was more concerned about Pakistan and the already existing protracted conflict over Kashmir. China was already a powerful neighbor, but Nehru seemed unconcerned about Chinese military might. Since national security is important to all countries, India-- a country with China as a neighbor-- should have been more concerned about its national and military security vis-à-vis China. However, in those days, Nehru understood the difference between a militarily powerful neighbor and a neighbor with which a territorial conflict exists. As long as war was a remote possibility, concern over China was marginal. Over time, territory-war linkage caused India to worry more about Chinese threats. If Chinese military strength had been important to India, Nehru would have been more concerned about that country between 1947-50 when China had a clear military advantage in attacking India. Nehru was so convinced about Chinese intentions that he told Michael Brecher: "Why create enemies who will be induced to attack you? Why not have friendly relations, for when there is no particular inducement to attack, there is less likelihood of attack."⁴² Nehru's

⁴¹K.Subrahmanyam, interview, New Delhi, January 28, 1997

⁴²Michael Brecher, *The New States of Asia: A Political Analysis*, London: Oxford University Press, 1963, p.205

positive attitude changed when the Indians realized that Chinese territorial ambitions which were accompanied by aggressive moves.

China and India inherited border disputes from the British colonial period in the Northern Frontiers Area and the Aksai Chin. By 1950, China's take-over of Tibet instigated India's serious concern over China. Nehru, who believed India should be more concerned about Pakistan and Kashmir than China, changed his perspective on the China-India relations after 1950 and the need for the Indian military preparedness. During that time, he had diverted a major portion of the defense budget to the Chinese front. Relations deteriorated dramatically and the China-India war started in 1962. India was not prepared to fight a war with China and was badly defeated. The country did not receive support from either of the super powers during the war and was also morally defeated. The Ministry of External Affairs Report of 1964-65 states:

Developments during the year revealed... that the India-China border question was not merely a territorial issue but an instrument forged by China to bring about a political confrontation between the two countries and to apply protracted military pressure on India. It was clear that conflict with India was an integral part of China's foreign policy.⁴³

The Indians understood the need to be better prepared for either war-fighting or war-avoidance after the 1962 war.

⁴³Ministry of External Affairs Report 1964-65, New Delhi, Government of India Printing Office, 1965, p.2

The next stage was the Chinese explosion of nuclear weapons in 1964, which triggered India's nuclear weapons program. India did not want to go nuclear and tried to look for other defense options including security guarantees from the major powers. This was natural for a country which had acquired independence from colonial rule less than two decades before and which was still in the process of state-building. The Gandhi-Nehru legacy also had a major impact on India's reluctance to acquire nuclear weapons. The Indian nuclear energy was directed towards providing energy needs all this time rather than weapons capabilities. India wanted the nuclear states to provide guarantees against any possible Chinese nuclear threats, but K. Subrahmanyam stated that "even in the sixties as US records now disclose, the US was not willing to risk a confrontation with China to guarantee India's territorial integrity."⁴⁴ Shastri's efforts to obtain nuclear guarantees from Britain, the US and the former Soviet Union were fruitless, and India had to depend on its own military capabilities. India realized that the nuclear powers were not prepared to extend their "nuclear responsibilities beyond their own frontiers and the frontiers of their key allies."⁴⁵

In the mid-1960s, the US had reduced its military aid to India, which impacted on India's faith in US military links. Ultimately India moved closer to the USSR and made efforts to develop indigenous defense production. This situation reached the peak in 1968 when, instead of providing security guarantees, the West

⁴⁴*Times of India*, New Delhi, October 23, 1996

⁴⁵Kanti Bajpai, "Abstaining: The Nonnuclear Option," p.27

began to pressure the Indian government to join the NPT. India had refused to join the Treaty because of its discriminatory nature, and also because it did not consider security threats to countries such as India. Ultimately India started reprocessing plutonium in the 1960s,⁴⁶ and conducted its first nuclear test in 1974. It maintained an opaque nuclear status for twenty-four years until 1998 when it carried out a series of nuclear tests and openly went nuclear.

Although India required a deterrent capability based on weapons of mass destruction to address possible Chinese threats, it could not rely on other weapons of mass destruction such as chemical or biological weapons. This is because China was already a nuclear weapon state in the Sino-Indian dyadic PC by 1964 and because nuclear weapons are best as deterrents, other weapons of mass destruction became unimportant in the Sino-Indian PC. Thus India has been one of the early signatories of the Chemical Weapons Convention (CWC), ratified it in 1996, and even took a place as chair on the CWC's executive council.⁴⁷ India addressed China's nuclear threat by acquiring nuclear weapons and Pakistan followed suit. Due to this triangular relationship, these two new nuclear states did not make use of chemical or biological weapons to deter their adversaries in the PC settings.

The Indian policy makers and the academic community were once again focused on the issue of territorial problem in their CTBT debates. As J. N. Dixit

⁴⁶Ashok Kapur, "Nuclear Development of India and Pakistan," in Jorn Gjelstad and Olav Njolstad, eds., *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996, p.146

⁴⁷"India's Ratification of Chemical Weapons Convention," *Deccan Herald*, June 30, 1997

stated in 1996, “our overall objective should be to structure a practical and realistic relationship with China, a relationship which will address the nagging boundary issue.”⁴⁸ Although most scholars believed that a realistic and practical resolution was needed, the issue is not about the kind of resolution required, but about unresolved border issue that is associated with nuclear weapons need in India for deterrent purposes. India proposed disarmament to address the China factor. It also could not forswear nuclear testing because of its nuclear neighbor, China. India’s refusal to join the CTBT demonstrate how seriously the China factor has been perceived in India. Scholarly references to the border dispute and the consistent need for deterrence suggests the significance of the territorial dispute, war likelihood and the nuclear weapons requirement.

It is quite surprising that the nuclear powers did not comprehend India’s need for a deterrent capability vis-à-vis China when, after many years, even the Chinese seem to understand its nuclear requirement from a deterrence perspective. Recently, the Chinese participants from various think tanks at the Shanghai dialogue empathized with India’s security concerns over China. In a paper, a Chinese representative stated that as long as India does not have a credible nuclear umbrella against China’s nuclear might, it can not be expected to give up its nuclear option.⁴⁹ This may not be the official Chinese position, but the Chinese scholars do acknowledge India’s deterrent needs.

⁴⁸*The Indian Express*, New Delhi, November 12, 1996

⁴⁹M.J.Vinod, “Nuclear Proliferation in South Asia,” p.1616

The 1962 war enabled India to learn how indifferent superpowers could be when India needed security. It could not rule out the possibility that in any future Sino-Indian war India would not be helped by either of the superpowers again for some different reasons. As Subrahmanyam states that “in some future confrontation between India and China, the Soviet Union may not for a variety of reasons render deterrence assistance, and the United States may either be unwilling to help, or may side with Peking. Such scenarios are not entirely fanciful ones for a nuclear-unarmed India.”⁵⁰ Given the high probability of war between adversaries in the territorial conflicts and the usefulness of nuclear weapons as deterrent instruments, Subrahmanyam questions, “might it not be that mutual possession of nuclear weapons across a hostile border induces peaceful settlement and dampens the possibility of war?”⁵¹ The Indian strategic thinkers cannot forget the peace which prevailed in the Soviet/American conflict because of nuclear weapons possessed by both states, nor can they stop thinking that a China-India accommodation may result from India possessing nuclear weapons.⁵²

Similarly, Jasjit Singh stated that the Indians needed to feel safe from China and that the territorial dispute with China, a nuclear state since 1964, compelled India to have a nuclear weapons force.⁵³ Savita Pande has argued that a security threat need not mean that states would go to war immediately. However, since

⁵⁰K.Subrahmanyam, “India: Keeping the Option Open,” p.118

⁵¹Ibid., p.123

⁵²Ibid.

⁵³Jasjit Singh, interview, New Delhi, January 29, 1997

China has been a major player and a dispute over the border exists, India was forced to go for a nuclear weapons capability.⁵⁴ She added that “China has 324 strategic weapons and Chinese missiles are stationed in Tibet. Out of 324, only 2 are meant for the US. India has to have a defense preparedness.”⁵⁵ Arkin and Fieldhouse’s study reported that the major Chinese missile deployments area was located in Tibet near the border with northeastern India.⁵⁶ It was also believed that China could challenge even US air supremacy in the Asian region. “The decision to acquire the latest generation long-range multi-role Sukhoi fighter aircraft-- estimates of numbers to be acquired/built are as high as 300--also pose significantly higher levels of threat to India, as it would render sensitive installations in India highly vulnerable to Chinese strikes and increase Beijing’s deep penetration strike capability.”⁵⁷ Thus, Ashok Kapur stated that in the nuclear/missile sphere, the India-China conflict incrementally nuclearized India in the form of development of an Indian nuclear weapons option, and by India’s refusal to participate in the NPT-- including IAEA’s full-scope safeguards-- as well as in the Missile Technology Control Regime.⁵⁸

⁵⁴Savita Pande, interview, New Delhi, January 29, 1997

⁵⁵Ibid.

⁵⁶William M. Arkin and Richard W. Fieldhouse, *Nuclear Battlefields: Global Links in the Arms Race*, Cambridge: Mass, Ballinger, 1985, p.55

⁵⁷*The Asian Age*, New Delhi, September 16, 1996, p.75

⁵⁸Ashok Kapur, “Nuclear Development of India and Pakistan,” p.146

If China was India's primary threat, why did it not go nuclear ten years before? In other words, why did India first test in 1974 and not 1964-65? There are two major explanations. The first is that India was unprepared for both a border war with China in 1962 and its emergence as a nuclear neighbor in 1964. India's nuclear program had no weapons objective at that time and so a nuclear test was out of the question. Secondly, after 1964, India expected the other nuclear powers to do something about the threat to India posed by Chinese nuclear weapons acquisition and it sought nuclear guarantees from the world's most powerful nations, the US, the USSR and Britain. The NPT's discriminatory nature also surprised India because it did not address security concerns of non-nuclear states involved in protracted conflicts with nuclear states. India had to address its security threats by concentrating on self-reliance in its nuclear weapons program. This also explains why it was during Shastri's period that India first took an ambiguous nuclear position, although the Pokhran I test was conducted during Indira Gandhi's rule. Soon after the Chinese explosion, Indian Prime Minister, Lal Bahadur Shastri, initiated the policy of ambiguity by declaring that India had the capability to make nuclear weapons but the government was not keen to exercise this option. At the same time, it had kept its option open to conduct a peaceful nuclear explosion.⁵⁹ Although it was reported in 1964 that Homi Bhabha announced India could make a bomb in 18 months,⁶⁰ India began diverting its nuclear program towards the weapons capability program after 1964. As K.

⁵⁹Ashok Kapur, *India's Nuclear Option*, New York: Praeger, 1976, p.134

⁶⁰*Times of India*, October 17, 1964, p.7

Subrahmanyam states, "October 16 1964 was one of the defining moments in the history of Indian nuclear policy. Up to that date India only thought of developing a capability which could be converted into a nuclear weapon option, if it became necessary. On that day when China became a nuclear weapon power, it became imperative for Indian policy-makers to give serious consideration for the country acquiring nuclear weapons."⁶¹

In 1964 the Indian nuclear scientists were involved in building heavy water plants in three reactors, Apsara, Cirus and Zerlina. Plutonium, the core of an atomic bomb, could only be produced in the Cirus reactor. But even Cirus was not capable of producing large amounts of plutonium, so a larger plant was only completed in 1968. The Poornima project, a zero energy fast reactor that physicists working to conduct nuclear tests require for theoretical calculations, was approved by the Indian government in 1968. The reactor was almost completed in 1970, although it was commissioned in May 1972.⁶² Therefore, in May 1972, the then Defense Minister Jagjivan Ram, informed the Lok Sabha that the Atomic Energy Commission was involved in studying the technology necessary to conduct underground nuclear explosions for peaceful purposes.⁶³ This indicates that India's nuclear weapons program started after the Chinese nuclear tests, but it took

⁶¹K. Subrahmanyam, "India's Nuclear Policy--1964-98," p.26

⁶²For more information on India's nuclear test preparations between 1966-1974 see Shyam Bhatia, *India's Nuclear Bomb*, New Delhi: Vikas Publishing House Pvt. Ltd., 1979, pp.132-145

⁶³*Foreign Affairs Report*, New Delhi, May 1967, vol.13, no.5, pp.56-59

several years for India to get to the stage where it was possible to conduct an underground nuclear test.

A Dyadic Conflict between Asymmetric Nuclear States

The protracted conflict between India and China is unique because it placed India in a situation where an extra-regional power became a rival state. Receiving military assistance from another country in the region was not possible. Unable to achieve nuclear guarantees, India, the weaker country in this dyadic conflict, embarked on its own nuclear weapons option. It could not depend on other states' nuclear capabilities, nor could it share responsibilities to deter the adversary in a unique dyadic conflict. It was thus stated, "India alone shall have to shoulder the responsibility and the burden of defending herself."⁶⁴

It is also believed that India considers India and China to be competing powers with their conflict as structurally determined, even though China is an extra-regional power. India must have the military power to match China's capability. According to K.K. Nayyar, Chinese real intentions as far as India is concerned have been projected by the relations it has maintained with Pakistan through missile transfers.⁶⁵ In 1997, he argued that to address the Chinese threat in a more definite manner India needed to openly go nuclear.⁶⁶ One cannot deny the

⁶⁴Lokshabha, Debates, India, series 3, vol.35, no.6, p.1300

⁶⁵K.K.Nayyar, interview, New Delhi, January 31, 1997

⁶⁶Ibid.

fact that China has continued to maintain friendly relations with Pakistan and that friendliness developed into serious military-security relations after 1971. Even the United States acknowledged the situation. Ashok Kapur argues that the second cold war between China and America ended in 1971 when the US realized that “American geo-politics in the sub-continent under the direction of Richard Nixon and Mr. Henry Kissinger required Chinese co-option in the defense of Pakistan and in the containment of India.”⁶⁷ Others have argued that “the US indeed joined with China in unleashing coercive diplomacy against India in 1971.”⁶⁸ From 1971 to date Chinese-Pakistani cooperation in the military field has prompted debates among the academic community and policy-makers. Pakistan has continued to receive technological support from China. In 1996 the US intelligence and media reported:

Sino-Pakistan collusion has by now progressed well beyond what existed even in 1995--when disclosures of Chinese supply of M-11 missiles to Pakistan, shipment of missile components, sale of 5,000 ring magnets, assistance to build a ‘boosted bomb’ that uses Tritium to magnify the blast of old fashioned atomic warheads, and of miniaturized warheads had rocked the subcontinent.⁶⁹

⁶⁷*The Hindu*, New Delhi, September 24, 1996

⁶⁸*The Pioneer*, New Delhi, November 5, 1996

⁶⁹*The Asian Age*, New Delhi, September 16, 1996, p.74

It is also believed that China assisted Pakistan in building a secret medium-range missile factory near Rawalpindi.⁷⁰ The close collaboration that still exists between China and Pakistan has a direct bearing on India's security environment, and highlights the "new strategic dimensions of the threat from China."⁷¹ One cannot separate the two nuclear configurations--India-Pakistan and India-China and it is impossible to address the security concern of South Asia without fully understanding India's concerns over China. As Stephen P. Cohen argues, keeping China out of the South Asian problem means dealing with "a region-and-a-half."⁷² Some Indians have argued that the Chinese nuclear arsenal still provide the major impetus for India to have a nuclear deterrent, and "Pakistan's nuclear activities are a source of concern."⁷³

The Sino-Indian border problem and the China-Pakistan collaboration are very much related. India's concern over its twin protracted conflicts becomes more understandable. The armed confrontation between India and China in Jammu and Kashmir (J&K) over the delineation of boundaries is part of the Kashmir problem. Major General Afsir Karim argues that J&K's strategic importance must be understood in the context of security perceptions of India, Pakistan and China. He states:

⁷⁰Ibid.

⁷¹Ibid.

⁷²Stephen P.Cohen, ed., *Proliferation in South Asia: The Prospects of Arms Control*, Boulder: West View Press, 1991, p.14

⁷³M.J. Vinod, "Nuclear Proliferation in South Asia," p.1613

China's interest in Aksai Chin is mainly due to the importance of the surface route linking Xinjiang with Tibet.... Chinese claims on Aksai Chin, Sino-Pak Border Agreement of 1963 and the joint construction of the Karakoram highway through Northwestern Ladakh give a clear indication of China's abiding interest in maintaining a favorable strategic balance in the region...Pakistan's strategic alliance with China remains intact even after the Cold War... The Chinese claim line in Aksai Chin and South Eastern Ladakh and the provisional acquisition of large tracts in Shaksgam, after agreement with Pakistan in 1963, are without doubt measures to provide depth to the strategic Xinjiang-Tibet region. Regardless of the debates on the boundary question China is unlikely to vacate Aksai Chin and therefore it is a permanent stake in J&K.⁷⁴

The Sino-Indian conflict is also one where India associates security with prestige and status. It has a nuclear weapon state as its adversary, so there is a natural inclination to attempt to reduce the gap in military terms through the possession of nuclear weapons. The motivation to obtain military-security with deterrent capability is there, as discussed above. There is also a prestige motivation in the minds of the Indian decision-makers because it is now dealing with a nuclear weapon power with a different kind of status and power based on its acquisition of nuclear weapons. The General Secretary of the Congress Parliamentary Party, Bibhuti Mishra, indicated that India's prestige fell after the Chinese attack in 1962 and dropped further after the Chinese explosion.⁷⁵ As a consequence, enhancing

⁷⁴Afsir Karim, "The J&K Problem:An Interpretative Study," *Forum for Strategic Studies*, Paper 2, February, 1996, p.11

India's prestige became important because it was dealing with a nuclear-armed adversary. Although security is a central consideration, prestige and status also influence nuclear weapons acquisition in this context. Therefore, Kapur contends that in the realm of the India-China conflict, "security and prestige considerations have motivated India's behavior."⁷⁶

China continues to enhance its nuclear weapon capabilities, and it has identified Japan and India as long-term threats.⁷⁷ On the diplomatic front, China and India are working to improve their bilateral relations--including confidence-building measures along their borders. However, the following concerns persist in India: 1) China's military modernization program and its nuclear superiority over India will remain predominant in the Indian psyche, pushing it to achieve parity and to establish a mutual deterrence relationship. China's nuclear armed missiles can reach any part of India. 2) China- Pakistan nuclear collusion and the possibility of a collective nuclear threat by the two PC adversaries against India. 3) China's hostile response to India's open declaration of nuclear weapons status in 1998. China opposed any lifting of sanctions against India. 4) China's power projection in Spratly Islands and arms supplies to Myanmar and Nepal. 5) China's desire to create a Rapid Deployment Force and acquire naval bases in the Pacific and Indian

⁷⁵Peter R. Lavoy, "Nuclear Deterrence and the New Nuclear States: Speculations on the Sources of Nuclear Doctrines in India and Pakistan," Paper presented at the conference on Nuclear Weapons in a Transformed World, McGill University, Montreal, November 4, 1995, p.38

⁷⁶Ashok Kapur, "Nuclear Development of India and Pakistan," p.146

⁷⁷Premnath, "Future of the Strategy of Nuclear Deterrence," *Trishul*, vol.9, no.1, autumn, 1996, p.98

Oceans, along with the reinforcement of its nuclear force already deployed in Tibet and in Xinjiang province.⁷⁸

It seems evident that India was concerned about nuclear asymmetry before its 1998 nuclear tests. Nuclear asymmetry cannot be tolerated because “it will encourage obduracy over the border issue. Should instabilities in Tibet, and other areas of Southern China, tempt the Chinese leadership to “teach” India a lesson (as a way of rallying support domestically), this temptation will be reinforced by nuclear superiority. And China’s nuclear confidence will enable it to enlarge its spheres of influence to India’s detriment.”⁷⁹ India also tries to enhance its status or bargaining position with nuclear weapons vis-à-vis China in Asia. An opaque status is different from an open nuclear posture, but India felt that its nuclear ambiguity served its security purpose and provided the required status in connection with China.

India believed that it had some type of deterrence with China, but it did not rule out the possibility of future nuclear testing in the years before 1998. Although objection to the CTBT has not been a function of ambiguity, in 1996 India’s former Prime Minister, I.K. Gujral, stated with reference to China, that India would not compromise its nuclear option because “a major nuclear power” borders India which “could threaten the country’s security today or tomorrow.”⁸⁰ The first argument India used after testing its nuclear weapons in May 1998 was its need to

⁷⁸Ibid., pp.99-100

⁷⁹Kanti Bajpai, “Abstaining: The Nonnuclear Option,” p.35

⁸⁰*The Asian Age*, New Delhi, September 8, 1996, p.5

address the Chinese nuclear threat. Indian cabinet-level statements also justified the tests on the basis of a nuclear threat from China. Defense Minister George Fernandes declared China to be the major threat to Indian security and the Indian Prime Minister, A.B. Vajpayee, in a letter to the US President Bill Clinton, dated the day of the Pokhran II test, referred to Chinese security threats to India.⁸¹ After many years India now has a credible nuclear deterrent capability against China, which it probably should have had many years ago.

Sino-Indian Nuclear Deterrence

India's opaque nuclear status and the Chinese acquisition of nuclear weapons created an asymmetrical situation in the India-China PC until 1998. The asymmetry was exacerbated because India conducted only one nuclear test--a peaceful nuclear one--while by 1996, China had conducted 45 nuclear tests. Since deterrence needs credibility, scholars and policy-makers believed that India should conduct at least a few thermonuclear tests. As K. Subrahmanyam stated in 1996,

Since one of the factors in our security calculations is China--in fact it is the major factor and has thermonuclear weapons---this country, it is argued should conduct a few thermonuclear tests in order to have a credible deterrent against China.⁸²

⁸¹*The Hindu*, August 5, 1998

⁸²*The Times of India*, New Delhi, November 11, 1996, p.5

An effective deterrence between China and India required India to openly declare its possession of nuclear weapons. This is the general understanding in the Western academic community, but the Indians have reacted positively to the deterrent relationship that existed before 1998 between China, a nuclear weapon state, and India, a nuclear weapon-capable state. It is not that some are optimistic about this deterrent relationship while others are not, but that India made logical calculations to assess the situation. The concept of minimum deterrence has been applied to the Sino-Indian nuclear context. The Indian decision-makers felt that communication of credibility, reliability of weapons, and a willingness to use the weapons have all been done via government statements, the press, and CIA press releases as was done in the India-Pakistan PC context. It was a workable deterrence, even though a declared possession of weapons capability would have improved the situation. Confidence-building steps have also been taken recently and have been a positive aspect in this unique deterrent relationship.

India never intended to match the superpowers in numbers and types of nuclear weapons because it has neither the resources, nor the need. From the beginning, India decided that it “will require weapons sufficient merely to raise the level of uncertainty for potential aggressors somewhat in order to induce adequate deterrence.”⁸³ Jasjit Singh argued that India did not need 500-5000 weapons to be on par with China. If nuclear weapons are for political use, which he believed, then a minimum deterrent capability is required. He believed in retaliatory capabilities

⁸³K.Subrahmanyam, “India: Keeping the Option Open,” p.144

and area targets, and stated that China is very developed and very dependent on Shanghai.⁸⁴ So, a retaliatory capability to destroy Shanghai was what India needed. In the context of the US-Soviet nuclear weapons and deterrence, K. Subrahmanyam argued that in 1961 the United States considered to strike first with its massive stockpile of 5000 weapons against the Soviet arsenal of only 300 weapons for a total destruction. The joint chiefs of staff were not sure that there would be no retaliatory strikes and that was enough to deter the US from striking--according to the US Secretary of State Robert MacNamara.⁸⁵

Deterrent weapons need not match in terms of numbers or qualitative developments. In the China-India PC, it is argued that "there is no need to match China--weapon for weapon either in quantity or quality--in order to deter it. If the Chinese can be persuaded to believe that Chengdu and Quangzu are vulnerable to kiloton bomb strikes, that is deterrence enough."⁸⁶ The most important point is to ensure that in a second strike India can cause unacceptable damage to China, which was possible before the recent tests, and China was aware of that. The point is about destruction and retaliation--how much can an enemy take? As Savita Pande stated in 1997,

The original deterrence theory works in this region. Missile capability and bomb capability are both here. Minimum deterrence should work with China. One bomb is unacceptable to the Chinese or even the Indians. A dozen

⁸⁴Jasjit Singh, interview, New Delhi, January 29, 1997

⁸⁵*The Times of India*, November 8, 1996

⁸⁶*Ibid.*

would help keep a stable deterrent relationship in the region.⁸⁷

In the India-China protracted conflict, minimum deterrence would suffice for India, meaning that a second-strike capacity against a handful of cities and causing unacceptable damage after accepting a first strike exists. While India maintained opaque status, General Sundarji argued that as long as India had a second-strike option against a handful of the aggressor's cities after it had attacked India first, there was no need for India to conduct further tests. He stated in 1996:

For minimum nuclear deterrence, that relies on a second-strike against city targets, one can accept a very low availability-cum-reliability quotient say even of 33.3 per cent. If an Indian second strike can only attack say, two cities instead of the planned five in Pakistan, and four out of the ten in China, and only one of the three warheads assigned to each actually detonates on these cities, I would suggest that the damage is horrendous enough to deter the enemy⁸⁸.

He further argued that as long as India possessed a credible second-strike capability, there was no need to test.⁸⁹ The most important concept is what kinds of weapons are expected to deter the adversary.

With regard to nuclear deterrence, and specifically in the China-India case, in 1996 Raja Ramanna stated that, "the use of plutonium bomb is sufficient enough

⁸⁷Savita Pande, interview, New Delhi, January 29, 1997

⁸⁸*The Hindu*, New Delhi, September 16, 1996

⁸⁹*Ibid.*

to act as a deterrent and we have that capability.”⁹⁰ Nuclear weapons serve two purposes --for deterrence and for war. Nuclear weapons for deterrence are what India wanted, so only a stockpile of plutonium weapons was adequate. India did not need to carry out more nuclear tests for plutonium weapons, nor were tests of nuclear warheads in missiles required.⁹¹ Since India decided that nuclear weapons were needed for deterrence, first generation plutonium bombs were enough and India had access to these. Only in a nuclear war would India need an arsenal of weapons, “miniaturized to be used in battlefields.”⁹²

With respect to delivery systems, Raja Mohan maintained that Agni missiles are meant to be used as a deterrent capability against China.⁹³ Jasjit Singh has argued that ballistic missile capability development and induction into operational service is critical to India’s security. This is reinforced by the fact that “such missiles have been operationally deployed by hundred in China which is also pursuing a vigorous program of deploying newly developed accurate and mobile missiles of varying ranges with improved nuclear warheads.”⁹⁴ Bilateral relations between China and India could only be improved by deploying Agni missiles. To penetrate deep into the Chinese territory the Agni missile was the only solution.⁹⁵

⁹⁰*The Times of India*, New Delhi, November 8, 1996

⁹¹*Ibid.*

⁹²*Ibid.*

⁹³C. Raja Mohan, interview, New Delhi, January 31, 1997

⁹⁴*The Indian Express*, New Delhi, December 12, 1996

⁹⁵*The Hindu*, New Delhi, January 2, 1996

An examination of the Indian policies and related statements reveals that the Agni, which reaches most part of Chinese territory, has been designed with China in mind.⁹⁶ Decisions to design and produce a missile system based on Agni technologies were made with the threat perception and regional security environment considerations.

As far as the Chinese understanding of Indian nuclear weapons capability is concerned, it is important to consider that the Indian case is not like Pakistan. India has had a proven capability and the whole world knew about its test in 1974 and that the nuclear know-how was there. K.K. Nayyar stated that India had a massive nuclear industrial base, and based on the peaceful nuclear explosion of 1974, a proven weapons capability.⁹⁷ China was aware of the near-weaponization of India and its ability to deploy nuclear weapons on short notice.

With regard to confidence-building measures, a high point in China-India relations was Prime Minister Rajiv Gandhi's visit to Beijing in December 1988. The visit thawed the China-India relationship and there were a host of subsequent visits and interactions at different levels over the next few years.⁹⁸ Progress was made in 1989 when both India and China agreed to create a favorable climate and condition for a reasonable settlement of the border; and a mutually acceptable security through peaceful and friendly cooperation.⁹⁹ K. Subrahmanyam's

⁹⁶*The Pioneer*, January 17, 1997

⁹⁷K.K.Nayyar, "India's Security, Economy and Diplomacy," p.103

⁹⁸D.Banarjee, "India China Relations and Chinese Military Capability," p.66

⁹⁹*The Times of India*, New Delhi, January 9, 1989

argument that the possession of nuclear weapons might bring about a settlement on the border issue, has happened in practice. In 1989 a Joint Working Group was set up at the Vice Ministerial level and met for the first time in Beijing. Modalities for future consultation were agreed upon, and it was also resolved “not to dwell on past differences but to look to the future in a practical, workmanlike and realistic manner in order to reach a fair, reasonable and mutually acceptable settlement of the boundary question. Peace and tranquillity should be maintained. Need for confidence-building was recognized.”¹⁰⁰ The Chinese President Jiang Zhemín’s visit to India in 1996 was a remarkable achievement in China-India relations. No Chinese head of state visited India after 1962, and from that perspective this visit can be seen as the beginning of direct communication between the leaders of the two hostile powers in Asia. This would not have happened if strategic relations between the two countries had not improved over the years.

There was a major confidence-building measure when in November 1996, China and India signed several historic agreements committing to each other to not cross the Line of Actual Control (LAC), reduce troops and armament presently deployed to man the India-China border, and “to seek a fair, reasonable and mutually acceptable settlement of the boundary question.”¹⁰¹ This agreement, the “confidence-building measures in the military field along LAC in India-China border areas,” is a continuation of the agreement to maintain peace and tranquillity along the LAC in India-China border areas which was signed in September 1993

¹⁰⁰Ministry of External Affairs Annual Report, 1989, p.18

¹⁰¹*The Statesman*, New Delhi, November 30, 1996

when the Indian Prime Minister, Narasimha Rao, visited China.¹⁰² The Confidence-Building Measures enumerate the desire of the two countries to have peaceful borders by reducing troop deployment and armament.¹⁰³

Thus, the China-India protracted conflict is a unique case which demonstrates long-term stability between asymmetric nuclear weapon states. Now that India has tested its nuclear weapons, the deterrent relationship between China and India will be more credible. As far as strategy and doctrine are concerned, as long as India does not attempt to clarify them, the non-traditional nuclear deterrence should continue keeping peace and stability in the overall Sino-Indian protracted conflict.

SUMMARY

This chapter examined Indian nuclear weapons acquisition in the context of the Sino-Indian protracted conflict. Security threats from China have been important to the Indian nuclear decisions, especially after the Sino-Indian war and the Chinese nuclear explosion. India's concern about the higher-than-normal war-probability in this territorial conflict and its need for a deterrent capability for war-avoidance was evident. The unavailability of a nuclear umbrella drove India to be self-reliant in its nuclear deterrent requirements. The dyadic nature of the conflict, geographical proximity, and an extra-regional nuclear power as an adversary made

¹⁰²Ibid.

¹⁰³Ibid.

India more prone to nuclear weapons acquisition. Although India's search for a nuclear deterrent capability has been the primary motivation to go nuclear, because its adversary is a nuclear weapon state, it had also been concerned about its status, and to some extent, prestige, in the context of this conflict. Finally, deterrence between then opaque nuclear India and nuclear China was maintained in this conflict situation, and several confidence-building measures have been taken to ensure peace and stability.

PART III: CASE STUDIES

MIDDLE EAST : THE ARAB ISRAELI PROTRACTED CONFLICT

The Middle East is a multi-power region with several regional powers, including Israel, Egypt, Iran, Iraq, Syria and Jordan. There are two major protracted conflicts in this region which currently remain unresolved. The first is the Arab-Israeli protracted conflict, which began in 1947. The conflict had its roots in the Arab rejection of the Jewish state of Israel and the Jewish demand for statehood. Between 1947 and 1993, this conflict generated 25 international crises, and the first crisis had six direct participants: Israel, Iraq, Egypt, Syria, Jordan and Lebanon.¹ Although Iran was not a direct party to the Arab-Israeli conflict at the beginning, over time it became actively involved in repudiating the state of Israel.

The second protracted conflict in the region is between Iran and Iraq which began in 1959. Between 1959 and 1988 this conflict experienced seven international crises, with five during the 1980-88 war.² Although the conflict between these two regional powers has multiple roots, including influence in the Islamic world, there are two territorial disputes: one over control of the Shatt-al-

¹Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997, pp.268-269

²Ibid., p.300

Arab waterway in the Gulf and key strategic points along their long land border; and the other over their respective parts of Kurdistan.³

Both the Arab-Israeli and the Iran-Iraq conflicts are territorial protracted conflicts and, except for Israel, the key countries in the two conflicts have been potential nuclear weapons possessors. Israel is an opaque nuclear weapon state, and the Arab countries have demonstrated strong interest to acquire nuclear weapons. The following chapters investigate the motivations for acquiring nuclear weapons by the Middle Eastern states of Israel, Iraq, Iran, Syria and Egypt. Except for Iran, all the states have been involved in the Arab-Israeli PC from the beginning. Iran is included not only because it is a major Middle Eastern country involved in the Arab-Israeli PC, but also because it is involved in another protracted conflict with Iraq. A comprehensive understanding of Iraqi and Iranian nuclear weapons propensities is impossible without taking into account the two protracted conflicts they are involved in.

In the following chapter Israeli nuclear weapons acquisition is discussed. It is followed by a chapter on the Arab states' motivations for going nuclear. Finally, the non-traditional nuclear deterrence between the Arabs states and Israel is discussed in the context of the Arab-Israeli protracted conflict.

³Ibid., p. 301

CHAPTER VIII

ISRAEL'S OPAQUE NUCLEAR WEAPONS

This chapter analyzes Israel's motivations to acquire nuclear weapons from the systemic, state and individual levels of analysis. This is followed by an analysis of the relationship between war-probability, the need for a nuclear deterrent capability, and its nuclear weapons acquisition. The non-traditional nuclear deterrence that Israel has pursued is also examined.

Israel, one of the principal countries in the Middle East, has maintained an opaque nuclear posture since the late 1960s. Israel's possession of nuclear weapons capability has been public knowledge for about three decades, yet the country has not overtly gone nuclear. It has not signed the NPT, although it did sign the CTBT in 1996¹ and has clearly refrained from renouncing its nuclear weapons option. Israeli leaders have consistently argued that nuclear weapons are important for the country's security because the state is surrounded by rival Arab countries. It is also a country which has been conventionally inferior--in quantitative terms--as compared to its Arab neighbors. It, however, has had an

¹ Rodney W. Jones et.al., *Tracking Nuclear Proliferation*, Washington D.C.: Brookings Institution Press, 1998, p.208. The authors observe that Israel has shown its support for arms control by signing the CTBT and by joining the Chemical Weapons Convention (CWC). They, however, report that Israel could have access to information regarding US tests from the 1950s and 1960s. They mention the unconfirmed nuclear tests conducted by either Israel or South Africa on September 22, 1979 over the South Atlantic and detected by an American Vela satellite. For more information on this see, Frank Barnaby, *The Invisible Bomb*, London: I.B. Tauris & Co. Ltd., 1989, p. 14

extremely good relationship with the United States during and after the cold war. Despite its cordial relationship with the US, Israel has acquired opaque nuclear weapons. Estimates of Israel's nuclear capabilities have been difficult to confirm. Some estimates are based on an Israeli nuclear technician, Mordechai Vanunu's, testimony. He revealed in 1986 that Israel could have at least 200 nuclear devices.² More recently, Seymour Hersh reported that Israel's nuclear capability was far more advanced than what Vanunu had revealed, and that the country possessed not only hundreds of low-yield enhanced radiation-type warheads, but thermonuclear weapons as well.³ Whatever the number or the type--although they are important to security calculations--that Israel has nuclear weapons capability is obvious. Its nuclear capability remains beyond any shadow of doubt, but what led this small country to a nuclear path is still somewhat unclear. It is pertinent to understand why Israel acquired nuclear weapons. For a better understanding of Israel's nuclear weapons acquisition, the motivations from all three levels of analysis need to be presented.

INDIVIDUAL-LEVEL MOTIVATIONS

a) Attitudes and Beliefs of Leaders

Israel's founding father and the country's first Prime Minister, David Ben Gurion, wanted his country to develop nuclear weapons to have "a qualitative

² "Revealed: The Secrets of Israel's Nuclear Arsenal," *Sunday Times*, London, October 5, 1986

³Seymour M. Hersh, *The Samson Option*, New York: Random House, 1991, pp. 291, 312, 319

edge over its quantitatively superior Arab adversaries.”⁴ His intention was to build a nuclear bomb whose power would dwarf all others.⁵ Did Ben Gurion motivate Israel to go nuclear? Did the nuclear weapons choice stop after Ben Gurion or did the policy change? Avner Cohen observes that even Ben Gurion’s opponents supported the fundamental proposition that Israel needed a basic nuclear infrastructure.⁶ There was no change in Israeli nuclear policy after Ben Gurion’s departure. Levi Eshkol replaced Ben Gurion as Prime Minister in 1963 and he, along with his Chief of Staff Yitzhak Rabin, were opposed to going ahead with an Israeli bomb⁷. That did not stop Israel from moving on with its nuclear weapons program. Moreover, Vanunu’s information and its interpretation by Barnaby and Theodore Taylor--the US bomb designer consulted for the Vanunu information by the *London Sunday Times*--reveal that Israel’s nuclear option was expanded by Menachem Begin in 1977. That does not necessarily mean that it was this leader’s nuclear decision or enthusiasm that made Israel go for the bomb. From what is known, the Labor Party leader Shimon Peres wanted to follow a doctrine of a “nuclear balance of terror” based on the assumption that the Arabs would acquire

⁴Shai Feldman, “Israel,” in Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation after the Cold War*, Washington D.C.: The Woodrow Wilson Center Press, 1994, p. 67

⁵M.G. Leith, *Israel, Nuclear Weapons and the Middle East*, Peace Research, vol. 25, no.4, November 1993, p. 49

⁶Avner Cohen, “Patterns of Nuclear Opacity in the Middle East,” *Aurora Papers* 16, Centre for Global Security, 1992, p. 17

⁷Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, London: Brassey’s, 1991, pp. 121-122.

a bomb of their own someday. Peres was the first to mention the nuclear option in public.⁸ Yitzhak Rabin also shared the same position on the nuclear issue. After the Likud Party leader Benjamin Netanyahu came to power following the assassination of Rabin in 1995, his policy on nuclear weapons changed nothing. Although he was against the Middle East peace process during the initial years of his rule, like his predecessors, he did not openly go nuclear. Therefore, other leaders wanted Israel to keep nuclear weapons opaquely, and not to sign the NPT. This means that all leaders, irrespective of their political affiliations or their charismatic ambitions, opted to keep Israel's nuclear weapons acquisition opaque right from beginning when Israel began to pursue an undeclared nuclear status.

