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Nuclear proliferation in the Middle East and South Asia: the case of Israel and India

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NUCLEAR PROLIFERATION IN THE MIDDLE EAST AND SOUTH ASIA: THE CASES OF ISRAEL AND INDIA

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ABSTRACT

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This research attempts to offer a multivariate explanation for the decisions of Israel and India to build nuclear weapons and deploy them, and their choice of nuclear strategy by 'theorizing' the largely descriptive but undertheorized literature on the topic. It focuses on the formative period of each country's nuclear program during which time its nuclear program was set on track.

The major aim of the work is to open the 'black box' of nuclear politics and shed light on the anomalies in the nuclear decisions of both countries, that are not adequately addressed by the security model and its accompanying principles of state rationality. This thesis will argue that while the nuclear decisions of both countries have been, no doubt, shaped by its strategic threat perceptions, two other variables played, to different degrees, an important role in nuclear proliferation: the attitudinal prisms of its chief nuclear decision-makers in relation to their perceptions of 'national interest', 'science', 'modernity' and 'prestige' and chief bureaucrats residing over key scientific establishments. In order to account for the reasons behind key nuclear decisions, three theoretical models were used: the security perspective with its focus on strategic threat perceptions, the cognitive approach to decision-making with

its emphasis on the attitudinal prisms of decision-makers, and the bureaucratic approach with its ability to account for the pulling and hauling that is characteristic of bureaucratic politics.

Finally, the thesis comparatively evaluated the Israeli and Indian cases of proliferation and related them to other cases of proliferation and non-proliferation in the third world.

CHAPTER 1

INTRODUCTION

Most analysis of Cold War nuclear policy, and of proliferation, rely almost exclusively on the security model of state rationality. This explanation assumes that states act as coherent units in their relentless pursuit of power (defined largely in material terms) amidst an anarchic international environment. In this regard, nuclear weapons are seen as facilitators of much-needed security. In other words, "many U.S. policymakers and most international relations scholars have a clear and simple answer to the proliferation puzzle: states will seek to develop nuclear weapons when they face a significant military threat to their security that cannot be met through alternative means: if they do not face such threats, they will willingly remain non-nuclear states."[1]

This thesis will examine the decisions of India and Israel to build nuclear weapons and deploy them, and their choice of nuclear strategy. Moreover, it will focus on nuclear decision-making in both countries. A closer look at each of the two countries reveals anomalies in their nuclear decisions that are not well-explained by the security model. First, the nuclear programs of India and Israel have been shaped by the "attitudinal prisms" of their chief nuclear decision-makers and their different perceptions of 'national interest'. Secondly, nuclear politics in both countries involved important "normative" concerns. Of particular importance, is the interaction between

[1] Scott Sagan, "Why Do States Build Nuclear Weapons ?: Three Models in Search of a Bomb," *International Security* 21 (Winter 1996/1997): 54.

'science' and 'prestige', as important normative constructs, and how they were understood by nuclear decision-makers in relationship to perceptions of modernity and identity. Third, nuclear decisions were pioneered by chief bureaucrats residing over an extensive nuclear bureaucracy. In other words, nuclear decision-making largely involved pulling and hauling between bureaucrats whose interests and perceptions were largely shaped by personal and partisan interests.

India and Israel invite analysis because they have the longest nuclear history in the developing world, and their democratic systems, however flawed, yield relatively greater information on domestic decision-making. More specifically, it will enable one to better understand the "attitudinal prism" of key decision-makers, bureaucratic politics and important "normative" concerns that played a role in nuclear decision-making. This is not to say that authoritarian regimes lack the previous attributes, but rather a realization that the nature of democratic governments makes it easier to obtain information on a sensitive issue that is already concealed by multiple veils of secrecy. Hence, the democratic systems of both India and Israel enable one to better understand the domestic dimension of decision-making that would have otherwise been further obscured by personalized politics, authoritarian regimes, extremely rigid censorship and lack of informative publications pertaining to the subject-matter of the thesis.

The main problem in proliferation studies lies in the lack of analytical appreciation of the complexity of nuclear politics, the reasons behind key strategic decisions, and the range of reasons why states choose to go nuclear. More importantly, an exclusive reliance on the security model for understanding proliferation is called into question by recent literature recognizing the important role

that domestic factors and normative concerns play in nuclear decision-making. Scott Sagan contends that "the consensus view, focusing on national security considerations as the cause of proliferation, is dangerously inadequate because nuclear weapons programs also serve other, more parochial and less obvious objectives."[2] Chellaney captures the problem of nonproliferation theory when he argues that the "understanding of the incentives and disincentives to proliferation, and formulation of anti-proliferation strategies, have been handicapped by the analytical straightjacket in which developments have been viewed by nonproliferation scholars and policymakers…..The nonproliferation literature has major shortcomings. Much of the literature analyzes proliferation in relation to threat perceptions and national security concerns, and views nuclear weapons mainly in military terms."[3] Hence, the security explanation is seen as producing a sort of "black box" or "billiard ball" concept of national actors by "eschewing any empirical concern with domestic and internal variations within the separate nations."[4]

Furthermore, the security explanation is quite elusive and is further obscured by the fact that "a large number of 'insecure' countries do not turn to nuclear force for their security. On the other hand, if we consider the concept of security broadly, every country that has gone nuclear has faced some security problem."[5] Hence, national

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[2] Ibid., 55.

[3] Brahma Chellaney, "South Asia's Passage to Nuclear Power," *International Security* 16 (Summer 1991): 44.

[4] J. David Singer, "The Level-of-Analysis Problem in International Relations," *World Politics* 14 (October 1961): 81.

[5] Peter R. Lavoy, "Nuclear Myths and the Causes of Nuclear Proliferation," *Security Studies* 2 (Spring/Summer 1993): 196.

'insecurity' seems to be a necessary but insufficient cause for nuclear proliferation to occur.

In order to understand the reasons for nuclear proliferation among Third World states, one must not only appreciate the unique security threats that make Third World states 'insecure', but also the ways in which their domestic decision-making processes interact with their threat environment. Such an approach allows one to conceptually appreciate the causal link between domestic and international environments and that they are both important in determining nuclear decisions. James Rosenau characterized the conceptual difficulties in such a process when he maintained: "No less sturdy and protective is the conceptual jail that students of comparative and national politics have built for themselves…..By regarding every national system as acting to enhance or preserve its basic interests, however these may be defined or from wherever they may come, the foreign policy analyst can focus on the international actions themselves and is relieved of having to treat them as responses to various internal sources as well as to external stimuli."[6]

This thesis will draw on the relatively extensive and increasingly growing historical and policy/descriptive literature on India and Israel, reanalyzing and reformulating information in a systematic way in order to test the limits of what can be explained by the security model. The anomalies which cannot be explained by such a model, will be isolated and explained using theoretical tools that illustrate individual

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[6] James N. Rosenau, "Introduction: Political Science in a Shrinking World," in *Linkage Politics: Essays on the Convergence of National and International Systems* ed. James N. Rosenau (New York: The Free Press, 1969), 9.

and bureaucratic decision-making and important normative symbols of 'science' and 'prestige'.

Historical Background

During the Cold War, the Third World has largely been characterized by "gradual militarization, violent conflict, interstate arms transfers, massive military developments."[7] In addition, the developing countries have witnessed a continuos upward spiral in military spending.[8] The end of the Cold War highlighted the necessity of a sharper focus on Third World security concerns that were often overridden by superpower conflicts and the resulting struggle over spheres of influence in the Third World. In fact, it has been argued that during the Cold War, "great power conflicts [were] exported to the Third World, whether as wars by proxy or as exacerbation of indigenous Third World conflicts."[9] Moreover, Third World security concerns were most often seen as derivative of the more encompassing bipolar conflict. The end of the Cold War necessitated more attention be given to Third World states and their respective concerns which were neglected during the years of the bipolar conflict.

The Arab-Israeli and the Indo-Pakistani conflicts are both examples of major protracted Third World conflicts. The seriousness of those regional conflicts could be

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[7] Yazid Sayegh, "Security in the Developing Countries," in *International Politics: Enduring Concepts and Contemporary Issues* ed. Robert J. Art and Robert Jervis (New York: Harper Collins, 1992) , 220.

[8] Ibid., 221.

[9] Mohammed Ayoob, "State Making, State Breaking, and State Failure," in *Managing Global Chaos: Sources of and Responses to International Conflict* ed. Chester Crocker et al. (Washington D.C.: United States Institute of Peace Press, 1996) , 37.

illustrated if one recognizes that they have lead to colossal human and material costs and show little prospect of being resolved in the near future. The seriousness of Third World conflicts could be illustrated when one notes that according to some CIA accounts, the 1990 Indo-Pakistani crisis over Kashmir was the closest that the world has ever come to an actual nuclear exchange.[10] Richard Kerr, deputy director of the U.S. Central Intelligence Agency at the time of the crisis, mentioned that "it was far more frightening than the Cuban Missile Crisis".[11] The human costs of Third World conflicts, could be appreciated if one recognizes that the 1947 Indo-Pakistani war alone left one million people dead and created ten million refugees.[12] In terms of the material cost of protracted Third World conflicts, it is important to note that the Middle East has been the largest arms purchaser in the world during the 1970s and 1980s.[13] The cumulative value of arms transfers to twenty states in the Middle East between 1982 and 1986 was equivalent to 43.5% of total arms exports. [14] This means that a significant portion of resources that should have been allocated to economic, political and social development, have been used for arms purchasing. More recently, the increased prospects of nuclear exchange in both the Middle East and South Asia in light of the increasing nuclear capabilities of many regional actors, illustrates the

[10] David Cortright and Amitabh Mattoo, "Elite Public Opinion and Nuclear Weapons Policy in India," *Asian Survey* 36 (June 1996) : 545.

[11] Ibid.

[12] Jaswant Singh, "Against Nuclear Apartheid," *Foreign Affairs* 77 (September/October 1998) : 45.

[13] Bahgat Korany and Ali E. Hillal Dessouki, "The Global System and Arab Foreign Policies: The Primacy of Constraints," in *The Foreign Policies of Arab States: The Challenge of Change* ed. Bahgat Korany et al. (Colorado: Westview Press, 1991) , 38.

[14] Ibid., 39.

seriousness of protracted Third World conflicts. It is estimated that India has a stockpile of about 370 kilograms of weapons-grade plutonium, enough to make roughly 75 nuclear weapons; and Pakistan has amassed some 210 kilograms, enough for roughly 10 nuclear weapons.[15] In the Middle East, Israel is projected to possess as many as 200 nuclear devices.[16] This has prompted many Arab and Muslim states such as Libya, Iran, Syria, Iraq and Algeria to seek nuclear technology and attempt to become nuclear capable. This has increased the specter of a nuclear arms race and even nuclear exchange should members of those two volatile regions engage in armed conflict.

Unlike other Third World states, the nuclear concerns of India and Israel are not recent but both countries have a long history of nuclear decision-making and well-developed nuclear programs. Amitabh Mattoo argues that with the death of Mahatma Ghandi and his idealist tradition of non-violence, there was a gradual erosion of India's moral commitment to nuclear non-proliferation.[17] Moreover, India's Atomic Energy Commission was set up in 1948 (just a year after its independence) and India conducted its first nuclear test at Pokhran in the Rajasthan desert in 1974. In the case of Israel, Avner Cohen argues that Israel is the sixth nation in the world and the first in the Middle East to acquire nuclear weapons.[18] Moreover, he maintains that Israel

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[15] Jurgen Wouters, "Asia's Cold War Heats Up," *ABC News* http://www.abcnews.com

[16] Leonard S. Spector, "Israel Introduced Nuclear Weapons to the Middle East," in *Nuclear Proliferation: Opposing Viewpoints* ed. Charles P. Cozic et al. (San Diego: Greenhaven Press, 1992) , 127.

[17] Amitabh Mattoo, "India's Nuclear Status Quo," *Survival* 38 (Autumn 1996): 54.

[18] Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1998) , 1.

completed the development stage of its first nuclear weapon in 1966-67 and on the eve of the June 1967 War, it "already had a rudimentary, nuclear weapons capability."[19]

Research Objectives

In light of this background, it becomes rather important to study the reasons for nuclear proliferation in the Middle East and South Asia. More specifically, the aims of the research will be threefold. First, it will examine the rationale behind the decision of India and Israel to build nuclear weapons. This thesis will argue that many factors have shaped nuclear decision-making in both countries. In the absence of any one of those factors, the nuclear program of both India and Israel might have not been initiated or might have taken a different course. As has been previously mentioned, the main problem in proliferation literature has been the exclusive reliance on the security explanation for nuclear decisions. Also, in most cases, historical and policy/descriptive research on the Indian and Israeli nuclear programs has been illuminating, informative and detailed, but undertheorized.[20] Very little effort has been spent on theorization or rigorous conceptualization. In order to remedy the previously mentioned deficiencies and for analytical and conceptual purposes, this research will employ two other decision-making models in order to explain phenomena which cannot be explained by the "security" model:

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[19] Ibid.

[20] Examples of brilliantly informative but undertheorized literature are: Avner Cohen, *Israel and the Bomb* (New York: Columbia UP, 1998) ; Taysir N. Nashif , *Nuclear Weapons in Israel* (New Delhi: S.B. Nangia, 1996) ; David Cortright and Amitabh Mattoo, eds. *India and the Bomb: Public Opinion and Nuclear Options* (Notre Dame: University of Notre Dame Press, 1996).

- The Cognitive approach to decision-making – including "normative concerns" in relation to attitudinal prisms/worldviews of individual decision-makers.

- Bureaucratic politics.

The current research will also examine the nuclear strategies and nuclear postures of both countries as they relate to each country's threat perceptions. Important strategies that will be examined will be compellence, deterrence, war-making, or using nuclear weapons to secure political benefits in negotiations. In terms of nuclear postures, opaque and overt nuclear posturing will be examined.

In its concluding section, the research will comparatively evaluate the Indian and Israeli nuclear programs. In addition, it should shed some light on more general Third World nuclear issues and try to briefly examine some important similarities and differences between the Indian and Israeli cases, on the one hand, and other regional or third world cases of nuclear proliferation or non-proliferation, on the other. By focusing on two states with a long tradition of nuclear decision-making, one could capture the depth of the decision-making process and understand the subtleties of nuclear proliferation in the Middle East and South Asia. This does not mean that the concerns of India and Israel are necessarily identical to that of other Third World states or of their regional counterparts. However, by focusing on India and Israel, one could draw comparisons between and among the developing countries of the world in terms of their nuclear decision-making processes and security concerns. This comparative perspective would not have been possible had one focused on the nuclear decision-making and nuclear strategies of only one country.

Theoretical Framework

Within the rather large and complex debate on nuclear proliferation, there are various arguments that directly touch on the subject-matter of this thesis. Nevertheless, due to the complexity and multidimensionality of those arguments, only the major strands will be presented in this theoretical framework.

The research problem derives itself from the researcher's realization of the deficiencies inherent in the literature on nuclear decision-making and nuclear proliferation in the Third World. In fact, the several existing schools of theoretical literature on nuclear proliferation and nuclear strategy suffer from an overemphasis on the security model of explaining proliferation. On the other hand, a descriptive literature exists on Indian and Israeli nuclear decision-making, which provides rich empirical material but is undertheorized. Hence, one of the main aims of this thesis will be to reformulate and theorize this descriptive material using several key approaches from decision-making theory.

There have been various approaches to nuclear decision-making and nuclear proliferation. In the post-Cold War period and due to the predominance of American proliferation literature, there is a tendency to examine Third World nuclear proliferation from a US perspective. This perspective exhibits an inherent predisposition to misunderstand or downplay Third World security concerns and ambitions. On the other hand, the "Cold War nuclear debate" is useful in understanding the reasons for nuclear proliferation, yet it is derived solely from the bipolar experience which might significantly differ from that of the Third World. The "Third World perspective" criticizes both superpowers for failing to understand the unique strategic and geopolitical environment in which Third World states survive

and requests that more attention be given to issues that are specific to the Third World. However, all of the previously mentioned approaches share a recurrent tendency to analyze nuclear politics in terms of national security threats and neorealist concerns. Such a depiction of nuclear politics obscures our understanding of the process of nuclear decision-making – a process which evidently takes place on many levels as opposed to only one level, the level of the nation-state.

As a result, there seems to be a need for the reevaluation of those previous approaches in a more nuanced fashion in order to arrive at a more comprehensive analysis and understanding of nuclear politics. This section attempts to summarize the main ideas presented in those three conceptual models and then focus on the decision-making models that will be employed in this thesis.

Strategic Literature

The Cold War Nuclear Debate:

The traditional "Cold War nuclear debate" provides one with useful insights pertaining to the dynamics of nuclear proliferation. The debate was largely embedded in the historical experience of the bipolar struggle. One strand of the debate focused on the subtleties of nuclear deterrence within the framework of the Cold War and given the nature of the bipolar struggle. Within this framework, the majority of the literature suggests that states are dissuaded from engaging in conflict due to the nuclear risk that looms large. In other words, Cold War deterrence theorists generally argue that "since war between nuclear-armed adversaries involves the possibility of reciprocal destruction, even annihilation, the prospects for a stable deterrent relationship between them…..are alleged to be much greater than in a non-nuclear

world."[21] Kenneth Waltz asserts that "nuclear weapons are in fact a tremendous force for peace and afford nations that possess them the possibility of security at reasonable cost".[22] Robert Jervis sees that "nuclear war-fighting" is not a possibility and argues that "mutually assured destruction exists as a fact, irrespective of policy…..No amount of flexibility no degree of military superiority at levels less than an all-out war, can change the fundamental attribute of the nuclear age….Not only can each side destroy the other if it chooses to, but that outcome can grow out of conflict even if no one wants it to."[23]

Even after the end of the Cold War and the fall of the Soviet Union, there emerged a general perception among international relations scholars that the possession of nuclear weapons by both superpowers had induced restraint and greatly prevented the escalation of superpower conflicts during the Cold War years. This kind of bipolar "stability" stemmed largely from the superpower realization of the extreme and quick devastation brought about by nuclear weapons and the annihilating prospect of "mutual kill."[24] In other words, there seemed to be a near consensus on the fact that "the very existence of nuclear stockpiles has created and enforced a considerable caution in the relations among nuclear-weapon states, so that where the very interests

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[21] David Karl, "Proliferation Pessimism and Emerging Nuclear Powers," *International Security* 21 (Winter 1996/1997) : 90.

[22] Kenneth Waltz, "Nuclear Myths and Political Realities," *American Political Science Review* 84 (September 1990) : 731.

[23] Robert Jervis, "Escalation Dominance and Competition in Risk-Taking," in *The Use of Force* ed. Robert J. Art and Kenneth Waltz (Maryland: Maryland UP, 1998) , 408.

[24] Robert Jervis, "The Utility of Nuclear Deterrence," in *International Politics: Enduring Concepts and Contemporary Issues* ed. Robert J. Art and Robert Jervis (New York: Harper Collins, 1992) , 204.

of those states are clear and their political and military engagement manifest, as with the Soviet Union and the United States in Eastern and Western Europe respectively, there is an intrinsic inhibition on adventure."[25]

Another strand of the "Cold War nuclear debate" focuses more on 'war-fighting' as opposed to 'deterrence'. With the development of small-yield short-range tactical nuclear weapons, some deterrence theorists argued that nuclear weapons could be used in this limited form. Robert Oppenheimer stressed the importance of changing nuclear strategy from that of "mass destruction" to one in which tactical weapons would be a possibility.[26] In his view, that would mean bringing "battle back to the battlefield."[27]. The possibility of nuclear war, which loomed large during the Cold War, led some theorists to even argue that the superpowers must prepare themselves for "nuclear-war fighting" rather than only limit themselves to nuclear deterrence. Colin Gray argues that "coming to terms with the enduring facts of the nuclear age should mean more than focusing near-exclusively upon the deterrence of war; it should also mean thinking about it, and planning carefully for the conduct of nuclear war."[28] However, both strands of the "Cold War nuclear debate" focused mainly on "systemic" dynamics within the bipolar conflict and viewed nuclear

[25] McGeorge Bundy, "The Unimpressive Record of Atomic Diplomacy," in *International Politics: Enduring Concepts and Contemporary Issues* ed. Robert J. Art and Robert Jervis (New York: Harper Collins, 1992) , 211.

[26] Lawrence Freedman, "The First Two Generations of Nuclear Strategists," in *Makers of Modern Strategy*, ed. Peter Paret (Princeton: Princeton UP, 1986) , 746.

[27] Ibid.

[28] Colin Gray, "War Fighting for Deterrence," in *The Use of Force* ed. Robert J . Art and Kenneth Waltz (Maryland: Maryland UP, 1998) , 364.

decision-making as a function of national security concerns derived from strict "neorealist" calculations such as deterrence and war-fighting.

The American Non-Proliferation Consensus:

From the point of view of the United States in the post-Cold War period, the main problem lies in the worldwide proliferation of nuclear weapons. In fact, since 1990, there seems to be a strong consensus between the policy statements of the U.S. government and most academic analysts on the importance of nuclear non-proliferation. The Clinton Administration concluded that "the spread of weapons of mass destruction posed the most direct threat to U.S. post-Cold War security interests."[29] U.S Defense Secretary, William Perry, warned that the danger of a 'rogue nation' acquiring nuclear arms was "one of the most serious threats facing the world today."[30] Also, there has been a general perception among many academics that "the major military threat facing the United States in the post-Soviet world is not a particular country but a trend: nuclear proliferation."[31] George Perkovich has warned that the primary threat of nuclear war is "no longer from conflict in Central Europe but from conflict in Asia – the Middle East, the Persian Gulf, the Korean peninsula, and the South Asian subcontinent."[32]

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[29] Karl, "Proliferation Pessimism," 87.

[30] Ibid., 88.

[31] Michael Mandelbaum, "Lessons of the Next Nuclear War," in *Foreign Affairs: Agenda 1996* (New York: Council on Foreign Relations, 1996) , 205.

[32] George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy* No.91 (Summer 1993): 85

The United States seeks to establish total disarmament of nuclear weapons and to prevent "rogue" states in particular from becoming nuclear capable. Despite this apparently benign goal, the focus on "horizontal" proliferation as opposed to the "vertical" proliferation of superpower strategic weapons could be seen as unjust and largely "colored by the parochial perceptions of U.S. strategic interests."[33] In addition, if the United States succeeds in its declared ambitions of nuclear non-proliferation, it would be able to more easily police the international seas and intervene in regional conflicts without incurring significant military and political costs. As such, the United States, while continuing to maintain its own nuclear capabilities, continues to pursue its declared goal of worldwide non-proliferation with almost total disregard for the security concerns of many actors in Third World regional systems.

The Third World Perspective:

The Third World national security literature has criticized the American Perspective on nuclear weapons and has sought to remedy the deficiencies of the "Cold War nuclear debate" by focusing on important Third World security concerns that are/were not addressed by the previously mentioned perspectives. More specifically, it sought to account for the more specific concerns and issues that are characteristic of nuclear proliferation in the Third World. Those issues and concerns might set the Third World experience apart, in many significant ways, from the bipolar one. However, The "Third World perspective" also looks at nuclear politics

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[33] Chellaney, "South Asia's Passage," 47.

through the realist prism discussing traditional strategic and geopolitical issues of 'high politics' and does not attempt to open further the "black-box" of nuclear decision-making.

Many authors arguing from the "Third World perspective" suggest that the Cold War peace was facilitated by the unique strategic and geopolitical character of the Cold War. David Karl argues that "the territorial separation of the superpowers…..the status-quo orientation of their leaderships, coupled with the simplicity of the bipolar rivalry, made for a uniquely benign security environment with redundant sources of stability."[34] He contends that in the case of the Third World, conflict has usually been among traditional enemies in close proximity, and at the same time conflict is endemic and quickly comes to engage critical interests.[35] As such, conflict in the Third World is seen as having a higher potential to escalate and therefore the threat of nuclear exchange is increased. Another important difference that is often attributed solely to the Third World, is the lack of congruence between regional states' perception of their own legitimate political role in a region and the role they attribute to other regional powers.[36] This is exemplified in the case of India and its desire to become the regional hegemon and Pakistan's refusal to accord it that regional role and its attempt to thwart its regional aspirations. Also, the hegemonic position that Israel accords itself is rejected by its larger neighbors like Egypt, Iraq,

[34] Karl, "Proliferation Pessimism," 92.

[35] Ibid.

[36] Mohammed Ayoob, "Unravelling the Concept: 'National Security' in the Third World," in *The Many Faces of National Security in the Arab World* ed. Bahgat Korany, et al. (New York: St' Martin's Press, 1993) , 43.

Iran and Syria who feel that they are entitled to the position of regional hegemon. According to Mohammed Ayoob, this problem did not exist in Europe during the last five decades, especially in Western Europe vis-à-vis West Germany, due to the direct strategic presence of the superpowers in Europe and the latter's near-total integration into the two major global alliance networks.[37]

The motives of the United States in pursuing global non-proliferation have sparked tremendous criticism on the part of many Third World scholars. Some have pointed out that US policy makes an implicit but rather ethnocentric proposition to the effect that "only the states of the North can act in a responsible manner."[38] Brahma Chellaney contends that the United States continues to pursue its own self-interest and seeks to prevent regional hegemons from acquiring nuclear weapons so that it would be able to expand its influence in the Third World unchallenged.[39] In addition, Chellaney argues that the United States fails to understand the dynamics of nuclearization and incentives for military buildups in South Asia.[40] Furthermore, some have mentioned that India's nuclear program is partly aimed at staving off "American hegemonism" in addition of course to deterring Chinese and Pakistani threats to its national security.[41] Moreover, Jaswant Singh, the Senior Adviser on

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[37] Ibid., 43

[38] Jasjit Singh, "The Bomb or Peace," *UNESCO Courier* 46 (October 1993): 35+ Academic Full-Text Internet Service – Ebsco Host http:// www.ebscohost.com

[39] Chellaney, "South Asia's Passage," 47.

[40] Ibid., 71.

[41] John Cunningham, "Third World Missile Proliferation Poses New Threats," *The Journal of Social, Political & Economic Studies* 19 (Summer 1994): 131.

Defense and Foreign Affairs to Indian Prime Minister Atal Bihari Vajpayee, argues that the superpowers have failed to address the security concerns of India which ultimately forced that country to seek nuclear weapons.[42] He contends that the Comprehensive Test Ban Treaty (CTBT) "was neither comprehensive nor related to disarmament but rather devoted to ratifying the nuclear status quo….[and therefore] India's options had narrowed critically."[43] Also, some have argued that the situation in the Middle East is different from that of South Asia, since Israel's nuclear monopoly creates a more unstable situation in the former as opposed to the more balanced and stable situation in the latter.[44] For many Third World scholars, the policy of the United States aimed at mainly curbing so-called Middle Eastern "rogue" states from becoming nuclear capable might have in fact exacerbated the instability of the Middle East through this dynamic of selective proliferation. As such, many have pointed to the biases inherent in US nonproliferation policies and the inability of the United States to understand regional dynamics and address Third World security concerns.

Despite the innovative style of the "Third World perspective" and its many useful insights, it has often dealt with nuclear proliferation in the Third World either in a very "general" way that deals with the phenomena in its entirety, and/or on a strict regional or country-by-country basis without an in-depth comparative analysis.

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[42] Singh, "Against Nuclear Apartheid," 41.

[43] Ibid.

[44] Mario E. Carranza, "Rethinking Indo-Pakistani Nuclear Relations," *Asian Survey* 36 (June 1996): 570.

As has been stated above, all of the previously mentioned approaches have tended to obscure decision-making dynamics occurring within nation-states and have neglected the importance of interregional and interstate comparisons. Thus, this research will focus on nuclear decision-making in India and Israel and, in its concluding section, it will attempt to address important interregional and interstate issues. This analysis recognizes the utility of previous approaches to the study of nuclear proliferation but engages in a selective and careful process of reanalyzing and reformulating previous arguments with the purposes of understanding the subtleties of nuclear proliferation and decision-making in both India and Israel: two countries existing in two volatile regions of the world.

The Security Perspective and Decision-Making Theory

Due to the largely "secretive" nature of nuclear decisions and the absence of intricate, detailed information pertaining to nuclear decision-making, one should not be expected to establish a rigid theoretical framework and undertake a rigorous analysis of decision-making as one would be able to perform on other occasions.[45] However, this does not mean that available evidence cannot be isolated and studied within a coherent, well-organized theoretical framework that would enable one to, at least, categorize the many factors that played an important role in nuclear decision-making in India and Israel. Thus, within the limits of available material, a coherent study of nuclear decision-making is possible.

[45] For a more detailed account on the difficulties in studying nuclear decision-making, see the introduction to Avner Cohen's book *Israel and the Bomb* pp.2-3 and also the preface to Itty Abraham's book *The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State* (London: Zed Books, 1998) , pp. 4-5.

The declared goals of the thesis entail that a multidimensional theoretical approach be adopted for a comprehensive analysis to be undertaken. Moreover, such an endeavor requires that multiple levels of analysis be used in order to enhance the "explanatory power" of the research. This mainly stems from the researcher's realization that previous analyses of the reasons for nuclear proliferation have often suffered from a recurrent tendency to provide parsimonious security explanations that tend to oversimplify or to neglect altogether decision-making dynamics.

Despite its obvious deficiencies, the "security model" provides some useful insights to the understanding of the reasons for nuclear proliferation. This model is based on neorealist theory which assumes that "each state is like all other states in being an autonomous political unit….states are made functionally similar by the constraints of structure (neorealists assume that 'anarchy' is a distinct structure that governs the international system), with the principal difference among them defined according to capabilities."[46] Moreover, since "states exist in an anarchical international system, [they] must therefore rely on self-help to protect their sovereignty and national security." [47] Under such a framework, nuclear weapons are seen as important factors which would enhance national security since they could be developed to serve "either as deterrents against overwhelming conventional military threats or as coercive tools to compel changes in the status quo."[48]

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[46] Kenneth N. Waltz, "Realist Thought and Neorealist Theory," *Journal of International Affairs* 44 (Spring/Summer 1990): 36-37.

[47] Sagan, "Why Do States Build Nuclear Weapons ?," 57.

[48] Ibid.

Kenneth Waltz, arguing from a neorealist perspective, emphasizes only the strategic utility and deterrent aspects of nuclear weapons when he says that "with nuclear weapons, countries need to threaten to use only a small amount of force. This is so because once the willingness to use little force is shown, the adversary knows how easily more can be added. This is not true of conventional weapons."[49] In his analysis on the reasons for nuclear proliferation, Bradley Thawer argues that the principal cause of nuclear proliferation is "the desire of states to gain increased security from external attack in an anarchic world."[50] With reference to Israel, Thayer contends that its nuclear program was primarily driven by its need to prevent the occurrence of another Holocaust and its desire to nullify the conventional superiority of its Arab opponents.[51] In the Indian case, he argues that it was primarily motivated by India's desire to "match the capabilities of China."[52] Finally, Thayer goes a step further and maintains that other causes, such as the need to acquire nuclear weapons for prestige, or due to bureaucratic politics or as a result of "technological pull" are complementary explanations that are insufficient to explain why states acquired nuclear weapons.[53] Frank Barnaby discusses Israeli "insecurity" suggesting that the Jews have suffered dreadful persecutions and "given these experiences, the Jews must

[49] Waltz, "Nuclear Myths and Political Realities," 733-734.

[50] Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime," *Security Studies* 4 (Spring 1995): 468.

[51] Ibid., 487.

[52] Ibid.

[53] Ibid., 468.

assume that fascist, or other anti-Semitic totalitarian regimes will yet again find that it suits their ends to persecute them…..Israel feels secure only if it is armed with the most powerful weapons scientists can produce."[54] Going along with the security explanation, Robert Harkavy mentions that Israel's nuclear weapons are intended to discourage the Arabs from the goal of annihilation of Israel, deter other non-Arab states from joining the Arab side, using nuclear technology transfer as a bargaining chip in dealing with other nations and the assurance of ultimate survival for Israel after "conquered" territory is divested in the event of a final political settlement.[55] In short, the security model rests on the assumptions of neorealist theory which argues that states are *rational* actors existing in an anarchical international system and hence must rely on self-help to protect their sovereignty and national security. It also assumes that states are *unitary* actors pursuing policies dictated only by their strategic threat perceptions.[56] In other words, the security model provides a parsimonious explanation to nuclear proliferation which is "conceptually clear…..and fits our intuitive belief that important events in history (like the development of a nuclear weapon) must have equally important causes (like national security)."[57]

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[54] Frank Barnaby, *The Invisible Bomb: The Nuclear Arms Race in the Middle East* (London: I.B. Tauris & Co. Ltd, 1989) , 5 (Prelude).

[55] Robert Harkavy, *Spectre of a Middle Eastern Holocaust: The Strategic and Diplomatic Implications of the Israeli Nuclear Weapons Program* (Colorado: University of Denver Press, 1977) , 57-59.

[56] The most influential text on neorealism remains Kenneth N. Waltz, *Theory of International Politics* (New York : Random House, 1979)

[57] Sagan, "Why Do States Build Nuclear Weapons ?," 63.

This thesis attempts to explain nuclear proliferation in Israel and India in terms of three clusters of possible variables: security, cognitive, and bureaucratic. Accordingly, the security model will be complemented with two other decision-making models: The cognitive approach to decision-making which seeks to examine the worldviews of decision-makers linking them to important normative concerns such as prestige and science, and the bureaucratic politics approach with its emphasis on the role of chief bureaucrats and institutional in-fighting in nuclear politics.

Since nuclear decision-making in those two countries has largely been confined to a few individuals, the cognitive approach will examine the worldviews or "attitudinal prism" of key decision-makers. In this regard, the cognitive approach relaxes the assumption of 'state rationality' inherent in the security approach by illustrating that states do not necessarily "go nuclear" because they are rational, objective, security-maximizing entities, but because decision-makers within the state define threats and "act in accordance with their perception of reality, not in response to reality itself."[58] The concept of attitudinal prism is based on the assumption that "men chose among alternative paths in accordance with their perception of the world in which they must act. The lens through which that setting is filtered may…..be called the *Attitudinal Prism*."[59] Hence, the research will focus on the worldview of the decision-makers and their psychological predisposition. In other words, it will be concerned with "the idiosyncratic qualities of the decision-makers – that is those

[58] Michael Brecher, *The Foreign Policy System of Israel: Setting, Images, Process* (New Haven: Yale University Press, 1972) , 12.

[59] Ibid., 229.

aspects of elite attitudes which are not generated by role occupancy."[60] This is based upon the concept of cognitive consistency, since it assumes an "overall coherent and interconnected set of beliefs about the nature of political life."[61]

Furthermore, Peter Lavoy maintains that "a state is likely to go nuclear when national elites who want the state to develop nuclear weapons, emphasize the country's insecurity or its poor international standing to popularize the 'myth' that nuclear weapons provide military security and political power."[62] Lavoy then rests his argument on three basic assumptions: (1) The beliefs of individuals matter for foreign policy making; (2) policymakers' beliefs about nuclear weapons are particularly important; and (3) talented and well-placed experts can help create, diffuse, and perpetuate nuclear myths.[63] David Cortright and Amitabh Mattoo capture the dynamics of the Indian case when they maintain that:

> "The decisions about India's nuclear program are usually taken in secret by a few individuals. India's vast nuclear establishment continues to function even today without real public accountability. The chairman of India's Atomic Energy Commission, for instance, has the absolute power to 'initiate, formulate, plan and execute India's nuclear program in total secrecy' and is responsible only to the prime minister. Informed observers have referred to India's nuclear decision-making process as 'scientific and political czarism' or as a virtual 'nuclear sub-government'….There is not much emphasis on nuclear policy in the media, in public forums, or in the two houses of Parliament – all of which seem otherwise preoccupied with domestic problems."[64]

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[60] Ibid., 11.

[61] Jerel A. Rosati, "A Cognitive Approach to the Study of Foreign Policy," in *Foreign Policy Analysis: Continuity and Change in its Second Generation* ed. Laura Neack, Jeanne A. K. Hey, and Patrick J. Haney (Englewood Cliffs: Prentice-Hall, 1995) , 56.

[62] Lavoy, "Nuclear Myths," 199.

[63] Ibid.

[64] David Cortright and Amitabh Mattoo, "Indian Public Opinion and Nuclear Weapons Policy," in *India and the Bomb: Public Opinion and Nuclear Options* ed. David Cortright and Amitabh Mattoo (Notre Dame: University of Notre Dame Press, 1996) , 5.

In the case of Israel, Avner Cohen points out that three men set the nuclear project in motion: the nation's political leader, his chief scientist, and his chief executive officer. More specifically, he explains that "Ben Gurion believed that Israeli scientists could provide the ultimate answer to Israel's security problem. Ernest David Bergmann, an organic chemist, tutored Ben Gurion in nuclear matters for many years. Shimon Peres exploited the international opportunity to make the dream into reality. Without these men the Israeli program would likely not have been launched."[65]

Shlomo Aronson and Oded Brosh shed light on some of the domestic debates that took place in Israel concerning nuclear weapons. They point out that some influential decision-makers in Israel favored reliance on conventional weapons. They mention that Yegal Allon, a prominent Israeli politician who is recognized as one of the best military generals in Israel's so-called "War of Independence" (1947-1949), referred a strategy of compellence that "could be achieved by invoking conventional means in a conventional environment….Nuclear weapons meant, in the case of the Middle East, a dangerous status-quo, which the Arabs could use for their own purposes."[66]

Besides their more evident security purposes, nuclear weapons have acquired a certain aura in the international system and have provided those who possess them with a considerable degree of power and prestige. This has resulted in a situation

[65] Cohen, *Israel and the Bomb*, 9.

[66] Shlomo Aronson and Oded Brosh, *The Politics and Strategy of Nuclear Weapons in the Middle East: Opacity, Theory and Reality, 1960-1991, An Israeli Perspective* (New York: State University of New York Press, 1992) , 24.

whereby "only the great powers may legitimately possess nuclear weapons…..and provide mechanisms for the international community to differentiate the status and legitimacy of the various states."[67] In other words, compliance with the "appropriate" nuclear norms, as defined by the superpowers, "reinforces the identity of states and their status as legitimate members of the international community and/or the certain kind of state (responsible,civilized…etc)."[68] For Robert Gilpin, the possession of nuclear weapons largely determines a nation's "rank in the hierarchy of international prestige."[69]

In this regard, another element of nuclear decision-making that was particularly important in the case of India, is the role of normative concerns manifested in the desire for prestige and the importance that science played in India's post-colonial culture. David Cortright and Amitabh Mattoo mention that the Indian nuclear program is not only intended to address national security threats emanating from China and Pakistan but also to reaffirm India's national identity and enhance its prestige as a large country with an ancient civilization that is deserving of a more dominant role in the world community.[70] Moreover, Gaurav Kampani suggests that India's decision to test its nuclear weapons in 1998 and to suddenly declare itself a

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[67] Richard Price and Nina Tannenwald, "Norms and Deterrence: The Nuclear and Chemical Weapons Taboo," in *The Culture of National Security: Norms and Identity in World Politics, ed. Peter Katzenstein* (New York: Columbia University Press, 1996) , 142.

[68] Ibid.

[69] T.V. Paul, "Power, Influence, and Nuclear Weapons: A Reassessment," in *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order* ed. T.V. Paul, Richard J. Harknett, and James J . Wirtz (Michigan: University of Michigan Press, 1998) , 21.

[70] David Cortright and Amitabh Mattoo, "Elite Public Opinion and Nuclear Weapons Policy in India," *Asian Survey* 36 (June 1996): 559.

nuclear weapon state was influenced more by the rise of a prestige-seeking nuclear coalition led by the belligerent Bharatiya Janata Party (BJP) than by its long-standing security concerns. He mentions that the BJP "allied itself with an increasingly vocal section of India's strategic community (known as the 'bomb lobby') that has come to identify nuclear weapons as the ultimate index of state power in the international system."[71]

Hence, it becomes necessary that one would shift the focus from *materialist* concerns involving balance of power politics and examine the role of *normative* and *ideational* concerns. This requires an understanding of the norms that were valued by key decision-makers which eventually helped shape the strategic culture of their respective nations. This approach departs in significant ways from neorealist and neoliberal approaches to international relations. Materialists in security studies do not ignore cultural factors altogether, but they treat them as "epiphenomenal" or secondary, as a "superstructure determined in the last instance by the material base."[72] As Peter Katzenstein explains:

> "Neorealist and neoliberal theories adhere to relatively sparse views of the international system. Neorealism assumes that the international system has virtually no normative content. The international system constrains national security policies directly without affecting conceptions of state interest. Neoliberalism takes as given actor identities and views ideas and beliefs as intervening variables between assumed interests and behavioral outcomes. In this view states operate in environments that create constraints and opportunities."[73]

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[71] Guarav Kampani, "From Existential to Minimal Deterrence: Explaining India's Decision to Test," *The Non-Proliferation Review* 6 (Fall 1998): 13.

[72] Ronald L. Jepperson, Alexander Wendt, and Peter J. Katzenstein, "Norms, Identity, and Culture in National Security," in *The Culture of National Security: Norms and Identity in World Politics* ed. Peter Katzenstein (New York: Columbia University Press, 1996) , 38.

[73] Peter Katzenstein, "Introduction: Alternative Perspectives on National Security," in *The Culture of National Security: Norms and Identity in World Politics* ed. Peter Katzenstein (New York: Columbia University Press, 1996) , 25.

In this regard, norms could be understood as "collective expectations about proper behavior for a given identity."[74] In the case of India, "prominence norms" have become increasingly important for many decision-makers. In other words, "norms held by states widely viewed as successful and desirable" became prominent and diffused among India's strategic elite.[75] In India's post-colonial period, there was a perception that the success of the West was largely due to its scientific and technological development. In other words, "the idea of science, epitome of and metaphor for the modern, was a recurrent theme in anti-colonial nationalist thought."[76] In his presidential address to the Indian Science Congress in 1947, Jawaharlal Nehru spoke of the relationship between science and development, and of atomic energy to war, maintaining that "atomic energy – that has suddenly come about through scientific research – may be used for war and may be used for peace."[77] Even Hindu revivalist groups such as the Arya Samaj, re-read Hindu scriptures, in an attempt to extract information that could be represented as continuous with modern scientific knowledge.[78] Thus, it is clear that "scientific norms" played an important role in India during its post-independence period and contributed greatly to nuclear

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[74] Jepperson, Wendt, and Katzenstein, *Norms, Identity, and Culture in National Security*, 54.

[75] Martha Finnemore and Kathryn Sikkink, "International Norm Dynamics and Political Change," *International Organization* 4 (Autumn 1998): 906.

[76] Abraham, *The Making of the Indian Atomic Bomb,* 28.

[77] Ibid., 46-47.

[78] Ibid., 26-27.

decision-making. Moreover, atomic energy was widely perceived as the ultimate manifestation of India's technological development and contributing to its national standing and prestige. It is noted that after China exploded its first nuclear device in October 1964, some Indians mentioned that "India has to have the bomb if it is to hold sway in the world…..Not to make it would be to let the whole world treat us like some third-rate country."[79]

In the case of Israel, normative concerns seemed to also play a role especially in the way in which Ben Gurion linked science to the Zionist state. For Ben Gurion, scientific achievements were the hallmark of the Zionist state, "a secular manifestation of the idea of Israel as the 'chosen people'."[80] However, unlike India, nuclear weapons and science in Israel were not seen as a manifestation of much-needed prestige after a long colonial history. Ben Gurion is quoted to have said that "no other people is superior to us in its intellectual prowess."[81] Robert Harkavy tends to downplay "non-rational" factors related to national prestige that may have played a part in Israel's decision to go nuclear. He mentions that the "traditional and long-celebrated Jewish achievements in science and technology would not suggest a residue of 'inferiority' feelings in the Israelis which would require the nation to prove its intellectual or technological capability, which has been well demonstrated, in any

[79] Lavoy, "Nuclear Myths," 198.

[80] Cohen, *Israel and the Bomb*, 10.

[81] Ibid.

case..…in the indigenous development of a wide range of sophisticated conventional weapons."[82] Alan Dowty explains further:

> "In most if not at all 'threshold' countries, the non-military motives of status, prestige, and equality have exerted considerable influence in favor of a weapons program. (In a case like India they may have been decisive.) It is unlikely, however, that these considerations will be of much importance in Israeli nuclear policy. Issues of security are so predominant in Israeli thinking that the luxury of status-climbing in international society is hardly relevant."[83]

The previous account opens up the "black box" of decision-making by focusing on the decision-makers and their worldviews and normative concerns. However, such an approach does not take into consideration that "the acquisition of nuclear weapons is [also] likely to serve the parochial bureaucratic or political interests of at least some individual actors within the state."[84] In this light, the bureaucratic approach would suggest that bureaucratic actors are not "passive recipients of top-down political decisions; instead they create the conditions that favor weapons acquisition by encouraging extreme perceptions of foreign threats, promoting supportive politicians, and…..[work on the] formation of domestic coalitions within the scientific-military-industrial complex."[85] This necessitates that one opens up the "black box" further in order to account for bureaucratic politics and the role that it played in nuclear politics. In fact, by examining the role and interests of bureaucratic actors operating within the state, one would have relaxed the second

[82] Harkavy, *Spectre of a Middle Eastern Holocaust*, 83.