Various Israeli leaders have had individual beliefs about the Arab-Israeli rivalry and to what extent Israel has been vulnerable to Arab strikes. Even though some leaders took conciliatory measures with their Arab neighbors--namely Egypt--as far as nuclear weapons acquisition was concerned, all have had the same goal. They could not and would not give up the nuclear weapons option under any circumstance. In other words, some leaders' policies may have taken Israel a step forward towards nuclear weapons development,⁹ but it may not have been a vital motivation for Israel to go nuclear. All the leaders have, by and large, been

⁸ Shlomo Aronson, *The Politics and Strategy of Nuclear Weapons in the Middle East*, New York: State University of New York Press, 1992, p.176

⁹Ben Gurion, Moshe Dayan and Shimon Peres have been reported to have been the strongest supporters of an Israeli secret nuclear weapons program. It was further reported that Dayan and Peres believed that only nuclear weapons could be the ultimate deterrent to any Arab threat to destroy Israel. See Leonard Spector, *The*

determined to maintain Israel's nuclear opacity, even though their characteristics and personalities have varied widely. Israeli leaders as diverse as Golda Meir, Shimon Peres and Menachem Begin, did not change Eshkol's declaratory stance.¹⁰ Where Israel's security was at stake, no leader wanted Israel to vacillate about its nuclear capability. This was more apparent when, after having signed the Camp David Accord with Egypt, a rival state with whom Israel fought all of its wars in the Middle Eastern region, Israel did not even discuss the possibility of forswearing its nuclear weapons. Israeli leaders across the political spectrum have preferred to maintain Israel's nuclear weapons program opaquely.

STATE-LEVEL MOTIVATIONS

a) Bureaucratic Politics

It is argued that Israel's defense military establishment has always had considerable influence on nuclear decision-making. However, the relationship between the defense-military establishment and political leadership has depended on the attitudes of the political leaders. It depends mostly on whether or not a ruler is weak. If the leader's understanding of strategic matters is limited or shallow, the defense-military establishment becomes more powerful in regard to such

Undeclared Bomb: The Spread of Nuclear Weapons 1987-1988, Cambridge: Ballinger, 1988, pp. 165-187

¹⁰Avner Cohen, "Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future," p. 25

decisions.¹¹ When Israel was developing nuclear weapons under Ben Gurion's rule, he had a strong personality and his name was associated with the country's nuclear weapons program. He not only understood the strategic affairs of Israel, but also strongly intended that Israel acquire nuclear weapons. Successive governments followed this initial decision, and the military had a limited role in nuclear decision-making because of powerful political leaders.

The military is generally not interested to having defense expenditures diverted from usable conventional expenditures to non-usable nuclear expenditures. Yair Evron states: "It is quite possible that prior to the adoption of a nuclear doctrine, the majority of the military establishment will be quite reserved in their support for endorsement of a nuclear doctrine. This is also a natural tendency of a conventional army."¹² In other words, the military in Israel, as in most countries, has a tendency to acquire usable weapons and which will not involve huge unnecessary expenditures. A nuclear Israel was perhaps not what the military wanted because otherwise the country would be a nuclear power instead of an opaque state.

b) Scientific/Technological Momentum

Scientific achievement in Israel has been extensive in the nuclear area. Israel had the ability to assemble nuclear weapons in the 1960s when China, a

¹¹Yair Evron, *Israel's Nuclear Dilemma*, Ithaca, New York: Cornell University Press, 1994, p.128

¹²Ibid.

nuclear weapon state, had just completed its own nuclear testing. It is believed that in Israel “technological momentum of the nuclear-weapons program has taken over and become unstoppable.”¹³ Ernst David Bergmann was Israel’s chairman of the Atomic Energy Commission, set up in 1952. He was an uncompromising and an effective advocate of Israel’s nuclear weapons. He was the man most directly responsible “for Israel’s status by the end of the 1960s as a nuclear weapons state.”¹⁴ There is no doubt about the scientific successes in terms of Israel’s nuclear capability, but scientists are only the capability-makers, not the decision-makers. Israel was suspected of having bombs in the basement, ready for assembly on short notice, since the late sixties, yet it has not openly gone nuclear during the past three decades. Although during the cold war years the US overlooked Israeli nuclear ambitions,¹⁵ in the post-cold war period the situation had changed. The US urged Israel to sign the NPT before it was extended indefinitely in 1995, but Israel refused to abide by US-led norms. It, however, did not consider going nuclear and then joining the NPT. Scientific preparations were there, but the decision to nuclearize was not because there was no necessity.

¹³Frank Barnaby, *The Invisible Bomb*, p.54

¹⁴Seymour M. Hersh, *The Samson Option*, p.23

¹⁵According to Seymour Hersh, all American governments have overlooked Israel’s nuclear weapons program. They have also ignored the US intelligence information that Israel had conducted a nuclear test along with South Africa on September 22, 1979. See, Seymour Hersh, *Samson Option*, p. 275

After the Vanunu revelations, it became known that Israel possesses about 200 nuclear devices¹⁶ and that it had been possible for Israel to test its weapons long ago. Although Israel may not need to test its nuclear weapons because of the knowledge it has obtained from US and French tests data, or because it is capable of performing computer simulation tests,¹⁷ scientists are generally satisfied only when demonstrated tests prove their achievements. Israel has refrained from carrying out any underground test to confirm its scientific progress. Yair Evron states, "One tangible demonstration of a nuclear capability is a nuclear test. A test may have two functions: first to give to the tester a final proof as to the effectiveness of its nuclear weapons technology, and second, to demonstrate the nuclear capability of the state. Increasingly, however, experts argue that tests are not needed anymore for the first function--the credibility of the weapons, as testing could be computer-simulated. In any case, the absence of an Israeli test adds a measure of opacity to the Israeli effort."¹⁸ Scientific momentum propels states to test nuclear weapons as the ultimate means of demonstrating scientific achievements. Israel's scientific progress with regard to nuclear weapons capability is unquestionable, but the lack of open demonstration of its nuclear capability is due to other political reasons which need to be examined.

¹⁶According to the Military Balance of 1998/99, Israel has a nuclear capability with up to 100 war-heads. See, IISS, *The Military Balance*, 1998/99, p.130

¹⁷Leonard Spector, "Nuclear Proliferation in the Middle East: The Next Chapter Begins," in Efraim Karsh, et.al., eds. *Non-Conventional Weapons Proliferation in the Middle East*, Oxford: Clarendon Press, 1993, p.153; also see, Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p.127

¹⁸Yair Evron, *Israel's Nuclear Dilemma*, 1994, p.11

c) Public Opinion

It is arguable that motivations related to the domestic attributes could also influence Israel's decision to acquire nuclear weapons. A small country compared to the Arab states, whose existence has always been at stake, Israel has had a tremendously patriotic citizenry. The Israelis have always wanted their government to take appropriate measures to address security threats. There has always been strong unity amongst the Israelis on this matter. How far, and to what extent public opinion has influenced or determined Israel's nuclear decisions is another matter.

For a democratic country, Israel has been very undemocratic about its nuclear decision-making. For decades the general public has not known where their country stands in terms of the nuclear matter—even though a vague understanding exists that there are some weapons in its possession. The Israelis know via the world news media that Israel has not signed the NPT because it cannot compromise its security. The nuclear issue is not dealt with publicly, nor is there any accountability by the government for its decisions.

The Israeli government continues to not discuss its nuclear matter in public, but has always made a ritualistic pledge not to be the first country to introduce nuclear weapons in the Middle East. Why would a democratic country adopt undemocratic means for nuclear decision? Two interrelated explanations seem reasonable. First, Israel's opaque nuclear status prohibits the country from stating clearly what the country is doing in terms of the nuclear weapons acquisition. Shai

Feldman states, "Publicly, Israel adhered to a policy of avoiding any reference to the precise state of its nuclear capacity."¹⁹ Others have also confirmed the fact that in spite of having an advanced nuclear capability, Israel has treated the nuclear activities as something that is not to be discussed in public.²⁰ It is interesting to note that to keep the Israeli public uninformed about Israel's secret nuclear program, the Dimona site, which is about 40 kilometers south of Tel Aviv, has been described as a textile factory.²¹ This does not necessarily mean that the Israeli leaders did not want to take public opinion into consideration, but that they could not do so to avoid discussing the matter publicly. Second, a general understanding prevails in Israel that the Israelis, no matter what their living conditions are, would be willing to accept their country's nuclear choice. This has to do mostly with the prolonged Arab-Israeli rivalry and the continued animosity which prevails between the two peoples. The Jewish state of Israel was created for the Jews, and when the existence of that state is uncertain, it is obvious that people want their government to take care of their security first. Where nuclear capability can provide better security than any other conventional weapons or strategy, the people support the nuclear choice. For the Israelis, national security comes before any other issue, so it has never been necessary for the governments of Israel to take public opinion into account. Thus, there has always been a domestic consensus on Israeli nuclear

¹⁹Shai Feldman, "Israel," in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, p.68

²⁰Avner Cohen, "Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future," p. 15

²¹Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p. 119

policy. Public opinion surveys conducted in Israel demonstrate wide public support for the development of Israeli nuclear capability.²²

The point to note is that public opinion was not a motivating factor in Israel's nuclear choice even though a general consensus on the matter existed. This is somewhat obvious from the fact that the political responsibility for the nuclear program was in the hands of a sub-ministerial committee headed by the Prime Minister. Nuclear matters have rarely been raised in the forum of the entire cabinet, and ultimately the decisions were made by a few officials including the Prime Minister, the Defense Minister, and some senior bureaucrats.²³ Its opaque nuclear status prohibits Israel from discussing this issue publicly, which is also why the country has not made it a democratic decision. Thus, successive Israeli governments, irrespective of their composition, have adhered to Israel's policy of avoiding any reference to the state of its nuclear capacity.

d) Economic Motivation

Economically Israel has never been very powerful, and if military power

²²Asher Arian, Ilan Talmud and Tamar Hermann, *National Security and Public Opinion in Israel*, JCSS Study No.9, Tel Aviv: Jafee Center for Strategic Studies, Tel Aviv University, 1988; Israeli public opinion polls on nuclear weapons options are also quoted in Paul Jabber, "A Nuclear Middle East: Infrastructure, Likely Military Postures and Prospects for Strategic Stability," Los Angeles: UCLA Center for Arms Control and International Security Working Paper no. 6, 1977, p.7

²³Avner Cohen, "Patterns of Nuclear Opacity in the Middle East," p. 18; According to Anthony Cordesman, Israeli nuclear weapons program was kept a secret from the general public and most of the Cabinet members. See, Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p.119

could be acquired at low cost, a country like Israel should be the first one to opt for such a policy. Since many Arab countries are economically stronger as compared to Israel, it is quite obvious that Israel would explore areas where its defense/security would be less expensive. In other words, securing the country with low cost is more important to Israel than to the Arabs. How much Israel wanted nuclear weapons for economic reasons is important in this context.

Israel had the most successful relationship with the United States during the cold war years and received strong military support from the United States. This relationship continues to be strong. It has never given up conventional military transfers from the US over the past three decades even when it has been suspected of possessing nuclear weapons. As Shai Feldman argues, "Indeed, Israel's nuclear ambiguity may have also provided a continuous incentive for US conventional arms supplies to Israel."²⁴ Although the Arabs invested heavily in conventional weapons during the 1960s, 1970s and 1980s, Israel has been no less interested in acquiring modern conventional weaponry. Its nuclear possessions did not encourage Israel to cut conventional expenditures. It is contended that in the past two decades Israel has not lowered its conventional security margin against the Arabs, and instead the ratio has improved in its favor.²⁵ Avner Cohen observes that Israel has often conveyed the message to the Arabs that as long as the Arab states do not possess nuclear weapons Israel will not depend on its nuclear

²⁴Shai Feldman, "Israel," in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, p. 69

²⁵Avner Cohen, "Patterns of Nuclear Opacity in the Middle East," p.15

weapons for security.²⁶ It indicates that acquiring conventional weapons was important to Israel even though it was an opaque nuclear state. Whether or not Israel actually depends on its nuclear weapons for security considerations is not the issue, it is evident that Israel did not reduce its conventional expenditures.

A country the size of Israel with its economic capability will not give up its conventional military purchases, even if it has nuclear weapons capability. Nuclear weapons are not substitutes for conventional weapons and expenses for conventional weapons are not usually reduced by possessing nuclear weapons as is evident in the Israeli case. Israel never stopped its efforts to be conventionally superior, nor did it renounce its opaque nuclear weapons.

e) Domestic Turmoil Diversion

Israel has been a democratic country for decades. Its political conflicts generally include social cleavages between its Jewish and Arab citizens which originate because the Arabs believe that they do not have a rightful place in a Jewish state. The other cleavage is between the European and Oriental Jews because the former have a higher status in terms of profession and prestige compared to the latter group.²⁷ Such cleavages are not unusual in any society, and it is unlikely that any government would acquire nuclear weapons to suppress such cleavages or to divert attention from these troubles. Conflicts may not even be

²⁶Ibid.

²⁷ Joel Krieger, et.al., eds., *The Oxford Companion to Politics of the World*, New York: Oxford University Press, 1993, p. 477

temporarily quelled by demonstrating the government's technological capability. Finally, a permanent solution to such conflicts may only be found in political solutions and not in the possession of nuclear weapons.

Although Israel has domestic troubles like most states, it is unique in the sense that the people of Israel 'rally around the flag' if and when necessary for the survival of the state. Although most people show such allegiance to their country under crisis situations, the Israeli case differs because the citizens know how vulnerable their state is in the Middle Eastern region--their loyalty is remarkable. From this perspective, domestic sources of political instability are overall, absent in Israel. Such a country does not need nuclear weapons to divert public attention away from domestic troubles.

Additionally, when adversaries exist, and riots and small-scale external crises and conflicts unify the Israelis, there is no need to spend millions of dollars on developing nuclear weapons to deal with domestic problems. Israel's nuclear opacity is a reality and the country's democratic institutions have "abdicated their democratic duties--checking, debating, informing, overseeing and critiquing--in the face of the nuclear issue."²⁸ Where this is the case, the general public has no way of knowing what exactly is happening in Israel with regard to the nuclear issue, nor is the government able to use the weapons to deal with domestic troubles even if they need to.

²⁸Avner Cohen, "And Then There Was One," *The Bulletin of the Atomic Scientists*, vol.54, no. 5, September/October, 1998, p.53

With regard to the political regimes in Israel, from its independence until 1977 the Labor party ruled Israel, then the Likud party governed for another fifteen years. In 1992 the Labor party returned and was again defeated in the 1995 elections by the Likud party. Israel's nuclear weapons program dates from the 1950s and 1960s, when the Labor party dominated the political life of the country without many political problems. In the 1970s, 1980s and 1990s nothing much changed with respect to its opaque nuclear weapons status that might be associated with any of the governments' defeat. In other words, when leaders were losing popularity and expecting political defeat, nuclear tests could have been carried out to regain the lost popularity, but that never happened in Israel. It is unlikely that Israel ever considered this motivation in its nuclear thinking.

SYSTEM-LEVEL MOTIVATIONS

a) Increasing Bargaining Advantages

It is quite possible for a country like Israel to use nuclear weapons to bargain for status, position, economic concessions and the like. This is especially relevant for small states, in terms of population, size or resources, which do not have anything significant to be used to bargain with. Israel's small size, population and resource base make it a weak state when compared to its Arab adversaries, and it might be likely that Israel possesses nuclear weapons to gain leverage in international politics. Usually such states try to bargain with the West.

Israel has used its nuclear weapons to bargain with the West and to strengthen its relations with the US. Shahram Chubin argues that, with respect to

nuclear weapons, states can gain leverage when bargaining for arms or diplomatic support, but that bargaining comes with Israel's ability to credibly threaten to resort to nuclear weapons.²⁹ Although there is no doubt that Israel received millions in financial and military aid from the US during the cold war years, it is unclear whether or not it was because the US wanted Israel to keep its nuclear weapons secret and not jeopardize the nonproliferation efforts during the 1960s and 1970s. It is unlikely that Israel used nuclear weapons to bargain with the US, with which it had a cordial relationship throughout the cold war years. Israel has been America's important ally in the Middle East. The US needed to support Israel for strategic reasons. Israel did not need nuclear weapons to accomplish this. It is also questionable if opaque nuclear weapons are useful in this regard. Shahram Chubin himself argues that the threat of nuclear weapons has to be credible, which was not possible for Israel with its possession of opaque nuclear weapons.

As far as the Arab adversaries are concerned, Israel could also have intended to use its nuclear weapons to bargain with them. It may be argued that the Arab states now recognize Israel as a state and have come to the negotiating table to discuss outstanding issues in the context of the Arab-Israeli protracted conflict only because Israel had nuclear weapons. For a very long period the Arabs have been ambivalent about Israel's ambiguous nuclear status so they fought the 1973 war with Israel. Some Middle Eastern countries still do not fully accept that Israel is here to stay, nor have they gone to the negotiating table because of

²⁹ Shahram Chubin, "The Middle East," in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, p.46

Israel's possession of nuclear weapons. The end of the cold war brought about major changes in the international system including the Western interest in seeing the regional changes from violence to stability. It was the US that obliged the two opposing parties in the Arab-Israeli conflict to deal with territorial and security issues. If Israel's opaque nuclear weapons could bring them concessions, then the Arabs and Israelis would have established peace in the Middle East when Israel's nuclear weapons possession was speculated about during the 1960s and 1970s. That did not happen, and it is important to note the limited applicability of opaque nuclear weapons in this regard. Nuclear weapons, after all, may not be as fungible as most analysts would like them to be.

b) Gaining International Prestige

Israel's need for international prestige has always been minimal because it has had little conflict with any power outside its regional setting. During the cold war, Israel and the US were strong allies and Israel did not need to gain prestige with the possession of nuclear weapons. The US had always recognized Israel as a sovereign and independent power, as did the NATO allies, including Britain. These countries also supported Israel's efforts to maintain its sovereignty. Israel had more international prestige than many of its Arab neighbors.

As far as the Arab and Muslim world is concerned, Israel never obtained the prestige it deserved. Some have not recognized it as an independent state. Israel may have considered embarking on a nuclear weapons program to gain international prestige it required. Although gaining recognition was important for

Israel, the possession of opaque nuclear weapons would not achieve it. Israel is reported to have possessed nuclear weapons since the 1960s, but there has only been limited international recognition. The Arab and Muslim countries consider that Israel's international status has been questionable since its independence in 1948, and for some states in the Middle East that has not changed over time. Its international prestige did not change with the possession of opaque nuclear weapons.

c) Seeking Regional Hegemony

Israel is a small state in the Middle East attempting to survive among its Middle Eastern adversaries. With such a geopolitical situation, seeking regional hegemony through the possession of nuclear weapons is not realistic. Domination in the Middle East has not been Israel's motivation, and it could not accomplish that objective because of the number of powers in this region. The Middle East is a multi-power region where Iraq, Iran and Egypt have strived to gain leadership role, but Israel has not shown any such interest. However, Israeli leaders have repeatedly stated that they will not allow any other Middle Eastern states to possess nuclear weapons, and the destruction of the Iraqi nuclear facility by Israel in 1981 is a proof of that. Does that imply that Israel has sought domination in the region with nuclear weapons while not permitting others to possess them? A regional hegemony requires not only military domination, but economic, geographic and demographic control. Israel may have nuclear weapons, but its size, population and economic condition limit the possibility of acting as a regional

hegemon. Yair Evron states that "Israel holds a substantial lead--in political, social, industrial, technological and scientific terms--over all other states in the Middle East. However, Israel suffers from a relatively small population in comparison to other states in the region, and also from economic problems caused in no small measure by massive military expenditure."³⁰

Israel's need for regional prestige is significant because it is not recognized by its Arab neighbors and the Muslim states as a sovereign state. In the regional setting, Israel has needed to enhance its prestige. Possessing nuclear weapons capability could increase its regional prestige. That was not Israel's intention because if that were true, it would have been an openly nuclear state by now. It has lost all opportunities in all these years to declare itself as a nuclear weapons state and unless one of the Arab states does, it is unlikely that Israel will. Israel could have made use of the opaque status in some other way. There was a time when none of the Arab states believed that Israel possessed nuclear weapons capability, all due to Israel's opaque nuclear status. Where prestige enhancement is the question, seeing is believing, and testing weapons is important in regard to this. Israel has signed the CTBT and has proved to the surrounding regional powers that it is satisfied with its present nuclear status. Therefore, gaining regional hegemony also seems to have limited applicability in the case of Israel.

³⁰Yair Evron, *Israel's Nuclear Dilemma*, p.83

d) Quest for Security

The fact that Israel has serious security problems is undeniable. It has only 5.9 million people and is surrounded by 140 million well-armed Arabs, whose ultimate intention, according to Israel, has been the destruction of Israel. Israel has not been recognized by its Arab neighbors³¹ and has fought several wars with these protracted conflict states, including Egypt, Syria, Jordan and Iraq. In the 1960s when security assurances were unavailable, Ben Gurion's Israel decided to embark on a nuclear weapons program to ensure its security.³² It has been argued that Israel's Dimona nuclear facility went into full-scale production in early 1968, and by 1973, there were more than 25 bombs in the arsenal.³³ Since then Israeli nuclear weapons have served only one purpose--providing security. Scholars have, by and large, accepted that security is the primary motivation for Israel to go nuclear. As George Quester states that "a state whose very existence is threatened is then inevitably a state more suspected of wanting nuclear weapons, for the threat posed by such weapons serves status quo powers much more than it serves the forces of

³¹Shai Feldman argues that some of the Arab states' unwillingness to accept the state of Israel creates threat perceptions in the minds of the Israelis. Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, Cambridge, Mass: The MIT Press, 1997, p.105

³²Frank Branaby, *The Invisible Bomb*, p. 52

³³Seymour M. Hersh, *The Samson Option*, p.179

irredentism.”³⁴ The term ‘security,’ however, is broad and it is essential to clarify the type of security Israel required and expected to achieve by possessing opaque nuclear weapons.

Territorial Conflict and the Requirement for a Nuclear Deterrent Capability

From the beginning of the creation of the state of Israel, wars were a reality in the Arab-Israeli protracted conflict. All of these wars were fought over territorial issues, and each time the Arabs were in some form of coalition and fought Israel. The probability of war with the Arab states had not changed over the years because nothing has changed³⁵ with regard to territorial issues over which the Arab-Israeli PC started or those wars were waged, with the exception of the Sinai Peninsula.

The proclamation of the state of Israel on May 14, 1948 was perceived by the Arab states as a serious threat and “the loss of territory that for centuries had been an integral part of the ‘Arab World.’”³⁶ The Arab response was to invade Israel, and the first of many Arab-Israeli wars began in 1948. Although the war ended with armistice agreements, it triggered a perception of insecurity in Israel. Since 1948, Israel’s primary goal has been to secure itself from possible Arab

³⁴George Quester, “Nuclear Weapons and Israel,” *The Middle East Journal*, vol.37, no.4, autumn, 1983, p. 548

³⁵Although the Middle East Peace Process started in 1991, the region has yet to see a peaceful settlement of the territorial disputes.

³⁶Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997, p. 270

aggression. The 1956 Suez Nationalization War, the 1967 Six-Day War, the War of Attrition in 1969-70, and the 1973 Yom Kippur War have confirmed that wars are a constant reality in the Arab-Israeli protracted conflict.

Not only the Israelis are concerned about wars in the Middle East over the Arab-Israeli conflict, the Arab states are also worried about the use of military force. Egyptian official, Nabil Fahmy, has stated that the Arabs and the Israelis have fought a war in every decade and that situation must be changed.³⁷ All the wars have been fought over unresolved territorial issues, but after 1967, the Arab states' determination has been to regain territory lost to Israel in the 1967 war. During the Six Day War in 1967, Israel occupied the Sinai Peninsula, the Golan Heights, West Bank, Gaza Strip and East Jerusalem. Therefore, the next two wars in 1969 and 1973 were initiated by the Arab states to regain the territories lost by Egypt, Syria and Jordan. Although Iraq had no territorial losses during these Arab-Israeli wars, it had been one of the direct participants of the first Arab-Israeli war in 1948. The army of the Arab League forces was to be organized under Iraqi leadership to invade Israel during the first war.³⁸ It is also important to note that unlike other Arab states, Israel did not have an agreement with Iraq to end the 1948 war.³⁹ Therefore, Israel and Iraq have been long-term enemies within the

³⁷Interview with Nabil Fahmy, Cairo, March 1997

³⁸Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, pp. 269-270

³⁹Ibid., p.270. Iraq was the only Arab state that did not sign an armistice agreement with Israel and "for decades it was the vanguard of the Arab coalition against Israel, in word and deed." See, Brecher and Wilkenfeld, *A Study of Crisis*, p. 293

context of the Arab-Israeli PC. Iran has also been involved in the conflict with Israel, though as a non-Arab state, over the existence of Israel in the Middle East.

The territorial aspect of the Arab-Israeli protracted conflict and the Arab coalition against which Israel must maintain military preparedness created a difficult situation for Israel. The country is vulnerable to attacks from different Arab states in the Middle East. Iraqi and Iranian involvement has made the territorial aspect of the conflict more important. It is not only a question of returning the territories that Israel has occupied in 1967,⁴⁰ but also a question of Israel's survival in the Middle East. Israel must prepare itself to face different Arab states from different fronts simultaneously. The majority of the wars within the Arab-Israeli PC have been initiated by the Arab countries. Under such unique conditions, security threats have exacerbated for Israel.

With territorial issues remaining unresolved and war-probability higher-than-normal, Israel's only hope has been to find a deterrent capability against its Arab aggressors. When the importance of conventional deterrent capability ended and non-conventional weapons such as nuclear capability took over, Israel was the first state in the region to attempt to obtain nuclear weapons for itself. "Deterrence for survival" has been important for this country. Israelis believed that nothing could be better than having a nuclear deterrent capability against possible Arab

⁴⁰This is not to suggest in any way that Israel has been ready to give the territories back to Syria or Jordan (even today several factors are in the way, even if agreements are signed), but to say that there were other major problems that needed to be addressed.

aggressors since nuclear weapons deter an adversary from war for fear of a nuclear retaliation.

The Arab-Israeli wars have always been a possibility, and although Arabs have been unhappy about this high probability of war, Israel has been terrified of the possibility. For years the Arabs were convinced that force alone, or an all-out war, could accomplish their political and territorial objectives. Israel has always been aware of such Arab intentions. Since “the conventional warfare possibility was the Arabs’ one hope of bringing Israel to terms”⁴¹ the search for a nuclear deterrent capability became essential to Israel. It was not a question of radical Arab states going to war with Israel, but the clear understanding by Israel that frequent wars with the Arab states had to be accepted as the reality. Unless a deterrent capability with regard to weapons of mass destruction existed in Israel, this situation would not change. In the Arab-Israeli protracted conflict, military force is frequently used as a legitimate political tool. Although few regional rules of the game have developed over the years to moderate the tendency to resort to violence, “they have not been sufficient to prevent the frequent occurrence of wars in the region.”⁴² Possessing nuclear weapons to deter adversaries in the war-prone Arab-Israeli protracted conflict has been crucial. Anthony Cordesman states that “Israel has been driven to proliferate by its need to survive, and to acquire an

⁴¹George Quester, “Nuclear Weapons and Israel,” p.554

⁴²Yair Evron, *Israel's Nuclear Dilemma*, p.86. The rules of the game that Evron mentions are the functions of various causes. They include: stable balance of conventional deterrence, the assessment of some political elites with regard to the high cost of war, preference of some political elites to achieve economic development and modernization, and the evolving Arab-Israeli peace process.

‘ultimate deterrent’ that can convince potential Arab opponents that no military invasion could ever be successful because of Israel’s ability to retaliate by destroying the forces or population centres of its opponents.”⁴³ Israel’s purpose has been to avoid wars, and after a few decades Israel’s former Prime Minister, Shimon Peres, confirmed this motivation. In an interview in 1998 conducted by Denmark’s DR 2 television channel, Peres stated, “our nuclear potential is to deter war so we can arrive to peace.”⁴⁴

Before attempting to examine more critical questions it is important to note that Israel was the first country in the Middle East to acquire nuclear weapons capability. Why did Israel not wait like other Arab states in acquiring this capability? In a multi-power Middle East, where the central powers are Egypt, Iran, Iraq, Israel, Syria, and Saudi Arabia,⁴⁵ and where all but Israel are allies in the PC, Israel faces serious security problems. No option of depending on others to face the enemy existed as far as Israel was concerned. In addition, its inferiority in terms of territory, population, energy, financial capacity and size of the armed forces has been “referred to as Israel’s problem of the few facing the many.”⁴⁶ From the Israeli perspective, facing the many simultaneously was impossible

⁴³ Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p.117

⁴⁴ *Washington Times*, May 2, 1998, p.A6

⁴⁵ Yair Evron, *Israel’s Nuclear Dilemma*, p.82

⁴⁶ Shai Feldman, “Security and Arms Control in the Middle East: An Israeli Perspective,” in Shelley A. Stahl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin’s Press, 1992, p. 76

because of its quantitative inferiority in demographic, economic and spatial terms as compared to the Arab states.

Moreover, in the over-all Arab Israeli conflict, Arab acceptance of Israel's existence has been important to Israel. The October 1980 Israeli proposal to the UN for a Nuclear Weapon-Free Zone (NWFZ) was primarily intended to ensure that Israel would not have to "surrender the deterrent effect of its nuclear potential unless Arab acceptance of Israel's existence in the region is manifested in a willingness to negotiate with the Jewish state."⁴⁷

Although the Middle East has multiple powers, all powers are united against Israel in the conflict, so the rivalry is essentially a two-power regional rivalry from the Israeli perspective. Any gain by its adversaries is a loss for itself. Israel's attack to destroy the Iraqi Osiraq nuclear reactor near Baghdad in 1981 is proof that the Arab-Israeli PC rivalry is structurally rooted and that it is a zero-sum game from the Israeli perspective. On June 7, 1981 an official announcement from the Israeli Prime Ministers' office stated: "on Sunday, June 7th, the Israeli Air Force launched a raid on the atomic reactor Osiraq near Baghdad. Our pilots carried out their mission fully. The reactor was destroyed. All our aircraft returned safely to the base."⁴⁸ Despite possessing opaque nuclear weapons, Israel was able to destroy the Iraqi nuclear reactor. Its attack raised debate about the nuclear non-

⁴⁷Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, pp.249-250

⁴⁸ Herbert Krosney, *Deadly Business: Legal deals and Outlaw Weapons*, New York, London: Four Walls Eight Windows, 1993, p.34

proliferation issue in the world. Herbert Krosney states: "An actual military attack against a potentially dangerous nuclear target, whether from Israel, the United States or another country, raised the question, exactly who was assuming the role of policeman--and what rights did he have?"⁴⁹ In the Israeli view, it could not allow Iraq or any Arab state to possess nuclear weapons, and thus, it was a motivated attack on Iraq. Iraqi nuclear program was a direct challenge to Israel's strategy of nuclear opacity. During the Osiraq raid, Begin clearly stated what became known as the 'Begin Doctrine,' that Israel would not tolerate Arab nuclearization and would prevent them from possessing nuclear weapons by all means.⁵⁰ The type of conflict and the regional structure have contributed to Israel's fast-paced nuclear weapons acquisition and strategy.

The geographical position of Israel in the Arab-Israeli conflict is important to examine. Israel has a small territory and a few major cities that are all within the reach of its Arab adversaries. If Tel Aviv, Jerusalem and Haifa were destroyed, it would bring the end of Israel's national existence. It is argued that, "one good-sized nuclear weapon" for each of these cities would be enough to destroy Israel.⁵¹ Therefore, Israel seems to have great difficulty in accepting that Iraq or other Arab countries might possess nuclear weapons. On the other hand, geographical proximity with Arab adversaries makes conventional wars easier to wage. The facts of contiguity and limited strategic depth for capital cities creates a situation of

⁴⁹ Ibid., p.37

⁵⁰ See Ze'ev Schiff, "The Begin Doctrine," *Ha'aretz*, July 19, 1981

mutual vulnerability. Consequently, Israel's fast-paced nuclear weapons development was also a function of its geographical proximity to its adversaries. This proximity encouraged Israel to acquire nuclear weapons capability for war-avoidance, and simultaneously to prevent Arab states from acquiring nuclear weapons and missiles with which they can reach Israeli territory easily. Some scholars have argued that the Scud surface-to-surface missile with a range of 160 to 180 miles could reach any Israeli targets from Syria, Jordan or even northern Sinai.⁵² Israel's delivery systems include the Jerico I surface-to-surface missile with a range of up to 500 km and the Jerico II with a range of 1500 km. The Jerico II was tested between 1987-89.⁵³

There are three points that require clarification. First, the US was Israel's ally during the cold war, so why did it need nuclear weapons for deterrence? Second, why did Israel not depend on other weapons of mass destruction? Third, what kind of deterrence would opaque nuclear weapons provide to Israel?

Israel's relationship with the United States has been extremely cordial since its independence and during the cold war years. Its decision to embark on a nuclear weapons program for security when US support has always been there is questioned. Although Israel has had military relations with the US, no formal

⁵¹ Geoffrey Kemp and Robert Harkavy, *Strategic Geography and the Changing Middle East*, Washington D.C.: Brookings Institution Press, 1997, p.288

⁵² Steven Rosen, "Nuclearization and Stability in the Middle East," in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near Nuclear Countries*, Cambridge, Mass: Ballinger Publishing Company, 1975, p. 163

⁵³ IISS, *The Military Balance*, 1998/99, p.130

agreement between the two countries exists in terms of a nuclear guarantee. Israel made efforts to obtain a security guarantee from the United States. During the Eisenhower Administration in the mid-1950s, efforts to secure a mutual security treaty with Washington was unsuccessful. It is argued that “Ben Gurion, Shimon Peres, and Ernst Bergmann believed that Israel’s independent arsenal finally could provide what President Eisenhower would not--the nuclear umbrella.”⁵⁴ In fact, in the 1960s when Israel started acquiring a capability of its own, the US was developing its own nuclear arsenals. Therefore, it is also quite possible that Israel could not depend on the US either for its security needs.

Emphasizing history, Frank Barnaby elaborates why Israel could not depend on the US. He argues that while the US would never allow Israel to be eliminated, Israel could not rely on such “de facto” security assurance. He added that the Jews remembered how six million of their fellowmen were killed by Hitler and no country came to their aid. They doubted that any country would help them in case of an Arab aggression against them.⁵⁵ In other words, from their past experience, Israelis believed that depending on others would not be wise and that self-sufficiency would be most prudent.

In terms of Washington’s ability to honor commitments, as early as 1966, Israel’s Defense Minister Moshe Dayan believed that Israel could not depend on the US to provide deterrence to Israel. He was quoted as being “very much worried” about “the steadiness of the United States in honoring its

⁵⁴Seymour M. Hersh, *The Samson Option*, pp.22-23

⁵⁵Frank Barnaby, *The Invisible Bomb*, 1989, p.52-53

commitments.”⁵⁶ Israel’s support from the United States depended mostly on Washington’s assessment of its international and regional interests in any crisis situation.⁵⁷ Israel could not depend on such uncertain support. All these indicate that Israel was unable to obtain a nuclear guarantee from the US, nor was it able to rely on the US to provide assistance in the case of a possible Arab aggression.

With regard to chemical weapons, some scholars have been uncertain whether or not Israel actually possesses them, while other reports clearly identify Israel as one of the states possessing such weapons of mass destruction. Michael Klare states that it is probable that Israel has these weapons.⁵⁸ However, the 1990 DIA study indicates that Israel not only has chemical weapons but that it also maintains a chemical warfare testing facility in the Negev desert.⁵⁹ Some reports state that Israel’s chemical weapons program involves a mix of nerve gas and blister agents.⁶⁰ Although Israel could easily depend on chemical weapons as deterrents in the Arab-Israeli PC, it has refrained from doing so and instead

⁵⁶Seymour H. Hersh, *The Samson Option*, p.176

⁵⁷Ibid.

⁵⁸Michael Klare, *Rogue States and Nuclear Outlaws*, New York: Hill and Wang, 1995, p.134

⁵⁹E.J. Hogendoorn, “A Chemical Weapons Atlas,” *The Bulletin of the Atomic Scientists*, vol.53, no.5, September/October 1997, p. 37. For more information on Israel’s significant offensive chemical weapons capability, see, Edward M. Spiers, *Chemical and Biological Weapons: A Study of Proliferation*, New York: St. Martin’s Press, 1994

⁶⁰Geoffrey Kemp and Robert E. Harkavey, *Strategic Geography and the Changing Middle East*, p. 392

embarked on a nuclear weapons program. The question is why did Israel not make use of chemical weapons to deter wars with its Arab adversaries?