[83] Alan Dowty, "Nuclear Proliferation: The Israeli Case," *International Studies Quarterly* 22 (March 1978): 95.

[84] Sagan, "Why Do States Build Nuclear Weapons ?," 63.

[85] Ibid., 64.

assumption of the security model which argues that states are unitary actors pursuing policies that are dictated only by their strategic threat perceptions.

In this regard, the classical works of Graham Allison and Morton Halperin provide a useful framework for analyzing bureaucratic politics.[86] Allison maintains that the Bureaucratic Politics Model "sees no unitary actor but many actors as players – players who focus not on a single strategic issue but on many diverse intra-national problems as well; players who act in no consistent set of strategic objectives but rather according to various conceptions of national, organizational, and personal goals; players who make government decisions not by a single rational choice but by the pulling and hauling that is politics."[87] Moreover, a bureaucracy is more likely to support a government policy that will promote the bureaucracy's organizational essence and oppose those policies that would weaken or take away those organizational functions. Morton Halperin contends that "stands on issues are affected by the desire to maintain influence. This could lead to support for certain policies which will require greater reliance on the organization. Participants prefer courses of action which will require information from them or which they will be asked to implement. They recognize that they will gain influence if such decisions are made."[88]

However, one must understand that bureaucracies are not single monolithic structures but often there are disagreements and struggles within a single bureaucracy.

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[86] Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little Brown, 1971) ; Morton Halperin, *Bureaucratic Politics and Foreign Policy* (Washington D.C: The Brookings Institution, 1974).

[87] Allison, *Essence of Decision*, 144.

[88] Halperin, *Bureaucratic Politics and Foreign Policy*, 27.

In other words, "in some organizations the same view of the organization's essence is shared by all those in the same promotion and career structure. In other cases there will be difference of view. The differences may concern the particulars of a broad agreed essence or may reflect struggles for dominance."[89]

Within the context of nuclear proliferation, bureaucratic theory argues that the decision to proliferate is made by key individuals within the scientific or defense bureaucracies of states. Those individuals advocate proliferation in order to enhance or increase the power of their bureaucracies and therefore push the state towards nuclear proliferation. In the case of India, the pivotal role played by Homi Bhabha – the Chief of the Atomic Energy Commission – and his central role in the genesis and growth of India's civil and military nuclear program, from the initial acquisition of research reactors, to the initial deployment of a Canadian-built reactor, the development of plutonium reprocessing facilities in Trombay, and finally his 1965 attempt to pressure Prime Minister Lal Bahadur Shastri into developing nuclear weapons, bears witness to the important role of key bureaucrats.[90] In the case of Israel, the role played by Ernest David Bergmann – the Chief of Israel's Atomic Energy Commission, scientific director of the Weizmann Institute and, since 1949, the chairman of the scientific department of the Haganah (and later the Ministry of Defense) is also a case in point. In Israel, many internal conflicts that are of a bureaucratic and partisan nature took place. For instance, the conflict that took place in the spring and summer of 1951 between David Bergmann and Chaim Weizmann

[89] Ibid., 28.

[90] Thayer, "The Causes of Nuclear Proliferation," 477.

(Israel's first president and the founder of the Weizmann Institute of Science) over the control and funding of the Weizmann Institute, is a case in point.[91] Thus, it becomes clear that bureaucratic politics had a significant impact on nuclear decision-making in both India and Israel.

Frank Barnaby contends that the Israeli decision to build nuclear weapons was largely derived from its need to deter the Arabs from threatening Israel's existence, yet he mentions that such an explanation is not adequate to explain the size and quality of Israel's nuclear arsenal.[92] Moreover, he mentions that the Israeli goal of deterrence could be achieved by a much smaller nuclear arsenal, and hence the creation of a large and sophisticated nuclear arsenal could not be solely attributed to the "deterrence" explanation. He suggests that the most likely explanation for Israel's large and sophisticated nuclear weapons arsenal is the "technological momentum of the nuclear-weapon program [which] has taken over and become unstoppable."[93] Barnaby sheds light on some of the domestic dynamics taking place inside Israel by referring to Israel's scientists and technologists and their need "to design and produce increasingly sophisticated nuclear weapons just to convince themselves that they can do so for the sheer satisfaction of it."[94] This further illustrates the importance of the "scientific bureaucracy" in Israel and its impact on nuclear developments in that country.

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[91] Cohen, *Israel and the Bomb*, 27.

[92] Barnaby, *The Invisible Bomb*, 54.

[93] Ibid.

[94] Ibid.

In summary, the above introduction was an attempt to rationalize nuclear politics within the context of the declared research objectives and the conceptual and methodological frameworks employed. The importance of multilevel explanations, as opposed to monocausal ones, are key towards understanding the reasons for nuclear proliferation. Moreover, the presence of empirically significant but undertheorized literature on Israel and India necessitates that one attempts to establish the causal link between both neorealist and decision-making theories, on the one hand, and the subtleties of nuclear proliferation on the other. Such are the main goals of the current work and will be addressed thoroughly in the coming chapters.

The coming two chapters will provide a more in-depth outlook on nuclear decision-making in Israel and India – an outlook which is much more specific and detailed. Each country will be examined in a separate chapter. The chapters will address the reasons for each country's decision to acquire nuclear weapons and the dynamics of its nuclear decision-making during the formative period of its nuclear program in which the most important nuclear decisions were undertaken. In the Israeli case, this means focusing on the period between 1948 and 1970 and in the Indian one, it entails examining the period between 1947 and 1974. In order to capture the complexity of nuclear politics, the research will attempt to apply a multilevel analysis. First, the thesis will attempt to apply the security argument on nuclear proliferation as it relates to each country's threat perceptions within the context of the regional and international systems. Second, for each case study, the thesis will use insights from decision-making theory to explain those features that have not been adequately explained by the security perspective.

Moreover, the final conclusive chapter will be a comparative evaluation for the rationale behind the Indian and Israeli nuclear programs, which should be both empirically and theoretically significant. In addition, it should shed some light on more general Third World nuclear issues and try to examine the Indian and Israeli cases of nuclear proliferation within the context of other third world cases of nuclear proliferation or non-proliferation.

CHAPTER 2

ISRAEL – A RELENTLESS QUEST FOR SECURITY ?

This chapter will attempt to provide an in-depth analysis of Israel's decision to acquire, develop, and deploy nuclear weapons. First, this chapter will discuss Israeli threat perceptions within the framework of the security model. Second, it will attempt to isolate those factors that have not been accounted for by the security model. The decision-making section will mainly focus on the period between 1948 and 1970 – the formative period of Israel's nuclear decision-making. It is during that period that most of Israel's major nuclear decisions were undertaken and its nuclear doctrine fully materialized. However, in order to examine change in Israel's nuclear policy and patterns of decision-making, references will be made to important decisions and events in the post-1970 period that had a significant impact on that country's nuclear posture. In this regard, the worldviews or attitudinal prisms of key decision-makers and their influence on nuclear decision-making is immensely important. Of particular importance, are the worldviews of the nuclear advocates and the pioneers of Israel's nuclear program such as Ben-Gurion, Shimon Perez, Ernest David Bergmann and Moshe Dayan. Furthermore, the research will examine the role that science played, as an important normative construct and an integral part of the worldview of key nuclear decision-makers in Israel. Also, bureaucratic politics played an important role in Israeli nuclear decision-making. This was manifested in struggles for power and pulling and hauling between the heads and prominent members of important bureaucracies such as the Israeli Atomic Energy Commission (IAEC), the Ministry of

Defence, scientists and executive officials in Israel. This struggle also reflected personal and partisan interests.

The Security Perspective

Much of the discussion on Israel's nuclear program has focused mainly on security threats facing Israel and how those threats lead to that country's decision to acquire nuclear weapons. Alan Dowty summarizes the dominant scholarly approach to understanding Israel's nuclear decision: "Let us suppose for a moment that we knew nothing about the actual state of Israeli nuclear weapons program. Looking simply at Israel's situation and the options available, what kind of program would we predict as the most likely course of action ? In other words, what seems to be the *logical* perspective on nuclear weapons for a state with Israel's security problems, capabilities and international standing."[95] Hence, the security perspective derives itself from an intellectual process that involves looking at the security threats facing Israel and directly linking them to Israel's decision to acquire nuclear weapons. This section will describe the structural characteristics of the Middle East regional system and move on to discuss the possible security threats that supposedly have lead Israel to acquire nuclear weapons.

[95] Alan Dowty, "Going Public With the Bomb," in *Security or Armageddon: Israel's Nuclear Strategy* ed. Louis Rene Beres (Lexington: D.C. Heath and Company, 1986) , 15.

The Middle East Regional System

In order for one to understand the security threats facing Israel, one first has to define the system within which Israel operates and to which the development of nuclear weapons was a response. The Middle East will be dealt with in this section as a "regional system" or what Michael Brecher defines as a "subordinate state system".[96] First, the Middle East is multipolar in terms of the number of actors.[97] The central actors in terms of foreign and strategic policy issues are: Egypt, Iran, Iraq, Israel, Syria, and Saudi Arabia. Those actors give the region its multipolar character. Second, power is distributed asymmetrically among the central actors. [98] Third, interstate conflict and competition is persistent. [99] Fourth, states in the region are engaged in a series of arms races which are fueled and complicated by the large number of regional conflicts and the financial reserves of the oil states. [100] Fifth, the Middle East is characterized by the prominence of military regimes, widespread political instability and the lack of established procedures for the change of

[96] Michael Brecher, *The Foreign Policy System of Israel: Setting, Images and Processes* (New Haven: Yale University Press, 1972) , 47. In his analysis, Brecher maintains that a "subordinate state system" requires six conditions for its existence: (1) delimited scope with stress on geographic region; (2) at least three actors ; (3) Objective recognition by most other actors as constituting a distinctive community, region, or segment of the global system; (4) self-identification as such; (5) units of power relatively inferior to units within the dominant system, using a sliding scale of power in both; and (6) more intensive and influential penetration of the subordinate system by the dominant system than the reverse.

[97] Yair Evron, *Israel's Nuclear Dilemma* (London: Routledge, 1994) , 82.

[98] Ibid.

[99] Ibid., 83.

[100] Ibid.

government.[101] Sixth, the Middle East is characterized by a high level of superpower involvement due to the fact that the superpowers have always had clear economic and strategic interests in the region and obligations to regional allies.[102] Seventh, the Middle East suffers from a high level of interstate violence. Since World War II, there have been several major military confrontations most important of which are: six Arab-Israeli wars; the Iran-Iraq war, the Iraqi invasion of Kuwait and the 1991 Gulf War.[103] Moreover, the region has been characterized by 'nonwar violence' and low-intensity conflict between Israel and Arab states and among Arab states themselves. Eighth, the region has been exposed to several moderating influences on interstate violence such as the Arab-Israeli peace process, balances of deterrence between regional states, superpower influence, and the recognition of the high costs involved in military confrontations by some political elites.[104] Nevertheless, one must put those "moderating influences" in their proper perspective. The modification of the international system following the demise of the Soviet Union (the Arab patron), the ascendancy of the United States, and the changes in the Middle East in the wake of the 1991 Gulf War have been generally considered beneficial to Israel's security and a prelude to the so-called "peace process". However, it is still uncertain whether those changes will inevitably lead to a comprehensive regional détente. As Efraim Enbar

[101] Ibid.

[102] Ibid., 85.

[103] Ibid., 86

[104] Ibid.

maintains: "the myopic preoccupation with the details of the negotiations between Arabs and Israelis blurs the Middle Eastern picture. It is all too easily forgotten that the Middle East, in contrast to other regions where the New World Order has drastically improved the security situation, remains a "zone of turmoil", characterized by continuos security challenges…..and it remains a region where the use of force is widely considered a policy option and even enjoys popular support".[105]

The Strategic Utility of Israel's Nuclear Weapons

Nuclear analysts have attributed multiple security reasons for Israel's possession of nuclear weapons. However, one must note that this type of analysis is very speculative and arbitrary. In this regard, Robert Harkavy mentioned that: "At best, one can speculate, moving back and forth in a shadowy area of definable doctrines, various circumstances and possible uses: the possibilities can only be surmised, the analysis only indicative".[106] This section will mainly focus on frequently attributed reasons for Israel's possession of nuclear weapons within the previously mentioned security model.

Perhaps the most dominant explanation for Israel's possession of nuclear weapons is the potential for its use as a "last resort" counter-cities threat against nuclear and massive conventional attacks, with the implied threat of total retaliation

[105] Efraim Enbar, "Israel's Security in a New International Environment," *Israel Affairs* 2 (Autumn 1995): 32.

[106] Harkavy, *Spectre of a Middle Eastern Holocaust* , 57.

for vengeance' sake should deterrence fail.[107] Alan Dowty maintains that the "minimal aim of any Israeli nuclear weapons program would be to offset an Arab nuclear force should such a force be developed".[108] That has generally been regarded as an unlikely occurrence due to the fact that, in general, Arab attempts to acquire nuclear weapons have made little progress.[109] However, the Iraqi attempt to acquire nuclear weapons seemed to have provided a clear threat to Israel's interests, which lead to the bombing of the Osiraq reactor in Iraq in 1981. Israeli strategists seem to put great emphasis on the danger of Arab/Muslim nuclear weapons programs and the necessity of using *all means* to halt them, maybe even including nuclear weapons. This theme was repeated in a public statement by the Israeli government after the 1981 bombing of the Osiraq reactor: "under no circumstances would we allow the enemy to develop weapons of mass destruction against our nation; we will defend Israel's citizens, in time, with *all* the means at our disposal."[110] Also, in April 1992, in the aftermath of the Gulf War, IDF-Deputy Chief of Staff, Major General Amnon Shahak, said: "I think Israel should invest all its energy and efforts in preventing the

[107] Ibid., 59.

[108] Dowty, "Nuclear Proliferation: The Israeli Case," 87-88.

[109] Ibid., 88.

[110] Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East* (Massachusetts: MIT Press, 1997) , 109.

development of a nuclear capability in an Arab state. In my opinion, *all means* are legitimate to obtain this objective."[111]

It seems, however, that the threat of a large-scale conventional attack on Israel is a more realistic possibility. Harkavy, writing during the Cold War, envisioned a scenario where Israel is confronted by war on several fronts at the same time and faces the specter of imminent annihilation. In other words, a combined attack by several Arab/Muslim states on Israel, and a simultaneous Arab uprising in the occupied territories leads to the breakdown of Israeli defenses after the IDF has been outnumbered and its organizational efficiency undermined "like many other cases in history, most recently in Vietnam, when the Israeli army begins to lose heart and crack, it goes into pieces with surprising suddenness".[112]

In this regard, the Israeli military establishment and its supporters are mainly influenced by the relative conventional military strength of Israel's adversaries, which affects their thinking about the need for nuclear weapons. In fact, conventional weapons that have been purchased by the Arab states are much more sophisticated today than they were in previous years and given its "critical vulnerability in terms of geography and demography, Israel maintains that it cannot afford an Arab conventional superiority, even a temporary one, on the battlefield, as there would be far-reaching consequences, such as heavy losses in human life and a reduction in the size of the state. This is so even with the peace agreements concluded between Israel

[111] Ibid.

[112] Dowty, "Nuclear Proliferation: The Israeli Case," 60.

and Egypt and, more recently, between Israel and the PLO and Jordan"[113]. In other words, the threat of an even temporary Arab superiority on the battlefield is considered "axiomatic to the destruction of the state and the people".[114]

The Israelis suggest that when Israel started to think of developing its nuclear option, there was little evidence of Arab willingness to tolerate any coexistence with the Jewish state. Amidst periodic references to "pushing Israel into the sea", Israelis seemed to conclude that its Arab neighbors intended to duplicate the ouster of the Crusaders seven centuries ago.[115] Frank Barnaby, although writing in 1989 – before the 1991 Gulf War and the subsequent dismantling of the Iraqi military machine – nevertheless gives a relevant illustrative account of the military balance between the Arab armies and Israel.[116] He maintains that for purposes of comparison, Syria, Iraq and Jordan alone (without Egypt) possess wartime armies totaling some 1.8 million soldiers, 10,000 main battle tanks, and 1,342 fighter aircraft. Facing them is Israel's wartime strength of about 444,000 soldiers, 4,000 tanks, and 662 fighter aircraft.[117] Barnaby contends that these Arab armies are roughly the same size as NATO's total active ground forces plus its ground force reserves deployed in Central Europe (i.e,

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[113] Nashif, *Nuclear Weapons in Israel* , 63.

[114] Dowty, "Nuclear Proliferation: The Israeli Case," 88.

[115] George H. Quester, "Nuclear Weapons and Israel," *Middle East Journal* 37 (Autumn 1983): 548.

[116] Barnaby, *The Invisible Bomb* , 47.

[117] Ibid.

the NATO forces deployed in West Germany, Belgium, the Netherlands, and Luxembourg), its tanks are about the same as the total number of NATO's main battle tanks, and the number of Arab aircraft is four times as many as NATO has in central Europe.[118]

Israel's quantitative military inferiority has so far been offset by its technological, operational and tactical superiority. However, from the Israeli perspective, there seems to be widespread pessimism with regards to both the maintenance of Israel's qualitative edge over the Arabs over a long period of time, and also with regards to the durability of peace arrangements in the Middle East.

Concerning the former issue, Taysir Nashif suggests that "most of Israel's military and political leaders believed that with the passage of time, the quantitative superiority that the Arabs have in economic and human resources would become greater, and that the Arabs would narrow the technological, scientific and educational gap existing between them and the Israelis."[119] Those apprehensions were illustrated in the swift social, political, economic and military modernization of the Arab countries which occurred in the post-independence years. For example, the 1952 Egyptian revolution and Jamal 'Abd al-Nasir's coming to power in Egypt in 1954, and the fiasco of the tripartite military attack shared by France, Great Britain and

[118] Ibid.

[119] Nashif, *Nuclear Weapons in Israel* , 53.

Israel on Egypt in 1956, lead to diminishing Western influence in the Arab lands and the strengthening of the Egyptian regime which was vehemently anti-Israeli.[120]

The decisive steps in Israel's nuclear history were taken in mid- and late-1960's, with the 1967 June War serving as the catalyst.[121] Despite Israel's massive victory over the Arab armies during that war, Israelis still remember "the sense of abandonment and solitude that characterized their situation during the three weeks immediately preceding the outbreak of the war".[122] Benjamin Frankel maintains that "between 15 May and 6 June 1967 Egypt marched its army into Sinai and blockaded the Straits of Tiran; Syria concentrated its forces on the Golan Heights, overlooking Israel's northern sector; and Jordan allowed Iraqi and Egyptian forces to enter its territory and move close to the Israeli border. The Arab leaders accompanied the encirclement of Israel with dire and explicit predictions concerning Israel's fate. There were expressions of concern for Israel in Western capitals but little concrete action was offered to assist it".[123] Moreover, the War of Attrition in 1968-70, the surprise of the 1973 October War and the improved performance of the Arab armies in it, and the growing economic and political influence of the Arab states in the wake

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[120] Ibid.

[121] Benjamin Frankel, "The Brooding Shadow: Systemic Incentives and Nuclear Weapons Proliferation" *Security Studies* 2 (Spring/Summer 1993) : 52.

[122] Ibid.

[123] Ibid.

of the oil embargo, indicated that the political, economic, and military trends favored the Arab states.[124]

Furthermore, the vulnerability of Israel was made very clear in the October 1973 War since "the war challenged a basic assumption concerning Israeli conventional superiority concerning the extent of self-reliance on Israeli conventional military strength, and about Arab military performance".[125] Some interpret the increased number of Israelis killed in military action as a proof of the narrowing of this gap. For example, in the 1956 Sinai war, fewer than 300 Israelis were killed; in the June 1967 war some 600 Israelis were killed, whereas in the 1973 war over 3,500 were killed.[126] The late Nahum Goldman, who served as President of the World Zionist Organization, held the view that this existing technological gap would narrow in favor of the Arabs explaining that "the Arabs with a past brilliant civilization will certainly acquire Western technological know-how in the military field as well as peaceful endeavors."[127]

Regarding the weakness of security arrangements in the Middle East and hence Israel's pervasive feelings of "insecurity", the views of Shalheveth Freier, a senior scientist and former Director of Israel's Atomic Energy Commission are quite illuminating. He maintains that regional arrangements in the region are unreliable: "In

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[124] Nashif, *Nuclear Weapons in Israel* , 52.

[125] Ibid., 63.

[126] Ibid., 106.

[127] Ibid.

the past 26 years, Egypt and Syria joined together in the United Arab Republic, which soon fell apart; a union of Syria and Iraq came to nothing and the two countries are now enemies; a similar plan for Syria and Libya miscarried; and many agreements between the PLO and the Lebanese government have broken down. The Saudi Arabian regime and the Sheikhdoms in the Gulf are unstable. For these reasons, Israel is reluctant to rely on formal agreements, at their face value with their hostile neighbors….Israel has a very small margin of error….Israelis feel permanently under siege….As regards wealth, the gross domestic product of Israel ($22,160 million in 1986) is a mere quarter of that of Saudi Arabia alone ($82,440 million in 1986)."[128]

Moreover, Israel is also perceived as being able to make tactical use of nuclear weapons, in addition to its counter-city massive retaliation utility. Harkavy suggests that in any future Middle East conflict, Israel might unleash a tactical nuclear attack against Arab troop concentrations which were threatening the annihilation of the Israeli army.[129]

Furthermore, Israel's possession of nuclear weapons could also be perceived as a psychological weapon intended to discourage the Arabs from the goal of annihilation of Israel. Robert Harkavy writes: "Logically, to the extent that Israeli nuclear weapons make it very unlikely that the Arabs could destroy Israel without themselves suffering enormous, probably, unacceptable, damage, nuclear weapons are

[128] Ibid., 50-51.

[129] Harkavy, *Spectre of a Middle Eastern Holocaust* , 66

a road to 'final peace' in the Middle East."[130] Hence, for Israel, nuclear weapons are seen as a means by which they could impose upon the Arabs a political settlement to the Arab-Israeli struggle under the shadow of their nuclear monopoly by signaling to the Arabs that Israel is there to stay. Israeli nuclear weapons are intended to bring about an Arab realization "that neither the present balance of forces nor any foreseeable future power alignment will offer a viable military option to destroy Israel…..Nuclear weapons [will] induce moderation and a revolution of declining expectations in the 'Arab street', as the end-of-the-world character of atomic war is understood by both mass and elite elements within the Arab World."[131] Fuad Jabber, the Arab-American scholar, noted that "the psychological 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 annihilating Israel from the world's map."[132]

In fact, Israeli nuclear weapons seemed to have played an important role, not only in deterring Arabs from the final goal of annihilating Israel, but also in limiting Arab ambitions during negotiations and in wartime. William B. Quandt, in an interview with Schlomo Aronson, mentions that during the 1973 October War, Sadat indeed recognized the dangers inherent in an overall offensive, even in a limited one, beyond the Sinai passes because of the anticipated Israeli nuclear response: "The

[130] Ibid., 68.