Israel, like many other states, has known that chemical weapons, which are identified as weapons of mass destruction, have been used in several wars and that they could not be used as war deterrents in a region where they have already been used. The taboo has been lifted with their use. Some reports indicate that Israel itself has used chemical weapons to suppress the Intefada.⁶¹ From the Israeli perspective, possessing a deterrent capability which would have the maximum deterrent effect was crucial. Since chemical weapons can be used in warfare, Israel also maintains a chemical warfare testing facility. Israel had developed its offensive chemical weapons program to respond to the Arab chemical weapons threat.⁶² Despite this, Israel signed the Chemical Weapons Convention (CWC), while it refused to sign the NPT.

Israel's opaque or ambiguous status since the 1960s has provided it two advantages. First, Israel has not been subjected to sanctions from the West--which is an expected consequence of an open nuclear status. Israel could not afford sanctions from the Western world because of its economic situation, and it has

⁶¹Julian Perry Robinson, "Chemical Weapons Proliferation in the Middle East," in Efraim Karsh and Philip Sabin, eds., *Non-Conventional Weapons Proliferation in the Middle East*, Oxford: Clarendon Press, 1993, p. 76

⁶²E.J. Hogendoorn, "A Chemical Weapons Atlas," p. 37

always been in its best interest not to annoy the West.⁶³ Along the same lines, for many years Israel has repeated that it will not be the first country to introduce nuclear weapons in the Middle East.⁶⁴ This again assured the US that Israel, a NPT non-member, will not generate an open nuclear arms race in the Middle East, so there has been little conflict of interest between the West and Israel on this matter.

Second, it has obtained a non-traditional nuclear deterrence with its nuclear ambiguity. By keeping its status opaque, Israel gained the most. Arab neighbors were not pushed to match its capability immediately. It, however, did acquire the nuclear deterrent capability with the expectation of avoiding wars with its adversaries. Although the Arab states have had their own desire for nuclear capability, the pace has not accelerated due to Israel's nuclear ambiguity. Israel's intention has been to let its Middle East adversaries know that it has the deterrent capability which it is willing to use as a last resort in case of a war. Thus, Shai Feldman states that as a strategic tool, nuclear ambiguity in Israel "seems to have

⁶³In a recent National Public Radio broadcast interview conducted by Mike Shunter, the Israeli strategic analyst Avner Cohen stated that Israel had been a nuclear power since 1967. President Kennedy was the first American President to know about Israeli nuclear weapons in the early 1960s, but he did not want to acknowledge it due to his non-proliferation efforts. The CIA knew about it, but it was in their best interest to keep Israel's nuclear weapons possession a secret. As long as Israel did not reveal its weapons, the US did not have to confront the issue. (Broadcast on *NPR Morning News*, December 1, 1998). There was a tacit understanding between the West and Israel since the 1960s with regard to the Israeli nuclear issue, but neither country had to face the consequences if Israel kept it a secret.

⁶⁴Prime Minister Yitzhak Rabin's response to a question posed by a Jordanian journalist during a press conference in Washington D.C., July 26, 1994

been designed to produce effective deterrence through uncertainty.”⁶⁵ The point is that the Arab states cannot rule out the possibility that the Israeli nuclear weapons will be used in retaliation, so deterrence is workable under such situations.

Although several crisis situations have occurred in the Arab-Israeli PC, none escalated to full-scale warfare after the 1973 war. In the past two decades, there have been no wars in the Arab-Israeli PC, while there was at least one war, and sometimes more, in each of the preceding decades. Out of the 25 international crises that occurred in the Arab-Israeli PC, 17 crises generated between 1948-1973, and five wars were waged during this period. About 8 crises situations have been documented by Michael Brecher and Jonathan Wilkenfeld since the 1973 war, but they did not escalate to wars in all of those cases, the exception being the Lebanon crisis.⁶⁶ This means that almost every third crisis generated a war before 1973, and since that period, one war with Lebanon, resulted out of 8 crises. This has been a big change to the crisis/war ratio from earlier decades. During the 1973 war, Israel was already a nuclear weapon-capable power, but its ambiguity was not taken seriously by the Arab states. After the Vanunu revelations Israel’s nuclear status became much transparent and since then the non-traditional deterrent relationship has been more effective. During the 1973 war the Arab states planned on a limited aims strategy and did not want further escalation. Wars were planned to avoid possible Israeli nuclear retaliation. In the Arab-Israeli PC, wars seem

⁶⁵Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p.97

⁶⁶Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, p. 268

unlikely. It must, however, be noted that low-intensity conflicts continue to exist in the Middle East.

Although this is the situation Israel has been in since the 1960s, the country would not be able to remain an opaque state if its Arab adversaries were nuclear powers. Because none of the Arab states has acknowledged possession of nuclear weapons, Israeli nuclear ambiguity can still be maintained and non-traditional nuclear deterrence continues to work. Unless the territorial disputes underlying the Arab-Israeli protracted conflict is resolved, it is expected that Israel will continue to depend on nuclear deterrence in this war-prone Middle East.

The Middle East Peace Process began with a conference in Madrid on October 30, 1991 mediated by the United States and Russia. A series of bilateral talks between Israel and its Arab neighbors were initiated to resolve the outstanding bilateral disputes and to bring about regional peace. However, Syria and Iran were not involved in the talks and consequently, the talks were suspended by early 1995.⁶⁷ Few concrete accomplishments were achieved. The situation worsened when, during the April 1995 NPT Review and Extension Conference, the Arab countries, especially Egypt, began to pressure Israel to sign the NPT. Moreover, the deterioration of the peace process established by the 1993 Oslo accords undermined efforts to resume the regional arms control talks. By 1996, when Benjamin Netanyahu came to power, Israel's position on the peace process had changed with regard to the implementation of the Oslo agreement provisions

⁶⁷*Arms Control Reporter*, 1992-1996, Section 453 B

for interim steps toward self-rule in the West Bank and Gaza. Similarly, negotiations with Syria had almost stopped due to Israeli attacks against the Hezbollah terrorist group in Lebanon, which originated because of its rocket attacks in northern Israel. The peace process was further shattered in 1997 when Netanyahu announced that Israel would build 6500 Jewish housing units in an Arab sector of east Jerusalem.⁶⁸ A new round of terrorism was launched against Israel⁶⁹ and the overall situation worsened. Although a stalemate persisted until 1998, pressure from the US forced Netanyahu to resume negotiations which culminated in the October 1998 Wye accords. According to the accords, Israel is expected to hand over an additional 13 percent of West Bank territory to the Palestinians. However, as far as implementation of the Wye accords is concerned, Israel has put them on hold until after the country's May 1999 elections.⁷⁰ In 1995 Israeli Prime Minister Shimon Peres stated: "Give me peace and we will give up the atom...If we achieve regional peace, I think we can make the Middle East free of any nuclear threat."⁷¹ Little progress has been achieved in regard to the Middle East peace process. If the peace process fails, the conflict situation in the Middle East may worsen. In the context of the 1997 experience it has been argued that

⁶⁸ Peter Jones and Gunilla Floden, "The Middle East Peace Process," *SIPRI Yearbook*, 1998, p.92, fn. 6

⁶⁹"Walking Bombs, Live Bullets, Stones and Barbs Muddy the Peacemaking," *Mideast Mirror*, April 1, 1997, pp.2-5

⁷⁰See, "Israel: Country Report," *London: Economic Intelligence Unit*, 1st quarter 1999, pp. 12-13, 27

⁷¹*Jerusalem Israel Television Channel I*, December 22 1995

“the failure of the peace process can mutate into a basis for confrontation and violence which is made more destructive by the new situation in which Israelis and Palestinians find themselves and the crushed hopes of a destroyed peace process.”⁷² Given this, a renunciation of nuclear weapons by Israel seems to be a remote possibility. Only peace with all the states involved in the Arab-Israeli protracted conflict could make Israel reconsider its nuclear policy-- if such a chance still exists.

SUMMARY

This chapter has examined Israel's nuclear weapons acquisition in the context of the Arab-Israeli protracted conflict. It has evaluated motivations from individual, state and systemic levels of analysis to understand what propelled Israel to acquire nuclear weapons. The quest for security was the significant motivation in Israeli nuclear choice. But it was more than that. The war-probability with its Arab adversaries has been higher-than-normal in this territorial conflict and since qualitative superiority in conventional weapons could not deter Arab states from waging wars with it, a nuclear deterrent capability was required. Israel has been the most vulnerable state in the Arab-Israeli conflict because it has had to face several allied adversaries simultaneously in the context of this conflict. It was thus the first country to introduce nuclear weapons in the Middle East for the purpose of war-avoidance.

⁷²Peter Jones and Gunilla Floden, “The Middle East Peace Process,” p. 106

CHAPTER IX

ARAB STATES AND NUCLEAR WEAPONS

This chapter focuses on the Arab states' incentives and disincentives to acquire nuclear weapons within the context of the Arab-Israeli PC. However, a study of the Iraqi and Iranian motivations is incomplete without an understanding of the other conflict in the region, the Iran-Iraq protracted conflict. A discussion of the Iran-Iraq PC is incorporated in the chapter to understand the drive for nuclear weapons acquisition by these two countries. Two other states, Syria and Egypt, are also examined.

IRAQ

Among the Arab countries, Iraq has always been the most determined state to acquire a nuclear weapons capability of its own. Over the years, this country has shown the world that external pressures need not prevent access to nuclear weapons acquisition by a determined proliferator. It not only made efforts to acquire the weapons, but also continued its efforts even after the destruction of its nuclear facility in Osiraq by Israel in 1981. Although Iraq has ratified the NPT in 1969 and signed a safeguard agreement with the IAEA,¹ it has consistently denied total IAEA inspection and, in the recent past, it has had to endure tremendous

¹Kathleen C. Bailey, *Strengthening Nuclear Non-proliferation*, Boulder, Colorado: Westview Press, 1993, p. 28

world pressure for the inspections, and it has also risked military confrontation with the United States. Iraq has been inconsistent in allowing the UN inspectors to inspect all of its nuclear sites since 1997. The determination to keep its weapons of mass destruction secret is unique, and requires explanation. Iraq's determined quest for nuclear weapons and its consistent policy about it provide a strong indication that it has the strongest motivation for nuclear weapons acquisition among all the Arab countries. The questions requiring answers are: What makes Iraq a different kind of proliferator among the Middle Eastern Arab countries? Why is it so determined to have its own capability when others are moderately serious about addressing security concerns? Finally, what best explains its need to acquire nuclear weapons?

Iraq's intention to have nuclear weapons is not new. Its determination and success in nuclear weapons acquisition was underestimated by the West until 1989-90 when it became an important issue on the world agenda after new Iraqi nuclear capability information was revealed. This does not mean that Iraq gave up its weapons program when it signed the NPT and when the world was in the dark about its weapons standing. The country has been determined since the 1960s about its nuclear program and policy.

Iraq's nuclear weapons program dates from the early 1960s. It had a research reactor operating at Tuwaitha since 1968. A second reactor, Isis, began operations in 1980, and the Osiraq reactor, which was bombed by Israel, was

scheduled to begin operating by the end of 1981.² In 1981, Iraq embarked on a clandestine uranium enrichment program using three methods simultaneously: electromagnetic isotope separation, the so-called calutron method; chemical enrichment, and gaseous centrifuge enrichment.³ By the time it invaded Kuwait, Iraq was well advanced in design, component testing and construction of manufacturing facilities for actual bomb production. More than 20,000 people were engaged in its secret nuclear weapons program.⁴

Before the Gulf war, the Western powers had almost no idea that Iraq was engaged in a huge nuclear program. Iraq did not report parts of the program to the IAEA, which was required in accordance with the NPT agreement. According to the American sources, Iraq had been trying to build a bomb.⁵ At the end of the war UN inspectors found evidence of huge uranium-enrichment program at the

²Frank Barnaby, *The Invisible Bomb: The Nuclear Arms Race in the Middle East*, London: I.B. Taurus and Co., 1989, p.90; See Leonard Spector, 1987

³David A Kay, "Denial and Deception Practices of WMD Proliferators: Iraq and Beyond," *The Washington Quarterly*, vol.18, no. 1, winter 1995, p.86

⁴David A. Kay, "Denial and Deception Practices of WMD Proliferators," p.86; Iraq's weaponization program began in 1987 and by the time of the Gulf War, it had completed a fifth revision of a design for an implosion-type bomb fueled by highly enriched uranium (HEU). By 1995, it was reported by Saddam Hussein's son-in-law that Iraq was prepared to divert its safeguarded HEU research reactor into a crash weaponization program in late 1990. For more information on what has been revealed about Iraq's nuclear weapons program, see, Steven Dolley, "Iraq and the Bomb: The Nuclear Threat Continues" Nuclear Control Institute, Washington D.C., February 19, 1998

⁵"Iraq's Atomic Enigma," *Economist*, vol.320, July 13, 1991, p.43

Tharmit site in Iraq.⁶ Although credible estimates of the weapons capability have never been made due to the secrecy surrounding its program, Iraq's ongoing efforts to build nuclear weapons alarms the world. It is now believed that the future status of Iraq's nuclear weapons program will depend on UN success in its weapons inspections.

The former UN inspector Scott Ritter testified, in the US Senate in September 1998, that Iraq had assembled the components for three nuclear weapons but lacked the fissile materials needed to set them off.⁷ The nuclear threat by Iraq is real, and the IAEA is unable to investigate all aspects of Iraq's clandestine nuclear weapons program because of Iraq's decision to block IAEA inspectors from making surprise visits to the nuclear sites. The 1998 report by the military experts in Washington and at the United Nations on Iraq's nuclear weapons acquisition indicated: "still unaccounted for are... parts of up to four nuclear warheads, which are said to lack only the uranium to fuel them."⁸

The Iraqi intentions have been apparent for some time, but its motives for nuclear weapons acquisition are not as clear. Has nuclear weapons acquisition in Iraq been primarily a function of Saddam Hussein's own personal interest? Iraq's

⁶ "Iraq's Atomic Enigma," p.43; also see, "Iraq," in Rodney Jones, et.al., *Tracking Nuclear Proliferation*, Washington D.C.: The Brookings Institution Press, 1998, pp. 187-204

⁷ Steven Dolley, "Ritter Testimony Confirms NCI's Warnings That Iraq Has Active Nuclear Weapons Program," *Nuclear Control Institute*, Washington D.C., September 3, 1998

⁸William J. Broad and Judith Miller, "Vital Pieces Missing in Iraq Arms Puzzle," *The Gazette*, December 20, 1998

dictator, President Saddam Hussein, has shown a fondness for weapons of mass destruction.⁹ There is no doubt that Saddam Hussein has been a very determined leader in all respects and the nuclear aspect is no exception. He has found ways of doing almost anything that he feels is in his best interest or his country's. His decision to use chemical weapons in the Iran-Iraq war, his invasion of Kuwait and going to war with the US-led Western coalition, his refusal to abide by the norms of the NPT, UN and IAEA--all demonstrate his determination, aggressiveness, and personal attitude. Recent events indicate that Saddam has repeatedly refused to let the United Nations Special Commission (UNSCOM) complete its task of eliminating Iraq's weapons of mass destruction. As far as the nuclear weapons acquisition is concerned, Saddam has made firm and determined decisions, while making it clear that nuclear weapons are needed for deterrence and not for personal interest or to challenge others. The secrecy surrounding Iraq's nuclear program and the concealment of the progress, even though a huge number of people are involved, indicates that Iraq needs nuclear weapons acquisition for purposes unrelated to Saddam's own ambitions. Besides, Saddam Hussein only came to power in 1979 when the nuclear weapons program was already underway, so it seems that the Al-Bakr regime was as interested in developing the Iraqi nuclear program. The Osiraq research reactor was destroyed only after two years of Saddam's coming to power.

The recent joint US and British declaration to support any opposition party in Iraq that could topple Saddam Hussein indicates that the major powers still

⁹ "Nuclear Desert," *Economist*, vol.311, April 8, 1989, p.13

strongly believe that Iraq's ambitions for possession of weapons of mass destruction are inextricably tied to Saddam's personal ambitions and beliefs. The West seems to be ignoring the statements by various political elites in Iraq. The most recent statement by Iraq's Vice-President, Taha Yassin Ramadan, indicates that Iraq will not let UN inspectors enter the country for further inspection of weapons of mass destruction, including nuclear weapons, after the joint US/British four-day bombing of Iraq in December 1998.¹⁰ All of the Iraqi elite has demonstrated strong determination to support the government's decision to acquire and maintain weapons of mass destruction at any cost. Although Saddam Hussein's determination to possess nuclear weapons is undeniable, but he is not the sole cause of nuclear weapons acquisition. Nor should one believe that other political leaders, if in power, would change Iraq's course in the nuclear weapons program. Robert Pape states, "Even if Saddam were removed, any successor--even one more friendlier to the West--would want weapons of mass destruction, to balance the growing nuclear capabilities of Israel and Iran. No policy on Iraqi weapons of mass destruction will succeed until the West recognizes that Saddam's personal ambitions are not the sole source of the problem."¹¹ It is therefore pertinent to look for better explanations for Iraq's nuclear ambitions.

On the domestic front, the Iraqi nuclear weapons acquisition could be associated with the scientific achievement. As early as 1983 it was argued that

¹⁰Roy Gutman, "Invitation to UN Awaited: US Expects Arms Inspectors to Return to Iraq Soon," *The Gazette*, December 20, 1998

¹¹Robert A. Pape, "New Iraq Strategy Needed," *The Gazette*, December 19, 1998

“like India in the early 1970s, Iraq almost certainly has the expertise to build some simple nuclear facilities of its own quite outside its official program. It has been training scientists for almost 15 years and has not been much affected by the direct and indirect attempts to slow down its progress.”¹² There were indications that Iraq was working then to build a bomb.¹³ In 1997, after more than a decade, David Albright argued that “Saddam Hussein’s nuclear scientists are his most important asset.”¹⁴ According to the Institute for Science and International Security recommendation, if a few dozen key Iraqi scientists could somehow be allowed to leave Iraq without fear of reprisal, it would “devastate Saddam’s ability to rebuild his nuclear weapons program.” This proves the importance of Iraqi scientists in the nuclear weapons program, but do scientists make nuclear decisions in Iraq? It has been argued that scientists have very little power in nuclear decision-making. According to a 1980 report, the Iraqi government arrested Hussain Shahrastani, then the Head of Research at the Atomic Energy Commission, for internal political reasons, and then another scientist, who was then the second-in-command, had also mysteriously disappeared.¹⁵ Decisions about the nuclear program were made entirely by the Iraqi government, and scientists had a minimal role. Moreover, Iraq did not lack scientists even in the 1980s, or important

¹²Judith Perera, “Can the Arabs Win The Nuclear Race With Israel?,” *Arab Papers*, no.12, 1983, p.34

¹³Ibid.

¹⁴“Let the Iraqi Nuclear Scientists Leave,” Institute for Science and International Security, November 3, 1997, p.1

¹⁵Judith Perera, “Can the Arabs Win the Nuclear Arms Race With Israel?,” p.34

personalities involved in nuclear research would not have been removed from office. In the current Iraqi context, it has been stated that “many of the nuclear experts are essentially prisoners of Saddam’s regime or at least not committed to remaining in this highly repressive police state. Most of the experts were arbitrarily assigned to the nuclear weapons program after returning from overseas education.”¹⁶ Therefore, scientists seem to have a limited role in Iraq’s nuclear weapons program.

In terms of the economic incentive, Iraq retains a sizable military establishment. Despite the cost of the Iran-Iraq war, Iraq began a military build-up plan to cost US \$25 billion over five years which was in addition to the expenditures for the nuclear weapons program.¹⁷ At the end of the Gulf war, although a substantial proportion of Iraq’s armaments had been destroyed, it was reported that Iraqi army could still claim 30 combat divisions and a large number of modern weapons, including about 2,300 tanks, 2000 APCs and 1500 artillery pieces.¹⁸ Therefore, Iraqi conventional weapons expenditures have not been reduced. Additionally, this country did not renounce its chemical or biological weapons programs, and its unwillingness in 1998 to allow UN weapons inspectors to investigate certain sites of chemical and biological weapons is proof of that.

¹⁶“Let the Iraqi Nuclear Scientists Leave,” p. 2

¹⁷See Sentinel Security Assessment: The Gulf, *Jane's Information Group Limited*, 1998

¹⁸ IISS, *The Military Balance 1992-93*, pp.100-111

On the domestic level, Iraq still does not have an organized democratic political opposition, even though the Iraqi National Congress (INC) was formed in June 1992. This group has very limited political strength. According to a British government analysis, Iraq has about 32 opposition groups, including groups such as the Shi'ites, Kurds, secular nationalists and independents, but all are small and weak without the power to overthrow Saddam Hussein.¹⁹ Given such circumstances, there is also no need for Saddam and his Ba'ath party to take public opinion into consideration about the country's nuclear weapons choices. Moreover, a leader who used chemical weapons on its Kurdish population is unlikely to have considered public opinion in its nuclear decisions. Popular consent has always been unnecessary for a dictator such as Saddam, nor has public diversion been necessary. When rulers do not face significant political opposition and do not have to consider it, the question of diversion does not arise. Nuclear weapons have very little utility in this respect in Iraq.

As part of its systemic drive, it is also possible that Iraq may have wanted to become a hegemonic power in the Middle East and dominate its neighbors by possessing nuclear weapons. It is believed that Iraq sought Arab leadership in competition with Egypt and Syria and "nuclear weapons would emphatically

¹⁹Anthony Cordesman, *Iran and Iraq*, Boulder, Colorado: Westview Press, 1994 , pp.225-231

affirm Iraq's leadership in the Arab world."²⁰ The desire for regional leadership has been there in Iraq for a long time. Saddam Hussein wants to protect and lead the Arab world, so the regional status argument may not be ruled out altogether. However, in the Iraqi view, the bomb has been the key factor to understanding the Arab-Israeli conflict. Its possession may provide a high status to the possessor, but that may be the result of its possession, not the possessor's motivation. Avner Cohen states: "The Israeli bomb is the ultimate symbol of Israel's military superiority over the Arabs, and it is its presence that prevents the Arabs from changing the political status quo...To counter Israel, the Arabs must have their own bomb, the one that will have it is certain to achieve a position of leadership in the Arab world."²¹

Just as there has always been an issue over Arab leadership, there has also been an unwritten coalition among the Arab states against Israel. An Arab nuclear leader would be well received by other Arab states because it would balance the Israeli nuclear force. This is the irony. In other words, although an Arab state would not want Iraq to dominate them with its possession of nuclear weapons, it would like Iraq to possess it to challenge Israel in the overall Arab-Israeli conflict. Gaining regional status may be a spill-over effect of nuclear possession, and not a primary motivation. If status were Iraq's main motive, it would be the first in the

²⁰Shahram Chubin, "The Middle East," Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation After the Cold War*, Washington D.C.: The Woodrow Wilson Center Press, 1994, pp. 42-43

²¹Avner Cohen, "Patterns of Nuclear Opacity in the Middle East," *Aurora Papers* 16, Centre for Global Security, 1992, p.41

Middle East to declare its possession of nuclear weapons. Gaining international status or increasing bargaining leverage with the West also requires Iraq to be a nuclear state rather than a nuclear-capable state. Iraq's determination to fight the US in the 1991 Gulf War indicates that it has the desire to prove to the world that it can stand up to the US. Undeclared nuclear status cannot provide Iraq the international status it desires.

What does Iraq need the bomb for? Iraq became the leading member of the Arab Atomic Energy Commission, established in December 1988.²² Its need to deter Iran was important, while it also needed nuclear weapons to balance Israel. It was the twin need that compelled Iraq to take the nuclear path.

In the Iran-Iraq front, Iraq's stakes have always been high. Iraq's conflict with Iran is territorial, with a long history of animosity. They have fought the bloodiest war in the Middle East for eight years and accomplishing very little at the end. One cannot ignore the fact that Iranian war-planes had also bombed Tuwaitha,²³ a crucial concern for Iraq. Iran has not agreed to a full peace settlement with Iraq and their first meeting after the end of the Iran-Iraq war in October 1993 did not have any positive impact on their relations. There is also no agreement over navigation and ownership rights of the Shatt-al-Arab.²⁴ Iran and Iraq both support each others' opponents, making the situation worse for them.

²²*Arms Control Today*, April, 1990, p.27; *The Middle East*, May, 1990, pp.11-14

²³Shyam Bhatia, *Nuclear Rivals in the Middle East*, London & New York: Routledge, 1988, p. 80

²⁴Anthony Cordesman, *Iran and Iraq*, p. 29

In the Iran-Iraq protracted conflict, Iran has some basic advantages in geographic and demographic terms. Iran is four times larger than Iraq, and has a population that is three times more than Iraq. Moreover, the Iraqi populations are concentrated in the cities, and the country remains a very vulnerable target of Iran. Iraq is a landlocked country surrounded by six states--Iran, Turkey, Syria, Jordan, Kuwait and Saudi Arabia, with a very small outlet to the sea. Under such geographical conditions and with an existing protracted conflict with bordering Iran, the country is forced to "prepare the means and the elements of deterrence to ensure a solid foundation for peace based on mutual respect and confidence."²⁵ From the Iraqi perspective, its acquisition of nuclear weapons serves as a basic deterrent.

Since the mid-1970s, the Iranian nuclear program has made Iraq a more serious state with regard to nuclear weapons. An Iraqi Radio broadcast announced that "the world has a responsibility to quickly and immediately thwart Iran's efforts to produce a nuclear bomb... Iranian nuclear bombs which are first and foremost aimed at threatening the Arab nation and disturbing stability and security in the Gulf, constitute a threat to world peace."²⁶ Iraq actively pursued a long-term nuclear program from mid-1970s onward, and it is believed that it became a member of IAEA simply to divert international attention away from its accelerated

²⁵Hazim T. Mushtak, "Arms Control and the Proliferation of High-Technology Weapons in the Middle East and South Asia: An Iraqi View," in Shelley A Stahl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992, p. 114

²⁶Baghdad Radio, December 27, 1992

efforts to acquire these nuclear materials. It was the war with Iran that gave Iraq the impetus to seek its ultimate security.²⁷

It is not unusual to identify states as “rogue” or “irresponsible” if and when they have used the WMDs, especially when leaders like Saddam Hussein have a reputation for aggression. It is more pertinent to understand why states in protracted conflicts and especially ones that are involved in two or more such conflicts, are generally determined to acquire nuclear weapons, particularly when their adversaries also possess such weapons. Saddam Hussein has been sharply criticized for being one of the most ruthless rulers on earth, capable of using chemical and biological weapons in wars. Although Saddam has made effective use of Iraq’s chemical weapons to its advantage in the Iran-Iraq war, his intentions as far as the nuclear weapons are concerned may match any other leader trying to protect his country from the enemy’s aggressive moves.

In 1990, Israeli Defense Minister Moshe Arens stated that Saddam Hussein’s Iraq has no reason to fear Israel because Israel and Iraq have no common border.²⁸ The truth of such a statement has not been well accepted by the Iraqis. As far as geographical proximity is concerned, Israel and Iraq are separated by Jordan, but the Arab-Israeli conflict is not about territorial proximity of each Arab state with Israel, even though proximate adversaries have more to fear from

²⁷Shahram Chubin, “The Middle East,” in Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation after the Cold War*, pp.42-43

²⁸*Haaretz*, June 20, 1990; See, Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, Cambridge Mass: The MIT Press, 1997, chapter 9, note 3

hostile neighbors. Besides the religious and ethnic issues that comprise the Arab-Israeli conflict, the very existence of the state of Israel, the most important territorial issue for some Arab states within the conflict, comprises an act of aggression against the Arab nations. For Iraq, it is about an Arab country facing an Israeli nuclear threat, not a bilateral territorial dispute. Consequently, Iraq threatens Israel only if Israel attacks the Arab countries. As a member-state of the Arab coalition against Israel, Saddam Hussein reportedly described Iraq's nuclear program as the first attempt at Arab nuclear arming.²⁹

Israel's own actions have clarified to the world how much it is threatened by Iraqi nuclear weapons possession. If the fear were limited to Arab countries bordering Israel, it would have no reason to fear the development of an Iraqi nuclear program. There is probably no reasonable explanation for the destruction of the Osiraq facility by Israel other than the threat of Arabs being able to possess nuclear weapons. That destruction had a great impact on Iraq's threat perception of Israel. As Herbert Krosney states: "The Iraqis stuck to their plan. A new reactor remained at the top of the Iraqi acquisition list..."³⁰ This raid did little to stop Iraq from acquiring nuclear weapons.

The driving force behind Iraq's nuclear weapons acquisition has been Israel's nuclear weapons possession, although acquiring nuclear weapons would also enhance Iraq's status in the Gulf region. Although this may be an added

²⁹Steve Weissman and Herbert Krosney, *The Islamic Bomb*, New York: Times Books, 1981, p.89

³⁰Herbert Krosney, *Deadly Business*, New York, London: Four Walls Eight Windows, 1993, p.37

incentive, Saddam Hussein has repeatedly mentioned that nuclear weapons are essential for his country because Israel possesses such weapons. Iraq's only deterrent capability against Israel is nuclear capability, which Saddam officially claims does not exist. However, some of Saddam's statements indicate that Iraq has needed a deterrent capability, and like other conflict-prone countries, he believes that it is the balance of power that ultimately maintains peace. In 1990 Saddam argued, "It should no longer be thought that if the Arabs have a certain weapon they will use it while others will not."³¹

In reference to the success of deterrence, Saddam opposed the Western view that the Arab states are incapable of establishing a stable mutual deterrence, and stated: "Why are the Arabs and the Muslims not permitted what is permitted to others? The U.S. and the Soviet Union have reached to peace thanks to a balance of power and the entire Western world is adhering to this logic in order to reach peace."³² For Saddam, Iraq and the Arab countries are as responsible and capable of keeping peace in the Middle East by using these deterrent capabilities. One cannot argue since the use of nuclear weapons was not mentioned by Saddam in his statements.

From the Iraqi perspective, the need for an Arab deterrent capability against Israel is undeniable. Its desire to balance Israel's nuclear capability became

³¹Saddam Hussein holds news conference after Baghdad talks, INA in Arabic, April 8, 1990 (BBC, ME/0745, April 10, 1990, p.A/1; See Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, chapter 4, note 26

³²Saddam Hussein, "Iraq Aspiring to A Nuclear Balance with Israel," *Davar*, December 3, 1990; See Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, chapter 4, note 26

the central component of Saddam Hussein's quest for leadership in the Arab world.³³ Iraq's drive for nuclear weapons in the 1980s has mostly been due to the desire to have mutual deterrence in the Middle East.³⁴ This was also evident in Saddam's speech after the Osiraq destruction:

I believe that anyone or any state in the world which really wants peace and security and which really respects peoples and does not want them to be subjugated to foreign forces should help the Arabs in one way or another to acquire atomic bombs to confront the actual Israeli atomic bombs, not to champion the Arabs and not to fuel war, but to safeguard and achieve peace. Irrespective of the Arabs' intentions and capabilities and even if the Arabs do not want them and are unable to use them, I believe that any state in the world that is internationally and positively responsible to humanity and peace must tell the Arabs: Here, take these weapons in order to face the Zionist threat with atom bombs and prevent the Zionist entity from using atomic bombs in wars.³⁵

Iraq's intention to possess nuclear weapons for deterrence purposes is explicit in this statement. How far or whether this leader has tried to deceive the world with this statement is another issue.

Why has Iraq not depended on its chemical weapons when it attaches a lot of importance to them? Iraq's possession of chemical weapons and its chemical

³³Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p.136

³⁴Ibid.

³⁵Saddam Hussein's Cabinet Statement, June 23, 1981 (FBIS, June 24, 1981, p. E-3), See Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, chapter 4, note 46

warheads for the SCUDs is not news to the world. The country has used its chemical weapons against Iran during the Iran-Iraq war and could use them again in future wars. Iraq has also convinced the world that other weapons of mass destruction such as the chemical weapons, are extremely important for the Arab countries in the face of Israeli nuclear weapons possession. Saddam Hussein has maintained that chemical weapons are the “poor man’s deterrent.” In reality, Iraq has been more open about its chemical weapons than its nuclear program or capability. After the 1991 Gulf War, Iraq had to submit, to the UN Special Commission on Iraq and IAEA, the details of its chemical, biological and nuclear materials stockpiles. Although Iraq, under extreme pressure, did declare the size of its WMD stockpiles, it did not provide accurate information about its nuclear program and weapons. Iraqis made misstatements about the size of all of its weapons of mass destruction, including chemical weapons, the deception and denial was even greater about the nuclear matter.³⁶ This is a clear indication of the much importance Iraq attaches to its nuclear capability. Although the chemical and biological weapons in Iraq’s possession are not to be dismissed, nuclear weapons have always had an important place in the strategic thinking of the Iraqis. Therefore, even the Osiraq destruction did nothing to prevent Iraq from pursuing its nuclear ambitions. In fact, the country’s interest had accelerated after that event and 1981 was the beginning of Iraq’s clandestine uranium enrichment program.³⁷

³⁶David A Kay, “Denial and Deception Practices of WMD Proliferators: Iraq and Beyond,” p. 86

³⁷Ibid.

The point is that Iraq had already used chemical weapons and the taboo on use was broken with not only Iran, but even the Israelis were aware of it. Both of its enemies--Iran and Israel--have these weapons and they are not considered to be special. In fact, one can easily argue that Iraq made great blunder using these chemical weapons during the Iran-Iraq war. They were tolerated by the international community, making the weapons war-fighting rather than war-detering to the key countries in the Middle East. On the nuclear front the situation is different. There is a nuclear taboo and the purpose of these weapons, with profound devastating capability, is for deterrence. Both Israel and Iran have access to these weapons-- although the former is an opaque possessor and the latter's acquisition is still questionable--and have deterrent capabilities, which worries Iraq. Why Iraq has given so much importance to chemical weapons is simple: as long as Iraq was unable to acquire nuclear weapons, it wanted the Israelis to believe that the Osiraq destruction has successfully crippled Iraq's nuclear program and only chemical weapons remained as deterrents. Because Iraq has two regional rivals which use chemical weapons, their significance as deterrents is not as strong for Iraq as for other Middle Eastern countries. Anthony Cordesman states, "Iran is now well equipped to retaliate, and the southern Gulf states and Israel have already lived through the threat of Iraqi missile attacks using chemical weapons."³⁸ Chemical weapons do not offer Iraq the capability it needs to secure itself from its rivals' attacks or to threaten rivals with retaliation.

³⁸ Anthony H. Cordesman, *Iran & Iraq*, p.273

Depending on other's capabilities to defend oneself is not an ideal situation. It, however, is a possibility in a multi-power region, especially where most powers are fighting just one state as in the Arab-Israeli conflict. Iraq's concern about Israel and Iran simultaneously seems to have made it the most proliferation-prone, and a fast-paced proliferator in the Middle East.

The Middle East, where a number of regional powers can share the responsibility of handling any Israeli threat, is a region that differs from a two-power region. Since Israel has been the primary threat in the Arab-Israeli conflict, the Arab coalition consisting of several powers is usually not so alarmed at the thought of an Israeli nuclear capability. Perhaps that is what happened with the Arab states at the initial stage, but then balancing Israeli nuclear capability became pertinent. If each power in the Arab coalition wanted another to take up the responsibility, the result would be no balancing at all. As a rule in the modern state system, it is always the major powers in a coalition that try to hold the major share of responsibility. Within the Arab coalition, Iraq and Egypt have always been the major players, and it was not unusual for them to take up the responsibility of balancing Israel with nuclear capability. Egypt's nuclear effort existed to a certain point, but its agenda changed with the improvement of its bilateral relations with Israel. The Arab hopes for an Egyptian nuclear capability to balance Israel soon faded. Iraq, a country with no common border with Israel, is in a bilateral territorial conflict with Iran. It became enthusiastic about having its own capability to address both conflicts simultaneously. Its drive for nuclear weapons acquisition had dual purposes which was a blessing for the Arab countries. As long as the

Israelis are checked, the Arabs have seemed to be satisfied. The point is not about what smaller Arab states did to neutralize the Israeli nuclear threat, but why and how Iraq responded to it. Iraq's response was not straightforward, but it served Arab purposes.

The response Iraq made was not a deliberate decision on behalf of the Arab states in the coalition, nor was it made in consultation with them. It was, however, expected that if any country took the first step to address the Israeli nuclear concern, it would be Iraq. That became clearer and pertinent after the signing of the Camp David Accords by Egypt and Israel, which had the effect of isolating Egypt from the Arab coalition for quite sometime. Although "all the Arab states must act as one body in order to obtain a countervailing nuclear deterrent that would eliminate Israel's monopoly in this realm,"³⁹ Iraq was the major player in this respect, and the Arab countries in the coalition seemed to have applauded Iraqi nuclear ambitions. The Arab countries, including Egypt, mostly felt sorry for Iraq when, in 1991, it was believed that Iraq could not succeed in making its nuclear weapons.⁴⁰ This caused the impression that, at least in an informal mode, Iraqi nuclear weapons were Arab ones as far as the Arab-Israeli conflict was concerned.