[131] Steven J. Rosen, "A Stable System of Mutual Nuclear Deterrence in the Arab-Israeli Conflict," *The American Political Science Review* 71(December 1977): 1373.

[132] Quoted in Ibid., 1372.

Israeli nuclear response has dictated his calculations ever since, and was the source of his controversy with Qaddafi."[133] Also, it seems that Israel's nuclear weapons played an important role in Sadat's thinking during the Camp David negotiations. Shlomo Aronson and Oded Broch maintain that "neither President Carter nor President Sadat could pressure Israel to make concessions in regard to the nuclear option. How could they, when, in fact, this nuclear option was one of the main reasons Sadat was ready to negotiate in the first place – not in the sense that he feared a nuclear attack from Israel, but rather in the sense that he was involved now with the United States, Israel's patron, which demanded peace from the Arabs…..he could not afford to ignore this demand…..ignoring this demand was dangerous by itself, but it was even more dangerous because of the record of the leading Israeli 'troika'…..they were likely to be less responsive to American pressure, and…..more conscious of Israel's own nuclear potential due to the 1973 debacle, especially after Israeli-made Jericho missiles were added to Israel's arsenal. Israel's airforce was now more capable of hitting Egyptian targets than before."[134]

Moreover, Avner Cohen suggests that Israel's image as an "invincible nuclear power" may have persuaded Egypt to make peace with Israel and later also helped Israeli-Palestinian reconciliation to take place. He maintains that: "As it has been for years, the nuclear factor in the Middle East is opaque, indirect, and tacit. …..Israeli nuclear weapons were important in encouraging Arab realism….It was instrumental in bringing Egyptian President Anwar Sadat to Jerusalem in 1977 and it may have

[133] Shlomo Aronson and Oded Brosh, *The Politics and Strategy of Nuclear Weapons* , 145.

[134] Ibid., 163.

been even more important in convincing other Arabs, particularly the Palestinians, to recognize that the Arab-Israeli conflict could not be resolved by the sword….David Ben Gurion's nuclear vision has been vindicated."[135]

More interestingly, Israel Shahak, relying on articles published by important Israeli generals and intelligence experts commenting on the pages of the Hebrew press, maintains that the *real* aims of Israeli policies is to establish a hegemony over the entire Middle East by "stabilizing the regimes which do not disturb too much the Israeli progress towards that aim and a possible use of nuclear weapons for this purpose."[136] He maintains that "within the context of possible uses of Israeli nuclear power…..Israel has contingency plans to be applied if the 'Egyptian regime should change' or because 'the Saudi royal family will not reign forever'…..Israel is preparing for war, nuclear if needed be, for the sake of averting domestic change not to its liking, if it occurs in some or any Middle Eastern states."[137] In this regard, he further adds that "at some time after the fall of the Shah it was disclosed that in the last days of his regime the Israeli Army planned to dispatch elite units to Tehran…..except that Begin, in a display of relative moderation, refused to okay the

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[135] Avner Cohen, "Did Nukes Nudge the PLO ?" *Bulletin of the Atomic Scientists*_ 49 (December 1993) http://www.ebscohost.com

[136] Israel Shahak, *Open Secrets: Israeli Nuclear and Foreign Policies* (London: Pluto Press, 1997), 31 (In this analysis, Shahak cites important figures such as Oded Brosh, a distinguished expert in nuclear politics who can be presumed to speak in semi-official capacity, and Shlomo Gazit, a former Military Intelligence commander who often explains in the media the strategic aims of the Israeli security system)

[137] Ibid., 43-44.

venture."[138] Hence, Israel's nuclear weapons capability is seen as a deterrent against radical domestic change in the Arab/Muslim world and also as an asset to regional regimes fearful of an Islamic fundamentalist takeover. Domestic changes within Middle Eastern states seem to fall within Israel's so-called "red lines". Those red lines have a "powerful deterrent effect by virtue of causing uncertainty beyond its borders, precisely because they are not clearly marked or explicitly defined. The purpose of these red lines is to determine what regional developments or other changes occurring beyond Israel's borders can be defined as threats which Israel itself will regard as intolerable to the point of being compelled to use all its military power for the sake of their prevention or eradication."[139]

Another reason that was often attributed to Israel's decision to produce nuclear weapons, is to deter Soviet involvement in the Middle East conflict and any possible Soviet threat that might have endangered the existence of Israel during the Cold War. In other words, the development of nuclear weapons in Israel also sought to face the Soviet challenge to its political and territorial interests and to limit Soviet activities in the Middle East, by "raising the stakes of the game and making Moscow reassess the possible gains and risks. Some of the Soviet activities had a bearing on Israel. Such activities were in the form of Soviet arms supplies to Arab countries, training of Arab armed forces, offering of technical assistance to Arab countries which were in conflict with Israel, and support for the Arab position on the question of Palestine and the

[138] Ibid., 44.

[139] Ibid., 41

return of lands which Israel has occupied since June 1967".[140] This is based upon the concept of "proportionate deterrence" given the unequal interests of the two sides: faced with destruction, Israel might credibly threaten the Soviet Union, while from a Soviet perspective the possible loss of one or two cities to a desperate Israeli blow might indeed cause hesitation.[141]

Despite the plausibility of this strategic assessment, many experts tend to belittle the Soviet threat to Israel's existence during the Cold War and hence refute the notion that the Israeli nuclear program was intended to deter the Soviet Union. Alan Dowty maintains that "it seems unlikely, on balance, however, that Israeli policy makers seriously considered the deterrence of the Soviet Union a plausible aim (Indeed, one encounters the idea more often from non-Israelis more than from Israelis)….In any event, it would be a secondary calculation since the more immediate danger is not direct Soviet intervention, but Soviet-supplied Arab armies."[142] Shai Feldman also suggests that an Israeli nuclear attack on the Soviet Union is not plausible given that "the Soviets have the densest air defense system in the world, with 5,000 surveillance radars, over 2,500 interceptors and about 12,000 surface-to-air missiles launchers."[143] He maintains that "for Israel to adopt a counter-Soviet nuclear posture has no merits, but it does have three important disadvantages: it would

[140] Nashif, *Nuclear Weapons in Israel* , 66.

[141] Dowty, "Nuclear Proliferation: The Israeli Case," 90.

[142] Ibid.

[143] Shai Feldman, *Israeli Nuclear Deterrence: A Strategy for the 1980's* (New York: Columbia UP, 1982) , 189.

be infeasible, unnecessary, and highly detrimental to Israeli security".[144] He contends that the American commitment to Israel, regardless of its extent and vagueness, is enough to deter the Soviet Union.[145] In addition, another possible Soviet response to the Israeli bomb, might have been to become deeply involved in the region rather than to withdraw, since there will be pressure from its Arab clients for it to pursue a more active role.[146]

Israel's Nuclear Decision-Making

The previous section was an attempt to capture the essence of Israel's nuclear program and its raison d'etre. However, the analysis was based on the security perspective which dealt with the issue on a purely strategic-rational basis that mainly depended upon analysis undertaken by previous authors as to the presumed aims of Israel's nuclear program. As previously mentioned, such an approach to the study of the Israeli nuclear program is deficient in that deals with Israel as a single, unitary, rational actor pursuing policies that are dictated only by its strategic position, capabilities, and security challenges. As Uri-Bar Joseph says: "The most widely held conception of the Arab-Israeli conflict, as far as the nuclear strategy is concerned, considers the Arab countries and Israel to be unitary actors. This is not only fallacious

[144] Ibid.

[145] Ibid., 190.

[146] Dowty, "Nuclear Proliferation: The Israeli Case," 93.

– it is dangerous ; many contradictions exist among the nuclear policies of Arab states as well as between Israeli policymakers."[147]

Hence, this section seeks to provide a more in-depth approach to the reasons for Israel's nuclear program by focusing on that country's decision-making mechanism. In short, it will focus on the idiosyncrasies of the "nuclear myth-makers" – nuclear advocates such as Ben-Gurion, Shimon Perez, Ernest David Bergmann, and Moshe Dayan. The objective is to illustrate how their cognitive characteristics played a prominent role in Israel's initial decision to go nuclear (which took place during the 1956-1958 period) and how it shaped its general strategy. Furthermore, it will also attempt to show how normative constructs such as "science" were important in Israel's nuclear decision-making as they were closely associated with the worldview of the nuclear advocates and founders of Israel's nuclear weapons program. Moreover, it will illustrate the role played by bureaucratic in-fighting and struggles for power within and among the different sectors of the Israeli nuclear bureaucracy.

From the beginning, Israel surrounded its nuclear policy, with a high degree of ambiguity. Publicly, Israel adhered to a policy of avoiding any reference to the precise state of its nuclear capability. Even its declarations were limited to repeated 'ambiguous' statements to the effect that Israel "would not be the first to introduce nuclear weapons to the Middle East".[148] More elaboration could be found on Israel's nuclear policy in the words of Yuval Ne'eman who has served as a senior military

[147] Uri Bar-Joseph, "The Hidden Debate: The Formation of Nuclear Doctrines in the Middle East," *The Journal of Strategic Studies* 5 (June 1982): 205.

[148] Ibid., 96.

intelligence officer, Israel science attache in Paris, the Chairman of Israel's Atomic Energy Commission, and Minister of Science: "During the 1950's and 1960's, I was a partner to the creation of a security concept, the essence of which was that Israel would build a nuclear infrastructure – largely in research – which could be materialized in time of need…..Israel is ambiguous about its nuclear capability. It follows two principles: first, it would not be the first to "nuclearize" the Middle East; second, should it be required, it would not take Israel very long to materialize its nuclear potential."[149]

On a strategic level, this policy of nuclear ambiguity seemed to have been designed to produce effective "deterrence through uncertainty" since the Arab states inability to rule out the possibility that Israel might posses a nuclear capability and might use it in retaliation was expected to deter them from posing a threat to its survival and existence.[150] Furthermore, it provided Israel with the ability to avoid a clash with the United States and with international nonproliferation norms, and to reduce the domestic pressure on Arab regimes demanding that their governments should follow suit and build a countervailing nuclear capability. In this regard, as long as Arab governments could confess uncertainty with regards to Israel's nuclear potential, they could effectively resist domestic pressures demanding a response to Israel's nuclear weapons.[151]

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[149] Feldman, *Nuclear Weapons and Arms Control* , 97.

[150] Ibid.

[151] Ibid., 98.

Israel's ambiguous nuclear position did not only come as a result of the strategic challenges that Israel faces, but also as a result of domestic imperatives. In other words, it could be regarded as a compromise between the two schools of thought in Israel on nuclear weapons. As Shai Feldman suggests: "Among Israel's policy elite, the ambiguous posture was originally a compromise between advocates of greater reliance on nuclear deterrence, and those who claimed that such deterrence was irrelevant to the Middle East or counterproductive for Israel."[152] Etel Solingen goes as far as to maintain that "coalition and party politics…played a very important role in propelling 'opaqueness'".[153] This illustrates the importance of domestic imperatives such as the attitudinal prisms of decision-makers, party politics and bureaucratic factors in nuclear decision-making and its role in shaping Israeli nuclear policy.

"Nuclear Mythmaking" – The Cognitive Approach to Decision-Making

In Israel there are two schools of though with regards to nuclear weapons: One is *the pro-nuclear school* and this includes David Ben-Gurion, Shimon Perez, Moshe Dayan and Ernest David Bergmann.[154] The other has been the *conventional school* of thought and it includes Yigal Allon, Ariel Sharon, and Yitzhak Rabin.[155] The major

[152] Ibid.

[153] Etel Solingen, "The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East," *International Studies Quarterly* 38 (1994): 319.

[154] Nashif, *Nuclear Weapons in Israel* , 72.

[155] Bar-Joseph, "The Hidden Debate," 218.

difference in both positions to nuclear weapons, is the "question of whether Israel, in the current as well as the predicted quantitative proportions of the conflict, will be able to preserve its security solely through the conventional forces of the IDF. Those who believe that the army is, and will always be, a deterrent reject the 'introduction' of nuclear arms to the conflict."[156]

It is also important to note that the difference between both schools on the nuclear question is not as huge as it seems at first. The term 'introduction' is rather ambiguous and not well-defined in Israeli strategy. It is unclear whether 'introduction' means embarking upon a nuclear weapons program in terms of research and the production of its initial materials or the actual installation of nuclear arms on missile warheads. In other words, the real difference between both schools is the question of "how far Israel should go in its nuclear weapons program" as opposed to whether Israel should or should not keep the nuclear option open. Avner Cohen explains:

> "Most political and military leaders did not share Ben-Gurion's pessimism in the late 1950's and early 1960's, or Dayan's gloomy conclusions that in the long-run Israel would not be able to keep up with the conventional arms race. They did **not** dispute, however, the notion that Israel must prepare itself for the worst-case scenario – a swift and dramatic deterioration of Israel's 'basic security'. The idea of a nuclear weapons program as a *safety net* has enjoyed almost total national consensus in Israel."[157]

It is also important to note that the division of political forces among the Israeli parties does not correspond, or run parallel to, the division of perceptions on the nuclear question. In other words, there is no necessary correspondence between the division "hawks/doves" on the territorial issue and "hawks/doves" on the nuclear

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[156] Ibid.

[157] Cohen, *Israel and the Bomb* , 237.

issue. In fact, some "doves" advocate Israel's acquisition of nuclear weapons since to them, the nuclear alternative is a way to guarantee Israel's security in the event that an agreement is reached with the Arabs and the occupied territories are compromised.[158]

The thesis will focus on the staunch nuclear advocates, or the so-called *technological-nuclear group*, since their perceptions and general input shaped the Israeli nuclear path to a very great degree. As Peter Lavoy suggested: "a government is likely to go nuclear when proficient and well-placed individuals who want their country to build nuclear bombs, exaggerate security threats to make a 'myth of nuclear security' more compelling." This portrayal of Israeli nuclear politics relaxes the security model's assumption concerning state rationality as the prime motivator behind strategic threat perception and state action, and focuses more on the role played by the subjective worldview of the nuclear myth-maker in the acquisition of nuclear weapons.

The Israeli nuclear program was set in-motion by four men – its main 'nuclear myth-makers': the nation's founder, David Ben-Gurion, its chief scientist, Ernest David Bergmann, Moshe Dayan, his chief of staff, and Shimon Perez, Ben-Gurion's confidant and the one who was entrusted by Ben-Gurion to lead Israel's pursuit of nuclear weapons. Hence, the cognitive characteristics and attitudinal prisms of those four nuclear advocates and decision-makers are important for one to be able to understand the reasons for Israel's nuclear weapons program.

[158] Nashif, *Nuclear Weapons in Israel* , 73.

David Ben-Gurion – The Founder and Protector:

The impact that David Ben-Gurion had on Israel's nuclear weapons program was immense since he was, not only the founder of the state, but also the chief architect of its security policy during the state's formative period. He was Israel's longest serving prime minister (1948-53, 1955-63) and he was also defense minister between 1955-63. Hence from the period between 1955 till 1963 he assumed the role of both prime minister and defense minister. Moreover, his role tends to be great in national security decision-making due to his preeminence among Israel's high policy elite and his tendency to identify Israel's policies with himself. Israel's foreign minister Abba Ebban said: "Ben Gurion has a monistic view of history; his perspective does not encompass a plurality of factors influencing the course of events. More than De Gaulle or Churchill he identifies the nation's history with himself; whatever does not involve him he simply ignores."[159] Or as Avner Cohen commented: "Ben-Gurion's worldview and his decisive governing style shaped his critical role in initiating Israel's nuclear program."[160]

Ben-Gurion's worldview was characterized by an extreme emphasis on, and sensitivity to, national security issues that are related to the actual physical survival of Israel. This might seem natural since all states fear threats to their national security interests. Yet, Ben Gurion had a comprehensive and multidimensional view of security and defined 'national security' in very inclusive terms. More specifically, he suggested: "Just as the problem of Israel's security is different from that of any other

[159] Brecher, *The Foreign Policy System of Israel* , 266.

[160] Cohen, *Israel and the Bomb* , 10.

country, so the scope of our defense is wider than that of any country…...Security means economic independence…..Security means the fostering of research and scientific skill on the highest level in all branches of [science and] technology……But Israel can have no security without her Defense Forces, and we must meet their needs in equipment of the finest quality."[161]

Within Ben-Gurion's overall security logic, nuclear weapons was considered as an important factor towards the establishment of a permanent Jewish presence in Palestine. In fact, the necessity of establishing an everlasting presence in Palestine was a major component in Ben-Gurion's "attitudinal prism". Ben-Gurion maintained that: "Arab peace with us is possible only if we are able to prove to them….that the Jewish factor [in this country] is not hopeless or temporary, but is rather potent and permanent, and is a historical fact that cannot be cancelled or weakened or ignored."[162]

Another major component of Ben-Gurion's worldview was his tremendous belief in science and technology. Avner Cohen suggests: "Ben-Gurion believed that science and technology had two roles in the realization of Zionism: to advance the State of Israel spiritually and materially, and to provide for better defense against its external enemies."[163] Ben-Gurion remarked: "We are inferior to other peoples in our numbers, dispersion, and the characteristics of our political life, but no other people is

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[161] Ibid., 267.

[162] Feldman, *Nuclear Weapons and Arms Control* , 114.

[163] Cohen, *Israel and the Bomb* , 11.

superior to us in its intellectual prowess. Until now we have disseminated our intellectual capital in foreign lands, and helped many nations in the great scientific achievements of the nineteenth and twentieth centuries…..There is no reason why the genius of science would not blossom and flourish in his native land."[164]As Perez suggested: "Ben-Gurion believed that Science could compensate us for what Nature has denied us."[165]

More specifically, since the late 1940's, Ben Gurion seemed to have had a special fascination with nuclear energy. In an April 1948 letter to one of his operatives in Europe, Ben-Gurion issued instructions to seek out Eastern European Jewish scientists who could "either increase the capacity to kill masses or to cure masses; both things are important."[166] In a pamphlet, Ben Gurion wrote in November 1948 for distribution among new recruits to the Israeli Defense Forces (IDF), he wrote: "We are living in an age of scientific revolutions, an era that discloses the atom, its miraculous composition, and the tremendous power hidden in it."[167] Avner Cohen maintains that this theme in Ben-Gurion's strategic thinking is repeated in speeches, diary notes, and conversations in which Ben-Gurion referred to the atomic revolution as an "unprecedented transformation of the history of civilization."[168]

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[164] Ibid., 10-11.

[165] Ibid., 11.

[166] Ibid.

[167] Ibid.

[168] Ibid.

Furthermore, in June 1963, Ben-Gurion paid a visit to Israel's authority for the Development of Armaments. In a closed circle of trustworthy members he secretly outlined his vision of Israel's future: "We need all possible means of defense; *and I don't want to say what the most effective means is and what it signifies*."[169] Moreover, Ben-Gurion's enthusiasm with regards to the development of a nuclear potential seemed to have been part of the concept of "cumulative deterrence" which he developed more than ten years before Israel's independence was established. In 1936 he stressed: "Only with the increase of our strength will the Arabs understand that this destructive and futile war against the forces building this country must be brought to an end. Only if we become *a large force which cannot be shaken or silenced* [emphasis added] will the Arab leaders understand the inevitability of reconciliation with the presence of the Jewish people in this country."[170]

Another major component of Ben-Gurion's attitudinal prism was his pessimism with regards to Israel's future. He expressed this pessimism many times to his inner circle of aides as well as during talks with foreign leaders. Yitzchak Navon, the prime minister's secretary in the later 1950's, recalled some of Ben-Gurion's statements at the time: "I could not sleep all night, not even for one second. I had one fear in my heart: a combined attack of all Arab armies."[171] Another typical expression of his was: "What is Israel ?…..A small spot….How can she survive in this Arab

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[169] Bar-Joseph, "The Hidden Debate," 212.

[170] Feldman, *Nuclear Weapons and Arms Control* , 113-114.

[171] Bar-Joseph, "The Hidden Debate," 212.

World ?"[172] Even as Israel's so-called 'War of Independece' concluded in 1949 with an Israeli victory, Ben-Gurion was convinced that the cessation of hostilities would not lead to lasting peace but only a "temporary pause" since he saw 'Arab hostility' towards Israel as "deep and long-lasting".[173]

Hence, it becomes clear that due to his general worldview and governing style, Ben-Gurion sought to make Israel, nuclear capable. Avner Cohen maintains that it is unclear when exactly Ben-Gurion began to think about nuclear weapons as a "practical option" despite his fascination with the idea since the early days of the State. However, Cohen suggests that it was only after Ben-Gurion assumed the dual position of Minister of Defense and Prime Minister in 1955 and after Eisenhower's Atoms for Peace program, that he "became convinced that the time had come to pursue the effort in earnest."[174] Uri Bar-Joseph, also suggests that the decision to build a nuclear option for Israel was taken following Israel's withdrawal from the Sinai after the 1956 War – a withdrawal brought about by American threats to use economic and political sanctions and Soviet threats to use military force.[175] Moreover, he maintains that it was approved, in secret, by Ben-Gurion and his closest aides – Perez, who was then general manager of the Ministry of Defence, and Moshe Dayan, who was Chief of Staff. However, some of the most senior members of Ben-Gurion's

[172] Ibid.

[173] Cohen, *Israel and the Bomb* , 10.

[174] Ibid., 12.

[175] Bar-Joseph, "The Hidden Debate," 211.

cabinet, both Mapai ministers and other coalition members, were not even aware of the details of the new project.[176]

The behavior of the superpowers and the UN during the Sinai campaign strengthened Ben-Gurion's image of world politics. In other words, the Soviet Union's threats of direct intervention and attempts to impose UN sanctions against Israel, US opposition to the Sinai Campaign and its refusal to condone any Israeli territorial gains, and UN inability to secure peace or to assist Israel in 'defending herself', all seemed to have made it clear to Ben-Gurion that he cannot rely on the superpowers to support Israel.[177] Furthermore, those factors seemed to have illustrated to Ben-Gurion, the necessity of self-reliance and building a nuclear potential, as opposed to forging a formal alliance with one of the superpowers – his initial option. He wrote in 1956: "What Einstein, Oppenheimer and Teller, the three of them were Jews, did to the United States, could also be done by scientists in Israel for their own people."[178] Also, Ben-Gurion told the foreign policy committee of MAPAI (his political party) on 4 March 1958, weeks after work at the Dimona nuclear facility had begun: "If the Arabs would know that Israel cannot be destroyed, then perhaps there would be some people among them who would begin thinking that this conflict should be over, that maybe the time has come to make peace with Israel. The

[176] Ibid.