Iraq is a unique proliferator in the Middle East because of the determination it has shown to the world. Its nuclear ambitions are largely due to

³⁹Quoted in Shira', Lebanon, January 9, 1989, HATZAV translation

⁴⁰Shai Feldman, *Nuclear Weapons and Arms Control in The Middle East*, pp.125-126

the unique situation it is in in the Middle East. It is engaged in twin protracted conflicts, with Israel and Iran. In the Arab-Israeli conflict Iraq is not the only power on the Arab side that is compelled to balance a nuclear Israel, but the Iran-Iraq protracted conflict requires Iraq to also address its own security needs since this remains a dyadic conflict. Thus, Iraq has taken its own nuclear path while it is a major state involved in the world's two most serious PCs. Even though the Arab-Israeli peace process is underway, it is unlikely that peace--if achieved soon--in the realm of that conflict would encourage Iraq to give up its nuclear weapons. An example about earlier Iraqi nuclear weapons efforts makes this point clear. Although Iraq's nuclear program was originally designed to counter the Iranian one in the mid 1970s, the Iranian change in nuclear policy during the late 1970s under the new Khomeini government did not change Iraq's nuclear policy. Israel seems to have become a prime focus of Iraq's nuclear policy at that point.⁴¹ This indicates that the two PCs have kept Iraq fully focused on its nuclear weapons program. An additional point is that it is not natural for a country to roll back its capability once it has acquired, but even if that were feasible Iraq would probably not accept such a proposition. The resolution of the Arab-Israeli conflict may only reduce the threat perception for Iraq on one front, but as long as its conflict with Iran remains unresolved, a deterrent capability will still probably be required. As Shai Feldman states, "...the resolution of the Arab-Israeli dispute would not necessarily relieve all perceptions of existential threat in the region... Interest in nuclear weapons may remain where strategic deterrence might still seem relevant,

⁴¹Ibid., p.135

primarily in the context of the relations between Iraq and Iran.”⁴² This is what makes Iraq the most determined proliferator among the Arab countries and makes it different from the other Arab countries involved in the Arab-Israeli protracted conflict.

Given this situation, it is hard to pinpoint exactly which PC motivates it the most to acquire nuclear weapons. What seems evident is that both are equally important to Iraq since both adversaries are nuclear capable--although Israel is an opaque nuclear state--making nuclear acquisition all the more necessary. The upside of such a situation is that the Iraqi nuclear weapons acquisition addresses its dual security needs simultaneously without having to pay equal attention to each one of them. The downside is that although its nuclear possession is somewhat believed, its motives are still vague because it is not clear whether Israel or Iran is the target, making matters worse for the Middle East in terms of nuclear arms race. The problem is that Iraq cannot seek a retaliatory capability against Iran without threatening Israel, nor can it possess it for Israel without threatening Iran. A comparative analysis of Iraq's two conflicts would provide a better idea of which country Iraq would prefer to target more, if it had to choose. Considering the two conflicts, it seems realistic that Iraq's central target is Iran because of the common border and the bilateral territorial conflict. Balancing Israel in deterrent capability has also been crucial for Iraq, being an Arab state. Wars are highly probable between Iran-Iraq, and deterrent capabilities are required to address security concerns. Iraq's acquisition of the WMDs also balances Iran, which is

⁴²Ibid., p.6

strategically in a better position than Iraq. The two conflicts create a chain reaction as follows: Iraq's WMDs, mostly to deter Iran, threaten Israel simultaneously, which in turn, threatens Iraq with destruction and Iraq threatens Israel with counter retaliation. Iraq's weapons elimination, if done by Israel, may have more impact on its military balance with Iran in the Iran-Iraq conflict, than on its military balance with Israel in the Arab-Israeli conflict.

Since Iraq has two rivals pressure may not be enough to denuclearize this country unless peace is achieved in both protracted conflicts. Its intentions are also unclear because of its affiliation with the NPT and simultaneous drive for nuclear weapons acquisition. Since Iraq has also been part of the NPT, the pressure to forswear nuclear weapons continues. Its covert nuclear program, contradictions between statements and nuclear activity, and unclear intentions for nuclear possession have all given the wrong signals to many, including the world's most powerful country, the United States, and thereby it has remained the main target in the Middle East.

The Iraqi case demonstrates how important it is to resolve protracted conflicts, even though a rolling back of nuclear capability may now be unlikely. It is time for Iraq to discuss its deterrent needs openly and not to alarm the world with false signals.

IRAN

With nuclear proliferation singled out by the West as a major threat to world peace, there is a close watch on Iran as a regional power in the Middle East

suspected of having a clandestine nuclear weapons program. Although Iran claims that its nuclear program is exclusively peaceful and is open to international inspections and points to small nuclear research facilities in Tehran, Isfahan, Karaj, and Bushehr, Western experts are convinced that Iran's nuclear program has dual purpose. US officials believe that Iran attempted to acquire nuclear technologies that are not consistent with a peaceful nuclear program. They maintain that Iran's secret nuclear facilities are located in the North of Tehran, in underground chambers beneath the village of Moallem Kalayeh, while another complex is believed to be hidden in a military base run by the revolutionary guards--Iran's military service.⁴³ In 1997 it was reported that Iran was only two years away from developing a usable nuclear weapon.⁴⁴ It is believed that Iran's efforts to acquire nuclear weapons accelerated in the mid-1980s when Tehran felt extremely threatened by Iraq's use of chemical weapons in the Iran-Iraq war.⁴⁵ In any case,

⁴³It has also been reported that there are possibly two secret bomb programs in Iran--one run by the defense ministry and the other by the Revolutionary guards. See, Scott Peterson, "Iran Eyes 'The Bomb,' West Watches," *Christian Science Monitor*, August 12, 1998

⁴⁴Voice of America News Report, December 23, 1997. Also see, "Iran May Be Close to Nuclear Bomb," *Israel Line*, November 13, 1997. In 1998, it was reported that Iran has about 4 nuclear weapons. See Steve Rodan, "Iran Has Up to 4 Nuclear Bombs," *Jerusalem Post*, 4/9/98. Although these are all western reports, as early as 1984 Hashemi Rafsanjani, Iran's former Parliament Speaker and President stated: "we have an English newspaper carrying a false report to the effect that within two years we would manufacture an atomic bomb. Needless to say, they are lying, for it is not clear whether we shall have atomic bombs that soon." See, Warren Getler, "Iran is Unlikely to Have Atom Bomb in 2 Years, Nuclear Experts Assert," *International Herald Tribune*, May 7, 1984.

⁴⁵Anthony Cordesman and Ahmed Hashim, *Iran: Dilemmas of Dual Containment*, Boulder, Colorado: Westview Press, 1997, pp.295-297

Iran is believed to be engaged in efforts to possess nuclear weapons. Iran possesses the 300-km range Scud-B and 500-km range Scud-C missiles, and it is able to strike targets in Iraq and other Middle Eastern states. The new 1,000-km range Nodong missile that Iran is acquiring from North Korea will enable it to target Israel easily for the first time.⁴⁶ It is noteworthy that Iran, a country that has ratified the NPT in 1970 and signed the CTBT in 1996,⁴⁷ is considered a proliferation threat. It is possible that Iran's signing of the NPT and the CTBT have been to receive more technical assistance from the West to help produce nuclear weapons. Why has Iran been so eager to obtain nuclear weapons when officially it has been part of the nuclear non-proliferation regimes, and why has the US policy of containing Iran through diplomatic isolation and sanctions not been able to end Iran's quest for nuclear weapons?

Iran received substantial assistance from China, Pakistan and Russia for its nuclear weapons program. It signed a formal nuclear research cooperation agreement with China in 1990 although cooperation began earlier, in the mid-1980s.⁴⁸ It is believed that the Iranian nuclear experts received training in China and Pakistan.⁴⁹ Similar nuclear agreements were concluded between Iran and

⁴⁶Rodney Jones et.al., *Tracking Nuclear Proliferation*, p. 169

⁴⁷Iran supported India in its objections to the CTBT until the end of the negotiation period. It has not shown any interest in ratification of the treaty.

⁴⁸Anthony Cordesman and Ahmed Hashim, *Iran: Dilemmas of Dual Containment*, p.297

⁴⁹*New York Times*, May 8, 1989; *Defense and Foreign Affairs*, November 20, 1989; *Jane's Intelligence Review*, Special Report no. 6, May 1995, p.14

Russia for the development of Iran's nuclear program. It is believed that Russia agreed to sell two nuclear reactors to Iran in the late 1980s, and by the mid 1990s Iran and Russia had signed an agreement under which Russia agreed to complete a reactor at Bushehr, begun by the German companies during the Shah's rule.⁵⁰ Russia had only agreed to assist Iran, but did not provide a nuclear umbrella that could perhaps have dissuaded Iran from acquiring its own nuclear weapons.

Iran's motives for seeking nuclear weapons originate in its rivalry with Iraq and Israel simultaneously in the Middle East. Its quest for preeminence in the Gulf region and its search for a deterrent capability against major power intervention are considered by scholars to be other crucial imperatives for going nuclear.⁵¹ The importance of an Islamic Bomb and the revolutionary Islamic state's role in nuclear weapons acquisition may be equally significant.

Iran launched its nuclear program under the Shah. It was his personal interest in seeing Iran develop its nuclear capability and, ultimately, his cordial relationship with the United States that had paved the way to activate the program. Although the Shah's contribution cannot be denied in Iran's nuclear program, his aim was for Iran to be an economic power in the region. He believed in conventional deterrent weapons and, in his view, nuclear weapons were less credible deterrents when compared to the conventional ones. Iran's one-man decision-making with regard to the nuclear program is amazing, but according to some scholars, the Shah never considered embarking on anything other than a

⁵⁰*New York Times*, January 8, 1995, p.A-8

⁵¹ See, Rodney Jones, et.al., *Tracking Nuclear Proliferation*, p.169

civilian nuclear program.⁵² It is, however, argued by others that the Shah began a nuclear weapons research program centered at the Amirabad Research Center, where studies of weapons designs and plutonium recovery from spent reactor fuel were conducted.⁵³ Even if the Shah was responsible for Iran's nuclear weapons program, successive leaders have gone along with the original plan.

The nuclear program continued to develop under the leadership of Ayatollah Khomeini, Ali Khomeini, Ali Akbar Hashemi Rafsanjani and Mohammed Khatami. After the Islamic revolution the pace of the nuclear program had slowed down, but some reports indicate that the revolutionary government planned to use reactors smaller than those at the Bushehr site because of its desire to acquire nuclear weapons.⁵⁴ They did not go ahead with the smaller reactors option at the end.

The Iran-Iraq War revived Iran's nuclear program. Iran's reactor projects at Bushehr were bombed repeatedly by Iraq, causing severe damage to its over-all nuclear program during the war. That situation changed when Hashemi Rafsanjani came to power in Iran. His regime has successfully kept the country's nuclear

⁵² Akbar Etemad, "Iran," in Harald Muller ed., *A European Non-Proliferation Policy*, Oxford: Clarendon Press, 1987, pp. 212-213

⁵³ Anthony Cordesman, *Iran and Iraq*, p. 104. Others, including as Jeffery Kemp and Robert Harkavy, also believe that Iran revived the old nuclear weapons program of Shah in 1984 after Iraq defeated it in the Persian Gulf war. See Jeffrey Kemp and Robert Harkavy, *Strategic Geography and the Changing Middle East*, Washington D.C.: Brookings Institution Press, 1997, p.389

⁵⁴Quoted in Leonard S. Spector with Jacqueline R. Smith, *Nuclear Ambitions: The Spread of Nuclear Weapons 1989-1990*, Boulder, San Francisco, Oxford: Westview Press, 1990, p. 208

weapons program a secret--which has been the only way for Iran to acquire nuclear weapons.⁵⁵ During the early 1990s, Iran's nuclear cooperation deals with China, Pakistan and India were discovered, but the Western reports have been unclear about the actual evidence of Iran's nuclear weapons program. Scholarly works, leaders' speeches, and the Western media reports all reveal that Iran is only years away from procuring an effective nuclear weapons. All Iranian leaders have demonstrated their commitment to nuclear weapons development. Whether or not today's Iranian nuclear program is a continuation of the earlier efforts remain unclear, but that the program is very active provides a clear indication that the Iranian leaders have wanted Iran to possess nuclear weapons. Therefore, it is not possible to point to one particular Iranian leader and say that it was his personal interest that made Iran the potential nuclear state it is today.

When the nuclear program began in Iran under the Shah's command, the Prime Minister and the cabinet were simply informed of the decision. The government's role appears to have been limited to establishing the Atomic Energy Organization of Iran (AEOI), and discussing their activities. Interestingly, the bureaucracies and the military had little to do with Iran's overall nuclear program during this period.⁵⁶ The argument that Iranian military bureaucracy demanded nuclear weapons and the Shah, who heavily relied on them for his power, had to

⁵⁵Safa Ha'iri, "Secrets of Iran's Nuclear Program and a Map of its Secret Factories," *Al-Watan Al-'Arabi*, January 20, 1995, pp.18-19 (FBIS Translated Text). According to Safa Ha'iri, the mullahs found themselves compelled to deny the existence of any nuclear projects.

⁵⁶Akbar Etemad, "Iran," in Harold Muller, ed., *A European Non-Proliferation Policy*, p.212

provide them what they wanted is not logical. In Iran the Shahs have always been the principal decision-makers, especially in regard to foreign and military affairs. Although it is believed that the Shah developed a nuclear program for civilian purposes alone and that there was no reason for the military to get involved in the process, contradictory arguments exist. After the Islamic revolution in 1979 very little changed in the decision-making process. Although the Shah was gone, the government did not have a greater role in this arena. The Speaker of the House was the most powerful man after Khomeini, and nuclear related decisions--civilian or defense--were made exclusively by them.⁵⁷ Iran's acquisition of nuclear weapons is associated with the post-revolution period, but it is unclear how and to what extent the Islamic leader's personal interest played a role in the nuclear decision-making. The nuclear weapons effort seems to have gained momentum from the late 1980s, when Iran was tired of fighting a long and defeated war with Iraq. With the change of the Iranian leadership in the 1990s, the nuclear aspiration did not seem to change. Iran is still suspected of forcefully pursuing a nuclear weapons program, and in July 1998, it tested Shihab-3, the medium-range ballistic missile (MRBM) which would allow it to strike all of Iraq and reach Israel.⁵⁸

In terms of the domestic situation, Iran, like most countries, faces internal challenges, but they are not broad based. Most Iranians support the central

⁵⁷Ibid., pp.214-216

⁵⁸Tim Weiner, "Iran Said to Test Missile Able to Hit Israel and Saudis," *New York Times*, July 23, 1998, H2; Also see, IISS, *The Military Balance*, 1998/99, p.116

government.⁵⁹ The country's domestic political stability was jeopardized by two anti-government threats--the factions of Iranian Kurds and the National Liberation Army or Peoples Mujahidin. The Kurds were involved in serious clashes with the Khomeini government and continue to be a threat for the current Iranian regime. The Peoples Mujahidins are Iraqi-based and supported and the Iranians do not support them, so they have lost internal support. Iran has been relatively stable for quite some time, but has experienced growing economic problems due to the Iran-Iraq war and the US economic sanctions. Did Iran try to divert domestic unrest by acquiring nuclear weapons? It is again unclear what nuclear weapons acquisition could have done to suppress domestic unrest in Iran, and whether or not the leaders perceived that as an incentive to proliferate. Iran does not need nuclear weapons to suppress the Sunni Kurds, who constitute only 9% of Iran's population.⁶⁰ As for the Mujahidins, they do not represent a significant internal political force, so the threat that they carry has little to do with domestic politics, and the question of using nuclear weapons for these kinds of internal problems is beyond reality. Finally, it is ultimately the weapons that need to be demonstrated. Open nuclear status is required for nuclear weapons to be used to divert domestic turmoil. Iran is still only suspected of having nuclear weapons, and they have not conducted any nuclear tests to date to demonstrate their nuclear status internally.

⁵⁹Anthony Cordesman, *Iran and Iraq*, p.80

⁶⁰CIA, World Factbook, 1992, p. 160. Iran has about 61.2 million people of whom 6.5 million are Kurds.

As for public opinion in nuclear decision-making, Iran, after the revolution, gave little importance to the general public in any matter, and decisions on defense or nuclear arena have not been the public's subject. A country that has kept the public in the dark about their future in terms of world politics, domestic politics, human rights, or civilian liberty would be unlikely to consider public opinion in nuclear choice. Anne Cahn writes, "On a question of such national importance as the nuclear option, it is clear that there will be no participatory decision-making."⁶¹ Why would the Iranian public be enthusiastic for their country to embark on a costly and ambitious nuclear program when the economy was devastated as a consequence of the Iran-Iraq war? Finally, an open nuclear status would be the public choice if and when they favored the nuclear option. Iran is still pursuing a clandestine nuclear weapons program and, unlike many near-nuclear countries, has refrained from referring to the dual use of their civilian nuclear program.

Did Iran consider the cost-effective aspect of nuclear weapons? The question can be answered by looking at the expenditures Iran has undertaken to accumulate modern conventional military capabilities. After Rafsanjani came to power in 1989, he wanted to rearm Iran with Western weapons, but the West was not willing to rearm Iran. Eventually the country sought help from China and the

⁶¹Anne Hessing Cahn, "Determinants of the Nuclear Option: The Case of Iran," in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near-Nuclear Countries*, Cambridge, Mass: Ballinger Publishing Company, 1975, p. 198

Soviet bloc and between 1986 and 1990 it received \$3.5 billion worth of arms.⁶² According to several sources, Iran had a \$10 billion arms plan to acquire new army, air defense and naval equipment during the 1990-94 period.⁶³ Sources indicate that Iran's defense budget has increased from \$3.4 billion in 1996 to 4.7 billion in 1997.⁶⁴ This means that Iran was not reducing its conventional expenditures in the period it has been suspected of developing nuclear weapons. Critics have accused Iran of making aggressive intentions which have been demonstrated by its rearmament efforts,⁶⁵ which prove that conventional expenditures have not been reduced by the possession of nuclear weapons. It is unlikely that Iran has actually taken this line of reasoning into consideration while making its nuclear weapons choice.

Iran was ruled by the Shahs and later by the Islamic fanatics until the mid-1990s so the scientific achievement of the possession of nuclear weapons was also associated with the leaders' support of it. The Shah assumed that military power was closely associated with access to modern technology and that less-advanced

⁶²Ahmed S. Hashim, "Iranian Science and Technology Capacity: Implications of Ideology and the Experience of War for Military Research and Development," in Eric Arnett, ed., *Military Capacity and the Risk of War*, New York, Oxford: Oxford University Press, 1997, p. 219

⁶³Anthony Cordesman, *Iran and Iraq*, p. 40

⁶⁴IISS, *The Military Balance*, 1998/99, p.127

⁶⁵Saideh Lotfian, "Threat Perception and Military Planning in Iran: Credible Scenarios of Conflict and Opportunities for Confidence Building," in Eric Arnett,

arms were undesirable. The Shah believed in scientific, modern, high-tech military achievements and the acquisition of nuclear weapons was associated with scientific success and military power. But again, the Shah's successors have pursued the nuclear option who did not believe in Iran's need for modern weaponry because that would make them temporarily dependent on the West.

Iranians may argue that possessing nuclear weapons increases their leverage with their allies. Using this kind of reasoning, "the United States might take a nuclear Iran more seriously than a non-nuclear Iran."⁶⁶ This argument is not applicable in the case of Iran. Since its nuclear acquisition is secret, the issue of bargaining with the Western nations does not arise. The two former opaque nuclear states, India and Pakistan, could not arrange any concessions from the United States for more than a decade after their nuclear weapons capabilities became known to the world. Instead, sanctions were levied against Pakistan by the West. After the Indian nuclear tests in 1998, the US tried to provide Pakistan with incentives, such as the delivery of the F-16s, to keep Islamabad away from testing its own nuclear weapons. That is not Iran's situation. As long as there is reason to question the actual possession of nuclear weapons, bargaining possibilities seem remote. It is obvious that Iranian leaders are also aware of this line of reasoning.

ed., *Military Capacity and Risk of War*, New York, Oxford: Oxford University Press, 1997, p. 207

⁶⁶Anne Hessing Cahn, "Determinants of the Nuclear Option: The Case of Iran," in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near-Nuclear Countries*, p. 197

Has Iran been eager to bolster its regional power or status by acquiring nuclear weapons? Iranians may well believe that nuclear weapons will influence the region and will serve their interests in being a strong power in the Middle East. Iran, which has always strived for regional dominance, may have sought nuclear weapons to obtain regional prestige and, in the process, increase its international status and power. Fredrick Strain asserts that Iran's open acknowledgment of programs funded for national prestige, a government controlled by a dictator, monarch or military regime, historic overestimation of the state's regional importance, among others indicate that Iran may well see the utility of nuclear weapons in terms of gaining regional prestige.⁶⁷ "Prestige as a motivation for the procurement of nuclear arsenals also manifests itself when discussing the quest for an Islamic bomb. This occurs because prestige, especially regional prestige, is an important qualification among Middle East nations."⁶⁸ Iran's development of an indigenous nuclear program easily becomes a symbol of patriotism and national ability.

Similarly, it is often argued that Iran has expressed dissatisfaction with the nuclear double standard of the Western states, and it is possible that Iran has been considering standing up to the West. When the Islamic leaders came to power, they terminated Iran's long-standing alliance with the West and began a neutral

⁶⁷Frederick R. Strain, "Iran's Nuclear Strategy: Discerning Motivations, Strategic Culture and Rationality," Institute for National Strategic Studies, 1998

⁶⁸Ibid.

course vis-à-vis the superpowers. These arguments, though relevant, are not logical when considering Iran's current nuclear status. Iranian decision-makers officially deny their nuclear weapons aspirations and continue to keep the program secret. The country is still something of a closed society, and it does not reveal to the US or its regional neighbors its nuclear capability. Under such circumstances, no regional power will give it the prestige it so desires, nor will the Western world give it the international status it aspires to. Hans J. Morgenthau writes about prestige that its purpose is to impress other nations with the power a state actually possesses, or with the power it wants the other nations to believe it possesses.⁶⁹ As for the actual possession of nuclear weapons, the Iranians have not yet disclosed their possession, and with regard to the possession of nuclear weapons it wants other powers to believe it has, Iran still has to make its intentions known. Nuclear weapons could conceivably place Iran on par with a number of key states, provided that it disclosed its intentions and refrained from signing the nuclear arms control treaties, the NPT or the CTBT.⁷⁰ In reality Iran has signed both. There is little reason to believe that Iran's search for nuclear weapons could be associated with the prestige motivation--regional or international.

⁶⁹H.J. Morgenthau, *Politics Among Nations*, New York: Knopf, 1956

⁷⁰Jalil Roshandel writes that Iran has fully accepted the safety rules set by the International Atomic Agency and this agency has the right to supervise the reactors in Iran. See, Jalil Roshandel, "Iran's Atomic Programs and Foreign Propaganda," *Hamshahri*, August 22, 25 1996, p.11, 11.

Iran's quest for nuclear weapons has been a function of its security needs. Iran's central threat emanates from Iraq, an aggressive Arab country along its border. Iran and Iraq have been in conflict since 1959 over territorial issues, and the two have fought one of the deadliest and longest wars of this century between 1980 and 1988. The two countries have had 7 foreign policy crises and 4 international crises since then.⁷¹ The immediate causes of the Iran-Iraq war include disputed borders and rights to a vital waterway, the Shatt-al-Arab. The Shatt-al-Arab is the meeting point of the Arab and the Persian states. It is vital for the export of oil from the Iraqi and Iranian ports, and much of the eight-year Gulf fighting took place in and around the Shatt-al-Arab.⁷² The war was not only costly but also inconclusive, and most Iranians consider it to be a defeat for themselves because Iran accepted a cease-fire at a time of maximum weakness.⁷³ The fact that Iran could not defeat or punish the aggressor in the war was a tremendous humiliation for the country. Consequently, the "war provides the experience, and the lessons derived from it the feedback, or corrective, for future defense policy."⁷⁴ This war had a tremendous impact on Iran's decision to aggressively embark on a nuclear weapons program. Iran tried to rebuild the Bushehr reactor with German

⁷¹Michael Brecher, *Crises in World Politics*, Oxford: Pergamon press, 1993, p. 72

⁷²Geoffrey Kemp and Robert E. Harkavy, *Strategic Geography and the Changing Middle East*, pp.93-95

⁷³Shahram Chubin, "Iran and the Lessons of the War with Iraq: Implications for Future Defense Policies," in Shelley A. Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992, p. 96

⁷⁴*Ibid.*, p. 97

assistance during the Iran-Iraq war.⁷⁵ Near the end of the war in 1987, Ali Khomeini, then President of Iran, addressed the Atomic Energy Organization:

Regarding atomic energy, we need it now...
Our nation has always been threatened from
outside. The least we can do to face this
danger is to let our enemies know that we can
defend ourselves. Therefore, every step you
take is in defense of your country and your
revolution. With this in mind, you should work
hard and at great speed.⁷⁶

The Western speculation concerning Iran's nuclear weapons program has been consistent with the Iranian leader's aspirations. In 1987 an exiled Iranian nuclear physicist revealed that Iran held a secret meeting in Tehran's Amir Kabir nuclear research center with key Iranian decision-makers, where it was decided that new funds would be allocated to develop an atomic device.⁷⁷ In 1988-89, the Iranian leaders also reportedly obtained large quantities of yellow-cake from South Africa for enrichment in Iran or even Pakistan.⁷⁸ The timing reveals the cause for Iran's nuclear aspirations. It was during this period that Iran was also suspected of making nuclear deals with China, and later with Pakistan, that would support its

⁷⁵Safa Ha'iri, "Secrets of Iran's Nuclear Program and a Map of Its Secret Factories," *Al Watan Al-Arabi*, January 20, 1995, pp.18-19

⁷⁶D. Segal, "Atomic Ayatollahs," *Washington Post*, 12 April, 1987

⁷⁷Statement from Kenneth R. Timmerman, "Iran's Nuclear Program: Myth or Reality," The Middle East Data Project Inc., 1995. Also paper presented at the USPID Sixth International Castiglione Conference, Castiglione, Italy, September 30, 1995

⁷⁸Mark Hibbs, "Bonn Will Decline Teheran Bid to Resuscitate Bushehr Project," *Neoclonics Week*, May 2 1991, p.17

weapons program. The point is not why these countries supported Iran in speeding its nuclear research, but why did Iran pursue a fast-track nuclear weapons program in the late 1980s?

Iran, like any other country aspiring to obtain nuclear weapons, has been eager to avoid any future wars with Iraq, a potential threat to Iran with whom because of unresolved territorial conflicts, a future war-probability is higher-than-normal. Anthony Cordesman contends that it is not possible to dismiss another round of fighting between Iraq and Iran.⁷⁹ Given this difficult situation, Iran must ask how the country can make conflict too costly for its opponent?⁸⁰ The association between territorial conflict and war-probability is evident in Saideh Lotfian's statement. He maintains that "the likelihood of a pre-meditated Iraqi attack on Iran and the renewal of a large-scale military confrontation over the Arvand Rud (Shatt al-Arab) waterway is still so high that it must be taken as the most serious basis for Iranian national defense policy."⁸¹

Iran has chemical weapons and it was able to produce mustard, phosgene and hydrogen cyanide gas by early 1988.⁸² Chemical weapons have been called as

⁷⁹Anthony Cordesman, *Iran and Iraq*, p.2

⁸⁰Frederick R. Strain, "Discerning Motivations, Strategic Culture and Rationality," Institute for National Strategic Studies, 1998

⁸¹ Saideh Lotfian, "Threat Perception and Military Planning in Iran," p.197

⁸² International Institute of Strategic Studies, *The Military Balance 1993-94*. Also see, Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p. 92; Julian Perry Robinson, "Chemical-Weapons Proliferation in the Middle East," in Efraim Karsh., et.al., eds., *Non-Conventional Weapons Proliferation in the Middle East*, Oxford: Clarendon Press, 1993, p.96

the "poor man's deterrent" by Hashemi Rafsanjani who believed that for defensive purposes Iran should consider these weapons.⁸³ Chemical weapons had been used during the Gulf war and Iran had already experienced the Iraqi use of mixes of mustard gas and nerve gas in attacks on the Iranian troops in 1987-88.⁸⁴ Consequently, the taboo became ineffective and both countries undermined the importance of chemical weapons as deterrents. Although Iraq was the initiator with regard to the use of these weapons, the fact remains that they are usable weapons and not weapons as deterrents. The non-deterrent effect of chemical weapons left Iran seeking alternative non-conventional deterrent capabilities to keep Iraq from waging another war with it. Iran's search for nuclear weapons thus accelerated after the war. Hashemi Rafsanjani, the former commander-in-chief of Iran's armed forces, stated:

With regard to chemical, bacteriological, and radiological weapons training, it was made very clear that these weapons are very decisive. It was also made clear that the moral teachings of the world are not very effective when war reaches a serious stage and the world does not respect its own resolutions and closes its eyes to the violations and all the aggressions which are committed in the battle field.⁸⁵

⁸³IRNA, October 18, 1988; FBIS-NES, October 19, 1988. This was cited by Peter Herby, *The Chemical Weapons Convention and Arms Control in the Middle East*, Oslo: International Peace Research Institute (PRIO), 1992, p. 42

⁸⁴Anthony Cordesman, *Iran and Iraq*, p. 113. Also See, Geoffrey Kemp and Robert E. Harkavy, *Strategic Geography and the Changing Middle East*, pp. 265. They state that due to the massive use of chemical weapons in the Iran-Iraq war, the international rules and norms restricting their use have somewhat been ineffective, making future use probable.

⁸⁵Speech by Hashemi Rafsanjani, Tehran Domestic Service, 19.35 GMT, October 6, 1988, trans. In FBIS-NES, 7 October, 1988, p.2. Also quoted by Leonard

He was referring to the use of chemical weapons by Iraq in the Gulf war and their tremendous negative impact on the morale of the Iranian military and the civilian. The Iraqi initiation of this new type of non-conventional war in the Middle East was also conveniently overlooked by the West, which strongly prohibits the use of these non-conventional weapons. The taboo in international law and custom was weakened and the world appears to have accepted to live with the use of chemical weapons.

Iran's nuclear rhetoric focuses centrally on Iraq. Iran perceived serious security threats when the existence of Iraq's nuclear weapons program became known to the world due to the Osiraq bombing.⁸⁶ However, its nuclear weapons program has been propelled significantly after the first Gulf war with Iraq, and it has launched a rapidly expanding nuclear weapons program in response to Iraq's nuclear weapons program which was discovered at the conclusion of the Second Gulf War.⁸⁷ Only nuclear weapons can prevent Iraq from starting another war with Iran over territorial issues. Iraq has claims against Iranian territory, suggesting that

Spector, "Nuclear Proliferation in the Middle East: The Next Chapter Begins," in Efraim Karsh, Martin S. Navias and Philip Sabin, eds., *Non-Conventional Weapons Proliferation in the Middle East*, New York: Oxford University Press, 1993, p.143

⁸⁶Haleh Vazri, "Iran's Nuclear Quest: Motivations and Consequences," in Raju G. Thomas, ed., *The Nuclear Non-Proliferation Regime: Prospects for the 21st Century*, New York: St. Martin's Press, 1998, p.316

⁸⁷ Haleh Vazri, "Iran's Nuclear Quest: Motivations and Consequences," in Raju G. Thomas, ed., *The Nuclear Non-Proliferation Regime: Prospects for the 21st Century*, New York: St. Martin's Press, 1998, p.318

Iran's need to deter an Iraqi attack is real. According to Fredrick R. Strain, Iranians have aggressive neighbors, and "to states like Iran, nuclear weapons have, and always will provide deterrence and therefore remain worthwhile objectives."⁸⁸

Since Iraq remains Iran's long-term military rival, the most likely war scenario involves an Iraqi invasion of Iran. According to Saideh Lotfian, "the fact that Iraq is temporarily restrained by the UN-imposed sanctions is not reassuring in the long run and the Iranian government cannot afford to ignore security threats from its western neighbor."⁸⁹ He adds that the existence of Iraq with a known CBW capability provides an incentive for Iran to develop a deterrent in kind, and "given the possibility of war with an Iraq that retains a residual CBW capability, Iran has good reasons to bolster its deterrent by any means that do not undermine the legitimacy of the government."⁹⁰ Although the Khomeini government reduced Iran's nuclear program led by the Shah, when Iraq invaded the Iranian territory, the nuclear program was revived and the new Islamic regime provided additional funds to the research groups to operate the reactor.⁹¹ That was not all. According to Mohammad Behesti, a senior official of the new regime, the mandate for Iran's nuclear program was then to develop a nuclear weapon.⁹² This means that the new

⁸⁸Frederick R. Strain, "Discerning Motivations, Strategic Culture and Rationality," Institute for National Studies, fn 44, 45

⁸⁹Saideh Lotfian, "Threat Perception and Military Planning in Iran: Credible Scenarios of Conflict and Opportunities for Confidence-Building," p. 197

⁹⁰Ibid., p. 199

⁹¹Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, p.104

⁹²Ibid.

Islamic regime understood that it was only the possession of nuclear weapons which would deter Iraq from attacking Iran in the future.

Iran's motivation to acquire nuclear weapons has been high because of its involvement in a bilateral conflict with Iraq and their geographical proximity. The bilateral conflict compels Iran to be self-reliant because no other power is committed to come to its aid in case of an Iraqi attack. Due to the geographical closeness, war is likely to start with minor clashes along the border, and Iran must take that into consideration. In fact, the outbreak of a full-scale war between Iran and Iraq was preceded by a series of border clashes.⁹³

Why did Iran not seek nuclear guarantees from the nuclear states? Iran has no security guarantees from the nuclear powers. It is said that Iran has the strongest negative security assurance from the United States.⁹⁴ To make matters worse, Iran is at the top of the US nuclear target list, so there is no hope of a positive security assurance from any quarter as evident from Iran's lonely struggle against Iraq during the 1980s.⁹⁵ When Iraq attacked the Bushehr nuclear power plant in 1984 and 1985, Iran did not get any help from the IAEA even after repeated requests,⁹⁶ demonstrating the inability and unwillingness by the IAEA to

⁹³ See, Joel Krieger et. al., eds., *Politics of the World*, 1993, p. 468

⁹⁴ Saideh Lotfian, "Threat Perception and Military Planning in Iran," p.213

⁹⁵ Ibid.

⁹⁶ Akbar Etemad, "Iran," in Harold Muller, ed., *A European Non-Proliferation Policy*, pp.224-225

fulfill its obligations and high-lighting that self-reliance was essential. Although Russia and China have been working closely with Iran in building long-range nuclear missiles which violate the 31-nation Missile Technology Control Regime (MTCR) banning the export of missiles and related technology for medium range missiles,⁹⁷ no nuclear assurance was provided to Iran by these friendly nuclear states. Embarking on a nuclear weapons program became crucial for Iran.

Iran's other concern in the Middle East has been Israel, as part of the ongoing Arab-Israeli conflict. Although Iran is apparently considered to be a non-Arab country in the Middle East, it is very much a part of this conflict because of its Islamic connection with the other Arab Muslim countries. Iran does not believe that Israel should be allowed to exist as a state. It believes that the territorial conflict between Syria and Israel, gives it more reasons to strongly oppose this Jewish state that should not have a legitimate place in the Middle East. Although Iran has highly complex relations with the Arab Gulf states, it has maintained close relations with Syria, especially since the Camp David Accords, which threatened Syrian national security and was strongly disapproved by Iran. Iran became actively involved in the Arab-Israeli conflict and had major security relations with Syria. In the process, Iran had access to the Syrian-dominated Lebanon. Following the Israeli invasion of Lebanon in 1982 President Assad allowed Iran to become more involved in the conflict by seeking its help creating a guerrilla force, the Hezbollah, and military and financial help. From the Syrian perspective, seeing

⁹⁷Bill Gertz, "Russia, China Aid Iran's Missile Programs," *The Washington Times*, September 10, 1997

beyond the Arab heartland and including the periphery was important in restoring the balance of forces between the Arabs and Israel.⁹⁸ Although a combination of inter-Arab rivalries are embedded in the Middle Eastern regional politics, because Israel is considered as the number one enemy, all of these states generally group together even though they are generally divided amongst themselves on other issues. Arab disunity is something Israel depends on when attempting to deal with individual countries in the Middle East. Even scholars try to imagine a situation where, simultaneously, Egypt would abrogate the Camp David Accords, the Iran-Iraq conflict would end in negotiations and Iraq/Syria would end their ideological differences.⁹⁹ Under such circumstances, Israeli security would be seriously threatened because the balance of forces would be altered. This essentially indicates that in the face of a common enemy the Arabs may unite, although otherwise they remain disunited.

The possibility of Israeli possession of nuclear weapons added to the discomfort and Israel became the other motivation for Iran's need to develop nuclear weapons. In November 1991 Iran's Deputy President Ayatollah Mohajerani stated that "if the Zionist regime has the right to possess nuclear weapons, then all Muslim countries have this right as well." He also stated that Muslims should develop expertise in the nuclear realm to face the Israeli nuclear

⁹⁸ Anthony H. Cordesman and Ahmed S. Hashim, *Iran: Dilemmas of Dual Containment*, p.140

⁹⁹ Anoushiravan Ehtashami, *Nuclearization of the Middle East*, London: Brassey's, 1989, p. 162

challenge.¹⁰⁰ Iran's involvement on the Palestine issue is also a part of its national security. Iran's anxiety over strikes from Israel has stimulated a growing interest in avoiding war through deterrence.¹⁰¹ Since nuclear weapons are best as deterrents, from the Iranian perspective, it has been in Iran's best interests to acquire nuclear weapons to avoid future wars with Israel.

Iran's nuclear policy has been consistent in the sense that it has continued to develop its nuclear weapons. Its conflict with Iraq is far from resolution, and it considers Israel as the Islamic enemy involved in territorial conflict with the Arab countries including itself. The two PCs compel Iran to acquire nuclear weapons capability for deterrence, although its immediate threat comes from Iraq--with which it has a bilateral territorial conflict to resolve. Inside the Middle East, the legacies of the Iran-Iraq PC and the Arab-Israeli PC are the obvious nuclear flashpoints.