[177] Brecher, *The Foreign Policy System of Israel* 265.

[178] Cohen, *Israel and the Bomb* , 12.

prospects of peace with the Arabs depends on strengthening Israel's power and security."[179]

Shimon Perez – The Nuclear Architect:

The role of Shimon Perez in realizing Israel's nuclear dreams are as important, if not more important than that of Ben-Gurion. It was Shimon Perez who persuaded Ben-Gurion in 1956-57 that the time was right to initiate the nuclear project and, from the beginning, Perez was entrusted by Ben-Gurion to lead Israel's pursuit of a nuclear capability.[180] Israel Dostrovsky writes: "There was another individual who contributed much to decision-making at the time, and this was Shimon Perez. He personally took it upon himself to promote the issues involved with atomic energy, particularly the relationship with France which started then. There is no doubt that because of his great push that he gave to this effort, it was advanced."[181] Perez himself wrote in 1995 on his role in nuclear decision-making:

> "From the outset, I resolved to keep my role entirely out of the public limelight….For this reason, my name was never included in any formal committee created in the area of atomic energy. That did not, however, prevent me from effectively running the entire program on behalf of Ben-Gurion, nor did it impair in any way my authority. Ben-Gurion trusted me. Professor Bergmann worked with me with no reservations. In time, I was able to win the trust and confidence of other scientists, engineers and senior personnel engaged in the project"[182]

Perez had extensive experience in arms procurement deals and in 1947, at only twenty-three years of age, he was recruited to the join the Haganah headquarters staff

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[179] Ibid., 354 (endnote section in Cohen's book)

[180] Ibid., 17.

[181] Ibid.

[182] Taken from *Battling for Peace: A Memoir*, quoted in Avner Cohen, *Israel and the Bomb* , 18.

in Tel Aviv taking charge of arms procurements deals which he continued to pursue in higher positions for years to come. In 1953, at age twenty-nine, he was appointed director-general of the Ministry of Defense, the highest civil servant at the ministry and running its daily operations.[183] It was during this time that he became acquainted with Bergmann's nuclear vision, Perez wrote: "I was intrigued as Ben-Gurion and as enthusiastic as Bergmann."[184] By early 1956, French-Israeli military relations intensified and their common interest in undermining Nasser, convinced Perez that France could be the primary source of nuclear assistance. In the end, Perez negotiated a secret deal with the French for the sale of a nuclear reactor to Israel, in return for Israel's participation in the tripartite aggression on Egypt and maybe intelligence cooperation between the two countries concerning the relations between Egypt and the Algerian rebels.[185] Hence, Perez' major contribution to Israel's nuclear program was his ability to establish Franco-Israeli nuclear cooperation and his role was also instrumental in selecting some of the project's scientists and managers.[186]

The search for arms has been at the core of Perez' policy orientation and an integral part of his worldview: "There are only three 'geographical locations' where modern arms can be acquired: The Soviet Union, which withheld arms from Israel because of her bloc interests, the United States, whose modest sale of Hawk missiles

[183] Ibid.

[184] Ibid.

[185] Ibid., 52-55.

[186] Ibid., 20.

reveals that their attitude is significant but not a permanent relationship, we are left with the European alternative – and this includes France's attitude…..We have to build up a deterrent force, both political and military….we must deal with the problem of military balance".[187]

Perez' quest for arms is closely associated with his belief that Israel cannot rely for its future survival on the conventional balance of power. Hence, he shares with Ben-Gurion his pessimism with regards to Israel's future, his fascination with nuclear energy and the necessity of establishing a permanent Jewish presence in Palestine. In his view, Arab quantitative superiority must be neutralized by introducing nuclear weapons in the security equation – a new qualitative element, Perez wrote: "The limits of quantitative superiority, and even its end, are more significant in the security field. The traditional strategy was based on three factors: quantitative superiority, geographical space and duration of time. But these factors disappeared with the advent of nuclear and thermonuclear weapons and guided missiles."[188]

In Perez' strategic thinking, "peace" in the Middle East could be brought about by nuclear weapons. At a press conference in Jordan held on 13 July 1998, Perez stated that Israel "built a nuclear option in order not to have a Hiroshima but an Oslo."[189] He believes that Israel's possession of those weapons, irrespective of

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[187] An address by Perez outlining his views on defense and foreign policy in June 1963, quoted from Brecher, *The Foreign Policy System of Israel* , 340.

[188] Nashif, *Nuclear Weapons in Israel* , 85.

[189] In the post-Gulf War period, Israel's nuclear policy seems to have become more explicit in light of media reports dealing with Vanunu's revelations and in response to Iraqi missile attacks on Israel. This

whether the Arabs posses such weapons or not, would inevitably convince the Arabs with the necessity of accepting Israel and making peace with it. Perez believes that if both sides possessed such weapons, the logic of nuclear *deterrence* will be at work: "the danger of war may be averted…..because the truth is that both sides will be vulnerable enough not to toy with the idea of war….if both sides had this capability, it might limit not only the will to commit aggression, but also the danger of war."[190] On the other hand, he also believes that If Israel unilaterally possessed nuclear weapons, it would be able to *compel* the Arabs to make peace with it, under Israel's terms, and accept its existence in the region, Perez wrote: "Israel can bring it [peace] closer – if it convinces the Arabs that with the help of science, we can eliminate their chances of defeating us, not only in the present but also in the future."[191]

Ernest David Bergmann – The Nuclear Scientist:

The role of Bergmann in Israel's nuclear decision-making was immensely important, since "for a small and technologically dependent nation in the mid-1950's to embark on a nuclear project, more than a leadership's commitment was required. There was also a need for scientific and organizational leadership to set goals, devise strategies, assign tasks, allocate funds, recruit scientists and managers, and oversee operations. These make the difference between a leader's vision and a credible

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was the first time that Perez explicitly admitted that Israel possessed nuclear weapon capabilities, nevertheless Israel's official policy of 'nuclear ambiguity' is generally upheld and has not changed to this date. "Israel's Nuclear Posture Review," (Center for Nonproliferation Studies: Monterrey Institute of International Studies, December 1998) http://cns.miis.edu/research/wmdme/israelnc.htm

[190] Nashif, *Nuclear Weapons in Israel* , 85.

[191] Ibid.

nuclear-weapon project."[192] It seems that David Bergmann made that difference by providing the necessary scientific and organizational leadership. Israel Dostrovsky, who replaced Bergmann at the head of the IAEC in 1966, characterized Bergmann's role in this way:

> "The role of Professor David Bergmann, Ben-Gurion's advisor on those issues, was vital. In my view, Ben-Gurion accepted the judgement of Bergmann without question. Hence, all suggestions that were brought for discussion must have been endorsed by Bergmann first, and if Bergmann had been persuaded, Ben-Gurion would have been as well."[193]

Bergmann was made closer to Ben-Gurion in the late 1940's because of the latter's conviction that Israel's future depended on harnessing science and technology. In August 1948, Ben-Gurion appointed Bergmann head of the scientific department of the IDF. On 15 July 1951, Bergmann was made scientific advisor to the Ministry of Defense, and in early 1952 was appointed director of research of the newly created Division of Research and Infrastructure (known as EMET) of the Ministry of Defense. In June 1952, the Israeli Atomic Energy Commission was established, with Bergmann at its head. He held those three posts until his final resignation in April 1966.[194]

Bergmann's worldview was very close to that of David Ben-Gurion and Shimon Perez. First, Bergmann's attitudinal prism was also characterized by a belief in science and technology and their role in developing Israel. Perez describes the alliance between Ben-Gurion and Bergmann: "Bergmann's scientific vision was

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[192] Cohen, *Israel and the Bomb* , 14.

[193] Ibid.

[194] Ibid., 15.

attracted to Ben-Gurion's statesmanlike vision, and the plowman met the sower. From the start a visionary alliance was forged between them over science, defense, and politics, that marked some of the most fateful moves of the State of Israel."[195] Second, he shared Ben-Gurion and Perez in their pessimism and extreme sensitivity for the future security of the State of Israel and saw nuclear weapons as an ultimate guarantor for the survival of his country in the Middle East amidst relentless 'Arab hostility'. In fact, the Holocaust experience seemed to have shaped his worldview, Perez cited him as saying: "I am convinced that the State of Israel needs a defense research program of its own, so that we shall never again be as lambs led to the slaughter."[196] In a 1961 letter to Meir Ya'ari, the leader of the left-wing MAPAM, who opposed nuclear weapons, Bergmann replied:

> "I was surprised that a man like you…..is prepared to close his eyes and assume that reality is how we would all like to see it. There is no person in this country who does not fear a nuclear war and there is no man in this country who does not hope that, despite it all, logic will rule in the world of tomorrow. But we are not allowed to exchange precise knowledge and realistic evaluations for hopes and illusions. I cannot forget that the Holocaust came on the Jewish people as a surprise. The Jewish people cannot allow themselves such an illusion for a second time."[197]

Moshe Dayan – The Military Man:

Dayan played a very important role in the development of Israel's nuclear weapons program, since he exercised a very strong influence on Israel's military and security establishment, and was a follower of Ben-Gurion, "the key figure in the early

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[195] Ibid.

[196] Ibid., 15-16.

[197] Ibid., 16.

stages of Israel's nuclear activities."[198] On October 1957, when France agreed to offer its assistance in constructing the Dimona reactor, Dayan was still serving as Chief of Staff, of the Israeli army and, as a military man, he received special appreciation from, and enjoyed a special status with, Ben-Gurion, which inevitably strengthened his position among Israel's decision-makers.[199] More importantly, Dayan was able to become Minister of Defense on the eve of the June 1967 War in the coalition government of Levi Eshkol and maintained his position under the government of Prime Minister Golda Meir (March 1969-June 1974). Concerning the nuclear question, Dayan was responsible for moving Israel from the 'nuclear option' to an actual 'bomb in the basement' – an existing nuclear-weapons force known, but not declared to the world. In other words, Dayan managed to convert the nuclear option espoused by Ben-Gurion, Perez and Bergmann into the actual, albeit unrevealed, production of nuclear weapons during his term as Minister of Defense and in his capacity as the highest authority on defense problems in Golda Meir's Cabinet.[200]

The importance of Dayan's achievements lies not only in his role in the conversion of the Israeli nuclear program from an "option" to an "actual reality", but also that he was able to perform that role in successive Israeli governments that were not necessarily sympathetic to his nuclear vision. Before Dayan joined the coalition government of Prime Minister Eshkol in the eve of the June 1967 War, Eshkol had

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[198] Nashif, *Nuclear Weapons in Israel* , 74.

[199] Ibid.

[200] Ibid., 75.

allowed US representatives to visit Dimona and was considered by many Israelis to be "soft" on the nuclear issue and to have compromised national sovereignty by allowing such visits – or so-called 'nuclear exchanges'.[201] Also, Allon was the highest authority on defense matters and both Rabin and Allon – two pillars of the conventional school in Israel - exerted a tremendous influence on security and military thinking in Israel in Eshkol's government.[202] However, Dayan's assumption of the Ministry of Defense in 1967 meant that the nuclear program and the security and military establishment were placed under his authority and Allon eventually had to acquiesce in the decision to have a 'bomb in the basement'.[203]

Dayan's leadership and decision-making style closely resembles his preeminent professional experience – the army: "I believe in decisions, not majority opinions. A consensus is something neutral, which never really leads to a real decision…..A decision implies risks and of course a lot of people don't like risks."[204] As for public opinion, "its not a way of making decisions but it's a way of expressing things."[205] During the critical stage of the 1973 October War, when it seemed that the Syrian forces were about to invade behind the 'green line', some suggest that Dayan put the Israeli nuclear force on alert and, if this actually happened, it might explain

[201] Cohen, *Israel and the Bomb* , 221-222.

[202] Nashif, *Nuclear Weapons in Israel* , 74-75 ; Bar-Joseph, "The Hidden Debate," 220.

[203] Bar-Joseph, "The Hidden Debate," 221.

[204] Brecher, *The Foreign Policy System of Israel* , 335.

[205] Ibid., 336.

the appearance of a Soviet military supply vessel carrying nuclear warheads in Port Said on 25 October 1973.[206] This illustrates the extent of Dayan's influence, strong leadership style and his ability to undertake critical nuclear decisions, sometimes amidst great odds.

Dayan's worldview was characterized by an extreme suspicion of the superpowers and their commitment to protect Israel. In fact, he believed that they were competing to support the Arabs: "If we have to stand up against one or more of the Arab states, supported in their attack by the Soviet Union, the United States will not necessarily help us. On the contrary the two blocks might compete in a shouting match against us."[207] In another occasion he maintained: "the interpower struggle for the Arab world increases the total means…..that are being put at the disposal of the Arab states and also weakens the West's willingness to oppose the wishes dictated by their hostility to Israel….The two blocs are outbidding each other in helpfulness to the Arabs."[208] More specifically, Dayan was concerned with the growing Soviet involvement in the region in the aftermath of the 1967 War. He saw the United States as a nation with waning influence, and the USSR as one which is able to take more risks and hence increase its influence. In fact, Dayan's views were largely influenced with Henry Kissinger's statements after the 1967 War in which he maintained that: "1. The aim of each American president was to avoid a total world war. 2. the United

[206] Ibid., 216 ; Nashif, *Nuclear Weapons in Israel* , 81.

[207] Brecher, *The Foreign Policy System of Israel* , 336.

[208] Ibid.

States would not go to war against the USSR for territories occupied by Israel after 1967; 3. The Soviets were aware of this fact."[209]

Consequently, Dayan believed in self-reliance and building an indigenous deterrent force. In 1966 he warned against seeking guarantees from foreign powers. Israel, he said, should rely on *Tzahal* (Defense Forces), not on guarantees.[210] For him, the key to Israel's existence lay in "capitalizing on the anticipated technological achievements of the 1970's…..[and] arming the IDF with the equipment of the future."[211] Note that in this statement, Dayan also emphasized the importance of science and technology to the future development of Israel – a theme repeated several times by the previously-mentioned decision-makers.

In this regard, the nuclear option played an important part in Dayan's strategic thinking: "Israel must have a deterrent power that will once and for all disillusion the Arabs of any idea of the conquest and annihilation of Israel."[212] He argued that arms competition imposes too high a price for Israel. In contrast, the Arabs have greater human and financial resources to withstand a prolonged conventional conflict. Nuclear weapons would negate this Arab advantage. Furthermore, Dayan believed that a nuclear Middle East would lead to a balance of terror and stabilization of the

[209] Bar-Joseph, "The Hidden Debate," 215.

[210] Brecher, *The Foreign Policy System of Israel* , 336.

[211] Nashif, *Nuclear Weapons in Israel* , 74.

[212] Brecher, *The Foreign Policy System of Israel* , 337.

conflict.[213] This theme was made very clear by Dayan after the 1973 October War, as he outlined some of his post-war conclusions or strategic assessments:

> "Israel had more or less reached its quantitative limits. In the long-run, it will be difficult for Israel to increase the size of its army, to add a large number of airplanes and tanks (this means not only a very high financial outlay with the growing sophistication and development of arms, but also prolonged military service for many young people…..Therefore, Israel must guarantee the balance of power against the rapidly expanding Arab military forces by increasing its quality of arms – *a quality that will ensure that every Arab attempt to conquer and destroy Israel will end with the destruction of its enemies.*"[214]

Uri Bar-Joseph suggests that Dayan was not only worried about developments in the Arab world, but also sought an "independent Israeli nuclear program [which] would expand Israel's freedom of action, especially with regards to the USSR, and would add some uncertainty to Soviet calculations concerning direct intervention in the conflict…Furthermore, the Arabs would probably demand that the Soviets supply them with nuclear weapons; and if the USSR did so, it would violate the NPT, thereby losing prestige and credibility all over the world, and risking a direct confrontation with the United States."[215]

Bureaucratic Politics and Israel's Nuclear Decision-Making

In the previous sections, the Israeli nuclear weapons program was represented as a product of much-needed security and also as a consequence of the attitudinal prisms of key decision-makers – well-positioned nuclear advocates whose worldview

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[213] Efraim Inbar, "Israel and Nuclear Weapons Since October 1973," in *Security or Armageddon: Israel's Nuclear Strategy* ed. Louis Rene Beres. (Massachusetts: D.C. Heath and Company, 1986) , 63.

[214] Bar-Joseph, "The Hidden Debate," 217.

[215] Ibid., 216.

and dedication made the program possible. The main intention of this section is to illustrate that Israeli nuclear proliferation was not only a product of security or worldviews/attitudinal prisms, but also a product of organizational and bureaucratic interests. Perhaps, in the case of Israel, security and worldviews/attitudinal prisms played a much more important role than bureaucratic politics, yet one must illustrate that nuclear decision-makers, did not only encourage "extreme perceptions of foreign threats" due to their worldviews or myth-making abilities[216], but also to serve their personal goals which are, in turn, derived from their organizational or bureaucratic interests. Also, by shedding light on the role played by bureaucratic actors within the state, the security model's assumption concerning state unity would be relaxed.

The lack of detailed information on the motives of those who initiated the Israeli nuclear program is clearly an obstacle in the way of unraveling important bureaucratic and organizational insights that might have played a crucial role in developing Israel's nuclear program. Nevertheless, several examples are sufficient to indicate the role that bureaucratic politics played. Bureaucratic theory, if applied to nuclear decision-making, would argue that the decision to proliferate is made by key individuals within the scientific or defense bureaucracies of states and those individuals advocate proliferation in order to enhance the power of their bureaucracies.[217] If applied to the Israeli case, the theory would suggest that Ernest David Bergmann would qualify, not only as one of the chief "myth-makers" as the

[216] This idea was advanced by Peter Lavoy, "Nuclear Myths," pp.192, when he explained the process of nuclear myth-making: "The strategic beliefs and political activities of highly motivated and resourceful individuals are where the sources of nuclear proliferation can be found."

[217] Thayer, "The Causes of Nuclear Proliferation," 476.

previous section illustrated, but also a chief bureaucrat whose input as the Chief of Israel's Atomic Energy Commission (IAEC), scientific director of the Weizmann Institute and, since 1949, the chairman of the scientific department of the Haganah (and later the Ministry of Defense) would qualify him to be regarded as a chief bureaucrat residing over key scientific establishments.

Moreover, early struggles that involved Bergmann and his opponents, were clearly of a bureaucratic nature indicating that personal and organizational interests were at stake. The conflict that took place in the spring and summer of 1951 between David Bergmann and Chaim Weizmann (Israel's first president and the founder of the Weizmann Institute of Science) over the control and funding of the Weizmann Institute is a case in point.[218] Bergmann attempted to change the character of the institute, by converting its facilities into a HEMED (Scientific Corps, Israeli Ministry of Defense) base, committing the institute to meet the needs of the scientific department of the Haganah (later, the Ministry of Defense), of which Bergmann was a board member, and since 1949, its chairman. Bergmann even proposed "to convert the Weizmann Institute into Israel's national scientific center, dedicated to both civilian and military needs."[219] Thus, Bergmann could be seen as having attempted to increase his bureaucratic and personal influence by attempting to monopolize most, if not all, Israeli scientific institutions. This was faced with Weizmann's opposition since he did not want his organization to be dependent on funds obtained from Ben-Gurion's Ministry of Defense – an organization run by his arch political rival. The

[218] Cohen, *Israel and the Bomb* , 27.

[219] Ibid.

conflict between the two reached a dead end, and eventually Weizmann fired Bergmann in July 1951.

Bergmann later assumed the position of scientific advisor to Ben-Gurion and created the IAEC in Spring 1952, which was eventually to function, under Bergmann's leadership, as a subsidiary of the Ministry of Defense.[220] Hence, the conflict between Bergmann and Weizmann is illustrative of bureaucratic and personal struggles which took place in Israel in the formative period of Israeli nuclear decision-making over the control of key scientific institutions necessary for launching the nuclear program.

This struggle was then eventually accelerated with the revolt of the nuclear physicists working for Bergmann in the IAEC and their eventual defection to the Weizmann Institute during the 1952-1954 period. In fact, the resignation of the nuclear physicists was as a result of their objection to Bergmann's strict managerial style and his effort to monopolize all the scientific and research endeavors for the purposes of a nuclear program under his leadership. In fact, Bergmann objected to the physicists' attempt to establish an academic research program in association with members of the Hebrew University. In 1952, he set the project's priorities as follows: "First, the reactor, then nothing, then education, and at last your research."[221] This was followed by another attempt by two nuclear physicists – Haber-Schaim and Yekutieli – to publish a paper in September 1952, without obtaining a security clearance from Bergmann, and with the Weizmann Institute as their institutional

[220] Ibid., 28-30.

[221] Ibid., 36-37.

affiliation, instead of the IAEC.[222] Finally, as they were reprimanded by Bergmann, they insisted on ending their formal relations with the IAEC.

The nuclear physicists were lead by Amos De Shalit, an internationally known physicist, who was eager to leave the IAEC for the Weizmann Institute and wrote to Haber-Schaim: "I do not want any contact with Bergmann or dependence on him….I do not see any reason why the IAEC should have labs of its own, and in my opinion it would fulfill its mandate if it would take care to meet the needs of the existing labs."[223] De Shalit formed an alliance with Meyer Weisgall, the Chancellor of the Weizmann Institute to establish a home there for the whole nuclear physics group. This request was met well by Meyer, who had an interest in building the Weizmann Institute as Israel's preeminent science center by adding a Department of Nuclear Physics with the Shalit group as its core. Avner Cohen writes: "de Shalit and his colleagues, who wanted to build a national nuclear physics program, preferred to do so at the Weizmann Institute, rather than as Bergmann's pawns at the Ministry of Defense."[224] When Ben-Gurion assumed the dual position of Prime Minister and Minister of Defense in 1955, he shared Bergmann's anger over what had happened and worked to revitalize the project under Bergmann's leadership, expressing a philosophy of self-reliance: "the future of Israel was not dependent on what the Gentiles would say, but on what the Jews would do…..we must have superiority in

[222] Ibid.

[223] Ibid., 37.