SYRIA

Among the Middle Eastern countries, Syria has a very powerful military force. According to the International Institute of Strategic Studies Report, in 1994,

¹⁰⁰Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p. 137, fn.48

¹⁰¹Shahram Chubin, "Arms Procurement in Iran: Ad Hoc Decision-Making and Ambivalent Decision-Makers," in Eric Arnett, ed., *Military Capacity and the Risk of War*, New York, Oxford: Oxford University Press, 1997, p. 226

Syria possessed 4,500 tanks, making it the sixth largest tank force in the world -- after Russia, the US, China, Turkey and Ukraine, in that order--along with multiple-rocket launchers and artillery pieces, and its airforce has been equipped with MiG and Sukhoi fighters.¹⁰² It has also been reported that it does not have any nuclear weapons, although it possesses other weapons of mass destruction such as chemical weapons.¹⁰³ Although Syria does not possess a nuclear weapons capability, it has desired a deterrent capability against the Israeli chemical and nuclear weapons since it learned of Israel's nuclear weapons acquisition. Michael Klare states: "...Syria has long sought a strategic deterrent to Israel's nuclear and chemical capabilities. Lacking the infrastructure for a nuclear weapons program, Assad concentrated on the development of chemical weapons and ballistic missile delivery systems."¹⁰⁴

While this seems to be the case, in 1993 Leonard Spector reported that Syria was attempting to build a nuclear infrastructure encompassing military objectives.¹⁰⁵ Moreover, Syria's MiG-29s, Su-21s, Frog 7 SSMS and Scud B SSMS are all sophisticated equipment with accuracy, range, and a nuclear

¹⁰²International Institute of Strategic Studies (IISS), *The Military Balance*, 1993-94, pp.129-31

¹⁰³IISS, *The Military Balance*, 1993-94, pp.129-31

¹⁰⁴Michael Klare, *Rogue States and Nuclear Outlaws*, New York: Hill and Wang, 1995, p.149

¹⁰⁵Leonard Spector, "Nuclear Proliferation in the Middle East: The Next Chapter Begins," in Efraim Karsh, S. Martin and Philip Sabin, eds., *Non-Conventional Weapons Proliferation in the Middle East: Tracking the Spread of Nuclear, Chemical and Biological Capabilities*, Oxford: Clarendon Press, 1993, p.146

capability. Syrians have also tried and failed to obtain SS-23 missiles from the Soviet Union, and has since then tried to obtain Chinese M-9 missiles. It is also alleged that Syria has obtained the M-11 missiles with a range of 300 km. from China.¹⁰⁶ The Syrians have needed a deterrent capability against the Israeli nuclear capabilities and have also made limited efforts to possess them because its national interests demand due to its territorial conflict with Israel.

The creation of the state of Israel is at the root of the Arab-Israeli conflict, but the territorial disputes between Syria and Israel during the 1949-67 period over strategically significant land have acquired a dynamic of their own. After the 1967 war the return of the Golan Heights became pivotal for a solution to the Syrian-Israeli conflict.¹⁰⁷ It is not whether or not Syria places the territorial component of its own conflict with Israel over the Arab-Israeli conflict, but that Israeli occupation of Syrian territory has increased the difficulty for Syria in the already existing Arab-Israeli conflict. To Syria the Golan Heights is an integral part of its homeland. Given the balance of power that decisively favors Israel, the Golan is also a security question for Syria.¹⁰⁸ Syria has never been willing to concede the Golan to Israel.

¹⁰⁶ W Seth Carus and Janne E. Nolan, "Arms Control and the Proliferation of Ballistic Missiles," in Alan Platt, ed., *Arms Control and Confidence Building in the Middle East*, Washington D.C: US Institute of Peace, 1992, p. 73

¹⁰⁷ Muhammad Muslih, "The Golan: Israel, Syria, and Strategic Calculations," *Middle East Journal*, vol.47, no.4, autumn 1993, p. 611

¹⁰⁸ Ibid., p. 631

Israel remains the major nuclear threat to Syrian security. Syrian targets are among the easiest for the Israelis to neutralize because its nuclear missiles can easily and in a matter of minutes reach Syrian targets. Therefore, Syria has always been extremely concerned about the Israeli nuclear threat. The territorial conflict has provoked major military clashes which have added to mutual Arab-Israeli fears. Border incidents between Syria and Israel were the most persistent of all such clashes. It is argued that "the policies and reactions of Israel and Syria in the demilitarized zone generated recurring incidents of armed friction. The incidents ranged from low-intensity conflict, including infiltration, clashes with small arms... Israel had the edge in this long-running confrontation, in part because the kind of military power at the disposal of Syria was ill-suited to oppose or challenge the stronger and better-armed Israel."¹⁰⁹ Crisis became a common phenomenon in the Arab-Israeli conflict and there was a tendency to manage crisis by war. As Michael Brecher states, "actors... have resorted to war or serious clashes in 50 per cent of Arab/Israel crises."¹¹⁰ He further reports that actors resorted to violence as their primary Crisis Management Techniques (CMT) in 54 per cent of the Arab/Israeli conflicts and provides evidence such as Syria's primary reliance on violence to manage its crisis created by Israeli attack on the Golan Heights during the 1967

¹⁰⁹Ibid., p. 618

¹¹⁰Michael Brecher and Jonathan Wilkenfeld, "Conflicts, Crises and Systems," in Michael Brecher and Jonathan Wilkenfeld, *Crisis, Conflict and Instability*, Oxford: Pergamon Press, 1989, p.149

Six Day War.¹¹¹ In other words, the probability of war is high in the overall Arab-Israeli conflict.

Syrians have been concerned about Israel's nuclear monopoly, and have always tended to link any nuclear arms control agreement in the Middle East to the resolution of the Arab-Israeli conflict. Even during the Arab-Israeli peace process after the end of the cold war, Syria stressed the link between the territorial dimension of the Arab-Israeli conflict and disarmament. In 1992 Syria's President Hafez al-Assad said that, "Syria favors disarmament in the region on condition that peace which will allow the return of the conquered territories would first be obtained."¹¹² Syria believes in the association between the territorial nature of the Arab-Israeli conflict, a high likelihood of war and arms build-up, and has consistently stressed the need for arms build-up by the Arab nations in the face of high war-probability. Disarmament was unacceptable under those conditions. Shai Feldman contends: "The Syrian position seems to be that arms control cannot be implemented as long as the use of force is possible, and that such use cannot be ruled out until the Arab-Israeli conflict is resolved. In Assad's view, any discussion of disarmament prior to a resolution of the Arab-Israeli conflict would be premature, out of context, and hence pointless...the resolution of conflict must precede arms control reductions."¹¹³ However, for a variety of reasons, including

¹¹¹Ibid., p.147

¹¹²*Hadashot*, March 13, 1992

¹¹³Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p.208

their physical and financial inability to have a credible nuclear force,¹¹⁴ Syria is still believed to not possess nuclear weapons capability.

Syrian efforts to acquire a nuclear deterrent capability may have been less because of its close and long-term relations with the former Soviet Union during the cold war. Although the country's basic orientation is towards the West because the Syrian leaders have had less affinity with communism, after the 1967 and 1973 defeats in the Arab-Israeli wars, Syria made efforts to increase its armed forces' professionalism with the Soviet Union's assistance. Syria has re-equipped itself with modern Soviet weapons after its defeat in each of the wars with Israel, and Syria's military units constitute one of the most powerful forces in the Middle East.¹¹⁵ Although the Soviet Union did not provide a "nuclear umbrella" to Syria in the post 1973 period, "Syrian military leaders felt self-confident and believed that their superpower ally would lend considerable weight in the event of renewed war with Israel."¹¹⁶ Over the next few years, Syrian-Soviet relations improved and in October 1980, Assad formalized and signed the Treaty of Friendship and

¹¹⁴Shai Feldman, "Is There A Proliferation Debate?," *Security Studies* 4, no.4, summer 1995, p. 788. Although this was stated by the author, none of the proliferants (India, Pakistan or Israel) has refrained from acquiring nuclear weapons capability for financial reasons. Syria has also demonstrated the same trend with regard to the acquisition of sophisticated conventional capabilities as well as missile capabilities. Financial constraints have not been regarded in these issues. In recent years it is believed that Syria has huge Soviet debts from the cold war years and does not intend to pay the Russians back either. However, physical reasons may be more significant in this case.

¹¹⁵ Michael Klare, *Rogue States and Nuclear Outlaws*, p.148

¹¹⁶"Syria: Syrian Israeli Hostility," *Country Studies*, Library of Congress, 1998, p.3

Cooperation.¹¹⁷ From a national security perspective this treaty was important to Syria. The treaty provided for regular consultations on bilateral and multilateral issues of interest, coordination of responses in the event of a crisis, and military cooperation. By expanding its relationship with the Soviet Union through this treaty, "Syria endeavored to formalize the relationship with a 'strategic cooperation' agreement comparable to the treaty between the United States and Israel."¹¹⁸

In the post-treaty period, Syrian-Soviet relations were further enhanced. The relationship was not only limited to Syria obtaining Soviet military equipment, but the Soviet military presence in Syria became significant. It is estimated that by mid-1984, there were 13,000 Soviet and East European advisors in Syria.¹¹⁹ Moreover, by 1987, relations were deeper and closer, and Syria was clearly favored among the Soviet client states in the developing countries.

An understanding of the Syrian-Soviet relations in the context of nuclear weapons proliferation requires relating it to the US-Israeli relationship. Syria perhaps wanted a parallel of the US-Israeli treaty in 1980 and so concluded its treaty with the Soviet Union, but it does not explain why Israel still required

¹¹⁷"Syria: Syrian-Soviet Relations," *Country Studies*, Library of Congress, 1998, p.1. This treaty runs for twenty years and has an automatic extension of five years unless the treaty is terminated by one of the parties to the treaty.

¹¹⁸"Syria: National Security Doctrine and Concerns," *Country Studies*, Library of Congress, 1998, p.1

¹¹⁹"Syria: Syrian- Soviet Relations," *Country Studies*, Library of Congress, 1998, p.1. Although it must be noted that many of these advisors have been withdrawn in 1985 during a dispute and in 1986 about 2000-5000 remained.

nuclear weapons and Syria seemed content with the treaty alone. There are two ways of looking at it. The first is that this treaty may have had more clauses than the US-Israeli one, which made Syria more secure in the Arab-Israeli war situation. The second is to go beyond the treaty to find the causal explanations based on its own capability situation and dependence on other states involved in the same conflict with Israel.

To understand the first point it is important to note that the treaty brought informal commitments that went beyond the realm of conventional military cooperation. As is reported: "A secret protocol to the treaty reputedly details Soviet military obligations to Syria and may mandate the dispatch of Soviet troops to Syria in case of an Israeli invasion. Syrian Defense Minister Tlas warned in 1984 that the Soviet Union would dispatch two Soviet airborne divisions to Syria within eight hours in the event of a conflict with Israel. Tlas has also stated that the Soviet Union would use nuclear weapons to protect Syria."¹²⁰ Other reports also suggest that in the 1980s Syria and the Soviet Union agreed on nuclear cooperation and that the Soviet Union agreed to assist Syria in constructing a nuclear power reactor.¹²¹ The Israeli Minister of Energy still believed in 1986 that

¹²⁰N. Ronald, "Soviets Reportedly Offer Nuclear Help to Syria," *United Press International*, 28 November, 1985. In the mid-1980s Syrian Foreign Minister Mustafa Tlas declared that the Soviet Union had guaranteed it would give Damascus nuclear weapons if Israel employed nuclear weapons against Syria. Also see, "Syria: Syrian-Soviet Relations," *Country Studies*, Library of Congress, 1998, p.1. It must be noted that this statement was not endorsed by Soviet Union and that Syrian-Soviet nuclear cooperation is limited to a February 1983 agreement for cooperation and exchange for peaceful purposes.

¹²¹ "Syria will construct a nuclear reactor with Soviet assistance," *Ma'ariv*, May 24, 1983.

Syria was constructing a Chernobyl-type nuclear power reactor. Under such circumstances there is reason to believe that Syria had no desire to divert its resources towards a nuclear weapons program because it had already invested a lot to purchase conventional military armaments and equipment from the Soviet Union. Although informal commitments generally do not bring a high level of confidence to leaders who contemplate high war-probability with their adversaries, they may nonetheless have some impact on the nuclear choices made by the weaker parties to the treaty.

Syrians did not have a consistent relationship with the Soviet Union in the 1980s. The Syrian leaders have done what they believed was right for their national interest, ignoring Syria's long-term relations with the Soviet Union. The country showed intransigence in its 1983 rebuff to Soviet requests for a naval base at the port of Tartus and its deviation from Moscow's position with regard to the Palestine issue.¹²² It also did not support Gorbachev's new agenda to have the Middle East peace conference attended by all parties including Israel. Therefore, Syrians have had their own agenda not only in regard to the Middle East, but also in achieving their goals using their conventional capabilities and allies in the region.

Although there is some controversy regarding the Arab possession of nuclear weapons, in the chemical weapons arena, no such doubt exists. The Arab states are definitely advanced in terms of chemical weapons, and Syria is no

¹²²“Syria: Syrian-Soviet Relations,” p.1

exception. Shai Feldman argues that key Arab states consider chemical weapons as a strategic “counterweight to Israel’s nuclear option,” which makes them unlikely to adhere to the Chemical Weapons Convention unless Israel signs the NPT.¹²³ Similarly, others have argued that the Arab chemical warfare threat against Israel constitutes a reply and counter-deterrent to Israel’s nuclear advantage.¹²⁴ Syrian spokesmen have indicated that the possession of chemical weapons acts as a deterrent against possible Israeli nuclear attack.¹²⁵

Although chemical weapons are not as destructive as nuclear weapons, “their characterization as weapons of mass destruction does not require that their destructive capability equal that of nuclear weapons but only that they be capable of inflicting damage of unacceptable cost to the opposing side. The point is not the character of the weapons, but the character of the effect. Sustained attack with chemical weapons on urban concentrations or, with more precise delivery systems, on critical military facilities such as air bases is likely to influence decisively and in a relatively short period the outcome of a conflict.”¹²⁶

¹²³ Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p.275

¹²⁴ Aharon Levron and Zeev Eytan, “The Middle East Military Balance,” *The Jerusalem Post*, Westview Press, 1987, p.103

¹²⁵ Yair Evron, “Opaque Proliferation: The Israeli Case,” *Journal of Strategic Studies*, vol.13, no.3, September 1990, p.58

¹²⁶ Brad Roberts, “The Strategic Implications of Chemical Weapons Proliferation,” in Shelley A. Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in Middle East and South Asia*, New York: St. Martin’s Press, 1992, p.34

According to the American officials, Syria is supposedly the most advanced country in the region in chemical weapons.¹²⁷ The Syrians have been producing chemical weapons in facilities constructed with the assistance of West German companies since the mid-1980s and have stockpiled large quantities of mustard and nerve gas.¹²⁸ In addition, it has also produced chemical weapons warheads for its Scud Missiles, bringing all of Israel within the reach of its chemical attack.¹²⁹ Syria has actively sought longer-range missiles to enable it to attack any target in Israel, and has long had details of the Soviet nerve gas warhead for the Scud, which has the accuracy necessary to attack Israel's air bases in the south and the nuclear facility at Dimona.¹³⁰ Syria clearly believes that it needs longer range, more advanced missiles to counter Israel's nuclear weapons, mobilization capabilities and air supremacy.

There is no doubt that the Arabs, in the face of Israeli nuclear threat, have other weapons of mass destruction, such as chemical weapons, and are better off when compared with states with no such weapons or which can not depend on such weapons. Although chemical weapons may be the 'poor man's deterrent,'¹³¹ Syria has also had its nuclear aspirations. It has continued its efforts to acquire

¹²⁷Aharon Levron and Zeev Eytan, "The Middle East Military Balance," p.94

¹²⁸Kenneth R. Timmerman, *Weapons of Mass Destruction: The Cases of Iran, Syria, and Libya*, Los Angeles: Simon Wiesenthal Center, 1992, pp. 59-61

¹²⁹Kenneth Timmerman, *Weapons of Mass Destruction*, p.60

¹³⁰*Jane's Defense Weekly*, 26 July, 1982, p.92

¹³¹For information on Poor Man's Atom Bomb, see Brad Roberts, "The Strategic Implications of Chemical Weapons Proliferation," in Shelley A. Shatl and Geoffrey

nuclear reactors and develop missiles that are nuclear-capable. One positive aspect of possessing other weapons of mass destruction, including chemical weapons, is that countries like Syria can afford to move slowly in acquiring nuclear weapons.¹³² That does not fully explain why Syria has given less effort to acquire its nuclear weapons as compared to other key Middle Eastern states such as Iraq or Iran.

The greatest advantage that countries like Syria have in a multi-power region and being involved in a non-dyadic conflict is that they can, to a certain extent, depend on the deterrent capabilities of the other powers engaged in the conflict. Although Iraq is not applauded for many of its deeds, when it comes to the nuclear weapons issue, Arab states are quite united and do not seem to believe that Iraq's intention is to use such capability against them. On the contrary, the Arabs have applauded Iraq's efforts to challenge Israel's nuclear monopoly and alter Israel's perceived advantage. Muhammad Hasanin Haykall maintains: "The fact that Iraq's nuclear program turned out to be larger and more advanced than what has been anticipated in the past did not alter the Arab attitude. In Arab eyes these comprised Arab weapons which were pointed at Israel, not Iraqi weapons which were aimed against other Arabs. The Arab state was entitled to catch up with Israel's military technology. Saddam Hussein's mistake was not in attempting

Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, pp.33-35

¹³²One must, however, understand that this is possible only in a conflict involving several powers on each side. Syria could not afford to continue with its slow pace in nuclear weapons acquisition if it were the only power involved in the conflict with Israel, a nuclear-capable country.

to develop these weapons but in his statements that he was prepared to challenge Israel before he was actually ready to do so.”¹³³

Syrians have also demonstrated similar attitudes during the US-Iraqi controversy about the Iraqi efforts to acquire nuclear weapons capability. The Syrians have welcomed the Iraqi nuclear weapons acquisition and argued that “Israel’s military planning for the next war is tied to [the efforts] to solve the threat entailed in the development of nuclear weapons by the Arabs. The Americans are cooperating with Israel in this realm through the ‘Star Wars’ program.”¹³⁴ The Syrians may have privately been concerned about Iraq or Iran’s nuclear developments, but they have entertained the idea of an Arab nuclear weapon to balance Israel’s in the Arab-Israeli conflict setting. Although status symbol of having nuclear weapons should have been as significant a cause as the potential security threats for Syria’s recent interests in the bombs, that is not the case. If it were, Syria would have made serious efforts to acquire nuclear weapons. Syria, which competes with Iraq for prestige and political influence in the Middle East, has not considered the possession of nuclear weapons an important tool to enhance its regional status. Since deterring the adversary has remained crucial, it has been able to depend on other states to do the job until it is ready to deter with the possession of nuclear weapons.

¹³³Book excerpts, Muhammad Hasanin Haykall, *Yediot Ahronot* , Israel, march 27, 1992

¹³⁴*Al-Sha'b*, July 5, 1990, translation by HATZAV.

Interestingly enough, it is not only the Arab states that believe other powers are there to check adversarial attack, Israeli officials have sometimes been convinced that in the absence of a common border between Iraq and Israel, there is no reason to fear Saddam Hussein's threats and statements since he threatens Israel only if it attacks an Arab country.¹³⁵ Even Israel seems convinced that the Arabs are united as far as any Israeli threat to the Arab countries is concerned. Threatening one Arab country by Israel means threatening all involved in the Arab-Israeli conflict. This is a unique situation because some of these states involved in the coalition can depend on others to balance or match the capability of their adversary, and deter the adversary from any military attacks. Although this is not an ideal situation or a permanent solution, as long as a country is unable to acquire the required weapons, it can continue to make efforts to get access to the capability because for them time is not running out.

EGYPT

Egypt is a major Arab country which has been directly involved in the Arab-Israeli protracted conflict since 1947. Its conflict with Israel had its roots in the creation of the state of Israel and was exacerbated when, in 1948, Israeli forces

¹³⁵This view was expressed by Israeli Defense Minister Moshe Arens, *Ha'aretz*, June 20, 1990. He, however, believes that in the realm of the Arab-Israeli conflict, the Iraqi belief is that the very existence of the state of Israel comprises an act of aggression against the Arab states.

crossed the Egyptian-held Sinai Peninsula.¹³⁶ From 1967 onwards the territorial aspect of the conflict became much more significant because Egypt's territory, the Sinai Peninsula, was occupied by Israel in the 1967 Arab-Israeli war. Although territory remains one of the major issues in the over-all Arab-Israeli conflict, and Israel had acquired nuclear weapons capability during the 1960s and had refrained from signing the NPT, Egypt has refrained from developing a nuclear weapons capability and ratified the NPT in 1981.¹³⁷ There is no evidence to suggest that the Egyptians are trying to enrich uranium or to obtain fissile material, nor is there any indication that the country has violated the treaty obligations of the NPT. Egypt's nuclear facilities are under full-scope IAEA safeguards. The Egyptian response to the perceived Israeli nuclear threat has been significantly muted --which calls for an explanation. Key questions in this regard would be to find out whether or not Egypt has ever considered taking a nuclear option; why and when did Egypt give up that option (if it ever had any); and how this country copes with the Israeli nuclear threat in the context of the Arab-Israeli protracted conflict.

Egypt's Nuclear Weapons Option

The Egyptian perspectives on building its nuclear capability has varied in different periods of the Arab-Israeli conflict. The various nuclear policies pursued by Egypt provide a better understanding of the relationship between war in a

¹³⁶Michael Brecher, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997, p.171

¹³⁷Frank Barnaby, *The Invisible Bomb: The Nuclear Arms Race in the Middle East*, 1989, p. 84

territorial conflict, deterrent-capability requirements and nuclear weapons acquisition.

In the 1960s Egypt was no different from any other country desiring to acquire nuclear weapons to address Israeli nuclear threats. The country made two serious efforts in the nuclear arena which included creating a nuclear infrastructure and attempting to buy nuclear capability by recruiting German scientists who had been involved in the German nuclear program during the Second World War years.¹³⁸ In 1966 Egypt apparently discussed the possibility with the Soviet Union of buying nuclear weapons. After the 1967 War President Nasser made efforts to upgrade Egypt's nuclear infrastructure and even tried to buy nuclear weapons from China.¹³⁹ China, however, did not agree with Egypt's plan and the attempts failed. The point is that Egypt made efforts to acquire nuclear weapons during this period.

As part of the Egyptian denunciation of the Israeli nuclear program, Egyptian President Nasser "responded publicly to the construction of the Dimona reactor for the first time in December 1960."¹⁴⁰ As for getting a nuclear guarantee from the former Soviet Union, when in 1966 speculations about an Israeli nuclear weapons program and the possibility of testing their atomic device existed, there were unofficial reports that the Soviet Union had promised to provide a nuclear

¹³⁸Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p.130

¹³⁹See Shyam Bhatia, *Nuclear Rivals in the Middle East*, p.56

¹⁴⁰ Gerald M. Steinberg, "Deterrence and Middle East Stability: An Israeli Perspective," *Security Dialogue*, vol.28, no.1, March 1997, p. 53

guarantee to Egypt in the case of an Israeli development of nuclear weapons.¹⁴¹ This was an important assurance for Egypt because it could not have a nuclear program of its own due to scientific and financial reasons. In the 1970s as well, the Egyptian President Sadat looked to the West for military and nuclear assistance.¹⁴² Egypt not only tried to have its own nuclear weapons, but also tried to get nuclear assistance from the two superpowers. Egypt's response to the Israeli nuclear weapons has not been as muted as is believed by most scholars. Nor was Egypt unconcerned about the Israeli nuclear threat or the country's need to possess nuclear weapons.

However, as a country conscious of its regional status and anxious to retrieve Sinai from Israel, Egypt did attempt to acquire nuclear weapons up to a certain point. Its sophisticated aircraft and missiles also guaranteed deliverability of the bombs once they were available to them. The country, nonetheless, seems to have changed its nuclear policy by the late 1970s.¹⁴³

¹⁴¹Hedrick Smith, "Soviet Said to Offer Cairo Atom Defense," *New York Times*, February 4, 1966

¹⁴² Anoushiravan Ehteshami, *Nuclearisation of the Middle East*, p. 134

¹⁴³There are some who argue that the 1967 Arab-Israeli war was not part of the mainstream political thinking. It was a dramatic event that terminated this project. It is also believed that the origin of the 1967 war was to terminate the project. Therefore, it was after that war that Egypt had a sudden shift in its nuclear policy. This was an observation Fawzy Hammad made during a personal interview. This is, however, not logical if we consider Egypt's desire to buy nuclear weapons from

A Change in Its Nuclear Policy

Egypt changed its nuclear policy with the signing of the Camp David Accords. Sadat's trip to Jerusalem in 1977, led to the 1979 Camp David Peace Accords and required Israel to withdraw in stages from the Egyptian territory. With this treaty, Egypt's territorial problem with Israel was permanently resolved. Egypt received all of the Sinai Peninsula, and the treaty was fully acceptable for the country. The probability of direct war between Egypt and Israel was reduced, and consequently, there was little need for Egypt to embark on a nuclear weapons option and create an additional problem in the crisis-prone Middle Eastern region. As the former Foreign Minister of Egypt during President Sadat's period, Morad Ghaleb, stated: "It was easier for Egypt to go for non-proliferation since it had resolved its problems with Israel in 1979 with the Camp David Accords. War became less probable, and the search for deterrent capability became less important...so giving up the option was easy."¹⁴⁴ He further elaborated on the subject of the territorial peace treaty and its relationship with nuclear weapons proliferation. He stated: "Solving territorial problem in a just way is important. If you are forced to sign an unjust treaty or agreement--then it creates future problems. The deal [Camp David] with Israel was an acceptable deal, so it was easy [for Egypt] to accept... As long as Sinai was given back to us, I think it was a reasonable agreement... Territorial claims of the Arabs will have to be resolved

the former Soviet Union after the 1967 war or to acquire nuclear weapons from China in the 1970s.

¹⁴⁴Interview with Morad Ghaleb, Cairo, March 18, 1997

first. A peace agreement has to be a package deal, but territory is a number one [priority].”¹⁴⁵ The bilateral territorial problem with Israel ended with the signing of the Camp David Accords and Egypt was able to give up its desire to possess nuclear weapons.

In similar vein, Fawzy Hammad stated: “We don’t have any territorial problem with Israel. In 1984 all of Sinai was given back to Egypt. So, a weapons program is not necessary [for Egypt]. In 1981, Sadat acceded to the treaty [NPT] because the territorial problem was over in 1978-79.”¹⁴⁶ It seems that as long as territorial claims existed and war-probability remained higher-than-normal, Egypt refused to consider any non-proliferation efforts.

Others have argued that Egypt may have considered that, with the signing of the peace treaty with Israel in 1979, the Israeli nuclear threat was greatly reduced “or even removed” which gave every reason for Egypt to believe that its need for nuclear security assurances was also removed.¹⁴⁷ With the removal of the security threat from Israel, nuclear assurance was also unnecessary. From the

¹⁴⁵Ibid. Although Morad Ghaleb contends that the peace agreement between Israel and Egypt was an acceptable one to the Egyptians in terms of getting back Sinai, he, nonetheless, mentioned that Egypt had to give a lot of concessions, even in Sinai (such as demilitarization, presence of international forces and limited presence of armoured forces in Sinai) for Israel to feel absolutely assured and secure.

¹⁴⁶Interview with former President of the Atomic Energy Authority, Fawzy H. Hammad, Cairo, March 18, 1997

¹⁴⁷ Frank Barnaby, *The Invisible Bomb: The Nuclear Arms Race in the Middle East*, p.85

Egyptian perspective, the signing of the Camp David Accords with Israel had a great impact on the Egyptian nuclear policy.

A comparative analysis of the Egyptian and Syrian cases would clarify the point. Egyptian response toward Israeli nuclear weapons acquisition was muted after the bilateral peace treaty over territory was agreed upon, while the Syrians have continued to suspect Israeli nuclear intentions even after 1979. Why did the two perspectives differ? Egypt had little reason to be afraid of Israel after the peace treaty was signed because war seemed to be a remote possibility. The bilateral territorial dispute between Syria and Israel still existed, and Syria, even today, not only feels threatened by Israel's nuclear capability, but also has mostly refrained from taking part in multilateral negotiations because it believes they are meaningless until progress has been made on the bilateral tracts.¹⁴⁸ Although Syria's coping method with the Israeli nuclear threat may differ from other Middle Eastern countries for several reasons, it has not given up its efforts to acquire the weapons. It is also a major Arab country strongly opposed to the Israeli nuclear weapons acquisition.

What is clear is that Egypt aspired to having its weapons up to a certain point and then its strategy changed in the 1970s when it was making good progress with the peace treaty with Israel, with the US assistance. Israel has been only suspected of having nuclear weapons since 1967, and it was only between 1967-74 that Egypt actually faced a crucial nuclear challenge from Israel. This was

¹⁴⁸ Abdel Monem Said Aly, "Conventional Arms Control in the Middle East: An Arab Perspective," *Kurasat Istratijiya*, Strategic Papers, May 1995, p.39

also the period when Egypt tried to acquire its own capability to address the Israeli nuclear challenge, obtain nuclear security guarantees from the US and the USSR, make Middle East a nuclear weapons-free zone,¹⁴⁹ and convince Israel to sign the NPT. It also resorted to a limited-aims strategy war to get back its occupied territory from Israel. This was also the period when the Israeli possession of nuclear weapons capability was ambiguous and many Arab states doubted Israel on this matter. From 1974 to 1979 the peace treaty negotiations were underway and Egypt hoped to obtain enough from the treaty to ultimately remove the Israeli-Egyptian bilateral security threat perception. It also explains why Egypt hesitated to ratify the NPT, and the timing of the ratification supports the linkage between territorial conflict and proliferation. It is possible to argue that Egypt was eager to sign the Camp David agreement because of the Israeli nuclear weapons capability, its defeat in the 1967 war, and its inability to retrieve its territory lost in the 1973 war. It is not important here to find out why the Camp David Accords were signed, but to understand what kind of impact it has had on the Egyptian nuclear policy. As far as the final point is concerned, Egypt seems to have changed its attitude on the nuclear matter only after the agreement was signed and implementation started.

¹⁴⁹In 1974, Egypt, along with Iran, had proposed in the United Nations to have a Nuclear Weapons-Free-Zone in the Middle East.

Coping with the Israeli Nuclear Threat in the Post-Camp David Period

There is a broader question which must be addressed. Although the Egyptian territorial conflict with Israel is over, the Arab-Israeli conflict, which is very much a territorial conflict --although other issues are also involved-- in which Egypt plays a major role, is not yet resolved. Under such circumstances, how does Egypt secure itself against the Israeli nuclear threat? Four important aspects need consideration in this regard: a) direct military confrontation between Israel and Egypt is unlikely even if war breaks out in the Arab-Israeli conflict, b) possession of other weapons of mass destruction by Egypt, c) nuclear balancing by other states in the Middle East, and d) the nuclear option is not totally absent in Egypt.

a) Since there is no bilateral territorial problem between Israel and Egypt, it is unlikely that there will be an all-out war against Egypt in the context of the Arab-Israeli conflict. Egypt realizes that and has tried to bring Israel to the negotiating table to discuss a peaceful settlement of the territorial disputes with the Arab states so that all probabilities of war with other Arab states are reduced. Egypt has made every effort to keep the present Middle East Peace Process going to avoid another war in this volatile region. With the Camp David Accords, Egypt has been somewhat isolated from the rest of the Arab states because it now is not a question of Arab states isolating Egypt because it had signed a treaty with the enemy, but that in case of an Arab-Israeli war Egypt is unlikely to be attacked by Israel in accordance with the conditions of the Accord. Israel may attack any Arab state

but Egypt, and that has isolated Egypt within the Arab coalition. In this respect Egypt is secure as compared to other Arab states.

Although this is the current situation, Egyptians have always felt threatened by Israel's possession of nuclear weapons. Israel's ambiguous nuclear status in 1973 was not taken seriously by the Arab states and did not stop Egypt and Syria from making a surprise attack on Israel. But it has been argued that Israel's nuclear capabilities were on high alert during the war.¹⁵⁰ Such arguments only create insecurity for the Egyptians.

b) Although, in the nuclear sphere Egypt has not achieved its military potential, in the chemical weapons situation it is quite advanced. Egypt had possessed the chemical warfare capabilities since the 1960s, and in fact, it was the first country to introduce chemical weapons into the Middle East.¹⁵¹ The country not only possessed these weapons, but also made use of them during the Middle Eastern wars.¹⁵² The taboo of chemical weapons is absent, while a nuclear taboo exists.

¹⁵⁰This was stated by Ali Erfan, Aid to Ambassador Nabil Fahmy, in Cairo, March 18, 1997, during a personal interview. He, however, said that whether or not this story is true is still unknown, but such do stories increase Egyptian threat perceptions.

¹⁵¹Aharon Levron and Zeev Eytan, "The Middle East Military Balance," *The Jerusalem Post*, Westview Press, 1987, p.94

¹⁵²Prominent Egyptian officials including Nabil Fahmy strongly deny Egypt's possession of chemical weapons. Similarly, Major General Ahmed Fakhr says, "For thirty years I have been in the armed forces and I have never been trained to use chemical weapons. We are capable of producing a sample to protect us and we (the military) do not have it in our hands." These views were given during personal interviews with Nabil Fahmy and Ahmed Fakhr respectively. Academic scholars on the subject, however, have consistently maintained that Egypt has possessed

Chemical weapons are not equivalent to nuclear weapons even though they inflict a high cost. Although there is a basic difference between nuclear and chemical weapons, possession of the latter capabilities assures that the Arabs are not strategically helpless in the Arab-Israeli non-conventional balance. In the context of the Egyptian-Israeli peace treaty, some Egyptians believe that Israel came to the negotiating table because Egypt possessed chemical weapons.¹⁵³ However, how far Israel calculates the Arab possession of chemical weapons is a question to ask. Chemical weapons are not effective deterrents against Israeli nuclear weapons, even though they may be used to enhance the bargaining position of the possessor. In 1997, the Egyptian Counsellor to the Foreign Minister Nabil Fahmi stated that "Egypt will not join the Chemical Weapons Convention (CWC) unless Israel joins the NPT. That is the general policy in Egypt now. We were concerned about Israel's nuclear weapons, they were concerned about chemical

chemical weapons since the 1960s and has used mustard gas extensively in the Yemeni civil war. See, Robert E. Harkavy, *Spectre of a Middle Eastern Holocaust*, Monograph series in World Affairs, vol. 14, p.74; Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, London: Brassey's, 1991, p. 25; Brad Roberts, "The Strategic Implications of Chemical Weapons Proliferation," in Shelley A. Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992, p. 30. General Fakhri's statement is somewhat consistent with what Anthony Cordesman writes in his book. With regard to the Egyptian use of chemical weapons in the Yemeni war, he writes that it was unknown to many Egyptian military serving in Yemen. Therefore, it is quite possible that some in the Egyptian armed forces were unaware of its use.

¹⁵³This view was expressed by Abdel Monem Said Aly, Director of the Al-Ahram Center for Political and Strategic Studies, during a personal interview on March 13, 1997 in Cairo.

options of ours--so package deal was suggested. They did not accept it."¹⁵⁴ This indicates the importance of chemical weapons in the Egyptian calculations. Although Egypt attaches some importance to chemical weapons as non-conventional deterrents against Israeli nuclear weapons, it could not depend on these capabilities if war was highly probable between Israel and Egypt. Since war remains a low probability, such a strategic calculation was, or still is, acceptable.

c) One basic difference that exists between Middle East and other regions is that it has multiple powers, and the Arab coalition consists of the major Middle Eastern powers. Although these states are not always able to depend on each other, in cases of need, by and large, they are in a team as far as the Arab-Israeli conflict is concerned. This creates a situation where countries like Egypt, already in a better position due to the resolution of its own bilateral territorial conflict with Israel, can depend on nuclear balancing by the other major powers in the Middle East. It may not be the best option for Egypt, but is an existing option. The fragile relationship between the Arab powers is not something that Egyptians consciously ignore, but there is a belief among the Egyptians that the Arab powers will not use nuclear weapons against each other. No such agreement exists between the Arab states, but a tacit understanding exists on this matter. Ehteshami states, "it is unlikely, however, that an Arab bomb will be used against other Arab states."¹⁵⁵

¹⁵⁴Interview with Nabil Fahmi, Egyptian Counsellor to the Foreign Minister, Cairo, March 18, 1997

¹⁵⁵Anoushiravan Ehtashami, *Nuclearization of the Middle East*, p.121

Egyptian reaction to the Iraqi nuclear weapons acquisition effort is a striking evidence of the fact that Egypt not only believes in the Arab non-use of nuclear weapons against other Arab countries, but that any Arab nuclear capability is a counter-balance to the Israeli nuclear weapons capability. Egyptian leaders have repeatedly mentioned that the US is biased towards the Israeli nuclear option and extremely rigid about similar Iraqi aspirations. A published statement in *Al-Sha'b* quotes Egyptian opposition leaders saying: "We are following with great amazement the concern focused on Iraq's nuclear energy projects while the US ignores the dangerous Israeli projects and plans in this realm."¹⁵⁶ The Iraqi effort to address the nuclear imbalance in the Middle East favoring Israel was appreciated by Arab countries, including Egypt which should have reacted otherwise¹⁵⁷ if they were worried about these weapons being used against them at some point.

One must wonder why Egypt, a country that aspired Arab leadership and competed with Iraq for it, and joined the coalition confronting Iraq during the Gulf War, somewhat supports the Iraqi nuclear weapons drive. It may be an exaggeration to say that Egypt openly supports Iraqi weapons ambitions, but Egypt has not shown serious concern over Iraq's nuclear choice, though such a response would be natural and expected because of Arab disunity. In the Arab-Israeli conflict, it is important to check the adversary, Israel, in every possible way, so as soon as the Israeli nuclear issue became significant, the goal once again

¹⁵⁶INA July 30, 1991, translated by HATZAV

¹⁵⁷Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East*, p. 125

became having an Arab power to balance Israel. There may not be unity among the Arabs, but there is a sense of security in believing that the enemy is somehow checked. Egypt is not pleased to see a nuclear arms race in the Middle East, but it seems to be the most satisfied country among the Arab states since one Arab country has tried to balance the enemy's nuclear capability. Major General Halim stated that if Iran has a nuclear weapons capability it would balance Israel, and Egypt would accept it. He continued that Israel should eliminate its nuclear weapons capability and if that is not done, any Middle Eastern country could check Israel by possessing nuclear weapons which would eventually will keep the Middle East secure.¹⁵⁸

With a slightly different spin, Abdul Monem Said highlighted the Egyptian view of the Middle Eastern nuclear arms race. He maintained that although the overall Egyptian strategy is to denuclearize the Middle East, if Israel has nuclear capability, Iraq and Iran can have it as well. From the Egyptian point of view, objections to nuclear proliferation are the same with regard to Israel, Iraq, and Iran.¹⁵⁹ In other words, although the Middle East should ideally be free from nuclear weapons, as long as Israel possesses them, other Arab states are entitled to possess them.

Though the Egyptian aim may not be to see an aggressive Arab country like Iraq possess nuclear capability, it is nonetheless acceptable under

¹⁵⁸Interview with Major General (Retd.) Ahmed M. Abdel Halim, National Center for Middle East Studies, Cairo, March 16, 1997

¹⁵⁹Interview with Dr. Abdel Monem Said Aly, Cairo, March 13, 1997

circumstances where the major Arab enemy--Israel--has the capability. This is an option that countries in a coalition within a multi-power region can have. Countries such as Egypt can make best use of the option. Egypt would like the Middle East to be nuclear weapon-free, but if that cannot be achieved, Arab countries may balance Israel on the nuclear issue. While Egypt cannot be certain of non-use of the Arab nuclear weapons against each other, Arab nuclear possession allows Egypt to feel secure in the Middle East because the Israeli nuclear monopoly is challenged.

d) Although Egypt is not pursuing a nuclear weapons option, it is not unconcerned about Israeli nuclear weapons capability and, it strongly suggests that Israel rolls back its nuclear capability. After the Vanunu revelations in 1987, Egypt highlighted the "presence of nuclear weapons and ballistic weapons as major threats to regional security."¹⁶⁰ Egypt is a key country in the Middle East peace-making. Since the 1993 Oslo Accords, each time the peace process suffers a serious setback,¹⁶¹ Egypt tries to bring the parties together in the hope of rekindling prospects for peace.

¹⁶⁰ Avner Cohen, "Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future," p. 36, fn. 68

¹⁶¹ The land-for-security peace process in the Oslo Accord committed Arabs and Israelis to work out a permanent peace by adopting a step-by-step approach within a span of five years. It, however, was not implemented as planned for several reasons: first because a hard-line politician, Benjamin Netanyahu came to power after Yitzhak Rabin's assassination in 1995; and second, because in early 1997 Israel started construction of a Jewish settlement on occupied Arab territory in Jerusalem. The problem persists each time the peace process gets back on track.

Adherence to disarmament and arms control has been central for Egypt. As part of the nuclear non-proliferation efforts, in the 1980s Egypt wanted the Middle East to be a nuclear-weapons-free-zone (NWFZ), and in 1990 Egyptian President Mubarak initiated an objective aimed at obtaining a weapons of mass-destruction-free-zone in the Middle East.¹⁶² This, if adopted, would not only ban nuclear weapons possession, but also other non-conventional weapons including chemical and biological weapons. It is meant to ensure that not only Israel, but also all Arab states give up all weapons of mass destruction. Arabs were concerned about Israel's nuclear program and Israel was concerned about Arab chemical weapons. Under such circumstances, putting forward a package deal which responds to the concerns of both sides--nuclear, chemical, and biological--was important. However, the lack of response by Israel was clear.

Egypt is still pursuing a non-proliferation objective in the Middle East, and wants Israel to eliminate its nuclear weapons. Although Egypt has given up its nuclear option, signed and ratified the NPT, and consistently emphasized nuclear disarmament, it has also maintained a pattern in objecting to the Israeli possession of nuclear weapons. Mahmoud Karem stated: "Peace has to be through equality. Peace should not allow any party to practice hegemony. Equal security for all is important...Security can be offered by peace treaties. Any security with weapons

¹⁶²Nabil Fahmy, "Egypt's Disarmament Initiative," *Bulletin of the Atomic Scientists*, November 1990, pp.9-10

of mass destruction is not acceptable.”¹⁶³ Imbalance breeds instability and fuels an arms race in the Middle East. The presence of nuclear dimension exacerbates tensions in the region. Egypt’s concerns over Israel’s refusal to sign the NPT was also evident in Nabil Fahmy’s statement. He pointed out that all of the Arab countries and Iran are NPT members, and only Israel is not. Its membership in the NPT is absolutely necessary. To complement the NPT, Egypt has presented possible solutions, including having one policy applicable to all countries. He added, “Now that we have a peace process we have more reasons to address the nuclear issue more directly. Egypt asked Israel, will you join the NPT after the problem with Syria is resolved? But there is still no positive answer.”¹⁶⁴ He argued that regional measures to complement global measures are important, but questioned, “How can you come and ask Iran to accept or agree to regional measures when you can’t even get Israeli’s to join the NPT?”¹⁶⁵ From the Egyptian perspective, the Israeli stand on the nuclear issue remains a major concern for them.

Egypt has not only expressed its dissatisfaction over Israeli refusal to abide by the norms of nuclear non-proliferation, but some in the country have also made extreme statements. Major General Fakhr stated: “If Israel does not agree to eliminate its nuclear weapons, we do have the Scud missiles to destroy Israel. 15

¹⁶³Personal interview with Ambassador Mahmoud Karem, Director, Disarmament and Nonproliferation Department, Ministry of Foreign Affairs, Cairo, March 17, 1997

¹⁶⁴Personal interview with Nabil Fahmy, Cairo, March 1997

¹⁶⁵ Interview with Nabil Fahmy, March 1997

Scud missiles can be used to destroy one target and destruction is easy. Iraq did not do that. It aimed one Scud for one target and that is not good enough. [Due to the geographical situation] we only need 350 km range [missiles] to destroy Israel while they need 2500 km range.”¹⁶⁶ Such statements indicate that Egyptians still worry about the Israeli nuclear weapons and strategic thinkers in Egypt are also giving some thought about how to address the security problem if and when needed.

Egypt may not have unilaterally ratified the NPT without any assurance from the West. According to some sources, Egypt’s ratification of the NPT in 1981 was based on US promise that Israel would sign it as well.¹⁶⁷ From the time of the Vanunu revelations about the size of Israeli nuclear capability, Egypt has voiced its concerns over the Israeli nuclear weapons component in the Arab-Israeli conflict, but its concerns became more prominent during the debate on NPT extension in 1995. Consequently, Egyptian-Israeli relations have also been negatively affected.¹⁶⁸ In January 1995, during the fourth Preparatory Committee (PrepCom) session for the Review and Extension Conference, Egypt, along with Syria, Libya and Algeria, issued statements indicating that they would oppose an

¹⁶⁶Interview with Major General Ahmed Fakhr , Director, National Center for Middle East Studies, Cairo, March 16, 1997

¹⁶⁷This view was expressed by Ali Erfan, Aid to Ambassador Nabil Fahmi during an interview in Cairo, March 18, 1997

¹⁶⁸Jane Hunter, “Egypt and the Nonproliferation Treaty,” *Middle East International* , no.497, 31 March 1995, pp.17-18

indefinite extension of the NPT if Israel did not agree to accede to the Treaty.¹⁶⁹ Egypt also took a hard-line position afterwards. It reportedly demanded that Israel sign the NPT within two years. In making these demands, Egypt succeeded in getting a memorandum on NWFZ in the Middle East as part of the package to extend the Treaty in perpetuity. According to the Israeli sources, Israel's Foreign Minister Shimon Peres agreed that Israel would agree to a nuclear weapon-free zone in the Middle East two years after the conclusion of a comprehensive peace accord among all states in the region, including Iran.¹⁷⁰

Egypt has also attempted to express its view on the Israeli nuclear issue with regard to the Middle East Peace Process. There cannot be a warm peace between Israel and the Arab states as long as Israel possesses nuclear weapons. Egyptians do not have much confidence or trust in Israel because it possesses 200 tactical weapons. Israel is a cause for suspicion in the minds of the Egyptians.¹⁷¹

The Egyptian case maybe an exception in the Middle East, but its policies are not inconsistent with its security requirements in the Arab-Israeli equation. Egypt's stand on nuclear non-proliferation strongly demonstrates the link between war-probability in a territorial conflict and the need for a deterrent capability in the context of nuclear proliferation. It has not shown any interest in possessing a nuclear weapons capability to match Iraq or Iran, countries which are as aggressive

¹⁶⁹Mark Hibbs, "Last NPT PrepCom Moves Toward Limited Extension," *Nucleonics Week*, February 2, 1995, p.6

¹⁷⁰"Israel: Weapons-Free Zone?," *Nucleonics Week*, March 9, 1995, p. 15

¹⁷¹View expressed by Abdel Monem Said Aly during an interview on March 13, 1997 in Cairo

as Israel in the Middle East. In other words, Egypt has no territorial conflict with any of these countries and feels no need to acquire nuclear weapons.

SUMMARY

This chapter has examined nuclear weapons acquisition by the Arab states in the Arab-Israeli PC. Iraq and Iran seem to be the likely proliferants. Their twin PCs have made them determined proliferators in the region. The Syrian nuclear motivation existed, but it does not possess nuclear weapons. It has had some security guarantees from the former Soviet Union covering a specific period and relies on other states in the Arab coalition to balance Israel. Egypt has renounced its nuclear ambition only after its bilateral protracted conflict with Israel was resolved. Its need to possess nuclear weapons is thus absent.

CHAPTER X

ARAB-ISRAELI PROTRACTED CONFLICT AND NON-TRADITIONAL NUCLEAR DETERRENCE

The previous two chapters have focused on the Israeli and Arab states' motivations for nuclear weapons acquisition. This chapter assesses the nuclear deterrent relationship existing between the Arab-Israeli adversaries. In it, I examine whether or not nuclear deterrence has worked and is still working within the context of the opaque nuclear status maintained by the key Middle Eastern states. Three salient aspects have been evaluated to provide a better understanding of the non-traditional nuclear deterrence among these opaque nuclear states in the Arab-Israeli PC. These are: the perception of non-traditional nuclear deterrence by the new nuclear states, the condition of communications used for deterrence to work, and the deterrent relationship that exists between the Arab states and Israel.

As stated in the previous chapters, the Arab-Israeli PC consists of several powers on one side, with Israel alone on the other. This chapter focuses on the Israeli perception of non-traditional deterrence as well as the Arab states' belief in this new form of deterrence. Finally, it examines the success of nuclear deterrence in the Arab-Israeli PC by focusing on crises and wars in the conflict.

Non-Traditional Nuclear Deterrence as Understood by the Israelis and the Arab States

From the traditional nuclear deterrence perspective--the US/Soviet pattern--only states with open nuclear status should expect to maintain successful deterrent relationships. The non-traditional nuclear deterrence assumes that undeclared nuclear states can also make deterrence work for as long as they believe in it, possess nuclear weapons capability in some form, and as long as they can tacitly communicate to their adversary their willingness to use it to retaliate. Although the possession may not be declared, it is crucial to communicate the possession. This type of nuclear state may not require many nuclear weapons and minimum deterrence is important here.

As far as Israel is concerned, its nuclear weapons acquisition has been a function of its need to obtain an ultimate deterrent capability for war avoidance. Leaders as diverse as Ben Gurion and Benjamin Netanyahu have all firmly believed that Israel needs a nuclear weapons capability to deter its rival Arab states from waging another war against it. Although this has remained the triggering factor for Israel's nuclear weapons acquisition, the country never moved forward since its opaque status became the proliferation news of the world. The Israeli government never publicly and officially declared Israel's nuclear weapons status, neither did it conduct a nuclear test to demonstrate its capability or to change the country's nuclear status. Given Israel's primary motivation for nuclear weapons possession, it is amazing that a country which requires deterrence to function against the Arab

coalition would maintain an opaque status for so long. This has also provoked a lively scholarly debate.

Israel's delivery vehicles demonstrate its intention to use nuclear weapons only as weapons of last resort. The country currently has Jerico I and Jerico II, two nuclear-capable ballistic missile systems.¹ The most important development in the Israeli anti-ballistic missile system is Arrow II, which aims at intercepting tactical missiles "with capabilities similar to Scud just as they start reentering the atmosphere after reaching the highest point of their flight trajectory."² This has been tested several times, and by the end of 1998 it was to have achieved initial operational capability.³

With regard to the Arab adversaries, Iraq is suspected of having Alabil-100 missile with a range of 100-150 km and 300 kilograms payload; the Al-Samoud missile with a 150 km range; the Scud B with 300 km range and 1000 kilograms payload; the Al-Hussein with 600-650 km range and 500 kilograms payload; and the Al-Hijarah 600-650 range and probably 250 kilograms payload. Iran's missile systems include the Mushak-120, Mushak 160, Mushak-200, CSS-8, Scud-B, Scud Mod B, Zelzal-3, Tondar 68, Shahab-3 and Shahab-4--all with ranges between 120 and 2000 km and payloads of 500-1000 kilograms. Syria has SS-21, Scud B, Scud Mod C^s and M-9--with ranges between 70-600 km and payloads of

¹ Rodney W. Jones et.al., eds., *Tracking Nuclear Proliferation*, Washington D.C.: The Brookings Institution Press, 1998, p.208

²Ibid.

³Carmella Menashe, "Israel Takes Steps Toward Arrow Misslie Development," *Defense News*, May 20-26, 1996, p.33

480-950 kilograms. Finally, Egypt also has the Scud B, the Project T and the Scud Mod C⁴, ranging between 300-500 km and payload of 700-1000 kilograms.⁴

Thus, the Arab states have the capability to deliver nuclear weapons in times of need. The possession of delivery vehicles, however, does not necessarily indicate the intentions to use nuclear weapons with these systems. A specific understanding of deterrence has to exist in these states. Although Israel has stated that nuclear weapons are only for deterrence, the Arab states have been somewhat ambiguous in this respect. This has been for two reasons: first, the Arab states, particularly Iraq, are not in a position to proclaim their nuclear ambition, especially after the 1990 war. Any deterrent intention associated with nuclear weapons will not be tolerated by the West. However, even Iraq has stated its deterrent intentions often through speeches of leaders (stated in the section below). The Arab states have consistently maintained that Arab nuclear weapons are needed to balance Israel and not for warfare --that these are war-detering capabilities. Iran has also stated its deterrent intentions, but has officially denied its nuclear ambitions. Syria is still in the process of making limited efforts to obtain a nuclear deterrent capability, while Egypt has given up its nuclear ambition. Thus, countries which are still pursuing a nuclear weapons program, such as Iraq and Iran or have shown some interest in acquiring nuclear weapons such as Syria, have considered opaque nuclear weapons to be deterrents. Israel, however, has explicitly stated the deterrent functions of its opaque nuclear weapons. Israel and Iraq or Iran are not

⁴Rodney Jones, et. al., eds., *Tracking Nuclear Proliferation*, pp.263-264

in the same category, but the motivation to acquire nuclear capabilities has been for deterrence in all these states. Thus, a deterrent relationship has prevailed between them.

Communication in Arab-Israeli Non-Traditional Nuclear Deterrence

One of the basic conditions for deterrence to work is communication between the adversaries regarding resolve and intention to use them for retaliation. The credibility factor is important in this context. When countries possess opaque nuclear weapons, adversaries may be unaware of the capability and the intentions due to the secretiveness associated with opacity. In the Arab-Israeli PC, Israel's opaque status and the Arab states' nuclear weapons programs have all been clandestine, and direct communication between the adversaries has evidently been absent. According to Cohen, the idea of opacity is based on the absence of explicitness with regard to direct strategic discourse among the adversaries.⁵ Under such circumstances, nuclear deterrence is unlikely to work.

Israel's possession of nuclear weapons did not become evident until the 1970s, when scholars began speculating about its capabilities. Some have even argued in the 1960s that its bombs were in the basement and ready for assembly on short notice. Since the 1960s, scholarly works on nuclear proliferation have devoted much time to examining Israel's nuclear status, and almost all academic

⁵Avner Cohen, "Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future," *Aurora Papers*, 16, Centre for Global Security, 1992, p. 32

works have reported that Israel has the capability required for the bombs as deterrent weapons, not for war-fighting. Newspaper reports kept repeating the same information during these years. In their speeches, leaders and officials also made their intentions clear. Israeli spokesmen began making vague statements that indicated Israel's possession of nuclear weapons, but that they were not assembled. The Israeli government also avoided making any formal declarations. At the same time, Israel avoided signing the Non-proliferation Treaty.⁶ Therefore, from the Israeli perspective, some form of informal communication had taken place.

The Vanunu revelations were the greatest breakthrough as far as the communication aspect of deterrence is concerned. Major Arab states, including Egypt and Iraq, and non-Arab Iran became aware of not only Israel's possession of capabilities, but of the numbers as well. For the first time, the Israeli possession of nuclear weapons became explicit. Although the pressure on Israel to roll back its capabilities and to join the non-proliferation regimes (global and regional) was persistent after this disclosure, Israel's possession of nuclear weapons capability became more transparent. Thus, Sholmo Aronson states that "the shock wave in the Arab world in the wake of the publication of Vanunu's information reduced opacity almost to a minimal, verbal-diplomatic game, as far as Arabs were concerned. And soon they dropped it almost altogether, at least in foreign-related forums, even if the conclusions drawn by various Arab governments were

⁶Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, London: Brassey's, 1991, p.124

different.”⁷ After Vanunu’s statement, the Arab states never doubted about Israel’s possession of nuclear weapons. Therefore, Cohen contends: “Before Vanunu, there had been a basic consensus about Israel’s nuclear capability, but it was without hard facts. Though by no means ambiguous, the consensus was rather opaque, and certainly liable to deniability.”⁸ This also differed from the kinds of rumors that Arab countries had heard about Israeli nuclear weapons possession. In fact, this time it was both credible and detailed, and it came from a source—a former technician of the Dimona reprocessing plant—that was completely identifiable.⁹ These indicate that although there may have been some ambiguity about Israel’s possession of nuclear weapons during the 1960s and 1970s, that ambiguity changed for the Arab world in the 1980s. This is still not a direct communication of credible capability as understood in deterrence theory, nonetheless it is one that makes resolve credible to the adversaries in the regional protracted conflict cases.

As far as the Arab nuclear capabilities are concerned, Iraq and Iran’s efforts to acquire nuclear weapons have been reported in scholarly books, journals and the media. With regard to their likely possession of nuclear weapons capability, especially during the 1970s and 1980s, these reports have partially convinced the Israelis that some Arab states might soon acquire nuclear weapons.

⁷Sholmo Aronson, *The Politics and Strategy of Nuclear Weapons in the Middle East*, Albany: State University of New York Press, 1992, p. 182

⁸Avner Cohen, “Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future,” p. 35

⁹See, Frank Branaby, *The Invisible Bomb*, London: I.B. Taurus and Co., 1989

Although the preemptive attack on Osiraq by Israel was aimed at destroying the Iraqi nuclear reactor, it has also made the Israelis realize that other Arab states are in a position to acquire nuclear weapons or are making efforts to obtain them, and will continue to make such efforts in the future. The discovery of an Iraqi nuclear weapons program and its progress during the Gulf war of 1990-91 triggered a new anxiety in the minds of the Israelis. Israel has not only condemned the program, but has urged the UNSCOM to eliminate all weapons of mass destruction in Iraq. In fact, Israel has been aware of Iraqi motivation, effort, and determination since suspicions about Iraq's nuclear weapons program began, although this awareness became much more pronounced after the 1990-91 Gulf War discovery of Iraqi nuclear weapons activities. Israel did not miss an opportunity to make sure that these weapons were not in the hands of Iraq, it however, did not disbelieve or deny that Iraq might possess nuclear weapons capability.

Similarly, Iran's nuclear weapons efforts have been in scholarly works, and the media has played a key role in projecting Iran as a fundamentalist power trying to acquire nuclear weapons, and making every effort to oppose Israel. Israel perceives that Iran, like Iraq, may have nuclear weapons capability or that it is in the process of building one. In the nuclear context the point is that when a state suspects that its adversary may have nuclear weapons, it cannot leave anything to chance and that is how deterrence often works in regional PC settings. Israel's understanding of the possible existence of an Iraqi or Iranian nuclear weapons acquisition is enough to keep it away from waging a war against them. Although

Syria did not acquire nuclear weapons, a single Iraqi nuclear weapon is enough to keep Israel away from waging a war against any Arab state. As far as possession is concerned, Israel may have doubts, but as long as there is any doubt, deterrence is likely to work. Although Israel may not be clear about the Iraqi or Iranian intentions, other Arab states such as Egypt and Syria have repeatedly mentioned that an Arab nuclear weapon is needed to deter Israel in the Arab-Israeli conflict. Moreover, as part of the chemical weapons possession arguments, most Arab states have referred to chemical weapons as the 'poor man's deterrent' which has made it evident that as long as Arab states are not able to match Israel in nuclear weapons, these would be used as deterrents. Since a deterrent capability is what the Arabs have sought, it is evident and that any Arab nuclear weapon will be used for deterrence and this has been stated implicitly.

As for Israel's nuclear doctrine, the country maintains its non-traditional nuclear deterrence by not testing its weapons and not declaring a nuclear strategy with respect to the use of nuclear weapons. Israel, however, has asserted that it will not be the first country to introduce nuclear weapons in the Middle East, but not the second state either. The country has not developed any strategy with regard to the use of such weapons. When, and in what fashion, during a crisis its nuclear weapons might be used is also unclear, although it is believed that its weapons will only be used as a weapon of last resort. Nuclear strategy and doctrine, as far as Arab states are concerned, have been absent because of the secrecy surrounding their nuclear weapons program.

Arab-Israeli Protracted Conflict and Regional Stability

In the Arab-Israeli protracted conflict, there were six interstate wars, with four of them fought by the late 1960s. The fifth war was waged in 1973 and the last one was fought in 1982. Israeli nuclear weapons capability may not have deterred Arab states from initiating wars in 1973 and 1982. Although 1982 was the last war, the 1973 war is important since it was one that involved major Arab states such as Egypt and Syria against Israel. As Avner Cohen states, "Perhaps the most fascinating historical linkage between Israeli nuclear opacity and the Arab tendency to overlook and marginalize the Israeli nuclear factor was the 1973 war."¹⁰ The question remains whether or not deterrence failed in this situation.

Shlomo Aronson argues that the deterrence-theoretical solution to Israel's problems could easily be defeated by deterrence-theoretical counter arguments, especially because one could easily argue that the Arabs were "irrational."¹¹ It is not about the kind of rationality Arab leaders have, but about what they have done thus far in the context of the Arab-Israeli PC. These leaders have not proved to be irrational as far as nuclear weapons are concerned. Although the world questions Saddam Hussein's aggressive intentions, even he has demonstrated that Arab states can refrain from waging a non-conventional weapons war in the Middle East. In the 1990-91 Gulf war he did not use chemical weapons against Israel when he could have easily destroyed Israeli cities. He repeated a similar point in his

¹⁰ Avner Cohen, "Patterns of Nuclear Opacity in the Middle East: Understanding the Past, Implications for the Future," p.31

¹¹ Shlomo Aronson, *The Politics and Strategy of Nuclear Weapons in the Middle East*, p. 177

address to the Islamic Conference in Baghdad on June 18, 1990 in which he stressed that his threat to Israel to “burn half of Israel,” was taken “out of context” and that it was to signal deterrence resolve, and not a reflection of intention to strike first.¹² From the Israeli perspective, Fuad Jabber states:

Where conventional power has failed, weapons of mass destruction would be expected to succeed in convincing Arab populations first and their governments second of the futility of continuing their confrontation with Israel. With the realization that Israel cannot be militarily defeated, the rationale behind the permanent state of war, the economic blockade, and the policy of non-acceptance and non-recognition might be expected to break down... The psychologically erosive effects of the nuclear logic would be at work on the Arab will, gradually producing that pervasive feeling of ‘doubt--and eventually resignation and despair--about the dream of eliminating Israel from the world’s map’ that Israel’s doctrine of deterrence has always sought to create.¹³

Although in 1974 Yair Evron stated: “it is most unlikely that an Israeli nuclear option would change either the basic pattern of conflict or the basic strategies employed by the two sides,”¹⁴ fortunately, the basic pattern of conflict in the Arab-Israeli setting has in fact changed. Although there was a war or two during each decade since the 1940s, in the 1980s and 1990s, that conflict pattern

¹²Saddam Hussein’s Address at the Islamic Conference, Baghdad Domestic Service, translated in FBIS-NES-90-118, *Daily Report*, June 19, 1990, p.21

¹³Quoted in Steven J. Rosen, “Nuclearization and Stability in the Middle East,” in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near Nuclear Countries*, Cambridge Mass: Ballinger Publishers, 1975, pp.161-162

¹⁴Yair Evron, “Israel and the Atom: The Uses and Misuses of Ambiguity, 1957-1967,” *Orbis*, 17, 4, winter 1974, p.1342

has changed. History does not provide evidence of any wars within the Arab-Israeli PC context after Israel's capability became less ambiguous in the 1980s. The basic strategies employed by the two sides have also changed with Israel's possession of nuclear weapons and its suspicion of any Arab possession of the same. In the Yom Kippur War, Egypt and Syria employed a limited-aims strategy, unlike the previous wars with Israel. As T.V. Paul states, "The decision to launch an offensive in the Sinai in 1973 was greatly influenced by the expectation of the Egyptian leadership that it was possible to wage a limited, *fait accompli* war, confined to the occupied territories, for political and limited strategic objectives."¹⁵

As far as the 1973 War is concerned, there are different interpretations in the scholarly writings. The war, first of all, was a limited-aims war, and it did not escalate to a full-scale war due to Israel's opaque status. In essence, the politico-strategic objectives of the war were limited. But, why were they limited? Did nuclear capability factor into the Arab calculation? Although Israel's nuclear capability may have kept the war limited and may have induced some caution in the Arabs,¹⁶ some scholars have argued that it was a limited war because the Arab goals were limited and that the war was planned in a totally "conventional arms

¹⁵T.V. Paul, *Asymmetric Conflicts: War Initiation By Weaker Powers*, Cambridge: Cambridge University Press, 1994, p.145

¹⁶Robert E. Harkavy, *Spectre of A Middle Eastern Holocaust: The Strategic and Diplomatic Implications of the Israeli Nuclear Weapons Program*, Monograph Series in World Affairs, vol. 14, Denver: University of Denver, 1977, p.71

mode.”¹⁷ However, even Evron does not believe that nuclear issue was totally ignored in the war design and states that “the nuclear issue was dealt with only secondarily.”¹⁸ Robert Harkavy contends that Israel “leaked the material in the *Time* article indicating that it had been prepared to use nuclear weapons after only the first week or so of the 1973 war.”¹⁹ If this was true then deterrence during the war may have helped keep the war limited.

One could argue that the war should not have happened in the first place. Although ideally no war should have happened in the two-way deterrent relationship, Israeli nuclear weapons possession was still very ambiguous at that time. Israel had never conducted a nuclear test and it was not like the Indian case. In other words, in the South Asian case, Pakistan had no doubt that India could have nuclear weapons because of India’s peaceful nuclear tests in 1974, but the Arabs could still doubt Israeli possession. In fact that is what really happened in the Middle East. Although the media has a big role to play in communicating to the adversaries about the Israeli resolve and intention, in the late 1960s the nuclear issue was completely absent from the Arab media²⁰ while the 1973 war changed that situation. According to Shai Feldman, after that war some Arab leaders

¹⁷Yair Evron, “The Relevance and Irrelevance of Nuclear Options in Conventional Wars: The 1973 October War,” *The Jerusalem Journal of International Relations*, vol. 7, nos. 1-2, 1984, p.163

¹⁸Ibid., p.165

¹⁹Robert Harkavy, *Spectre of a Middle Eastern Holocaust*, pp.70-71

²⁰Yair Evron, “The Relevance and Irrelevance of Nuclear Options in Conventional Wars: The 1973 October War,” 1984, p. 154

maintained that Israel might possess a nuclear capability and others perceived that Israel had the know-how and capability to assemble the bombs.²¹ In other words, the perceptions of the Arab leaders changed as a result of this war, and they could see what they had not seen before as far as Israeli nuclear weapons acquisition was concerned. Since the 1973 war occurred during the first stage of Israeli nuclear weapons acquisition, the possible possession was less transparent, surely for the best interests of the Israelis, but it had some negative consequences as far as deterrence theory is concerned.

In the 1980s, Israeli nuclear possession became much more mature and the Arab belief was real. This was also the time of the Vanunu revelations, and ambiguity was almost nil, although Israel still did not openly declare itself as possessing nuclear weapons. This has had the greatest impact on the Arab-Israeli stability since the 1980s. Communication is at the heart of the deterrence theoretical argument even on the regional PC level, although the type of communication differs with regard to the regional new nuclear states.

The 1982 war in Lebanon was different. First: the crisis started with the Israeli decision to attack Palestinian Liberation Organization (PLO) camps in Lebanon in 1982, and the war started when Israel invaded Lebanon and triggered a crisis for the latter. In this war none of the major Arab countries were involved, and Israel even communicated to Syria through Washington that its forces would not cross the Syrian territory unless they attacked Israel. However, because Israeli

²¹Shai Feldman, *Israeli Nuclear Deterrence: A Strategy for the 1980s*, New York: Columbia University Press, 1982, p.11

forces advanced into Lebanon, direct confrontation with the Syrian forces in the Bika valley of Lebanon began, which triggered a crisis for Israel. The crisis between Israel and Syria ended with an agreement in September 1982. The war with Lebanon continued until 1983.²² Thus, the basic difference between this war and the 1973 war is that the Arab states did not wage war against Israel this time. It was Israel that started a war with Lebanon, and Syria almost inadvertently got involved. Second, Syria was only suspected of making efforts to acquire nuclear weapons while Israel's nuclear status remained ambiguous. Egypt had given up its nuclear ambitions by that time and Iraq was only suspected of having nuclear weapons. As far as the Arab states are concerned, none of them possessed nuclear weapons.

There has not been an Arab-Israeli war for sixteen years, although crises and low-intensity military hostilities continue to be an endemic aspect of the PC. The absence of wars is remarkable, especially because previous decades witnessed a series of wars between the same adversaries. Stability in the regional PC states has been maintained because of the possession of opaque nuclear weapons by Israel and secret nuclear weapons capabilities by the Arab states.

As far as confidence-building measures are concerned, Israel and the Arab countries established five working groups to address regional issues of common interest, one of which is the Arms Control and Regional Security (ACRS). Significant progress has been made at ACRS in laying the groundwork for regional

²²For more information on the Lebanon war in 1982, see Michael Brecher and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan

confidence-building frameworks in the Middle East. These include, cooperation in search and rescue operations and avoiding incidents at sea; establishment of a regional communications network; pre-notification of major military movements; and, exchange of military information.²³ However, the major Israeli adversaries in the region, Syria and Iran, did not participate in the talks.²⁴ Moreover, the talks were suspended in the wake of Egypt's refusal to sign the NPT indefinitely in 1995 unless Israel did and its efforts to mobilize the non-aligned movement to oppose the NPT's extension at the NPT Review and Extension Conference. In the absence of conflict resolution, confidence-building measures are significant to improve relations between the adversaries.

SUMMARY

This chapter has focused on Arab-Israeli non-traditional nuclear deterrence in the context of that PC. The purpose has been to examine whether or not nuclear deterrence works under opacity. Although Israel has maintained nuclear opacity since the 1960s, its opacity became less ambiguous during the 1980s and the Arab-Israeli non-traditional nuclear deterrence has functioned well as a consequence of that. Communication--direct or tacit, but believable and credible-- is the most

Press, 1997, case no. 337, pp.295-297

²³Shai Feldman, "Addressing Proliferation "Demand" Through Threat Reduction, Arms Control, and Engagement--The Middle East," Paper presented at the Conference on Nuclear Non-Proliferation: Enhancing the Tools of the Trade, June Washington D.C., 9-10, 1997, p.2

²⁴*Arms Control Reporter*, 1992-1996, Section, 453. B

salient condition for any kind of deterrence to work and the Arab-Israeli non-traditional nuclear deterrence is no exception in that sense. The 1973 war provides the best evidence that a believable communication of nuclear deterrent resolve and intention is crucial for deterrence to work between adversaries. However, regional stability has been maintained since the 1980s.

CONCLUSION

This dissertation focuses on nuclear proliferation in protracted conflict regions and makes a comparative analysis of South Asia and the Middle East. The study examines why proliferation incentives remain limited to a few protracted conflict states and what makes states most prone to nuclear weapons acquisition. I explain the commonalties and divergences in the nuclear policies of the protracted conflict states within these two regions. The study makes a theoretical contribution to the proliferation literature, since only a handful of theories exist that can explain the reasons for nuclear weapons acquisition by states. It examines proliferation motivations from the systemic, state and individual levels of analysis and focuses why security needs, a critical variable, are crucial to only some of the protracted conflict states. A causal connection is made between the degree of war-probability, the search for a deterrent capability based on weapons of mass destruction, and nuclear weapons acquisition by states in protracted conflicts comprising territorial issues. Where the degree of war-probability is higher-than-normal, the search for a deterrent capability is high and nuclear proliferation likelihood is high as well. I propose a new definition of a protracted conflict which addresses the relationship between the issue/source of the conflict and war-probability. A proliferation hierarchy is created to class Most-Likely, Likely, Less-Likely and Muted Proliferators. The regional power structures, conflict types and geographical distances are used to understand the differences in the pace of proliferation among these states. Although territorial protracted conflict states acquire nuclear

weapons, those in two-power regions, involved in dyadic conflicts with proximate adversaries are the Most-Likely Proliferators. The next category of states are in multi-power regions, involved in dyadic conflicts with proximate adversaries, and are Likely Proliferators. The third group constitutes states in multi-power regions, involved in non-dyadic conflicts with proximate adversaries. They are Less-Likely Proliferators. Finally, states that are in multi-power regions, involved in non-dyadic conflicts with non-proximate adversaries are Muted Proliferators.

The hypotheses of the study have been tested in the context of two protracted conflicts in the South Asian region: India-Pakistan and India-China. India and Pakistan's nuclear motivations and pace in the context of their protracted conflict have been analyzed, and India's motivations in the realm of the Sino-Indian protracted conflict have also been examined. In the Middle Eastern region, the Arab-Israeli protracted conflict was the focus. The motivations of Israel, Iraq, Iran, Syria and Egypt were examined in the context of this protracted conflict.

The data is largely based on interviews I conducted with scholars and former officials in the concerned countries, as well as secondary materials. The study demonstrates that managing nuclear proliferation may not be easy unless the roots of the protracted conflicts are resolved. It argues that by identifying which states are most likely to perceive a need for nuclear weapons, the international community, especially the major powers, could foster the resolution of the conflicts, or provide effective extended deterrence to the countries that are most proliferation-prone.

Findings: South Asia

Within the context of the South Asian region, the study found that motivations from individual and domestic levels of analysis are unable to explain the decision by India and Pakistan to acquire nuclear weapons. In the Pakistani case, with the exception of a security motivation, all other systemic motivations have proved inadequate in explaining its nuclear weapons drive. For India, although a security motivation has been crucial, international prestige and status have also been important within the context of the Sino-Indian protracted conflict. This corroborates the theoretical argument which states that countries confronting declared nuclear states as adversaries in any protracted conflict may attach importance to their prestige and status.

In the two South Asian PCs I have explored, the security motivation for the intense search for a nuclear deterrent capability appears to be of major significance in explaining nuclear weapons acquisitions by both India and Pakistan. The two countries have been concerned about their security needs and have depended on a nuclear deterrent capability to avoid a higher-than-normal war-probability between them. The Indian case has its own uniqueness. It is a country involved in twin protracted conflicts with Pakistan and China. Therefore, its overall motivation has been assuring security, but specifically, to obtain a nuclear deterrent capability to avoid wars with its two adversaries, which are, unfortunately, allies. The findings from the Indian case study indicate that although China and India have not fought a war since 1962, as long as territorial issues

between the two countries remain unresolved, war-probability remains higher-than-normal and the importance of nuclear deterrence remains high as well. Similarly, within the context of the India-Pakistan PC, the central issue of Kashmir remains unsettled over which future wars are highly likely. Thus, possessing nuclear deterrent capabilities has remained important. One thing that is clear from the Indian case study is that the country has always been very concerned about China, a nuclear state. Although the country has considered Pakistan in its security calculations with regard to its nuclear choices, it has never had to acknowledge doing so. It was evident that the Indian nuclear weapons for deterrence against China would automatically negate the Pakistani threat.