[224] Ibid., 37.

weapons, because we will never achieve superiority in manpower. All those things that have to do with science, we must do them."[225] Bergmann and his supporters made use of Ben-Gurion's support and were determined not to repeat the mistakes of the past in selecting scientists on the basis of science alone, but selecting people who were ready to commit themselves to the top-secret project.[226] Avner Cohen writes:

> "Another constituency that contributed to the initiation of the nuclear program in 1956-57 was the small group of scientists and engineers concentrated around *Machon (Institute) 4*. When Perez and Bergmann began to draw the master plan for the project, based on obtaining a large production reactor from France and a small research reactor from the United States, they were helped by a small group of nuclear enthusiasts waiting impatiently for the age of reactors (Israel Pelah, Ze'ev [Venia] Hadari-Pomerantz, and others). Perez and Bergmann were also given advice, at times critical, by the nuclear physicists of the Weizmann Institute (Amos De Shalit, Zvi Lipkin, Igal Talmi, Yekutieli, and others)."[227]

Another bureaucratic constituency that was important in Israel's nuclear decision-making, albeit much less than the scientific community, was the Israeli military establishment and its associated military-industrial complex. This constituency resisted reliance on nuclear deterrence. In an interview, Chief of Staff General Mordechai Gur said in June 1975 that he did not fear an erosion in Israel' s military superiority in the next five to ten years. He explained that Israel's nuclear weapons cannot substitute for conventional forces, maintaining that "the State of Israel and the Jewish people have enough resources – financial and manpower – to resolve the State's security problems, based on the political, economic and military

[225] Ibid., 42-43.

[226] Ibid., 43.

[227] Ibid., 22.

conditions in which Israel may find herself in the coming years."[228] Also, General Ariel Sharon, who has occupied top positions in the Israeli defense establishment, including the position of Minister of Defense, is not in favor of reliance on nuclear weapons especially if the Middle East moved to a balance-of-terror situation where both sides posses nuclear weapons. For him, nuclear weapons do not achieve decisive results in long-term conventional war, 'terrorist activities', or wars of attrition. In fact, they might prevent the achievement of a decisive victory since both sides would be deterred from going to the point of no return. This would in return lead to a protracted conflict that would eventually weaken the IDF which is accustomed to short, decisive battles and not long, protracted wars. As a final argument, Sharon questions the discretion and 'rationality' of some Arab leaders and implies that in a balance-of-terror situation, Arab leaders might not be deterred by Israel's nuclear potential and might strike first, resulting in a much more serious escalation than if the conflict was kept purely conventional.[229] Etel Solingen writes:

> "Maintaining conventional superiority has been a long-standing objective of the Israeli Defense Forces. Supporters of an open, full-fledged deterrent often invoked its value as a means to reduce the need for conventional forces. Such claims represent an institutional threat to the conventional military. First, they might have exacerbated competition for dwindling budget resources…..Second, an open deterrent could have threatened the external network of procurement of conventional weaponry (high performance combat aircraft in particular). The military establishment was particularly sensitive to the fact that about 50 percent of the defense budget was covered by US military aid. Third, Israel's defense forces would have been required to maintain their conventional deterrent and fighting missions even in light of diminished capabilities, at potentially much higher human costs."[230]

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[228] Inbar, *Israel and Nuclear Weapons* , 66.

[229] Bar-Joseph, "The Hidden Debate," 222.

[230] Solingen, "The Domestic Sources of Regional Regimes," 321.

Despite the objection of many members of the military-industrial complex, it seems that their reservations did not stop the nuclear weapons program nor did it radically restructure Israel's nuclear policy. As previously mentioned, the debate in Israel was about how much should Israel rely on nuclear weapons and how far the nuclear program should go. There was never the suggestion that Israel should abandon the option altogether. The continuity of Israel's nuclear program was put to the test during 1974-77 period under the leadership of Prime Minister Rabin, where the forces calling for a conventional environment were stronger than ever. Despite that, the Rabin government did not "institute a reassessment of Israel's nuclear policy", Israel's nuclear program was probably unaffected and, formally, Israel's nuclear policy did not change.[231] Probably, the only impact that the conventional school of thought and the military/industrial complex had on the Israeli nuclear program was to lower Israel's nuclear profile and to bolster the already-established policy of nuclear ambiguity. Solingen argues that the "most relevant groups and institutions converged in their evaluation on the utility of opaqueness in accommodating conflicting political interests."[232]

[231] Inbar, *Israel and Nuclear Weapons* , 66.

[232] Solingen, "The Domestic Sources of Regional Regimes," 321.

Conclusions

This chapter represented a detailed account of the reasons behind Israel's decision to acquire, develop and deploy nuclear weapons and its associated process of decision-making. It seems clear that the security factor was very much predominant in Israel's nuclear thinking and hence tends to overshadow all other explanations. This is mainly due to the complexity and extensiveness of Israel's perceived security threats manifested in the extreme threat of annihilation. Due to that overwhelming threat, there was no explicit opposition to Israel's nuclear *option* by members of Israel's political elite or within its key institutions. Despite the fact that proponents of the *conventional school* in Israel called for a decreased reliance on nuclear weapons for security, they did not obstruct the efforts of pro-bomb advocates who worked relentlessly to develop a nuclear capability. Hence, the only dilemma that had to be resolved was the degree of Israeli reliance on nuclear weapons and how far it should go in the nuclear path, and *not* whether Israel should develop nuclear weapons or not.

In addition, the security model helped to account for the multitude of purposes that Israel's nuclear weapons could be used for. As previously mentioned, Israeli nuclear weapons are not only directed to deter the Arabs from launching a 'war of annihilation' (or 'liberation') against Israel, but also for purposes of compellence, war-making, or as a bargaining chip to nudge opponents and secure political benefits in negotiations. In addition, the security model helps to explain the reason behind Israel's opaque nuclear posture and its policy of 'deterrence through ambiguity'. Given the Israeli case, the security model would suggest that the desire to be free from international pressures calling for inspection on its nuclear installations and the need to prevent further regional proliferation that an *overt* posture might lead to –

both of which could be considered international or regional security concerns – are the reasons for Israel's opacity. Hence, the security model is very effective in explaining the raison d'etre of Israel's nuclear program.

Despite its overwhelming utility as a model for the Israeli case, the security model tends to reduce Israel's program to the obvious and neglects the domestic dynamics which played a role in Israel's decision to acquire nuclear weapons. In fact, Israel's insecurity is a necessary but insufficient cause for the development of nuclear weapons. In this regard, the cognitive model helps to account for the actual physical *development* of Israel's program and its transition from a vague utility for security to a sophisticated reality and a real security asset for the Jewish state. In other words, if it was not for Israel's *technological-nuclear group*, manifested in hard-working, well-positioned, perseverant, relentlessly dedicated nuclear advocates who used every possible opportunity to develop nuclear weapons, Israel's nuclear program would not have been launched. Moreover, the general quest for scientific prowess among important decision-makers was definitely an important factor. Hence, understanding the worldview and general input of those nuclear decision-makers is crucial for understanding the development of Israel's nuclear weapons. Moreover, the cognitive model helps to add to our understanding for the reasons behind Israel's *opaque* posture since it explains its opacity as a compromise between staunch nuclear advocates who generally supported an overt posture and those who preferred reliance on conventional weapons.

The bureaucratic approach also serves to open the 'black-box' further and shed light on the various *institutions* which played a role in nuclear decision-making. The bureaucratic 'lens' puts the decision-maker within his/her institutional context

and hence the role of the decision-maker becomes more accentuated. This was made very clear with the role of Bergmann as a key decision-maker residing over critical scientific establishments. Moreover, his ability – as a skillful bureaucrat – to monopolize the scientific establishment and overcome bureaucratic dissent might eventually have been critical for the production of the bomb and realization of Israel's nuclear dreams.

However, on balance, Israel's decision to acquire nuclear weapons was much more related to its pervasive feelings of insecurity and the presence of well-positioned 'nuclear myth-makers' among the political-scientific elite than to bureaucratic factors. For example, the military as an institution did not seem to greatly influence Israel's nuclear program. Despite its general opposition to reliance on nuclear weapons, the military worked only to bolster the already-existing position of nuclear ambiguity and did not add anything new to Israel's nuclear politics which, in any case, was already more affected by the pervasive security crisis which it faced and the boldness of that country's nuclear advocates.

CHAPTER 3

INDIA – INTERNATIONAL IMPERATIVES OR DOMESTIC FACTORS?

This chapter will examine the reasons behind India's choice of nuclear weapons and its preferred nuclear strategies. The Indian case of nuclear proliferation derives its importance from the ongoing political and academic discourse concerning Indian nuclear decision-making and the factors which played a role in such a process. Recently, this "puzzle" has been made more intriguing due to the nuclear tests conducted by India in May 1998. First, the chapter will examine the structural features of the South-Asian regional system. Second, it will attempt to illustrate the security threats which India faces and relate them to India's decision to acquire nuclear weapons. Third, it will attempt to shed light on the domestic dimension of India's nuclear politics – the role of nuclear "myth-makers", bureaucratic politics and the role played by normative concerns such as prestige and science. In other words, one must place India's decision to acquire nuclear weapons "within the overall context of India's foreign policy objectives as well to examine the…..domestic and external compulsions faced by New Delhi."[233] As in the previous chapter, the focus will be on the formative period of India's nuclear program – the period between 1947 and 1974 – the year in which India exploded its first nuclear bomb dubbed "The Peaceful Nuclear Explosion" or PNE. However, it will refer to other events that might have had a significant impact on India's nuclear decision-making in the pre-1948

[233] Mohammed Ayoob, "Nuclear India and Indian-American Relations," *Orbis* 43 (Winter 1999) : 59.

period or in the post-1974 period. In this light, it remains to be seen whether the May 1998 tests represent a break from India's past nuclear politics or simply "business as usual" – a continuation of India's international and domestic nuclear dilemmas.

India and the South Asian System

In order for one to understand India's threat perceptions and hence delve into the security threats that it faces, one must explain the structural features of the South Asian regional system. First, the structure and distribution of power in South Asia is difficult to precisely define. On the one hand, Ashok Kapur and Jeyaratnam Wilson argue that the distribution of power (broadly defined in terms of a country's economic strength; its scientific and technological growth; its capacity to solve internal and external problems; its political unity and capacity to accommodate conflicting pressures and so on) has always favored India. They explain that this has lead to the development of an asymmetrical distribution of military power that has resulted in a unipolar regional order lead by India – a hegemon that seemingly cannot be challenged neither by Pakistan nor by a combination of South Asian states.[234] On the other hand, Barry Buzan sees the South Asian system as a bipolar one dominated by both India and Pakistan which are "two large states whose insecurities are deeply intertwined that their national securities, particularly in terms of political and military

[234] Ashok Kapur and A. Jeyaratnam Wilson, *Foreign Policies of India and Her Neighbors* (Hampshire: MacMillan Press: 1996) , 8.

security, cannot be separated."[235] He maintains that a number of much less powerful states are bound into the security equation for geographical reasons – those are Bangladesh, Bhutan, Nepal and Sri Lanka. However, he suggests that China, although an important actor in the South Asian regional system, is not part of this security complex "because South Asia is relatively peripheral to its primary security concerns."[236] The view of the system as a bipolar one, is further supported by Mohamed Ayoob who argues that India might possess regional preeminence (measured by objective criteria) but lacks regional predominance' if measured by other states' acceptance of such a role as legitimate. He maintains that Pakistan's ability to "borrow power from abroad" – mainly from the US and China – has enabled it to maintain a position of 'near-parity' with India in military terms.[237]

Concerning the nuclear issue, it is important to see the Indo-Pakistani and the Sino-Indian conflict as central ones to India's security equation. Moreover, those conflicts are not only real challenges and serious threats to India, but they also define and structure the regional distribution of power. In this sense, one could see a tripolar regional system centered around China, India and Pakistan and their corresponding Indo-Pakistani and Indo-Chinese conflicts. This perception of the regional framework stands in stark contrast to the perception which sees a unipolar system lead by a

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[235] Barry Buzan, *People, States and Fear: The National Security Problem in International Relations* (Chapel Hill: The University of North Carolina Press, 1983) , 106.

[236] Ibid.

[237] See Mohamed Ayoob, "India in South Asia: The Quest for Regional Predominance," *World Policy Journal* (1990) - quoted in Kapur and Wilson, *The Foreign Policy of India and Her Neighbors* , 11.

strong, hegemonic India that can deal easily with its regional adversaries.[238] Moreover, the notion of a bipolar system centered around India and Pakistan with the underestimation of the China factor reflects simplicity and an inability to understand more complex interactions among regional adversaries. Brahma Chellaney maintains that one possible explanation for the neglect of China in writings on South Asia is that many analysts trained in American academia "have usually been trained in the Soviet-American deterrence model with its two rival and balancing forces. There is a tendency, therefore, to extend that analytical model to conflicts and problem elsewhere in the world, and thus to see issues simplistically in a one-to-one framework."[239] Moreover, Chellaney argues that "having divided the world into a number of regions, these scholars find it somewhat analytically problematic to introduce an 'outside' country into their regional framework. China is not seen as belonging to South Asia…..Its role is only seen as peripheral…..This view, naturally, misses much that is crucial to a real understanding of the underlying issues."[240]

Moreover, the region witnessed strong superpower influence due to the fact that regional powers sought superpower help to solve their security problems and balance against their adversaries. This is exemplified in the American commitment to Pakistan during the Cold War– a commitment that helped "assuage that country's

[238] An example of this trend is Kapur and Wilson, *The Foreign Policy of India and Her Neighbors* and Harish Kapur, *India's Foreign Policy: 1947-92* (New Delhi: Sage, 1994) On pp.50, Harish Kapur maintains: "She [India] through the years, acquired a military clout that no one in the region can challenge – probably not even China in the conventional sector."

[239] Chellaney, "South Asia's Passage," 51.

[240] Ibid.

security concerns."[241] In response, India, a champion of the non-alignment movement, signed in 1971 a twenty-year friendship treaty with the Soviet Union. In this sense, the American-Chinese-Pakistani alliance and the corresponding Indo-Soviet one, polarized the sub-continent and even raised doubts about the credibility of India's cherished non-aligned stance.[242]

Another important characteristic of the South Asian regional system is the permeability of boundaries between the states of the system. In other words, the "physical boundaries of South Asia are porous in several key areas: drug trade, arms trade, missiles and nuclear activities and supply relations, and the patterns of diplomatic and military alignments among key players. India and Pakistan and the personalities and institutions inside India and Pakistan who deal with diplomatic, military, nuclear and intelligence affairs have to work with a matrix of challenges and opportunities in a porous 'South Asian' world."[243]

The Security Perspective

In order to understand the security imperative in India's strategic calculations in the nuclear arena, one must appreciate the unique situation of India among states in the current international system and the persistent security threats that it faces on the

[241] Frankel, "The Brooding Shadow," 53.

[242] Ibid., 54.

[243] Ashok Kapur, "Nuclear Development of India and Pakistan," in *Nuclear Rivalry and International Order* ed. Jorn Gjelstad and Olav Njolstad (London: Sage Publications, 1996) , 143-144.

regional level. This understanding of India's strategic behavior and threat perception is in line with neorealist thinking. Robert Jervis has identified two characteristics of a systemic approach that are relevant in this analytical context. First, units within a system are interconnected, i.e. changes in one part of the system produces change in other parts. Second, relations between any two actors are conditioned in part by the relations between each of them and other actors in the international system.[244]

In this context, the term "systemic" refers to the larger international system, especially the power relationships among major actors and between them and all the other actors. The term "sub-systemic" is used for interactions limited to a specific regional system. In this light, India's threat perceptions could be seen as operating on two levels: the "systemic" level explains India's behavior in terms of its position in the international system and how it responds to the superpowers and the "sub-systemic" level focuses on power relations between regional powers (namely Pakistan and China).

There are two distinct qualities in India's foreign policy and strategy. The first "expresses a sensitivity to world-order concerns – to alter the gap between the 'developing' nations and the superpowers and to reduce great-power imperialism. The second expresses a sensitivity about Indian security – to shape India's position in the South Asian and the Asian balance of power, to shape international arms control and nuclear policies, to pursue Indian interests through non-alignment and peaceful

[244] Robert Jervis, "Systems Theories and Diplomatic History," ed. Paul Gordon Lauren. in *Diplomacy* (New York: Free Press, 1979) pp. 212-244 ; Robert Jervis, *System Effects: Complexity in Political and Social Life* (Princeton, NJ: Princeton University Press, 1997) cited in T.V. Paul, "The Systemic Bases of India's Challenge to the Global Nuclear Order," *The Non-Proliferation Review* 6 (Fall 1998): 2.

coexistence."[245] Given this framework, India's nuclear weapons program will be seen as a response to the systemic threat that it faces from the superpowers (especially the United States) and the regional or sub-systemic threat manifested in China and Pakistan. Those threats should not be seen as somehow isolated or separate from each other, but are very much interrelated due to the complex interactions between India and its adversaries. In other words, systemic and sub-systemic actors interact with one another to influence India's strategic environment.

The Chinese threat to India is considered the primary motivation for the Indian nuclear program. More importantly, the framework of Sino-Indian relations in the formative period of India's nuclear program was defined by China's occupation of the Tibet, on India's northern border, in 1950. This greatly alarmed the Indian leadership "in classic geostrategic terms: the large neighbor had extended its reach. Yet newly independent and poor India had few means with which to deal with the changed circumstances."[246] Nevertheless, India had tried, through a policy of constructive engagement, to court the Chinese. Nehru and Chou-En-lai exchanged visits later in 1954 and each leader received warm and enthusiastic welcomes, yet beneath the surface lay the lingering dispute over three regions totaling 50,000 square miles of territory that Chinese maps recorded as Chinese and Indian maps recorded as Indian.[247] The territorial dispute became more apparent in January 1959 when Chou

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[245] Ashok Kapur, *India's Nuclear Option: Atomic Diplomacy and Decision-Making* (New York: Praeger, 1976) , 47.

[246] George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Berkeley: University of California Press, 1999) , 42.

[247] Ibid., 43.

En-lai wrote Nehru to officially claim the disputed three regions for China. This was coupled with the Tibetan rebellion against Chinese rule, which resulted in the flight of the Dalai Lama to India. Indo-Chinese tensions escalated and negotiations were fruitless. In the meantime, China was racing to build atomic weapons and the Soviet Union signed an agreement with China in October 15, 1957 pledging to supply it with a prototype atom bomb.[248]

A turning point in Indian strategic thinking came in the aftermath of the Sino-Indian border war of October 1962. After invading India along the Himalayan border, the Chinese People's Liberation Army routed the ill-equipped and ill-prepared Indian army and came to occupy some 4,000 square miles of territory. The Chinese then declared a unilateral cease-fire after achieving their territorial objectives, thereby humiliating Nehru and the Indian political leadership.[249] Nehru had taken many measures to avoid the conflict with China: "In 1952, he readily ceded India's extraterritorial privileges in Tibet inherited from the British colonial period, and had championed China's entry to the United Nations."[250] The border war "forced Nehru to reappraise his strategy and his most cherished ideals."[251] Moreover, it resulted in a

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[248] Ibid.

[249] Sumit Ganguly, "India's Pathway to Pokhran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program," *International Security* 32 (Spring 1999) http://www.wilsonweb.com

[250] Ibid.

[251] Ibid.

situation where "the country's military weakness was exposed, and the Himalayas no longer were viewed as an impregnable barrier to invasion."[252]

The threat to India's security became more pronounced with the first Chinese nuclear test at Lop Nor on October 16, 1964. This lead to a firestorm of controversy in India as segments of India's political and scientific establishments pushed for the acquisition of nuclear weapons. Sisir Gupta, one of India's ablest diplomats, expressed the concerns of most Indian strategists: "without using its nuclear weapons and without unleashing the kind of war which would be regarded in the West as the crossing of the provocation threshold, China may subject a non-nuclear India to periodic blackmail, weaken its people's spirit of resistance and self-confidence, and thus achieve without a war its major political and military objectives in Asia."[253] Some also argue that "until the detonation of the Chinese nuclear device, India's security requirements had been defined exclusively in terms of conventional weaponry…..Yet the prospect of a neighboring Asian power acquiring nuclear weapons, coming so soon after that country's decisive military victory over India, sparked renewed discussion of India's security….there were widespread calls for India's development of nuclear weapons….Only India's nuclear capabilities could elevate India to a position where it could not be subject to Chinese nuclear coercion."[254] In addition, while leading politicians recognized the value of a

[252] Thayer, "The Causes of Nuclear Proliferation," 492.

[253] Ganguly, "India's Pathway to Pokhran II,"

[254] Thayer, "The Causes of Nuclear Proliferation," 492.

superpower's guarantee to their country's security, they were also afraid that such a guarantee would compromise their country's non-aligned status. In any event, Indian efforts to obtain a superpower's guarantee against China's bomb failed.[255]

The Kashmir dispute is generally considered the primary motivation behind the Indo-Pakistani *nuclear competition* and hence figures high in India's strategic calculations.[256] In fact, some argue that a crisis in Kashmir could trigger a fourth Indo-Pakistani war that might escalate to the nuclear level.[257] Nevertheless, neither India nor Pakistan initially decided to have nuclear weapons because of the *territorial* conflict in Kashmir. However, this does not mean that the overall Pakistani threat to India did not play an important role in India's strategic calculations – a role that seemed to increase over time. In fact, the "history and feature of arms control and non-proliferation in South Asia must be examined in the context of divergent, and apparently non-negotiable conceptions of national security and raison d'etre of the two states and societies….For Indian strategic thinkers, South Asia…..is part of an unstable, volatile neighborhood, and future enmities cannot be fully anticipated."[258]

In this light, the problem of Kashmir could be perceived as "a symbol of the clash between the secular self-perception of much of the Indian elite and communal/religious self-perception of their counterparts in Pakistan. The Kashmir

[255] Frankel, "The Brooding Shadow," 54.

[256] Carranza, "Rethinking Indo-Pakistani Nuclear Relations," 567.

[257] Ibid., 567 ; Carranza mentions that this prediction was made by former CIA Director James Woolsey in a testimony before the Senate Committee on Governmental Affairs, February 24, 1993.

[258] Ashok Kapur, "Nuclear Development of India and Pakistan," 143.

issue, therefore, is not just a bilateral territorial dispute between two neighbors. It is intimately linked to the self-definition of the Indian and Pakistani states."[259] Pakistan's leaders have argued that Pakistan remains "incomplete" without Kashmir because of its predominantly Muslim population and its territorial contiguity. On the other hand, India sought to demonstrate Kashmir's secular status and claimed to hold Kashmir for purposes of "nation-building and national cohesion."[260]

This should also be coupled with Pakistan's relentless quest for nuclear weapons. In fact, Pakistan established its Atomic Energy Commission in 1956. In August 1960, the United States gave Pakistan $350,000 to prepare for a first research reactor. In 1962, Pakistan signed an agreement on nuclear cooperation with France, which in the 1970s would seek to supply Pakistan with a plutonium production reactor and separation plant. This was coupled with Zulfikar Ali Bhutto's appreciation of modern science and technology, and particularly nuclear capability. He began to speak of the need for Pakistani nuclear weapons in 1965 and launched a program to acquire this capability in 1972.[261]

The Indo-Pakistani conflict should be understood in the context of India's foreign policy goals and the role which India has assigned for itself. India perceives itself much as the United States has traditionally perceived itself in relation to the

[259] Ayoob, "Nuclear India and Indian-American Relations," 60.