Pakistan, on the other hand, has been a determined proliferator and did everything in its power to match India to secure itself from its big power neighbor. The country's desire to obtain a nuclear deterrent capability was explicit. Pakistanis perceive that a war between India and Pakistan has been avoided since the 1970s because of the introduction of nuclear weapons to the region. Deterrence, although non-traditional, has worked between them. The Brasstacks crisis of 1987 and the Kashmir crisis of 1990 prove that despite reasons to worry about crisis escalation, in neither of these crises did war occur. The crises ended without war because of the possession of nuclear weapons capability by both adversaries. In the Sino-Indian case as well, crises did not escalate into war for more than three decades. Although the success of deterrence is hard to prove beyond doubt, it is, nonetheless, evident that in the India-Pakistan case the two PC states have tacitly communicated their deterrent resolve and intentions, and have

consequently, remained at peace in an otherwise war-prone regional environment. The Indian nuclear deterrent intentions have also been communicated to China in an informal mode for decades. Although ideally, India should have been a nuclear state long ago to effectively and credibly deter a nuclear China--which has been the central reason for India's recent nuclear tests--the asymmetric deterrent relationship has nonetheless worked in the Sino-Indian PC. India and Pakistan's nuclear tests in 1998 once again proved that nuclear deterrence is the central motivation in going nuclear. These findings seem to be consistent with the central hypothesis-- that a higher-than-normal war-probability in territorial PC states leads to a high search for a nuclear deterrent capability, which, in turn, motivates states to possess nuclear weapons.

The India-Pakistan dyadic conflict has created a difficult and complex situation for the two states which have fought each other three times in the past fifty-one years. The proximity of these states has created an additional vulnerability. In a two-power South Asian region where India and Pakistan are the major players, there is no other state to help them in case of war. Their rivalry is also structurally determined. Consequently, they have been fast-paced nuclear weapons possessors and the Most-Likely Proliferators. Thus, the hypothesis that PC states in two-power regions with dyadic conflicts and proximate adversaries are fast-paced in nuclear weapons acquisition is also strongly upheld.

The Middle East

In the Arab-Israeli protracted conflict, Israel appears to be the most determined proliferator because it has territorial conflicts with the Arab states which happen to be in a coalition. Israel's existence is threatened in the Middle East, while the Israeli occupied territories--the Golan Heights, the West Bank and the Gaza Strip--constitute the other territorial aspect of the conflict. Israel's case is most clear as far as its nuclear weapons needs are concerned. It has fought six wars with the Arab states and needed to bring an end to this situation of insecurity and uncertainty. A nuclear deterrent capability has been essential to deter the Arab states from waging another war against this small, vulnerable state in the region. Israel was the first country in the Middle East to introduce nuclear weapons and this is consistent with the hypothesis that territorial PC states in a two-power region, with dyadic conflict and proximate adversaries will be the Most-Likely Proliferators. Although Israel is in a multi-power region and the Arab-Israeli conflict is a non-dyadic one, for Israel, the game is as much a zero-sum one as in any two-power region. The conflict is a dyadic one for Israel because it faces several adversaries, but has no one to depend on. Consequently, Israel has also been a Most-Likely Proliferator such as India and Pakistan.

On the Arab side, Iraq remains the most determined proliferator. Its determination to possess nuclear weapons has been evident in 1981 at the time of the destruction of Osiraq, during the 1990-91 Gulf War, and in the post-1991 period. Its need to acquire nuclear weapons has been studied in the context of dual

PCs: Arab-Israel and Iran-Iraq. Although both conflicts are important to Iraq, the Iran-Iraq PC is a dyadic one which requires it to pay serious attention to its security needs. Both are territorial conflicts and Iraq was involved during the 1948 Arab-Israeli war, while its war with Iran has been the longest in the region in a long time. Iraq required a nuclear deterrent capability to avoid wars in these two territorial conflicts which it has been involved in for decades.

Although Saddam Hussein's personal interest has made Iraq a determined proliferator, the Iraqi case study indicates that Iraq is unlikely to give up its nuclear weapons program even if another leader comes to power. Domestic-level motivations did not seem to be relevant in Iraq's nuclear weapons acquisition. Since the Iraqi nuclear weapons acquisition has been of major concern to the West, Iraq has been compelled to officially deny its desire to acquire such weapons. Consequently, it has been somewhat difficult to understand Baghdad's motivations. However, even Saddam Hussein, the man who has been most associated with Iraq's weapons aspirations, has stated that deterrence has been the sole reason for Iraq's nuclear ambitions, and, as well, that Arab states needed nuclear weapons to balance Israel in the context of the Arab-Israeli PC. Its dyadic conflict with proximate Iran and its twin PCs have propelled it to acquire nuclear weapons, making it a Likely Proliferator among the Arab states. One thing that is clear from the Iraqi case study is that because it has been directly involved in two territorial PCs and because one of them is dyadic, Iraq needs a nuclear deterrent capability to address two major security concerns. Consequently, Iraq has not only been a Likely Proliferator, but also the most determined of the Arab states in the

Middle East. The hypothesis that nuclear weapons are acquired by states involved in territorial protracted conflicts to avoid higher-than-normal war-probability is confirmed by the Iraqi case study. Iraq is also a Likely Proliferator in the proliferation hierarchy because it is in a multi-power region and has a dyadic conflict with Iran, a proximate adversary. The Iraqi case study also confirms the hypothesis that states involved in two territorial PCs are most proliferation-prone.

Iran, a non-Arab state, has also been a Likely Proliferator because of its dual PCs in the region with both Iraq and Israel. Individual and domestic-level motivations cannot explain Iran's quest for nuclear weapons. At the systemic level, within the context of the dyadic conflict with Iraq, Iran's nuclear weapons acquisition seems to be to avoid war in the highly war-prone Iran-Iraq territorial PC. However, Iran has also considered Israel to be a major security threat in the context of the Arab-Israeli conflict where Iran still denies the legitimacy of the existence of Israel in the Middle East. Its strong connections with Syria have also involved it in the Arab-Israeli conflict. Although Iran has chemical weapons, it needed a nuclear deterrent capability for war-avoidance because chemical weapons have been acknowledged as usable weapons in the Middle East, especially to the Iranians because they have been used in the Iran-Iraq war. Iran's dyadic territorial conflict with Iraq has made it a Likely Proliferator. Its twin concerns with Iraq and Israel have propelled it to fast-paced nuclear weapons acquisition. Thus, Iran, like Iraq, also seems to have focused on its deterrent needs to avoid wars in territorial conflicts as far as its nuclear weapons possession is concerned. Consequently, the

Iranian case corroborates the hypothesis that territorial PC states search for a nuclear deterrent capability to avoid a higher-than-normal war-probability and nuclear weapons acquisition is a function of that. It also upholds the hypothesis that states in a dyadic conflict with proximate adversaries within multi-power regions will be Likely Proliferators, and that involvement in twin PCs will make states most proliferation-prone.

Syria, a country in direct territorial conflict with Israel and having geographical proximity to it, has made minimal efforts to acquire nuclear weapons. Syria remains a weak case because it has still been unable to acquire nuclear weapons or technology. According to the hypothesized relationship between higher-than-normal war-probability, high search for a deterrent capability and nuclear weapons acquisition, Syria should have possessed nuclear weapons more quickly than other states. Moreover, the geographical proximity factor should also have made it a fast proliferator. From this perspective, the Syrian case study seems weak in confirming the hypothesis. However, although Syria does not seem to have made serious efforts to acquire nuclear weapons, it has had some clear commitments from the former Soviet Union to assist it in case of an Israeli attack. Even the nuclear factor figured in that commitment. The country is also in a multi-power region where Iraq or Iran could balance Israel until it was able to possess nuclear weapons. Syria has always defended the concept of an Arab nuclear weapon. It has not objected to an Iraqi nuclear weapons acquisition in the Arab-Israeli PC context. Syria has also been involved in only one conflict in the region,

so nuclear deterrent needs were limited only in relation to the Arab-Israeli PC. In this PC, Syria has been in a coalition and other states could deter Israel as long as it was unable to acquire its own nuclear deterrent capability. Finally, for Syria, chemical weapons have remained the ultimate deterrent capabilities until nuclear deterrent capabilities are acquired.

Although the Syrian case presents it as a country which has a direct territorial dispute with Israel but has not yet acquired nuclear weapons capability, what is important is that Syria fits into the third category of states in the proliferation hierarchy in accordance with the theoretical argument. Although it needs a nuclear deterrent capability against Israel, it is also a state in a multi-power region, involved in a non-dyadic Arab-Israeli PC and is proximate to its adversary. It is thus expected to be a Less-Likely Proliferator. From this perspective the Syrian case upholds the hypothesis of this study.

The search for a nuclear deterrent capability variable seems to have had minimal impact on the Egyptian case. The country gave up its nuclear ambitions. The Egyptian case is interesting because although the country does not seem to be pursuing a nuclear weapons option, it nonetheless was involved in the development of nuclear weapons during the 1960s. It made serious efforts to buy nuclear weapons from both the Soviet Union and China, and failing that, it sought nuclear security assurances from the two superpowers in the 1960s and 1970s. The country changed its nuclear policy in the 1970s, at the time of the signing of the Camp David Accords with Israel, which permanently resolved its bilateral

territorial conflict with Israel. From 1974 onward, the time when Egypt first started treaty negotiations, it altered its nuclear policy and advocated non-proliferation in the region. It proposed that the Middle East become a nuclear-weapons-free-zone, and witnessing Israeli dissatisfaction with its proposal in the 1980s, it advocated non-proliferation of all weapons of mass destruction in the Middle East to address Israeli and Arab concerns in the region. As part of the Arab-Israeli conflict, Egypt has consistently maintained that Israel should adhere to the NPT and not fuel an arms race in the Middle East. It has also stressed that the peace process should provide Israel with the security it requires in the region. It has not officially supported the Iraqi nuclear weapons program, but has often made it clear that as long as Israel has nuclear weapons, other Arab countries can not be asked to give them up. The country possesses chemical weapons and has not signed the CWC.

What seems evident is that as soon as Egypt's own bilateral territorial problem was resolved in the context of Arab-Israeli PC, Egypt was in a position to change its nuclear policy and advocate non-proliferation to increase regional stability. It also has the advantage of being in a multi-power region and able to rely on other Arab states to check Israel in the Arab-Israeli PC.

Although Egypt is an exceptional case in the Middle East, the findings corroborate with the theoretical aspect of the study. Since Egypt's territorial conflict with Israel is over, its desire to acquire nuclear weapons to deter war-probability is also muted. However, since it is still part of the overall Arab-Israeli conflict, it has made serious efforts to urge Israel to give up its nuclear weapons,

join the NPT and the regional non-proliferation measures that are important in maintaining regional stability. As long as these have not been achieved, Egypt does not see the need to condemn other Arab states, such as Iraq, or even non-Arab Iran, for pursuing a nuclear weapons program; nor is Egypt ready to sign the chemical weapons treaty.

Israel has been an opaque proliferator, and the Arab countries and Iran have acquired some form of nuclear capabilities. Consequently, non-traditional nuclear deterrence seems to have worked in the context of the Arab-Israeli PC. There has not been a war since the 1980s between the adversaries and this can not be any accident, especially when these same states fought six times in the past few decades. Although Israeli deterrent intentions and resolve have been more transparent compared to the Arab nuclear capabilities, Israel still remains aware of the probable possession of nuclear capabilities by the Arab states. Consequently, deterrence, in a non-traditional mode, has worked.

The findings of this study reveal that deterrence need in a territorial protracted conflict drives states to acquire nuclear weapons, although the pace varies with the type of the conflict, regional power structure and geographical proximity of the adversaries. States involved in more than one PC are more likely to need such weapons. The two South Asian states' nuclear weapons acquisitions and Israel's nuclear ambitions in the Middle East strongly corroborate the hypotheses, while Iran and Iraq's nuclear weapons possession also upholds the

thesis hypotheses. However, although Syria has shown less than normal interest in acquiring nuclear weapons, this case also seems to uphold the thesis arguments because of Syria's option to depend on other powers in a multi-power region. Finally, although Egypt has no nuclear weapons, it has satisfactorily ended its territorial PC with Israel before deciding to give up that option and can depend on the other powers in the conflict if Israel makes aggressive moves in the context of the overall Arab-Israeli conflict.

The Policy Implications

- Achieving nuclear non-proliferation in the world may be possible if the specific security needs of potential new nuclear states are addressed. From this perspective, this dissertation contends that achieving nuclear non-proliferation requires the identification of states that are most likely to need nuclear weapons. It further points to the need for resolving conflicts over territorial issues that constitute the root of the nuclear proliferation problem. Once we know which countries may need nuclear weapons and why, it may be easier for the West to address their specific security needs and actively bring them into the nuclear non-proliferation regimes. Non-proliferation efforts must be structured along these lines.
- There is reason to be optimistic in the post-cold war era because the majority of states in the world are expected to be non-proliferation prone. Although there are states which require more security than others, it is states which are

involved in a territorial protracted conflict that have the highest propensity to acquire nuclear weapons. Therefore, the fear of a highly proliferated world is unrealistic.

- States acquiring nuclear weapons in a clandestine way --such as Israel, Iraq and Iran-- or by openly testing nuclear weapons --such as India and Pakistan-- may not necessarily induce other countries to follow suit. Each state is concerned about its own security relationship with its immediate adversary, and while that is not jeopardized its nuclear status is not expected to change. For example, as long as Iraq or Iran does not openly acquire nuclear weapons, Israel does not have to openly go nuclear either. Similarly, small states in South Asia or South-West Asia do not have any reason to suddenly start a nuclear weapons program simply because India and Pakistan have conducted nuclear tests. Nor is it expected that the South Asian tests would trigger tests in the other nuclear-capable states such as Israel. Spillover effects of nuclear weapons acquisition by neighbors are far less likely in a situation where states do not have a territorial protracted conflict to worry about. The nuclear club may not be increased dramatically in the near future after all.
- Non-proliferation is inextricably linked to protracted conflict resolution. It is pertinent to resolve the territorial conflicts by encouraging bilateral arrangements, or through a third party involvement. Each protracted conflict is unique and no one best solution to address all of them exists. It is important to find a conflict resolution strategy that best suits the specific context of the adversaries involved in the conflict. It is possible to broker a peace-process, as

in the case of Middle East. If the peace process in the Middle East is successful and Syria regains the Golan Heights from Israel in an amicable settlement, Syria could refrain from developing its own nuclear weapons. But, it may not be the best mechanism for all conflicts. For example, the US is unlikely to be accepted as a third-party in the South Asian conflict. Under such circumstances, adversaries should be encouraged as much as possible to come to a negotiated settlement on their own.

- Sanctions are unlikely to keep a potential proliferator from acquiring nuclear weapons. Unless the most pressing security issues in a conflict are addressed, sanctions will not do much to stop these determined proliferators from making nuclear weapons. Pakistan is a good example of this, because it has lived with economic sanctions since 1990 but has not given up its nuclear weapons. Instead, it became a nuclear state in 1998. Similarly, sanctions have not kept Iraq from being a determined nuclear weapons possessor. The effectiveness of sanctions is questioned in such a case.
- Where conflict resolution is unlikely, whether because of a unique conflict setting or for the inability of the adversaries to reach a negotiated agreement, extended deterrence by the nuclear states could be another way to arrest nuclear proliferation. This, however, must be accomplished before adversaries are advanced in their nuclear weapons program. In the Middle East it is possible that Syria would settle for an extended deterrent capability from the major powers since it is still not developing its nuclear weapons seriously. An extended nuclear deterrence is likely to be unacceptable to both Iran and Iraq

because they are far more involved in their nuclear weapons programs in which they have invested and which have provided them with enough confidence to stand against their adversaries in the case of aggression. Along the same lines, nuclear deterrence assurances from the West would not have been acceptable to India and Pakistan in the 1980s. Both countries were well-advanced in their nuclear programs by then--although India was far more advanced than Pakistan--and rolling back the capabilities was unlikely. It is crucial to guarantee nuclear deterrence to countries which are potential new nuclear states, but are still in the infancy of their nuclear weapons development.

- Where conflicts remain unresolved and adversaries are not in a position to accept extended nuclear deterrence from the nuclear states, states should be encouraged to be highly involved in confidence-building measures (CBMs) rather than putting pressure on them to give up their nuclear option or nuclear weapons. Only successful CBMs will ensure peace and stability in the regions.

Theoretical Implications

- This dissertation questions the realist theory as understood by International Relations scholars. Although Realism would generally expect all states involved in a conflict to be equally concerned about their security, not all states in protracted conflicts feel as strongly as others about security needs. Some that do, however, follow a different pace in acquiring nuclear weapons. Nuclear proliferation depends on conflict issues, and the pace of proliferation depends, to a great extent, on the conflict type, regional power structures and

geographical distance between the adversaries. What this means is that the Realist theory cannot be generalized across protracted conflict states or regions. Sweeping generalizations should be avoided. Scholars need to be more specific about the security needs that they are generalizing about. Security is a broad term, and the specifics must be defined to avoid wrong conceptualization of the word. What Realism has provided us with is a broad understanding that power politics are important to all states. But that is not enough because states in similar situations do not respond to security needs in the same way, as is expected by Realist scholars. While this remains true, Liberal theories do not fare well in a PC region. States are still worried about wars, whether or not their adversaries are democracies and whether or not there are economic interdependencies. Ultimately, conflict relations dominate, and deterrent capability is required to manage crises.

- Nuclear deterrence, as understood by the traditional theorists, requires redefinition. It may be useful to make a distinction between deterrence between global powers and deterrence among regional powers. Although deterrence as a policy remains the same for both group of states, new nuclear states have a tendency to use non-traditional methods to make the conditions of deterrence work. The deterrent relationship between adversaries may be stable without the use of traditional deterrent conditions. Although the expected outcome is stability for both group of states, the process of achieving this outcome is different between global and regional nuclear states. Since this remains one of the salient differences between old and new states adopting this war-avoidance

strategy of deterrence, it is pertinent to restructure the theory of deterrence for a better understanding of the strategy used by many regional states in the present day world.

- The utility of deterrence may not have decreased in the post-cold war world. With the end of the cold war deterrence has become less relevant within the context of the global powers, but the regional states are making better use of the strategy and are likely to do so for a long time. Therefore, deterrence, a debated term in the context of usefulness and applicability, has proved to be useful among the regional states in the new world we inhabit.
- Protracted conflict theorists need to address the issue of war in a better fashion. Rather than rejecting or including some conflicts as protracted conflicts, understanding why some protracted conflict states go to war while others do not is important. It is equally necessary to ask on what grounds states should be considered to be involved in protracted conflicts. All inter-state protracted conflicts may not experience war, depending on the issues involved in the conflicts. Since peace is generally understood to be the absence of war, and because we expect the post-cold war period to be a peaceful one, it is crucial to identify the war-prone states within the protracted conflict states.

Reinforcing Theory

- Although this dissertation has been critical of the generalizing tendency of the Realist theoretical paradigm, overall it reinforces this theory. The end of the cold war does not mean that the applicability of Realism is no longer relevant. One could perhaps state that Realism has limited applicability, but is not irrelevant. Regional powers in conflict still worry about security and survival, and power politics still dominate parts of the world where protracted conflicts are present. Security still remains at the top of the hierarchy of issues for some regional powers.

Further Research on the Subject

- Further research is called for with the findings of this dissertation. Research on the association between non-territorial protracted conflict states and non-proliferation is important. Which other variables might have impacted on the stability in these two regions could also be studied. Regime-type of the PC dyads could be studied to understand stability. For instance, a comparative study of the democratic dyad/ stability relationship and the nuclear dyad/stability relationship could be done. More research could be conducted on other protracted conflict states in different regions to understand the applicability of the theoretical arguments of this dissertation. When, and under what conditions, would states in a protracted conflict forswear nuclear weapons, is an important

question to ask. Finally, it would be useful to do research on the possibility of states outside PCs proliferating.

BIBLIOGRAPHY

Books and Articles

Ahmed, Samina, and David Cortright, Special Report, A Study of Pakistan's Nuclear Choices, *The Joan B. Kroc Institute for International Peace Studies* at the University of Notre Dame, Indiana: Notre Dame, August 1996

Ali, Akhtar, *Pakistan's Nuclear Dilemma*, Karachi: Economic Research Unit, 1984

Aly, Abdel Monem Said, "Conventional Arms Control in the Middle East: An Arab Perspective," *Kurasat Istratijiya*, Strategic Papers, May 1995

Andriole, Stephen J., "The Levels of Analysis Problems and the Study of Foreign International and Global Affairs: A Review Critique and Another Final Solution," *International Interactions*, 5, 2-3, 1978

Arian, Asher, Ilan Talmud and Tamar Hermann, *National Security and Public Opinion in Israel*, JCSS Study no.9, Tel Aviv: Jafee Center for Strategic Studies, Tel Aviv University, 1988

Arkin, William M., and Richard W. Fieldhouse, *Nuclear Battlefields: Global Links in the Arms Race*, Cambridge: Mass, Ballinger, 1985

Aronson, Shlomo, *The Politics and Strategy of Nuclear Weapons in the Middle East*, New York: State University of New York Press, 1992

Azar, Edward E., *International Conflict: Theory and Practice*, Sussex: Wheatsheaf, 1986

Azar, Edward E., "Protracted International Conflicts: Ten Propositions," *International Interactions*, 12, 1, 1985

Azar, Edward E., et.al., "Protracted Social Conflict: Theory and Practice in the Middle East," *Journal of Palestine Studies*, 8, 1, 1978

Bailey, Kathleen C., *Strengthening Nuclear Non-proliferation*, Boulder, Colorado: Westview Press, 1993

Bajpai, Kanti, "Abstaining: The Nonnuclear Option," in David Cortright and Amitabh Mattoo, eds., *India and the Bomb*, Indiana: University of Notre Dame Press, 1996

Bajpai, Kanti, P.R. Chari, Pervaiz Iqbal Cheema, Stephen P. Cohen and Sumit Ganguly, *Brasstacks and Beyond: Perception and Management of Crisis in South Asia*, New Delhi: Manohar, 1995

Banarjee, D., "India-China Relations and Chinese Military Capability," *Trishul*, vol.3, no.1, July 1990

Barnaby, Frank, *The Invisible Bomb: The Nuclear Arms Race in the Middle East*, London, I.B. Tauris and Co., 1989

Beaton, Leonard, *Must the Bomb Spread*, Harmondsworth, MDDX: Penguin Books, 1966

Beaton, Leonard, *The Struggle for Peace*, New York, Washington: Frederick A. Praeger, Publishers, 1966

Beaton, Leonard, and John Maddox, *The Spread of Nuclear Weapons*, London: Chatto & Windus for the Institute for Strategic Studies, 1962

Beg, Mirza Aslam, *Development and Security*, Rawalpindi: Friends, 1994

Beg, Mirza Aslam, *Development and Security: Thoughts and Reflections*, Rawalpindi: FRIENDS, 1994

Beg, Mirza Aslam, "Pakistan's Nuclear Program: A National Security Perspective," Rjukan Conference on *Nuclear Technology and Politics*, Norway, June 1993

Beg, Mirza Aslam, "Pakistan's Nuclear Program," in Jorn Gjelstad and Olav Njolstad, eds. *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996

Beri, Ruchita, "Ballistic Missile Proliferation," *Asian Strategic Review*, 1991-92

Bernard, Brodie, et. al., *The Absolute Weapon*, New York: Harcourt, Brace, 1946

Bhatia, Shyam, *Nuclear Rivals in the Middle East*, London & New York: Routledge, 1988

Bhatia, Shyam, *India's Nuclear Bomb*, New Delhi: Vikas Publishing House Pvt. Ltd., 1979

Bhutto, Zulfiqar Ali, *Awakening the People: Speeches of Zulfiqar Ali Bhutto 1966-69*, Rawalpindi: Pakistan Publications, 1970

Blair, Bruce G., *The Logic of Accidental Nuclear War*, Washington D.C.: Brookings, 1994

Booth, Wayne C., et.al., *The Craft of Research*, Chicago, University of Chicago Press, 1995

Brass, Paul R., "Pluralism, Regionalism and Decentralizing Tendencies in Contemporary Indian Politics," in A. Jeyaratnam Wilson and Dennis Dalton, eds., *The States of South Asia: Problems of National Integration*, London: C. Hurst and Company, 1982

Brecher, Michael, and Jonathan Wilkenfeld, *A Study of Crisis*, Ann Arbor: The University of Michigan Press, 1997

Brecher, Michael, *Crises in World Politics*, Oxford, Pergamon Press, 1993

Brecher, Michael and Jonathan Wilkenfeld, *Crisis, Conflict, and Instability*, Oxford, Pergamon Press, 1989

Brecher, Michael, and Jonathan Wilkenfeld, "Conflicts, Crises and Systems," in Michael Brecher and Jonathan Wilkenfeld, *Crisis, Conflict and Instability*, Oxford: Pergamon Press, 1989

Brecher, Michael, et.al., *Crises in the Twentieth Century: Handbook of Foreign Policy Crises*, Oxford, Pergamon Press, 1988

Brecher, Michael, "International Crises and Protracted Conflicts," *International Interactions*, 11, 3-4, 1984

Brecher, Michael, *The New States of Asia: A Political Analysis*, London: Oxford University Press, 1963

Brecher, Michael, *The Struggle for Kashmir*, New York: Oxford University Press, 1953

Brito, Dagobert, L. and Michael D. Intriligator, "Proliferation and the Probability of War: A Cardinality Theorem," *Journal of Conflict Resolution*, vol. 40, no.1, March, 1996

Brito, Dagobert L., Michael D. Intriligator and Adele E. Wick, *Strategies for Managing Nuclear Proliferation*, Lexington Books, Massachusetts, 1983

Broad, William J., and Judith Miller, "Vital Pieces Missing in Iraq Arms Puzzle," *The Gazette*, December 20, 1998

Brodie, Bernard, *War and Politics*, New York: MacMillan, 1973

Brodie, Bernard, *Strategy in the Missile Age*, Princeton: Princeton University Press, 1959

Brodie, Bernard, et. al., *The Absolute Weapon*, New York: Harcourt, Brace, 1946

Bundy, McGeorge, "Existential Deterrence and Its Consequences," in Douglas MacLean, ed., *The Security Gamble: Deterrence Dilemmas in the Nuclear Age*, Totowa, NJ: Rowman and Allanheld, 1984

Bundy, McGeorge, "The Bishops and the Bomb," *New York Review of Books*, June 16, 1983

Burrows, William E., and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World*, New York: Simon and Schuster, 1994

Buzan, Barry and G. Rizvi, *South Asian Insecurity and the Great Powers*, London: Macmillan, 1986

Cahn, Anne Hessing, "Determinants of the Nuclear Option: The Case of Iran," in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near-Nuclear Countries*, Cambridge, Mass: Ballinger Publishing Company, 1975

Carr, E. H., *The Twenty Years' Crisis, 1919-1939: An Introduction to the Study of International Relations*, New York: Harper and Row, 1946

Carus, W Seth, and Janne E. Nolan, "Arms Control and the Proliferation of Ballistic Missiles," in Alan Platt, ed., *Arms Control and Confidence Building in the Middle East*, Washington D.C: US Institute of Peace, 1992

Chari, P.R., "The International Nuclear Regime and the Near Nuclear Countries," in Kanti Bajpai and Harsh C. Shukul, eds., *Interpreting World Politics*, New Delhi: Sage Publications, 1995

Cheema, Pervaiz Iqbal, "The Implications of Arms Buildup in South Asia," *Regional Studies*, vol. 14, no. 1, winter 1995

Chellaney, Brahma, "India," in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, Washington D.C.: The Woodrow Wilson International Center Press, 1994

Chellaney, Brahma, "South Asia's Passage to Nuclear Power," *International Security*, vol.16, no.1, summer 1991

Chengappa, Raj, "The Bomb Makers," *India Today*, June 22, 1998

Chubin, Shahram, "Arms Procurement in Iran: Ad Hoc Decision-Making and Ambivalent Decision-Makers," in Eric Arnett, ed., *Military Capacity and the Risk of War*, New York, Oxford: Oxford University Press, 1997

Chubin, Shahram, "The Middle East," in Mitchell Reiss and Robert Litwak, eds., *Nuclear Proliferation After the Cold War*, The Woodrow Wilson Center Press, 1994

Chubin, Shahram, "Iran and the Lessons of the War with Iraq: Implications for Future Defense Policies," in Shelley A Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992

Chubin, Shahram and Charles Tripp, *Iran and Iraq at War*, London: I.B. Taurus, & Co. Ltd., 1988

Cimbala, Stephen J., *Military Persuasion: Deterrence and Provocation in Crisis and War*, Pennsylvania: The Pennsylvania State University Press, 1994

Cohen, Avner, "And Then There Was One," *The Bulletin of the Atomic Scientists*, vol.54, no. 5, September/October, 1998

Cohen, Avner, "Patterns of Nuclear Opacity in the Middle East," *Aurora Papers*, 16, Centre for Global Security, 1992

Cohen, Avner and Benjamin Frankel, "Opaque Nuclear Proliferation," *Journal of Strategic Studies*, vol. 13, no. 3, 1990

Cohen, Stephen P., "Identity, Survival, Security: Pakistan's Defense Policy," in Surendra Chopra, ed., *Perspectives of Pakistan's Foreign Policy*, Amritsar Gurunanak Dev University Press, 1983

Cohen, Stephen P., ed., *Proliferation in South Asia: The Prospects of Arms Control*, Boulder: Westview Press, 1991

Cohen, Stephen Philip, ed., *The Security of South Asia: American and Asian Perspective*, Chicago: University of Illinois Press, 1987

Cohen, Stephen P., *The Pakistan Army*, Berkley: University of California Press, 1984

Cordesman, Anthony, and Ahmed Hashim, *Iran: Dilemmas of Dual Containment*, Boulder, Colorado: Westview Press, 1997

Cordesman, Anthony, *Iran and Iraq*, Boulder: Westview Press, 1994

Cordesman, Anthony, *Weapons of Mass Destruction in the Middle East*, London: Brassey's, 1991

Cortright, David and Amitabh Mattoo, eds., *India and the Bomb: Public Opinion and Nuclear Options*, Indiana: University of Notre Dame Press, 1996

Creveld, Martin Van, *Nuclear Proliferation and the Future of Conflict*, New York: Free Press, 1993

Deutsch, Karl W. and David J. Singer, "Multipolar Power Systems and International Stability," *World Politics*, vol.16, no.3, 1964

Dixit, Abha, "Status Quo: Maintaining Nuclear Ambiguity," in Amitabh Mattoo and David Cortright, eds., *India and the Bomb: Public Opinion and Nuclear Options*, Indiana: University of Notre Dame Press, 1996

Dolley, Steven, "Iraq and the Bomb: The Nuclear Threat Continues," Washington D.C.: Nuclear Control Institute, February 19, 1998

Dolley, Steven, "Ritter Testimony Confirms NCI's Warnings That Iraq Has Active Nuclear Weapons Program," Washington D.C.: Nuclear Control Institute, September 3, 1998

Doran, C.F., "The Theory of Bounded Deterrence," *Journal of Conflict Resolution*, 17, 1973

Dunn, Lewis A, "A Widening Nuclear Circle: South Asian Choices in Broader Perspective," in Francine R. Frankel, ed., *Bridging the Nonproliferation Divide: The United States and India*, Lanham, New York, London: University Press of America, 1995

Dunn, Lewis A., "India, Pakistan, Iran--A Nuclear Proliferation Chain," in William H. Overholt, ed., *Asia's Nuclear Future*, Boulder, Colorado: Westview Press, 1977

Dutta, Sujit, "China and the Security of India," *Strategic Analysis*, vol.12, no.2, May 1988

Eckstein, Harry, "Case Study and Theory in Political Science," in Fred I. Greenstein and Nelson W. Polsby, eds., *Handbook of Political Science*, vol. 1, *Political Science: Scope and Theory*, Reading, Mass: Addison-Wesley, 1975

Ehtashami, Anoushiravan, *Nuclearization of the Middle East*, London: Brassey's, 1989

Epstein, William, "Why States Go and Don't Go Nuclear," *Annals*, 430, March 1977

Etemad, Akbar, "Iran," in Harald Muller, ed., *A European Non-Proliferation Policy*, Oxford: Clarendon Press, 1987

Evron, Yair, *Israel's Nuclear Dilemma*, Ithaca, New York: Cornell University Press, 1994

Evron, Yair, "Opaque Proliferation: The Israeli Case," *Journal of Strategic Studies*, vol.13, no.3, September 1990

Evron, Yair, "The Relevance and Irrelevance of Nuclear Options in Conventional Wars: The 1973 October War," *The Jerusalem Journal of International Relations*, vol. 7, nos. 1-2, 1984

Evron, Yair, "Israel and the Atom: The Uses and Misuses of Ambiguity, 1957-1967," *Orbis*, 17, 4, winter 1974

Fahmy, Nabil, "Egypt's Disarmament Initiative," *Bulletin of the Atomic Scientists*, November 1990

Faruqee, Mishi, and Michael Krepton, eds., *Conflict Prevention and Confidence-Building Measures in South Asia: The 1990 Crisis*, Occasional Paper no.17, Washington D.C.: Henry L. Stimson Center, 1994.

Feldman, Shai, *Nuclear Weapons and Arms Control in the Middle East*, Cambridge, Mass: The MIT Press, 1997

Feldman, Shai, "Addressing Proliferation "Demand" Through Threat Reduction, Arms Control, and Engagement---The Middle East," Paper Presented at the Conference on Nuclear Non-proliferation: Enhancing the Tools of the Trade, June 9-10, Washington D.C., 1997

Feldman, Shai, "Is There A Proliferation Debate?," *Security Studies* 4, no.4, summer 1995

Feldman, Shai, "Israel," in Mitchell Reiss and Robert S. Litwak, eds., *Nuclear Proliferation after the Cold War*, Washington D.C.: The Woodrow Wilson Center Press, 1994

Feldman, Shai, ed., *Confidence Building and Verification: Prospects in the Middle East*, Boulder: Westview Press, 1994

Feldman, Shai, "Security and Arms Control in the Middle East: An Israeli Perspective," in Shelley A. Stahl and Geoffrey Kemp, eds., *Arms Control and*

Weapons Proliferation in the Middle East and South Asia, New York: St. Martin's Press, 1992

Feldman, Shai, *Israeli Nuclear Deterrence: A Strategy for the 1980s*, New York: Columbia University Press, 1982

Feldman, Shai, "A Nuclear Middle East," *Survival*, 23, no.3, May-June 1981

Floden, Gunilla and Peter Jones, "The Middle East Peace Process," SIPRI Yearbook, 1998

Frankel, Benjamin, ed., *The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results*, London: Frank Cass, 1993

Fukuyama, Francis, *The End of History and the Last Man*, New York: Free Press, 1992

Ganguly, Sumit, *The Crisis in Kashmir: Portents of War, Hopes for Peace*, New York: Cambridge University Press, Woodrow Wilson Center Press, 1997

Garrity, Patrick J., and Steven A. Maaranen, eds., *Nuclear Weapons in the Changing World*, New York: Plenum Press, 1992

Geller, Daniel S., "Nuclear Weapons, Deterrence, and Crisis Escalation," *Journal of Conflict Resolution*, 34, 1990

George, Alexander L., and Timothy J. McKeown, "Case Studies and Theories of Organizational Decision-Making," *Advances in Information Processing in Organization*, 2, 1985

George, Alexander, "Case Studies and Theory Development: The Method of Structured Focused Comparison," in Paul Gordon Lauren, ed., *Diplomacy: New Approaches in History, Theory, and Policy*, New York, London: The Free Press, Collier Macmillan Publishers, 1979

Gertz, Bill, "Russia, China Aid Iran's Missile Programs," *The Washington Times*, September 10, 1997

Gertz, Bill, "Pakistan Deploys Chinese Missiles," *Washington Times*, June 12, 1996

Getler, Warren, "Iran is Unlikely to Have Atom Bomb in 2 Years, Nuclear Experts Assert," *International Herald Tribune*, May 7, 1984

Gilpin, Robert, "The Richness of the Tradition of Political Realism," in Robert Keohane, ed., *Neorealism and Its Critics*, New York: Columbia University Press, 1986

Gilpin, Robert, *American Scientists and Nuclear Weapon Policy*, Princeton: Princeton University Press, 1962

Ginsburg, George, and Michael Mathos, "Communist China and Tibet: The First Dozen Years," Martinus Nijhoff, *The Hague*, 1964, p.210

Goertz, Garry, and Paul F. Diehl, "Enduring Rivalries: Theoretical Constructs and Empirical Patterns," *International Studies Quarterly*, 37, 1993

Goertz, Garry, and Paul F. Diehl, "Empirical Importance of Enduring Rivalries," *International Interactions*, 18, 2, 1992

Goldgeier, J., and M. McFaul, "Core and Periphery in the Post Cold War Era," *International Organization*, spring 1992

Greenwood, Ted, *Nuclear Proliferation: Motivation, Capabilities and Strategies for Control*, New York: McGraw Hill, 1977

Gupta, Bhabani Sen, "India's N-Option: The Question of Consensus," in *The Tribune*, Chandigarh, April 10, 1996

Gupta, Bhabani Sen, "Dilemma without Anguish: India, Moraji and the Bomb," in T.T. Poullose, ed., *Perspectives on India's Nuclear Policy*, New Delhi: Young Asia Publications, 1978

Gupta, Sisir, in M.S. Rajan and S. Ganguly, eds., *India and the International System*, New Delhi: Vikas, 1981

Gutman, Roy, "Invitation to UN Awaited: US Expects Arms Inspectors to Return to Iraq Soon," *The Gazette*, December 20, 1998

Hagerty, Devin T., *The Consequences of Nuclear Proliferation: Lessons from South Asia*, Cambridge, Mass: The MIT Press, 1998

Hagerty, Devin T., "Nuclear Deterrence in South Asia," *International Security*, vol. 20, no.3, winter 1995/96

Harkavy, Robert E., *Spectre of a Middle Eastern Holocaust*, Monograph series in World Affairs, vol.14, Denver: University of Denver, Graduate School of International Studies, 1977

Hashim, Ahmed S., "Iranian Science and Technology Capacity: Implications of Ideology and the Experience of War for Military Research and Development," in

Eric Arnett, ed., *Military Capacity and the Risk of War*, New York, Oxford: Oxford University Press, 1997

Hass, Michael, *International Conflict*, Indianapolis, Bobbs-Merrill, 1974

Hazari, K.K., "National Security: Future Threat & Challenges," *Agni*, vol.2, no.1, May 1996

Hazari, K.K., "Security and Development in India and Pakistan," *Agni, Studies in International Strategic Issues*, vol. 1, no. 1, April 1995

Herby, Peter, *The Chemical Weapons Convention and Arms Control in the Middle East*, Oslo: International Peace Research Institute (PRIO), 1992

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

Hersh, Seymour M., *The Samson Option*, New York: Random House, 1991

Hibbs, Mark, "Last NPT PrepCom Moves Toward Limited Extension," *Neocleonic Week*, February 2, 1995

Hiro, Dilip, *The Longest War: The Iran-Iraq Military Conflict*, New York: Routledge Chapman and Hill, Inc., 1991

Hogendoorn, E.J., "A Chemical Weapons Atlas," *The Bulletin of the Atomic Scientists*, vol.53, no.5, September/October 1997

Holsti, Kalevi J., *Peace and War: Armed Conflicts and International Order, 1648-1989*, Cambridge, Cambridge University Press, 1991

Hunter, Jane, "Egypt and the Nonproliferation Treaty," *Middle East International*, no.497, 31 March 1995

Huth, Paul and Bruce Russett, "General Deterrence Between Enduring Rivals: Testing Three Competing Models," *American Political Science Review*, vol.87, no.1, March 1993

Huth, Paul, "The Extended Deterrent Value of Nuclear Weapons," *Journal of Conflict Resolution*, 34, 1990

Huth, Paul, *Extended Deterrence and the Prevention of War*, New Haven, Yale University Press, 1988a

Huth, Paul, "Extended Deterrence and the Outbreak of War," *American Political Science Review*, 82, 1988b

Huth, Paul, *Deterrence and War*, New Haven, Yale University Press, 1988

Jabber, Paul, "A Nuclear Middle East: Infrastructure, Likely Military Postures and Prospects for Strategic Stability," Los Angeles: UCLA Center for Arms Control and International Security Working Paper no. 6, 1977

Jabber, Paul., *Israel and Nuclear Weapons*, London, International Institute for Strategic Studies, 1971

James, Patrick, *Crisis and War*, Montreal and Kingston: McGill-Queens University Press, 1988

Jee, Sudhakar, "Affordable Defense Within Budget Constraints," *Trishul*, vol. 8, no. 1, autumn, 1995

Jensen, Lloyd, *Return from the Nuclear Brink: National Interest and the Nuclear Nonproliferation Treaty*, Lexington Mass: Lexington Books, 1974

Jervis, Robert, "The Future of World Politics: Will it Resemble the Past?," *International Security*, vol. 16, winter 1991-92

Jervis, Robert, "Models and Cases in the Study of International Conflict," *Journal of International Affairs*, vol. 44, no.1, spring-summer, 1990

Jervis, Robert, *The Meaning of Nuclear Revolution*, Ithaca: Cornell University Press, 1989

Jervis, Robert, "From Balance to Concert: A Study of International Security Cooperation," in Kenneth A. Oye, ed., *Cooperation Under Anarchy*, Princeton: Princeton University Press, 1986

Jervis, Robert, "Cooperation Under the Security Dilemma," *World Politics*, vol. 30, no.1, January, 1978

Jha, Hari Bansh, "Security Dimension of South Asia," Paper presented at the *Bangladesh Institute of International and Strategic Studies*, December 1989

Jocek, Neil, "Tacit Bargaining and Stable Proliferation in South Asia," *Journal of Strategic Studies*, vol.13, no.3, September 1990

Jocek, Neil, *Nuclear Proliferation and Security in India and Pakistan*, *Ph.D. Dissertation*, University of California Los Angeles, 1986

Johal, Sarbjit, *Conflict and Integration in Indo-Pakistan Relations*, Centers for South and South East Asia Studies, Berkeley: University of California, 1989

Jones, Rodney, "Small Nuclear Forces and US Security Policy," in Rodney Jones, ed., *Small Nuclear Forces and US Security Policy*, Lexington Mass: D.C. Heath, 1984

Joshi, Manoj, "Marginal Costing," *India Today*, June 1, 1998

Kaplan, Morton A., "The Great Debate: Traditionalism Vs. Science in International Relations," *World Politics*, vol. 19, 1966

Kapur, Ashok, "Indian Strategy: The Dilemmas About Enmities, the Nature of Power and the Pattern of Relations," in Ashok Kapur and Yogendra K. Malik, *India: Fifty Years of Democracy and Development*, New Delhi: APH Publishing Corporation, 1998

Kapur, Ashok, "Nuclear Development of India and Pakistan," in Jorn Gjelstad and Olav Njolstad, eds., *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996

Kapur, Ashok, *Foreign Policies of India and her Neighbors*, Great Britain: Macmillan Press Ltd., 1996

Kapur, Ashok, "India and Pakistan: Nature and Elements of Nuclear Deterrence Between Two Regional Rivals," Paper presented for workshop on "*The Future of Nuclear Deterrence*," Centre for Defense and Security Studies, Manitoba, May, 1995

Kapur, Ashok, *Pakistan in Crisis*, London and New York: Routledge, 1991

Kapur, Ashok, *Pakistan's Nuclear Development*, London: Croom Helm, 1987

Kapur, Ashok, *International Nuclear Proliferation*, New York: Praeger, 1979

Kapur, Ashok, *India's Nuclear Option: Atomic Diplomacy and Decision-Making*, New York: Praeger, 1976

Karim, Afsir, "The J & K Problem: An Interpretative Study," *Forum for Strategic & Security Studies*, 1996

Kasturi, Bhashyam, "Pakistan's Nuclear Bomb: An Appraisal," *Trishul*, vol. 8, no.2, spring 1996

Kaul, Ravi, *India's Strategic Spectrum*, New Delhi: Chanakya Publishing House, 1969

Kaushik, Brij Mohan, and O.N. Mehrotra, *Pakistan's Nuclear Bomb*, New Delhi: Sopan Publishing House, 1980

Kay, David A, "Denial and Deception Practices of WMD Proliferators: Iraq and Beyond," *The Washington Quarterly*, vol.18, no. 1, winter 1995

Kegley, Jr., Charles W., and Kenneth L. Schwab, eds., *After the Cold War: Questioning the Morality of Nuclear Deterrence*, Boulder: Westview Press, 1991

Kemp, Geoffrey and Robert Harkavy, *Strategic Geography and the Changing Middle East*, Washington D.C.: Brookings Institution Press, 1997

Kemp, Geoffrey, "Nuclear Forces for Medium Powers: Part I: Targets and Weapons Systems," *The International Institute for Strategic Studies, Adelphi Papers*, no. 106, 1974

Keohane, Robert O., *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton, Princeton University Press, 1984

Khan, M.R., "Sino-Pak Cooperation: Future Prospects," *National Development and Security*, vol.5, no.1, Rawalpindi: Friends, August, 1996

Khan, Munir Ahmed, "Containing Nuclear Arms Race in South Asia," *Strategic Studies*, vol. 17, no.1 and 2, autumn and winter, 1994

King, Garry, Robert O. Keohane and Sidney Verba, eds., *Designing Social Inquiry: Scientific Inference in Qualitative Research*, Princeton: Princeton University Press, 1994

Klare, Michael, *Rogue States and Nuclear Outlaws*, New York: Hill and Wang, 1995.

Krieger, Joel, et.al., eds., *The Oxford Companion to Politics of the World*, New York: Oxford University Press, 1993

Krosney, Herbert, *Deadly Business: Legal Deals and Outlaw Weapons*, New York, London: Four walls Eight Windows, 1993

Lall, John, *Aksai Chin and the Sino-Indian Dispute*, New Delhi, 1991

Lavoy, Peter, and C. Raja Mohan, "Avoiding Nuclear War," in Michael Krepon and Amit Sevak, eds., *Crisis Prevention, Confidence Building, and Reconciliation in South Asia*, New York: St. Martin's Press, 1995

Lavoy, Peter R., "Nuclear Deterrence and the New Nuclear States: Speculations on the Sources of Nuclear Doctrines in India and Pakistan," Paper presented at the conference on Nuclear Weapons in a Transformed World, McGill University, Montreal, Canada, November 4, 1995

Lawrence, M., and Joel Larus, eds., *Nuclear Proliferation Phase II*, Lawrence: Published for the National Security Education Program by University Press of Kansas, 1974

Leith, M.G., *Israel, Nuclear Weapons and the Middle East*, Peace Research, vol. 25, no.4, November 1993

Levron, Aharon, and Zeev Eytan, "The Middle East Military Balance," *The Jerusalem Post*, Westview Press, 1987

Levy, Jack S., "Domestic Politics and War," *Journal of Interdisciplinary History*, vol. 18, 4, spring 1988

Lieberman, Elli, "What Makes Deterrence Work? Lessons from the Egyptian-Israeli Enduring Rivalry," *Security Studies*, vol. 4, no.4, summer, 1995

Lijphart, Arend, "Comparative Politics and Comparative Method," *The American Political Science Review*, 65, 1971

Lotfian, Saideh, "Threat Perception and Military Planning in Iran: Credible Scenarios of Conflict and Opportunities for Confidence Building," in Eric Arnett, ed., *Military Capacity and Risk of War*, New York, Oxford: Oxford University Press, 1997

Malcolmson, Robert W., *Beyond Nuclear Thinking*, Montreal and Kingston: McGill-Queens University Press, 1990

Mansbach, Richard W., and John A. Vasquez, *In Search of Theory: A New Paradigm for Global Politics*, New York: Columbia University Press, 1981

Marwah, Onkar, "India's Nuclear and Space Programs: Intent and Policy," *International Security*, vol. 2, no.2, fall 1977

Marwah, Onkar, "India's Nuclear Program: Decisions, Intent and Policy, 1950-1976," in William H. Overholt, ed., *Asia's Nuclear Future*, Boulder, Colorado: Westview Press, 1977

Mazarr, Michael J., "Virtual Nuclear Arsenals," *Survival*, vol.37, no.3, autumn, 1995

Mazarr, Michael, "Going Just a Little Nuclear: Nonproliferation Lessons from North Korea," *International Security*, vol.20, no.2, fall 1995

Mazarr, Michael J., and Alexander T. Lennon, eds., *Toward A Nuclear Peace*, New York: St. Martin's Press, 1994

Mcknight, Allan D., *Nuclear Non-Proliferation: IAEA and Euratom*, New York: Carnegie Endowment for International Peace, June 1970

Mearsheimer, John J., "Back to the Future: Instability in Europe After the Cold War," *International Security*, vol.15, no.1, summer 1990

Menashe, Carmella, "Israel Takes Steps Toward Arrow Missile Development," *Defense News*, May 20-26, 1996

Mesquita, Bruce Bueno De, "Nuclear Peace Through Selective Nuclear Proliferation," Manuscript (undated)

Meyer, Stephen M., *The Dynamics of Nuclear Proliferation*, Chicago: University of Chicago Press, 1984

Milburn, T.W., "What Constitutes Effective Deterrence?," *Journal of Conflict Resolution*, 3, 1959

Miller, Richard W., *Fact and Method: Explanation, Confirmation and Reality in the Natural and Social Sciences*, Princeton: Princeton University Press, 1987

Morgan, P., *Deterrence: A Conceptual Analysis*, Beverly Hills: Sage Publishers, 1983

Morgan, Patrick, *Deterrence: A Conceptual Analysis*, Beverly Hills, London: Sage Publishers, 1977

Morgenthau, Hans J., *Politics Among Nations: The Struggle for Power and Peace*, New York: Knopf, 1956

Morgenthau, Hans J., *Politics Among Nations: The Struggle for Power and Peace*, New York: Knopf, 1948

Morgenthau, Hans J., *Scientific Man Vs. Power Politics*, Chicago: University of Chicago Press, 1946

Moshaver, Ziba, *Nuclear Weapons Proliferation in the Indian Subcontinent*, Basingstoke: Macmillan, 1991

Mueller, John, *Retreat From Doomsday: The Obsolescence of Major War*, New York: Basic Books, 1989

Mushtak, Hazim T., "Arms control and the Proliferation of High-Technology Weapons in the Middle East and South Asia: An Iraqi View," in Shelley A Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992

Muslih, Muhammad, "The Golan: Israel, Syria, and Strategic Calculations," *Middle East Journal*, vol.47, no.4, autumn 1993

Nair, Vijay K., "Nuclear Proliferation in South Asia: The Military Implications," *Indian Defense Review*, vol.10, no.1, January-March, 1995

Nayar, Baldev Raj, "Strategic Culture or Strategic Orientalism: Scholarship in the Service of Western Hegemony," *Canadian Consortium on Asia Pacific Security (CANCAPS) Bulletin*, no. 14, August 1997

Nayar, Kuldeep, "We Have The A-Bomb, Says Pakistan's Dr. Strangelove," *Observer*, London, March 1, 1987

Nayyar, K.K., "India's Security, Economy and Diplomacy," *Agni*, vol.1, no.2, November 1995

Nehru, Jawaharlal, *Independence and After: A Collection of Speeches*, 1946-1949, New York: John Day, 1950

Nye, Joseph S., *Understanding International Conflicts*, New York: Harper Collins College Publishers, 1993

Nye, Joseph, *Bound to Lead*, New York: Basic Books, 1990

Overholt, William H., ed., *Asia's Nuclear Future*, Boulder: Westview Press, 1977

Pande, Savita, *Pakistan's Nuclear Policy*, Delhi: R.R. Publishing Corporation, 1991

Pape, Robert A., "New Iraq Strategy Needed," *The Gazette*, December 19, 1998

Paul, T.V., "The Systemic Bases of India's Challenge to the Global Nuclear Order," *The Nonproliferation Review*, vol. 6, no.1, fall 1998

Paul, T. V., "Power, Influence and Nuclear Weapons: A Reassessment," in T.V. Paul, Richard Harknett and James J. Wirtz, eds., *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order*, Ann Arbor: University of Michigan Press, 1998

Paul, T.V., "Nuclear Taboo and War Initiation: Nuclear Weapons in Regional Conflicts," *Journal of Conflict Resolution*, vol.39, no.4, December, 1995

Paul, T.V., *Asymmetric Conflicts: War Initiation By Weaker Powers*, Cambridge: Cambridge University Press, 1994

Paul, T.V., "Realism, Institutionalism and Nuclear Choices," Paper presented at APSA convention, Chicago, September 1992

Paul, T.V., *Reaching for the Bomb: The Indo-Pak Nuclear Scenario*, New Delhi: Dialogue Publishers, 1984

Perera, Judith, "Can the Arabs Win the Nuclear Race with Israel?," *Arab Papers*, no. 12, 1983

Perkovich, George, "A Nuclear Third Way in South Asia," *Foreign Policy*, no. 91, summer 1993

Peterson, Scott, "Iran Eyes 'The Bomb,' West Watches," *Christian Science Monitor*, August 12, 1998

Pollack, Jonathan D., "China and Asia's Nuclear Future," in Francine R. Frankel, ed., *Bridging the Non-proliferation Divide: The United States and India*, Lanham, New York, London: University Press of America, 1995

Potter, William C., *Nuclear Power and Nonproliferation: An Interdisciplinary Perspective*, Cambridge, Mass: Oelgeschlager, Gunn and Hain, 1982

Powel, Robert, *Nuclear Deterrence Theory: The Search for Credibility*, Cambridge: Cambridge University Press, 1990

Premnath, "Future of the Strategy of Nuclear Deterrence," *Trishul*, vol.9, no.1, autumn, 1996

Quandt, William B., *Peace Process: American Diplomacy and the Arab-Israeli Conflict since 1967*, Washington: The Brookings Institution, 1993

Quester, George, "The Continuing Debate on Minimal Deterrence," in T.V. Paul, Richard J. Harknett and James J. Wirtz, eds., *The Absolute Weapon Revisited*, Ann Arbor: The University of Michigan Press, 1998

Quester, George H., "Minimal Deterrence," Paper presented at the conference on "Nuclear Weapons in a Transformed World," Montreal, McGill University, November 4, 1995

Quester, George, *Nuclear Weapons and Israel*, *The Middle East Journal*, vol.37, no.4, autumn, 1983

Quester, George H., "Reducing the Incentives to Proliferation," *Annals*, 430, March, 1977

Quester, George, *The Politics of Nuclear Proliferation*, Baltimore: Johns Hopkins University Press, 1973

Ragin, Charles C., *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies*, California: University of California Press, 1987

Rahman, Aatur, "Pakistan: Unity or Further Division?," in A. Jeyaratnam Wilson and Dennis Dalton, eds., *The States of South Asia: Problems of National Integration*, London: C. Hurst and Company, 1982

Rais, Rasul, "Pakistan in the Regional and Global Power Structure," *Asian Survey*, vol. 31, no. 4, April 1991

Ramanna, Raja, "Development of Nuclear Energy in India: 1947-73," in T.T. Poulouse, ed., *Perspectives of India's Nuclear Policy*, New Delhi: Young Asia Publications, 1978

Ramesh, Jairam, "Big Bombs, Bigger Bills," *India Today*, June 1, 1998

Razvi, S. M. Mujtaba, "Conflict and Cooperation in South Asia," *The Round Table*, no. 299, July 1986

Reiss, Mitchell, Robert S. Litwak, eds., *Nuclear Proliferation after the Cold War*, Washington: The Woodrow Wilson Center Press, 1994

Reiss, Mitchell, *Without the Bomb: The Politics of Nuclear Non-proliferation*, New York: Columbia University Press, 1988

Rhineland, John B. and Adam M. Scheinman, eds., *At the Nuclear Cross Roads: Choices about Nuclear Weapons and Extension of the Non-Proliferation Treaty*, Lanham: University Press of America, 1995

Richardson, Neil R., "Dyadic Case Studies in the Comparative Study of Foreign Policy Behavior," in Herman, Charles, et.al., eds., *New Directions in the Study of Foreign Policy*, Boston: Allen Unwin, 1987

Roberts, Brad, "The Strategic Implications of Chemical Weapons Proliferation," in Shelley A. Shatl and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992

Robinson, Julian Perry, "Chemical Weapons Proliferation in the Middle East," in Efraim Karsh and Philip Sabin, eds., *Non-Conventional Weapons Proliferation in the Middle East*, Oxford: Clarendon Press, 1993

Rodan, Steve, "Iran Has Up to 4 Nuclear Bombs," *Jerusalem Post*, September 4, 1998

Ronald, N., "Soviets Reportedly Offer Nuclear Help to Syria," *United Press International*, 28 November, 1985

Rosecrance, Richard N., "Bipolarity, Multipolarity, and the Future," *Journal of Conflict Resolution*, vol.10, no.3, 1966

Rosecrance, Richard N., "British Incentives to Become a Nuclear Power," in Richard N. Rosecrance, ed., *The Dispersion of Nuclear Weapons*, New York and London: Columbia University Press, 1964

Rosen, Steven J., "A Stable System of Mutual Nuclear Deterrence in the Middle East," *American Political Science Review*, 71, no.4, December 1977

Rosen, Steven J., "Nuclearization and Stability in the Middle East," in Onkar Marwah and Ann Schultz, eds., *Nuclear Proliferation and the Near Nuclear Countries*, Cambridge Mass: Ballinger Publishers, 1975

Rosenau, James N., "Toward a Single Country Theories of Foreign Policy," in Charles Hermann, Charles Kegley and James N. Rosenau, eds., *New Directions in the Study of Foreign Policy*, Boston: Allen Unwin, 1987

Roshandel, Jalil, "Iran's Atomic Programs and Foreign Propaganda," *Hamshahri*, August 22, 25 1996

Russett, Bruce, *Power and Community in World Politics*, San Fransisco: W.H. Freeman and Co., 1974

Sagan, Scott D., and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate*, New York: W.W. Norton, 1995

Sagan, Scott, "Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons," *International Security*, 18, no.4, spring 1994

Sagan, Scott D., *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons*, Princeton: Princeton University Press, 1993

Sarwar, Ghulam, "Sino-Pak Efforts to Maintain Peace and Promote Development," *National Development and Security*, vol.1, no.1, Rawalpindi: Friends, August, 1996

Schell, Jonathan, *The Abolition*, New York: Alfred A. Knopf, 1984

Schelling, Thomas, *The Strategy of Conflict*, New York: Oxford University Press, 1963

- Segal, D., "Atomic Ayatollahs," *Washington Post*, 12 April, 1987
- Shahi, Agha, "Nuclear Nonproliferation and Pakistan," *Strategic Studies*, vol. 14, no.3, 1991
- Sharma, Dharendra, *India's Nuclear Estate*, New Delhi: Lancers, 1983
- Sharma, V.N., "Its All Bluff and Bluster," *Economic Times*, New Delhi, May 18, 1993
- Shatl, Shelley A. and Geoffrey Kemp, eds., *Arms Control and Weapons Proliferation in the Middle East and South Asia*, New York: St. Martin's Press, 1992
- Siddiqua-Agha, Ayesha, "Ad hococracy, Decision-Making and Pakistan's Arms Production and Nuclear Projects," *Indian Defense Review*, vol.11, no.3, July-September, 1996
- Sidhu, W.P.S., "Enhancing Indo-US Strategic Cooperation," *Adelphi Paper*, 313, IISS, 1997
- Singer, David J. and Melvin Small, *Resort to Arms: International and Civil Wars, 1816-1980*, Beverly Hills: Sage Publishers, 1982
- Singer, David J., and Melvin Small, *The Wages of War 1816-1965: A Statistical Handbook*, New York: John Wiley, 1972
- Singh, Jasjit, "Why Nuclear Weapons," in Jasjit Singh, ed., *Nuclear India*, New Delhi: Knowledge World, 1998
- Singh, Jasjit and K. Subrahmanyam, *Security Without Nuclear Weapons: Indo-Soviet Dialogue*, New Delhi: Lancer International, 1986
- Singh, S.K., "CTBT- A Ready Reckoner," *Strategic Digest*, vol. 26, no.8, August 1996
- Smith, Hedrick, "Soviet Said to Offer Cairo Atom Defense," *New York Times*, February 4, 1966
- Smith, Jeffrey, "Report Cites China-Pakistan Missile Links," *Washington Post*, June 13, 1996
- Smith, Jeffrey, "An M-11 Missile Violation By Any Other Name," *Washington Post*, August 3, 1995

Smith, Jeffrey, "Spy Photos Suggest China Missile Trade," *Washington Post*, July 3, 1995

Snyder, G.H., "Deterrence and Power," *Journal of Conflict Resolution*, 4, 1960

Spector, Leonard S., "Nuclear Proliferation in the Middle East: The Next Chapter Begins," in Karsh, Efraim, Martin S. Navias and Philip Sabin, eds., *Non-Conventional Weapons Proliferation in the Middle East: Tackling the Spread of Nuclear, Chemical and Biological Capabilities*, Oxford: Clarendon Press, 1993

Spector, Leonard S. and Jacqueline R. Smith, *Nuclear Ambitions: The Spread of Nuclear Weapons 1989-1990*, Boulder: Westview Press, 1990

Spector, Leonard, *The Undeclared Bomb: The Spread of Nuclear Weapons 1987-1988*, Cambridge: Ballinger, 1988

Spector, Leonard, *Nuclear Proliferation Today*, New York: Vintage Books, 1985

Spiers, Edward M., *Chemical and Biological Weapons: A Study of Proliferation*, New York: St. Martin's Press, 1994

Steinberg, Gerald M., "Deterrence and Middle East Stability: An Israeli Perspective," *Security Dialogue*, vol.28, no.1, March, 1997

Starr, Barbara, "Pakistan's New Danger Weapon is Confirmed," *Jane's Defense Weekly*, vol. 28, no. 21, 1997

Strain, Frederick R., "Iran's Nuclear Strategy: Discerning Motivations, Strategic Culture and Rationality," Institute for National Strategic Studies, 1998

Strong, Robert A., "The Nuclear Weapon State: Why They Went Nuclear?," in Kincade, W. H. and C. Bertram, eds., *Nuclear Proliferation in the 1980s*, New York: St. Martin's Press, 1982

Subrahmanyam, K., "Indian Nuclear Policy—1964-98," in Jasjit Singh, ed., *Nuclear India*, New Delhi: Knowledge World, 1998

Subrahmanyam, K., "Middle Path to Nuclear Security," *Strategic Digest*, vol. 26, no.8, August 1996

Subrahmanyam, K., "Nuclear Imperialism: A Gandhian Response to NPT and CTBT," *Times of India*, New Delhi, January, 1996

Subrahmanyam, K., "Down Memory Lane," *Economic Times*, March 24, 1993

Subrahmanyam, K., "Capping, Managing, or Eliminating Nuclear Weapons?" in Kanti Bajpai and Stephen P. Cohen, eds., *South Asia After The Cold War*, Boulder, Colorado: Westview, 1993

Subrahmanyam, K., *Security in a Changing World*, Delhi: B.R. Publishing Co., 1990

Subrahmanyam, K., *Indian Security Perspectives*, New Delhi: ABC Publishing House, 1982

Subrahmanyam, K., "India: Keeping the Option Open," in Robert Lawrence and Joel Laurus, eds., *Nuclear Proliferation Phase II*, Lawrence: University Press of Kansas, 1974

Subrahmanyam, K., "The Role of Nuclear Weapons: An Indian Perspective," in Johan Jorgen Holst, ed., *Security, Order, and the Bomb*, Oslo, Bergen, Tromso: Universitetsforlaget, 1972

Subrahmanyam, K., "India's Problems of Security," *Indian Institute for Defense Studies and Analyses*, New Delhi, 1969

Subrahmanyam, K., "The Asian Balance of Power in the Seventies: An Indian View," *Institute for Defense Studies and Analysis*, New Delhi, 1968

Sundarji, K., "Imperatives of Indian Minimum Nuclear Deterrence," *Agni*, vol.2, no.1, May, 1996

Sundarji, K., "India's Nuclear Weapons Policy," in Jorn Gjelstad and Olav Njolstad, eds., *Nuclear Rivalry and International Order*, Oslo: International Peace Research Institute, 1996

Sundarji, Krishnaswami, "Changing Military Equations in Asia: The Relevance of Nuclear Weapons," in Francine R. Frankel, ed., *Bridging the Nonproliferation Divide: The United States and India*, Lanham, New York, London: University Press of America, 1995

Sundarji, K., *Blind Men of Hindustan: Indo-Pak Nuclear War*, New Delhi: UBS Publishers, 1993

Thayer, Bradley A., "The Causes of Nuclear Proliferation and the Utility of Non-Proliferation Regime," in Raju G. Thomas, ed., *The Nuclear Non-Proliferation Regime: Prospects for the 21st Century*, New York: St. Martin's Press, 1998

Thomas, Raju G., "Should India Sign the NPT?," in Pilat and Rendley, eds., *Beyond 1995*, New York: Plenum Press, 1990

Timmerman, Kenneth R., "Iran's Nuclear Program: Myth or Reality," The Middle East Data Project Inc., 1995

Timmerman, Kenneth R., *Weapons of Mass Destruction: The Cases of Iran, Syria, and Libya*, Los Angeles: Simon Wiesenthal Center, 1992

Travis, Thom A., *India, Pakistan and the Third World in the Post-Cold War System*, New Delhi: Har Anand Publications, 1997

Vanaik, Achin, and Praful Bidwai, "India and Pakistan," in Regina Cowen Karp, ed., *Security with Nuclear Weapons?* Oxford: Oxford University Press, 1991

Vas, Eric A., "Pakistan's Security Futures," in Stephen P. Cohen, ed., *The Security of South Asia*, Urbana and Chicago: University of Illinois Press, 1987

Vasquez, John A., *The War Puzzle*, Cambridge: Cambridge University Press, 1993

Vaziri, Haleh, "Iran's Nuclear Quest: Motivations and Consequences," in Raju G. Thomas, ed., *The Nuclear Nonproliferation Regime; Prospects for the 21st Century*, New York: St. Martin's Press, 1998

Vinod, M.J., "Nuclear Proliferation in South Asia," *Strategic Analysis*, March, 1996

Wallensteen, Peter, "Incompatibility, Confrontation, and War: Four Models and Three Historical Systems, 1816-1976," *Journal of Peace Research*, 18, no.1, 1981

Waller, Douglas, "The Secret Missile Deal," *Time*, vol.149, no.26, June 30, 1997

Walters, R.E., *The Nuclear Trap*, England: Penguin Books, 1974

Waltz, Kenneth N., "Nuclear Myths and Political Realities," *American Political Science Review*, 84, 1990

Waltz, Kenneth N., "Origins of War in Neorealist Theory," in Robert I. Rotberg and Theodore K. Rabb, eds., *The Origin and Prevention of Major Wars*, Cambridge: Cambridge University Press, 1988

Waltz, Kenneth N., "War in Neorealist Theory," *Journal of Interdisciplinary History*, 18, no.4, spring 1988

Waltz, Kenneth N., "Towards Nuclear Peace," in Dagobert L. Brito, Michael D. Intriligator and Adele E. Wick, eds., *Strategies for Managing Nuclear Proliferation*, Massachusetts: Lexington Books, 1983

Waltz, Kenneth N, *The Spread of Nuclear Weapons: More May Be Better*, *Adelphi Paper* no.171, London: International Institute for Strategic Studies (IISS), 1981

Waltz, Kenneth N., *Theory of International Politics*, New York: Random House, 1979

Waltz, Kenneth N., "The Stability of a Bipolar World," *Daedalus*, vol.93, no.3, summer 1964

Waltz, Kenneth N., *Man, the State and War: A Theoretical Analysis*, New York: Columbia University Press, 1959

Weede, E., "Extended Deterrence by Superpower Alliance," *Journal of Conflict Resolution*, 27, 1983

Weede, E., "Preventing War by Nuclear Deterrence or by Détente," *Conflict, Management and Peace Science*, 6, 1981

Weiner, Tim, "Iran Said to Test Missile Able to Hit Israel and Saudis," *New York Times*, July 23, 1998, H2

Weissman, Steve, and Herbert Krosney, *The Islamic Bomb*, New York: Times Books, 1981

Weltman, John, "Nuclear Devolution and World Order," *World Politics*, vol.32, no.2, January, 1990

Winner, Langdon, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*, Cambridge, Mass: MIT Press, 1977

Wirsing, Robert G., *Pakistan's Security Under Zia, 1977-1988*, New York: St. Martin's Press, 1991

Yaniv, Avron, *Deterrence Without the Bomb: The Politics of Israeli Strategy*, Massachusetts, Lexington Books, 1987

Broadcasts, Magazines, Newspapers, Reports and Statements

Al-Sha'b, July 5, 1990, translation by HATZAV

Bharatiya Janata Party, Election Manifesto, 1996

CIA, World Factbook, 1992

FBIS--CHI--88--023, February, 1988
Ha'iri, Safa, "Secrets of Iran's Nuclear Program and a Map of its Secret Factories," *Al-Watan Al-'Arabi*, January 20, 1995 (FBIS Translated Text)
INA July 30, 1991, translated by HATZAV
IRNA, October 18, 1988; FBIS-NES, October 19, 1988.
"Iran May Be Close to Nuclear Bomb," *Israel Line*, November 13, 1997
Lokshabha, Debates, India, series 3, vol.35, no.6
Ministry of External Affairs Annual Report, New Delhi, 1989
Ministry of External Affairs Report 1964-65, New Delhi, Government of India Printing Office, 1965 -
"Report of the Officials of the Government of India and Peoples Republic of China on the Boundary Question," Ministry of External Affairs, Government of India, February 1961
State Department Memo of 1983
Statute of the International Atomic Energy Agency, *United Nations Treaty Series* (UNTS), No. 3988, vol. 276, 1957
Shira', Lebanon, 1989, HATZAV translation
"Syria will construct a nuclear reactor with Soviet assistance," *Ma'ariv*, May 24, 1983.
White Paper on Jammu and Kashmir, 1948

Baghdad Radio, December 27, 1992
Broadcast on *NPR Morning News*, December 1, 1998
CNN
Jerusalem Israel Television Channel 1
Project 706: The Islamic Bomb, "*Panorama*" recording from a BBC transmission, June 16, 1980
Voice of America News Report

Saddam Hussein's Address at the Islamic Conference, Baghdad Domestic Service, translated in FBIS-NES-90-118, *Daily Report*, June 19, 1990
Saddam Hussein's Cabinet Statement, June 23, 1981 (FBIS, June 24, 1981)
Saddam Hussein holds news conference after Baghdad talks, INA in Arabic, April 8, 1990 (BBC, ME/0745, April 10, 1990)
Saddam Hussein, "Iraq Aspiring to A Nuclear Balance with Israel," *Davar*, December 3, 1990
Speech by Hashemi Rafsanjani, Tehran Domestic Service, 19.35 GMT, October 6, 1988, translation in FBIS-NES, 7 October, 1988

Arms Control Reporter
Country Report, Economic Intelligence Unit
Country Studies, Library of Congress
Institute for Science and International Security Report
London: International Institute for Strategic Studies, *The Military Balance*
Stockholm: SIPRI Yearbook

Al Watan Al-Arabi
Arab Papers
Bulletin of the Atomic Scientists
Dawn
Deccan Herald
Economist
Foreign Report
Ha'aretz
Hadashot
Hamshahri
Hindusthan Times
Holiday
India Today
Jane's Defense Weekly
Jane's Intelligence Review
Mid East International
Mid East Mirror
Muslim
New York Times,
Nucleonics Week
Pakistan Times
The Asian Age
The Economic Times
The Gazette
The Hindu
The Indian Express
The Jerusalem Post
The Nation
The News
The Pioneer
The Telegraph
The Times of India
The Statesman
Time
Sunday Times
Washington Post
Washington Times
Yediot Ahronot

Interviews Conducted

INDIA

Admiral K.K. Nayyar, Former Chief of Naval Staff, Government of India, New Delhi, January 1997

Air Comdre. Jasjit Singh, Director, Institute for Defense Studies and Analyses, New Delhi, January 1997

Bhabani Sen Gupta, Columnist and Prominent Proliferation Scholar, New Delhi, January 1997

Brahma Chellaney, Research Professor, Centre for Policy Research, New Delhi, January 1997

Brig. Vijay Nair, Proliferation Scholar, New Delhi, January 1997

C. Raja Mohan, Strategic Affairs Editor, *The Hindu*, New Delhi, January 1997

Dhirendhra Sharma, Proliferation Scholar, January 1997

K. Subrahmanyam, Prominent Defense Analyst, Former Defense Secretary, and Presently Member of the National Security Council, Government of India, New Delhi, January, 1997; also in Montreal, February 1999

Kanti Bajpai, Proliferation Scholar, New Delhi, January 1997

Muchkund Dubey, Former Foreign Secretary, Government of India, New Delhi, January 1997

Noor Ahmed Baba, Chairman, Department of Political Science, Kashmir University, New Delhi, January 1997

Proful Bidwai, Columnist and Proliferation Scholar, New Delhi, February 1997

R.R. Subramanian, Research Associate and Proliferation Scholar, Institute for Defense Studies and Analyses, New Delhi, January 1997

Rajiv Nayan, Proliferation Scholar and Research Associate, Institute for Defense Studies and Analyses, New Delhi, January 1997

S.K. Singh, Former Foreign Secretary, Government of India, New Delhi, January 1997

Savita Pande, Prominent Proliferation Scholar and Research Associate, Institute for Defense Studies and Analyses, New Delhi, January 1997

T.T. Poulouse, Security Studies Analyst, New Delhi, January 1997

PAKISTAN

Abdul Sattar, Former Foreign Secretary, Government of Pakistan, Islamabad, February 1997

Aga Murtaza Pooyah, Editor in Chief, *Muslim*, and Chairman of the Institute of Strategic Studies, Islamabad, February 1997

Agha Shahi, Former Foreign Minister, Government of Pakistan, Islamabad, February 1997

General Aslam Beg, Former Chief of Armed Forces, Government of Pakistan, Islamabad, February 1997

Nazir Kamal, Director of the Prime Minister's Advisors, 1989-90, Islamabad, February 1997

Niaz-A-Naik, Former Foreign Secretary, Government of Pakistan, Islamabad, February 1997

Ross Masud Hussain, First Chairman and Director General of the Institute of Strategic Studies, Islamabad, February 1997

Shirin Mazari, Former Chair Person, Defense and Strategic Studies Department, Quaid-E-Azam University and Presently Editor-in-Chief of *Pulse*, Islamabad, February 1997

Zafar Iqbal Cheema, Chairman, Defense and Strategic Studies Department, Quaid-E-Azam University, Islamabad, February 1997

EGYPT

Abdel Monem Said Aly, Director, Al-Ahram Center for Strategic Studies, Cairo, March 1997

Ali Erfan, Aid to Ambassador Nabil Fahmy, Ministry of Foreign Affairs, Government of Egypt, Cairo, March 1997

Ambassador Mahmoud Karem, Director, Disarmament and Non-Proliferation Department, Ministry of Foreign Affairs, Government of Egypt, Cairo, March 1997

Fawzy Hammad, Former President of the Egyptian Atomic Energy Authority, Cairo, March 1997

Major General Ahmed Fakhr, Director, National Center for Middle East Studies, Cairo, March 1997

Major General Ahmed M. Abdel Halim, Head of Military and Strategic Unit, National Center for Middle East Studies, Cairo, March 1997

Morad Ghaleb, Former Foreign Minister, Government of Egypt, Cairo, March 1997

Nabil Fahmy, Counsellor to Foreign Minister, Ministry of Foreign Affairs, Government of Egypt, Cairo, March 1997