[260] Sumit Ganguly, "Future Uncertain: Indian Security Policy Approaches the Millenium," *Journal of International Affairs* 51 (Summer 1997): 223.

[261] Perkovich, *India's Nuclear Bomb* , 48.

Americas.[262] In fact, the 'Indira Doctrine' named after Prime Minister Indira Ghandi is a clear manifestation of India's quest for regional hegemony and its self-perception as the strategic and political manager of the Indian subcontinent. The 'Indira Doctrine' stipulates that "India will neither intervene in the domestic affairs of any states in the region, unless requested to do so, nor tolerate such intervention by an outside power; if external assistance is needed to meet an internal crisis, states should look first within the region for help."[263] This is seen as an Indian version of the 'Monroe Doctrine'.[264]

Since their emergence as independent states, India and Pakistan have fought each other in three wars, in 1947-1948, 1965 and 1971. The importance of nuclear weapons becomes clear if one notes the struggle for power between India and Pakistan over the control of the subcontinent. In this regard, India might have seen that its possession of nuclear weapons would play a role in signaling to Pakistan – the regional "spoiler" in India's perceptions[265] – that India is more powerful.

The Pakistani factor in India's nuclear calculations was made clear in the aftermath of the 1965 Indo-Pakistani war in which India was victorious. The Tashkent Declaration of January 10, 1966 was seen by many Indians as a humiliating one that returned to Pakistan the territorial gains made by India during the war. The Soviet-

[262] Ayoob, "Nuclear India and Indian-American Relations," 60.

[263] Ibid., 61.

[264] Ibid.

[265] Ibid.

mediated talks in Tashkent resulted in an agreement that "called for both sides to withdraw their forces to positions held prior to August 5, 1965 and to repatriate prisoners of war. Both sides pledged not to have recourse to force and to settle their disputes through peaceful means."[266] However, the Tashkent Declaration failed to resolve the fundamental problem of Kashmir, stating merely "that Jammu and Kashmir was discussed, and each of the two sides set forth its respective position."[267] George Perkovich writes: "Paradoxically, the victory over Pakistan triggered renewed demands in India for nuclear weapons. The day before the cease-fire took effect, nearly one hundred members of Parliament from multiple parties, including Congress, issued a letter urging the prime minister to decide immediately to develop nuclear weapons."[268]

The Chinese role in the 1965 war was also an important factor in the Indo-Pakistani strategic equation. In fact, many suggest that the Chinese ultimatum to India in 1965 and Pakistani-Chinese collaboration, alarmed the Indians more than the Pakistani threat in its own right.[269] According to Indian defense analyst, K.

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[266] Perkovich, *India's Nuclear Bomb* , 110.

[267] Ibid.

[268] Ibid., 111.

[269] Ibid., 111 and Kotera M. Bhimaya, "Nuclear Deterrence in South Asia: Civil Military Relations and Decision-Making," *Asian Survey* 34 (July 1994). On pp.653, Bhimaya writes: " Following the Sino-Indian war of 1962, Pakistan developed very cordial relations with the PRC. The latter changed its earlier pro-Indian stance on Kashmir, and supported Pakistan's plea in various international fora for the right of self-determination for the Kashmiri people. In the third week of the war in September 1965, when India pulled out a division facing the Chinese and redeployed it along the Pakistani border, China presumably at the instance of Pakistan, served an ultimatum to India to stop all war-like activities along its border or face a full-scale war."

Subrahmanyam, the Chinese threat to India could take a more indirect form: "If China can transfer nuclear and missile technologies to Pakistan and thereby countervail India, there is no need for China to pose a [direct] threat to India…..China's ambition is to replace the U.S. as the primary hegemonic power in Asia and in that perspective China looks at India as a regional player to be offset by Pakistan. This is a very sophisticated Chinese challenge to India and not a crude military threat."[270] The Chinese threat to India was made more apparent in the words of Raju Thomas:

> "The Chinese military ultimatum to India during the Indo-Pakistani war of 1965, and the continuation of the Chinese atomic tests thereafter, reinforced the case of the pro-bomb lobby in India. The basic argument was that, even if Chinese nuclear weapons development was directed mainly against the Soviet Union, there was no guarantee that China would not resort to (perhaps veiled) nuclear blackmail during the times of crisis on the subcontinent. Especially in view of the unexpectedness of the Sino-Indian war of 1962, proponents of the bomb maintained the nuclear contingency should be taken into account in Indian defense preparations: according to this argument, maintaining ten mountain divisions – as India had done since 1963 – may prove to be futile if the conventional threat from the north were to escalate to a nuclear level in future Sino-Indian confrontations."[271]

Hence, Pakistan's ability to "borrow power from external patrons and thus to neutralize to a substantial extent India's inherent superiority in South Asia", was significant in India's strategic calculations.[272] Pakistani nuclear ambitions attracted greater attention after 1980 with growing reports about Pakistan's attempts to achieve nuclear weapons capability. Clandestine Pakistani nuclear weapons activities were highlighted, as were the activities of the scientist, Dr. Abdul Qadeer Khan and his

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[270] T.V.Paul, "The Systemic Bases of India's Challenge," 9.

[271] Raju G. C. Thomas, "India's Nuclear and Space Programs: Defense or Development ?" *World Politics* 38 (January 1986): 324.

[272] Ayoob, "Nuclear India and Indian-American Relations," 61.

'theft' of critical secrets regarding enrichment technology from the Dutch firm of UNRECO.[273] In this regard, Pakistani nuclear aspirations could be traced to Zulfikar Ali Bhutto's statements on nuclear weapons in the mid-1960's and his decision to acquire such weapons in 1972.

The role of the great powers especially that of the United States concerning the enforcement of the non-proliferation treaty was seen by many as posing a strategic threat to India since it did not address India's major security concerns and was seen as encroachment upon India's sovereignty. In fact, Stephen Cohen, commenting on the policies to arrest nuclear proliferation in South Asia, wrote: "Policies which are merely self-serving are self-defeating when they do not address the enlightened self-interest of other states as well."[274] This theme was reiterated several times by many Indian politicians and analysts alike. In an April 18, 1967 meeting between Defense Minister Robert McNamara, the Indian prime minister secretary, L.K. Jha cited the security problem vis-à-vis China as the main reason for India's refusal to sign. Moreover, the then Head of India's Atomic Energy Commission (IAEC), Vikram Sarabhai, maintained that "if the United States and the Soviet Union were not prepared to make nuclear disarmament 'the next step' and if China would not sign the NPT, then India is reluctant to give up the option of building the bomb….the present NPT is not 'salable' in India….the developing international nuclear situation

[273] Aabha Dixit, "Status Quo: Maintaining Nuclear Ambiguity," in *India and the Bomb: Public Opinion and Nuclear Options* ed. David Cortright and Amitabh Mattoo (Notre Dame: University of Notre Dame Press, 1996) , 62.

[274] Stephen P. Cohen, *Nuclear Proliferation in South Asia: The Prospects of Arms Control* (Boulder, Colorado: Westview Press, 1991) cited in Bhimaya, "Nuclear Deterrence in South Asia," 658.

possesses the characteristics of a Greek tragedy in which the actors are drawn inexorably to fates which they are seeking to avoid."[275] As former head of India's Atomic Energy Commission, Raja Ramanna, put it: "These nations chose to ignore the fact that by enforcing non-proliferation, they, along with the advanced nations, were asking us to give up part of our national sovereignty, something which we had won after years of sustained struggle."[276] This was also complicated by the fact that both the United States and the Soviet Union proved unwilling during the 1960's and 1970's to provide any robust nuclear security guarantees to India to reduce its fears from a Chinese nuclear threat.[277]

When the Nuclear Non-Proliferation Treaty was put to a vote on June 12, 1968, India voiced its "nay". Indira Ghandi summed up the situation accordingly saying that "the Parliament and the public do not seem to be ready for India to sign the treaty, no one seems to want it."[278] Indian suspicion towards the great powers was due to the fact that the most intense pressure on behalf of the treaty came from the greatest capitalist powers, the United States, and from India's former colonial master, the United Kingdom. Also, the recent food and rupee devaluation wrangles with the United States deepened India's resentment of the United States and increased its defiance to its dictates. As Homi Sethna put it:

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[275] Perkovich, *India's Nuclear Bomb* , 136-137.

[276] Ibid., 144.

[277] Ibid., 208.

[278] Ibid., 143.

> "There were pressures on India to sign the NPT around 1967…..You see something else had happened recently. We were told [in 1966] to devalue the rupee, which we did. We were told that money would flow once we devalued, and it would all be milk and honey. But money did not flow in. So that was when we became extremely suspicious of the U.S. advice about what was in our interest."[279]

Another watershed event in Indian-American relations was in 1971 when the United States attempted to pressure India through gunboat diplomacy. The deployment of the *USS Enterprise* and nine supporting warships to the Bay of Bengal during the war between India and Pakistan is cited by some Indian polemicists as an example of why India must have a nuclear arsenal of its own.[280] This was done after Prime Minister Ghandi authorized Indian forces to cross the border to pursue Pakistani forces, Kissinger and Nixon took this as reaffirmation that India was the aggressor determined to escalate the conflict in a strategy to disintegrate West Pakistan. The United States on December 2 announced the suspension of military sales to India and later froze economic assistance. On December 10, the battleships were deployed. The heavy-handed role played by Nixon and Kissinger in the 1971 Indo-Pakistani war was interpreted by India as constituting a major strategic threat to its security. Despite the fact that this deployment was not mainly directed against India but was largely an attempt to signal forcefulness to the Soviet Union to prevent it from intervening on India's behalf against a presumed Chinese military assistance to Pakistan, Mrs. Ghandi felt that the United States

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[279] Ibid., 144.

[280] Sumit Ganguly, "Why India Joined The Nuclear Club," *The Bulletin Of The Atomic Scientists* (April 1983): 32 ; Ganguly cites K. Subrahmanyam: "had India possessed nuclear weapons the *USS Enterprise* would not have steamed into the Bay of Bengal…..in what appeared from New Delhi to constitute atomic gunboat diplomacy." K. Subrahmanyam, "India: Keeping the Option Open," in *Nuclear Proliferation: Phase II* ed. Robert M. Lawrence and Joel Larus (Lawrence: University of Kansas Press, 1974), p. 122.

> "had ignored India's basic interests, tried to create parity of strength between India and Pakistan, pumped large-scale armament to Islamabad and fanned the embers of an arms race in the region. It had given considerable economic assistance to India but had always attempted to trade it off for political leverage…..Washington did not look kindly upon strong, independent countries in Asia, did not apparently wish to see the emergence of a strong India."[281]

India's Nuclear Decision-Making

From the previous analysis, one could infer that the reasons for India's nuclear weapons are purely strategic-rational. In other words, India developed nuclear weapons in order to face the burgeoning security threats that it faces from China, Pakistan and the United States. Those countries are seen, in one way or another, to be infringing upon India's national security or national sovereignty, either through posing a direct military threat as the case is with Pakistan and China, or a more implicit threat as exemplified by the United States and its attempts to enforce non-proliferation, its support for Pakistan, or its willingness and demonstrated ability to influence regional conflicts – conflicts which are perceived by India to lie exclusively within its domain. This explanation falls neatly in the realm of "Structural Realism, arguably the most influential theory in the international relations field, [which] predicts or explains that states in an anarchic international environment will seek to maximize their power for self-preservation or,…..their security. If an adversary or adversaries posses nuclear weapons, or appear likely to in the future, a state would be expected to seek nuclear capability to balance that threat in the absence of alternative

[281] Perkovich, *India's Nuclear Bomb* , 167.

means."[282] This would suggest that the main reason for India's capability would be to prevent US infringement on India's national sovereignty as defined by New Delhi and, more importantly, to counterbalance the immediate nuclear threat from China and the expected one from Pakistan.

The security explanation for India's decision to proliferate is quite useful, yet it leaves several questions unanswered. If India's 1974 nuclear test was a response to China's 1964 test, then why did India wait for ten years in order to conduct its own test, when it could have done so much earlier ? In response to this question, some argue that Indira Ghandi was faced with internal unrest and dissatisfaction by 1973-1974. Hence, she decided to conduct those tests in order to restore faith in her leadership and the nation more generally.[283] But then again, why would a nuclear explosion be the means by which a political leader seeks to restore faith in his/her leadership ? More importantly, irrespective of the timing of the nuclear test, what was so compelling about a nuclear explosion that would give a government the popular legitimacy it sought ? What did nuclear weapons represent to India in general and to the Indian elite in particular ? Clearly, the answers to these questions move the focus away from momentary security concerns to the realm of well established, conscious-shaping ideas and norms and their role in the decision-making process.

The intention here is not to suggest that India's nuclear program should be seen as somehow aloof from the security threats that the country faced, but rather that multicausality is behind India's nuclear weapons program. In this light, India's

[282] Ibid., 5.

[283] Abraham, *The Making of the Indian Atomic Bomb* , 16.

nuclear weapons program could be seen also as a result of the presence of pivotal nuclear myth-makers, whose worldviews and contribution to the program made it possible. Besides security reasons, India's decision-makers perceived nuclear weapons as a symbol of the nation's achievement of "scientific-technical prowess and national sovereignty and establish India's membership in the *aristocracy of nuclear states who set the standards of international rank*. India also perceives the U.S.-led nonproliferation regime as a *racist, colonial* project to deny India the fruits of its own labor and the tools of its security."[284] This entails that the security approach must be balanced with the study of the attitudinal prisms of the decision-makers and how they perceived nuclear weapons as symbols of modernity, identity and prestige. In fact, the quest for nuclear power and fascination with atomic energy was a dominant theme among many Indians long before any security threats emerged to drastically alter India's strategic environment.[285] Hence, by illustrating the role played by the subjective perceptions of prominent 'nuclear myth-makers' within the Indian political-scientific elite, one would have relaxed the assumption of the self-interested, rational nation-state inherent in the security model.

Furthermore, bureaucratic politics played also an important role in nuclear decision-making. As key bureaucrats, Homi Bhabha, Vikram Sarabhai, Raja

[284] Perkovich, *India's Nuclear Bomb* , 7.

[285] Abraham, *The Making of the Indian Atomic Bomb* , 28 ; Itty Abraham mentions that in 1948, during the Constituent Assembly debates in India, assembly delegates felt obliged to demonstrate their understanding of science wherever possible, and to articulate its preferred relation to atomic energy and national development. During the debates, some even sought to 'authenticate' atomic energy by suggesting that "our seers and sages, four thousand years ago, perhaps in 2000 BC, said something about atomic energy which scientists today are propounding in 2000 AD."

Ramanna, and Homi Sethna undoubtedly played a pivotal role in nuclear decision-making through their manipulation of the scientific-technological apparatus under their control – the Indian Atomic Energy Commission (IAEC). By shedding light on the role played by bureaucratic actors within the state, the assumption of state unity inherent in the security model would be relaxed.

Decision-making on nuclear issues in India is marred with ambiguity and complexity. No agency or department is solely responsible for coordinating policy formulation on security issues, including the nuclear one. In fact, for the period under research, no *White Paper* has ever been published on India's nuclear policy, nor does there seem to be a secret strategy on which specific policies are conducted.[286] K. Subrahmanyam, a former Secretary of Defense Production in the Indian government, argued that "the absence of strategic tradition has resulted in ad-hocism all around."[287] In an Indo-US academic conference he added:

> "As a consistent advocate of the nuclear option for India during the last quarter of a century and as a person very familiar with the general thinking at the top levels of military and bureaucratic leadership, though not privy to their secrets, I despair whether the India establishment can be persuaded to apply their minds at all to a nuclear strategic policy."[288]

This ambiguity in India's nuclear decision-making makes it extremely difficult for the researcher to precisely identify the turning points in India's nuclear program. Also, India's nuclear position seems contradictory and incoherent. This contradiction stems from the fact that India is known to have been working ambitiously to develop

[286] Mattoo, "India's Nuclear Status Quo," 43.

[287] Ibid.

[288] Ibid.

nuclear weapons, yet surprisingly most of the rhetoric of India's politicians mostly emphasizes themes of non-proliferation and disarmament.[289]

In order to clarify this ambiguity and to make sense out of India's seemingly contradictory nuclear position, several important points should be made concerning India's nuclear policy: First, India's nuclear paradigm is associated with the fact that India should develop *the option* to deploy nuclear weapons. India's nuclear weapons policy should remain "open-ended and ambiguous, offering both the lure of disarmament and the threat of armament. This position satisfied the popular desire that India would one day become a great power *primus inter pares*, while allowing it to limit the costs to the domestic economy and its foreign relations…..Furthermore, it allowed India to pursue nuclear weapons while still claiming the moral high ground."[290] Secondly, India worked to become self-reliant in nuclear-weapon technology by gradually accumulating, mainly through indigenous effort, the capabilities that allow it to assemble an effective nuclear deterrent should the need arise.[291] India's nuclear efforts mainly concentrated on research and development of

[289] For Nehru's statements on the need for nuclear disarmament see Sumit Ganguly, "Why India Joined the Nuclear Club," 30 ; Despite India's nuclear test in 1974 and the fact that most analysts look at India's weapons program as a strategic response to security threats, Indira Ghandi reiterated her opposition to nuclear weapons and said that India "forcefully rejects the concept of nuclear deterrence as repugnant and strategically unworkable." She reiterated in 1983: "we do not believe in the theory of deterrence." Quoted from T.T. Poulose "India's Deterrence Doctrine: A Nehruvian Critique," *The Non-Proliferation Review* 6 (Fall 1998) : 79.

[290] William Walker, "Viewpoint: India's Nuclear Labyrinth," *The Non-Proliferation Review* 4 (Fall 1996) http://cns.miis.edu/pubs/npr/walker41.htm

[291] G.C. Thomas, "India's Nuclear and Space Programs," 321-322 ; Thomas maintains that India's indigenous ability to produce nuclear devices is largely due to the fact that despite its modest economic and industrial base, India has the largest pool of scientists and engineers after the United States and the former Soviet Union. Much of this pool may not be comparable to Western standards, however there is

nuclear devices. Third, India believed that its capacities to produce weapons-grade material should be established outside international safeguards in order to maintain its freedom on nuclear development without international scrutiny or inspection.[292] Hence, when analyzing India's decision to acquire nuclear weapons one must note that that decision was usually an ambiguous one geared towards keeping the option open as opposed to overt weaponization. In other words, decisions concerning the Indian nuclear program in the period between 1947-1974 were directed towards "keeping the option [open], but not developing a deployable nuclear force."[293]

The Cognitive Approach to Decision-Making – Norms, Identity, and Nuclear Weapons

This section will focus on the process of nuclear decision-making as it is related to the attitudinal prisms and worldviews of the nuclear decision-makers themselves. Moreover, it will attempt to link important norms such as science, modernity, and prestige to the worldviews of decision-makers and to see how they shaped the normative essence of the prominent members of the Indian elite. Furthermore, it will seek to illustrate the importance of the beliefs and images of the decision-makers in directing India's nuclear program.

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a core group – especially in the Departments of Atomic Energy and Space – that compares well with the best in the world.

[292] Walker, "India's Nuclear Labyrinth,"

[293] Richard K. Betts, "Incentives for Nuclear Weapons: India, Pakistan, Iran," *Asian Survey* 19 (November 1979) : 1057.

In terms of nuclear decision-making, the worldviews of the Prime Ministers, especially that of Nehru, and the Heads of the Indian Atomic Energy Commission (IAEC), especially that of Homi Bhabha – the founder of India's nuclear program – are undoubtedly the most important. This is largely due to the fact that "in India, the Atomic Energy Department is treated as a sacred cow…..Its nuclear policy and atomic energy program is controlled by a closed circuit of powerful groups of vested interests, comfortably protected by the Atomic Energy Act of 1962. This Act confers total power to initiate plans, execute and regulate everything relating to nuclear activities in India upon a single man – *the Chairman* of the Atomic Energy Commission, who is accountable only to the *Prime Minister*. The Department can refuse public access to any information relating to existing and/or planned nuclear projects."[294]

Even the Ministry of External Affairs, usually considered an important unit in any country's nuclear decision-making, has been particularly wary because the IAEC shares little information with it about the actual state of the country's nuclear program.[295] This closed decision-making process has been criticized as 'scientific and political tsarism' or as a virtual 'nuclear sub-government' where only a handful of decision-makers mattered.[296] In fact, "very few non-scientists other than the Prime Minister know the exact nature of the country's nuclear program."[297]

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[294]Dhirendra Sharma, "India's Nuclear Policy and the Arms Race in the South-East Asian Region," in *On The Brink: Nuclear Proliferation and the Third World* ed. Peter Worsley and Kofi Buenor Hadjor (London ; Third World Communications, 1987) , 223.

[295]Mattoo, "India's Nuclear Status-Quo," 44.

[296] Ibid.

This section will mainly focus on the worldviews of Nehru – the nation's supreme political leader since independence and the Prime Minister from 1947 till his death in 1964, and Homi Bhabha, India's leading nuclear scientist, and Head of the IAEC from its creation in 1948 till his death in 1966.

In order to further conceptualize the important role that decision-makers have on nuclear decisions, one must recognize the effect of leadership transitions on India's program. As Peter Lavoy said: "The nuclear myths of a state's political and military leaders determine whether that state will launch a nuclear weapons program. When those myths change [in this case with leadership transitions], military nuclear behavior also is likely to change."[298] This will be examined briefly at the end of this section by illustrating the impact that the death of Bhabha had on nuclear decision-making and the way in which the views of Vikram Sarabhai, Raja Ramanna and Homi Sethna – subsequent heads of the IAEC – influenced nuclear decision-making in the period between 1966 and 1974 – the year in which India conducted its first nuclear test.

Nehru and Bhabha – The Political Leader Meets the Scientist:

The contribution of both Nehru and Bhabha is extremely important in understanding India's nuclear decision-making since both individuals laid the scientific and political base for the nuclear project to materialize. Ashok Kapur wrote

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[297] Ibid.

[298] Lavoy, "Nuclear Myths," 201.

about India's intragovernmental nuclear debate: "It centered on the official relationship and personal friendship between Indian Prime Minister Nehru and the distinguished scientist, and subsequently first chief of the Indian Atomic Energy Commission, Dr. Homi Bhabha. Up to 1964 these two personalities symbolized the two facets of India's disarmament and security policies."[299]

Nehru - The Political Leader:

Nehru's thinking on nuclear matters is quite ambiguous. His rejection of 'absolute power' and his willingness to accept 'relative power', left unanswered the exact meaning, the nature, of the latter. It indicated however, that "Nehru is not a peacenik as is sometimes imagined."[300] Nehru rejected the view that absolute military power counted, and this seemed to underlie his view of India's position vis-à-vis the superpowers and China. He never took the view that the superpowers could perform better just because of their superior strategic capabilities. However, at the same time, he "did not regard influence-building activity as simply a product of 'talk' – of expressing moral concerns – unless this was accompanied by material strength."[301] In his far-ranging speech to the Indian Parliament on February 15, 1955, Nehru expressed the need for a 'materially' strong India:

> "We feel, in so far as international policy is concerned, that right and wrong counts. But it is not the righteousness of a proposition that makes it listened to but rather the *person or the country which says so and the strength behind that country*…..In this nuclear age

[299] Kapur, *India's Nuclear Option* , 122.

[300] Ibid., 96.

[301] Ibid., 97.

> the only countries that count from the point of view of nuclear war, are those countries which are, unfortunately, in a position to use these bombs."[302]

While Nehru preferred that security policies be pursued through the development of proper policies and diplomatic means, a connection between diplomacy and military force was also made.[303] More importantly concerning the nuclear question, the use of force as a last resort was permissible "particularly if force is used to alter discrimination against the have-nots and protect Indian interests."[304] For Nehru, not only because a policy is morally "right" or "wrong" it should be endorsed, rather what mattered was the strategic utility of that policy as it relates to national policy goals. In this connection the difference between Nehru's and Ghandi's thinking could be illustrated – to quote Nehru:

> "…..but for us and for the National Congress as a whole, the non-violent method was not, and could not be a religion or an unchallenged creed or dogma. It could only be a policy and a method promising certain results, and by these results it would have to be finally judged."[305]

Within Nehru's worldview, the *atom* occupied a preeminent position as a sign of a new era of human civilization. Furthermore, India's weakness and its susceptibility to colonialism was, according to him, a product of its lack of technological sophistication: "But we are on the verge I think of a tremendous development in some direction of the human race. Consider the past few hundred

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[302] Ibid., 55.

[303] Ibid., 53.

[304] Ibid.

[305] Ibid.

years of human history: the world developed a new source of power, that is steam – the steam engine and the like – and the industrial age came in. India with all her many virtues did not develop that source of power. *It became a backward country because of that*…..But an enormous new power came in. Now we are facing the atomic age; we are on the verge of it. And this is something infinitely more powerful than either steam or electricity."[306] In this regard, one could see how, in Nehru's worldview, nuclear power became synonymous with prestige, technological advancement and freedom from colonialism – part of the post-colonial project intended to bring India back to the forefront.

Moreover, Nehru spoke of "the relationship between science and development, and of atomic energy to war using the term 'science' in two very different ways but consistent with the larger objectives of the post-colonial project."[307] On one hand, he urged the scientists to think in terms of the larger community and to put their energies for the general purposes of national development: "So science must think in terms of the 400 million people in India….it is because we forget the scientific approach that many of our troubles arise."[308]

However, even as Nehru hoped for the peaceful use of nuclear energy for national development, the association of war and science was never far from his mind: "I know how difficult it is for a line to be drawn between scientific work for

[306] Abraham, *The Making of the Indian Atomic Bomb* , 28.

[307] Ibid., 46.

[308] Ibid., 46-47.

peace and war. This great force that has suddenly come about through scientific research may be used for war and may be used for peace. We cannot neglect it because it may be used for war…..we shall develop it."[309] On another occasion, Nehru highlighted his willingness to use nuclear energy for war: "Of course if we are compelled to use atomic energy for other purposes, possibly no pious sentiments of any of us will stop the nation from using it that way. But I do hope that our outlook in regard to this atomic energy is going to be a peaceful one…..and not one of war and hatred."[310]

By the time of the Constituent Assembly Debates on Atomic Energy (1948), the public association of atomic energy and national defense was so strong that Nehru could not begin his introductory speech but by noting that congruence. Itty Ibraham writes: "The atomic bombs that had forced Japan to surrender and ended the Second World War just a few years before had left a powerful impression on the minds of the nationalist leaders, reinforcing the power of science for state ends, and India's own shortcomings in this regard."[311] Nehru wrote to the Cabinet as early as 1946: "Modern defense and modern industry require scientific research both on a broad scale and in highly specialized ways. If India has not got qualified scientists and up-to-date scientific institutions in large numbers, it must remain a weak country incapable of playing a primary part in a war." The note goes on to argue that the state

[309] Ibid., 47.

[310] Ibid., 49.

[311] Ibid., 48.

should set up both a scientific manpower committee ('the broad scale') and an Atomic Energy Commission ('highly specialized ways').[312]

Hence, one could infer from Nehru's early speeches and actions that India's nuclear program had a military component from the moment of its inception. This was clear when Nehru, in 1948, introduced before the Constituent Assembly an Atomic Energy Act to create an Atomic Energy Commission and the legal framework for its operation. The act was modeled on the British Atomic Energy Act but imposed even greater secrecy calling for research and development of atomic energy in complete secrecy and established state ownership of all relevant raw materials, particularly uranium and thorium.[313] The Assembly engaged in a debate on the secret nature of the project and the need for such a rigid state monopoly when the project's declared ambitions was to provide for the peaceful uses of atomic energy. The Act's only forceful critic, Krishnamurthy Rao, questioned Nehru: "May I know if secrecy is insisted upon even for research for peaceful purposes ? In the Bill passed in the United Kingdom secrecy is restricted only for defense purposes." Nehru's intentions for a dual-purposed nuclear project was made clear when he replied: "I do not know how you are to distinguish between the two [peaceful and military]."[314]

Bhabha - The Scientist:

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[312] Ibid., 49.

[313] Perkovich, *India's Nuclear Bomb* , 18.

[314] Ibid., 19.

Both Nehru and Bhabha shared almost identical views on nuclear energy. They both shared a considerable fascination with nuclear energy for overall national development and also recognized the political value of nuclear weapons.[315] Bhabha, like Nehru, whom he first met in 1937, "accepted the looming view that mastery over the energy potential in the atomic nucleus represented the apogee of science. The colonial British regime had purposely retarded Indian industrial development, but Nehru and Bhabha envisioned that Indian science would overcome this legacy and achieve the highest symbols of modernity."[316]

However, while Nehru reflected openly his mistrust of superpower-directed international security regimes and advocated a balanced and controlled nuclear disarmament, Bhabha mistrusted both superpowers and disarmament as a strategy.[317] Bhabha was the scion of a wealthy Parsi family, a person who is known, like Nehru, to have combined Western tastes and attitudes with a nationalistic determination to raise India's rank in the world.[318] The two men shared similar backgrounds and enjoyed good rapport: "both were born to wealth and influence, Cambridge educated, connoisseurs of culture, and world-class in knowledge, ability and outlook. Bhabha, a lifelong bachelor, and Nehru, a widower, devoted their time and energies to achievement with few distractions. In many ways, the Nehru-Bhabha relationship

[315] Kapur, *India's Nuclear Option* , 122.

[316] Perkovich, *India's Nuclear Bomb* , 17.

[317] Kapur, *India's Nuclear Option* , 122.

[318] Perkovich, *India's Nuclear Bomb* , 16.

constituted the only potentially real mechanism to check and balance the nuclear program. Yet, rather than being watchful and balancing, the relationship appears to have been friendly and symbiotic."[319] In fact, Bhabha seemed to have been the scientific counterpart of Nehru – the politician. Perkovich writes about Bhabha:

> "He favored Western dress, enjoyed deep friendships with leading British and continental European scientists and partook of Viennese Opera whenever he could. At the same time he negotiated defiantly and confidently with Western representatives to overcome the legacy of colonialism and elevate Indian science to the world stage. As a former protégé in the Atomic Energy Commission recalled: 'Bhabha displayed none of the diffidence that many Indians felt in front of White men. This was inspiring to many of us.'"[320]

Bhabha was known to have favored the nuclear option and firmly believed in nuclear weapons and their essential role in achieving national security. In a far-reaching presentation to the 12th Pugwash Conference on Science and World Affairs held in India in January 27- February 1, 1964, Bhabha maintained that "to achieve *absolute deterrence* it was essential to have nuclear weapons; if one had them, the other side's overkill capacity did not matter. Second, with conventional weapons, it was only possible to acquire a position of *relative deterrence*."[321] Furthermore, to quote Bhabha: "If two countries, one possessing nuclear weapons and the other without them, were to be permitted to fight out a war by themselves without any intervention by third parties, the possession of nuclear weapons might be decisive."[322]

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[319] Ibid., 21.

[320] Ibid., 16.

[321] Kapur, *India's Nuclear Option* , 170-171.

[322] Ibid., 171.

Bhabha's central role in the genesis and growth of India's civil and military nuclear program, enabled him to occupy the most preeminent position among India's nuclear decision-makers. In fact, Mitchell Reiss argued that the responsibility "for India's nuclear development can be traced to one individual, Homi Bhabha."[323] From the initial acquisition of research reactors, to the initial deployment of a Canadian-built reactor, to the development of a plutonium processing plant in Trombay, Bhabha's role was manifested.[324] Furthermore, his well-timed interventions helped to produce the atomic bomb. He is known to have persuaded Prime Minister Shastri to approve work on a nuclear weapons option sometime during 1965. Immediately after learning from the United States of the imminence of the Chinese nuclear test in 1964, Bhabha called for a press conference to announce "India's ability to produce a nuclear bomb in eighteen months" adding that China's nuclear capability demanded a commensurate Indian response.[325] Days later, he challenged the economic argument against the nuclear bombs. Citing figures produced at the Third International Conference on the Peaceful Uses of Atomic Energy, Bhabha claimed that a 10 kiloton bomb would cost $368,000 and a two megaton bomb would cost $680,000, adding that "atomic explosives were some twenty times cheaper than conventional explosives."[326]

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[323] Thayer, "The Causes of Nuclear Proliferation," 477 – originally quoted from Mitchell Reiss, *Without the Bomb: The Politics of Nuclear Nonproliferation* (New York: Columbia UP, 1988) , 217.

[324] Ibid.

[325] Lavoy, "Nuclear Myths," 201.

[326] Ibid., 210.

Nevertheless, the critical period after the death of Nehru in 1964 was marred by a great deal of ambiguity as to what the Indian nuclear and political establishment was doing. As politicians throughout India pressed the case for building the bomb, Prime Minister Shastri is known to have been against producing the bomb. In the Lok Sabha debate after the Chinese nuclear test in 1964, Shastri responded: "We have to consider the question from a practical angle. What will we gain by manufacturing the atomic bomb; how far it would be able to increase our strength…..and what burden will it impose on the country ?"[327] He further responded to a written query in the Lok Sabha by declaring that "despite the continued threat from China…..the government has continued to adhere to the decision not to go in for nuclear weapons but to work for their elimination instead."[328]

During the same period, in an article based on an interview with Bhabha, the *New York Times* journalist Anthony Lukas reported rumors that "Prime Minister Shastri may have given the nuclear agency permission to work up to a point about three months short of exploding a device, after which it would have to halt and await a political decision before completing the rest of the work."[329] In this interview, however, Bhabha said that "we are still 18 months away from exploding either a bomb or a device for peaceful purposes and we are doing nothing to reduce that

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[327] Frank E. Couper, "Indian Party Conflict on the Issue of Nuclear Weapons," *The Journal of Developing Areas* 3 (January 1969): 192.

[328] Perkovich, *India's Nuclear Bomb* , 111.

[329] Ibid. – Taken from Anthony Lukas, "India Rules Out Secret Atomic Test," *New York Times* 30 November, 1965.

period." Perkovich interprets comments made by Bhabha and Lukas as an affirmation that Bhabha had been authorized to work on a nuclear explosion and that the delay in producing it was "not due to policy but unmet technological requirements."[330] Kapur also seems to reaffirm this view by suggesting that Bhabha seemed to have won over both L.K. Jha, Shastri's principle secretary, and Shastri himself.[331] In November 1965, Bhabha put forward a note on a need for a subterranean nuclear explosion project (SNEP). In December, Shastri approved the proposal, allowing research to be undertaken up to a point "where, once the go-ahead signal was given, it would take three months to have the explosion."[332] Shastri's decision could be seen as a compromise with the pro-bomb members of the Congress party and the IAEC leadership.[333]

However, in 1966, both Shastri and Bhabha died. This led to important leadership transitions with Indira Ghandi assuming the position of Prime Minister. Vikram Sarabhai was chosen by Ghandi as the Head of the Atomic Energy Commission in succession to Bhabha. The importance of the worldviews of decision-makers becomes very important in this regard, because Sarabhai vehemently opposed the development of nuclear weapons, neglecting the political and psychological boost that the detonation of a nuclear explosion would have, and ordered a halt to all

[330] Ibid., 112.

[331] Kapur, *India's Nuclear Option* , 194.

[332] Ibid.

[333] Sagan, "Why Do States Build Nuclear Weapons ?," 66.

research on SPNE. In his first press conference after taking charge of the nuclear establishment, Sarabhai sought to devalue the putative benefits of nuclear weapons for India:

> "I would like to emphasize that security can be endangered not only from outside but also from within. If you do not maintain the rate of progress of the economic development of the nation, I would suggest that you would face a most serious crisis, something that might disintegrate India as we know it…..If you want to rely on the atomic bomb for safeguarding your security….this is not achieved by exploding a bomb. It means a total defense system, a means of delivery….you have to think in terms of long range missiles, radars, a high state of electronics, a high state of metallurgical and industrial base…It requires a total commitment of national resources of a most stupendous magnitude…..I think India should view this whole question in relation to the sacrifice it is willing to make, viewing it in its totality. I fully agree with the Prime Minister…..when she says that an atomic bomb explosion will not help our security. I fully share this feeling."[334]

Sarabhai's actions and statements marked a total deviation from Bhabha's stance on nuclear weapons. Many leading scientists and staunch pro-bomb advocates in the IAEC, such as senior members Raja Ramanna and Homi Sethna, opposed Sarabhai's actions. Both nuclear advocates maintained that Sarabhai's decision was due to his "fundamental distaste towards nuclear weapons," and Ramanna suggested that Sarabhai's decisions were done without the full knowledge of Mrs. Ghandi: "When Mrs. Ghandi came to BARC (the Atomic Energy Establishment) she saw things, we showed her around, but she may not have understood what was going on."[335] With the death of Sarabhai at the end of 1971, and with Homi Sethna's assumption of the leadership of the IAEC, India's nuclear weapons program was set back on track and work on the subterranean peaceful nuclear explosion (SPNE) commenced undisturbed. As Ramanna put it: "After Vikram Sarabhai's death in

[334] Perkovich, *India's Nuclear Bomb* , 121.

[335] Ibid., 123.

1971, India began to seriously consider conducting a Peaceful Nuclear Explosion."[336] Concerning the 1974 decision to detonate the nuclear device, no "authoritative public chronology exists of Indian decision-making regarding the 1974 explosion. Indeed, according to two of the few officials who participated in the decision-making process, written records of policy deliberations were not kept."[337] In an interview, Chairman of the Atomic Energy Commission explained: "there was not a scrap of paper on it."[338]

Bureaucratic Politics & India's Nuclear Decision-Making

The previous section attempted to illustrate the role that the worldview and general input of India's nuclear decision-makers had on the country's nuclear program. However, one must also consider the fact that the leaders of India's Atomic Energy Commission are not only behaving according to their attitudinal prisms but also in their position as leaders of key scientific establishments. In this regard, one could view Bhabha's relentless attempts for the development of nuclear weapons by deploying various tactics, from the encouragement of extreme perceptions of foreign threats to the propagation of excessively optimistic cost estimates, as an attempt to

[336] Ibid., 160.

[337] Ibid., 170.

[338] Ibid.

increase dependence on his organization and to keep money and prestige flowing to his scientific establishment.[339]

In fact, in order to illustrate that bureaucratic interests played some role, Abraham mentions that the excessive attention and funding given to the atomic energy program had "raised the ire of Indian scientists excluded from this cash cow, some of whom were well known and powerful enough potentially to cast doubt on the whole enterprise."[340] This was clearly the case with the Palit Professor of Physics at Calcutta University, Meghnad Saha, whose relationship with Nehru predated that of Bhabha by more than a decade. Moreover, his position as member of National Planning Committee in pre-independence India, supposedly gave him more influence than Bhabha.[341] Furthermore, at the time of Bhabha's return to India during the Second World War and the consolidation of close ties between Bhabha and Nehru, the Indian physics community had split into two factions: the 'Calcutta-Allahabad' axis dominated by Saha and his students, and the Bangalore group, lead by Nobel Laureate C.V.Raman. Saha's dislike for Raman would soon extend to Bhabha due to the latter's close rapport with Nehru. Saha had become "the most vocal critic of the IAEC's activities as soon as he realized that he would be excluded from the country's atomic energy institution."[342] Eventually however, Nehru and Bhabha managed to

[339] Sagan, "Why Do States Build Nuclear Weapons ?," 64-66.

[340] Abraham, *The Making of India's Atomic Bomb* , 72.

[341] Ibid.

[342] Ibid., 73.

diffuse public criticism and went on to develop India's nuclear infrastructure shielding it from public scrutiny whenever they can. This came as a serious blow to Saha as his institute, the Institute for Nuclear Physics in Calcutta, which was eventually marginalized.[343]

Another instance that could be explained by bureaucratic theory is the position of the Indian military on nuclear weapons. The military establishment was excluded from the national security decision-making process in India. This was due to the fact that India's early leaders, fearing the potential of military coups influenced by the British legacy, worked to subordinate the military to civilian rule.[344] Nevertheless, the Indian military, has shown very little enthusiasm for nuclear weapons in the first place. This was basically due to the "simple fear that a nuclear weapons program would mushroom into something costly, drawing funds from conventional weapons which for the moment seem more urgent."[345] The opinion of the Indian military, albeit uninfluential, implies that it was sensitive to bureaucratic concerns manifested in budget allocations.

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[343] Ibid., 74-75.

[344] Perkovich, *India's Nuclear Bomb* , 10.

[345] Kapur, *India's Nuclear Option* , 147.

Conclusions

The Indian case of proliferation is quite intriguing because it tends to complicate our understanding of the reasons behind key nuclear decisions. Moreover, it tends to challenge the conventional wisdom on proliferation which argues that proliferation is solely caused by security threats. This chapter reflected that multicausality as opposed to security threats on their own, have pushed India down the nuclear track. In this regard, the security framework that has been employed in this chapter suggested that India's decision to 'go nuclear' was a reaction to systemic and sub-systemic threats. In other words, the Indian decision to proliferate was due to the Chinese threat manifested in border incursions and nuclear tests, the Pakistani threat which was reflected in its leading role in the Kashmir insurgency, its relentless quest for nuclear weapons, and its collaboration with China. Furthermore, the Indian nuclear program sought to address, what New Delhi perceived as American encroachment on its sovereignty manifested in its biased proliferation policies and its intervention in regional conflicts.

Despite the role of the security perspective in linking India's decision to the strategic environment in which it operates, it seems that those previously mentioned security threats served only as catalysts to already existing pro-bomb trends among the prominent members of the Indian elite. This is evidenced by the fact that long before India faced any overwhelming security threat, both Bhabha and Nehru thought of the dual-uses of nuclear energy – i.e. for peace and war. Furthermore, there was no consensus within the Indian elite on whether a bomb should be built or not. Surely, the accumulation of security threats tended to increase the number of pro-bomb advocates within the Indian elite. Nevertheless, if it was not for Bhabha's well-timed

interventions and Nehru's approval it is very unlikely that India would have been able to pursue its nuclear dreams.

In this regard, the cognitive 'lens' seems the most useful in explaining India's decision to proliferate. This is due to its ability to link India's decision to proliferate with its domestic environment by examining the worldviews of its key decision-makers which is of profound importance for understanding Indian nuclear politics. Moreover, the cognitive approach to decision-making was able to add *dynamism* to the *static* security explanation, by enabling one to map India's progress on the nuclear field over time through the examination of leadership transitions and the effect of different worldviews on India's nuclear developments. This chapter has clearly illustrated that the death of both Bhabha and Nehru and the rise of anti-bomb elites such as Sarabhai and Shastri dealt a serious blow to India's nuclear program. However, Ghandi's assumption of premiership along with Ramanna and Sethna, as pro-bomb heads of the IAEC, lead to the revitalization of India's nuclear program and eventually gave way to the PNE of 1974. In addition, the cognitive approach shed light on important normative issues such as 'prestige' and 'science' and related them to the worldviews of decision-makers. In this light, the Indian nuclear program could be seen not only as a response to security threats but also as the ultimate culmination of elite identification of nuclear weapons as symbols of post-colonial modernity and successful state-building.

The bureaucratic approach adds to our understanding of the Indian case, through its ability to further open the 'black-box' of the nation-state by allowing one to investigate *institutional* conflicts that took place in India's nuclear politics. It also served another important function which is to put decision-makers within their proper

institutional framework and recognized that they had their own bureaucratic and personal incentives. In this regard, Bhabha's ability to overcome bureaucratic dissent and override his scientific opponents proved critical to the initiation of India's nuclear weapons program. In fact, some cite Bhabha's widely optimistic claims that India could develop the bomb in 18 months and that an arsenal of 50 atomic bombs would cost less than $21 million, as evidence of his interest in furthering the bureaucratic interests of his organization.[346] On balance, however, it seems that the worldviews of heads of the IAEC, had much more effect on their decisions in comparison to their bureaucratic and personal concerns. For example, despite bureaucratic theory's assumption that decision-makers will tend to take decisions that will increase dependence on their institution, due to his personal anti-bomb sentiments (and not his institutional interests), Vikram Sarabhai, as head of IAEC, worked to slow down India's progress in the nuclear field.

[346] Sagan, "Why Do States Build Nuclear Weapons?," 66.

CHAPTER 4

CONCLUSIONS

This thesis was an attempt to understand the reasons behind Israel and India's decision to acquire nuclear weapons and their preferred nuclear strategies. Moreover, it sought to "theorize" the largely descriptive, but undertheorized literature on those two proliferation cases, by employing several "levels of analysis" and hence more accurately conceptualize the process of nuclear decision-making in Israel and India. In essence, this research through its multivariate analysis and conceptual rigor, sought to address some of the major problems of proliferation literature as Peter Lavoy put it:

> "More problematic than the lack of reliable information about new and emerging nuclear-weapon states, however, is the dearth of carefully specified explanations of nuclear proliferation. The existing literature on the sources of proliferation is more rich than rigorous. Even the best case studies produce few enduring insights into general proliferation patterns…..Predictive and explanatory models, however, cannot be constructed through induction alone; there are too many variables that can influence the process of arms acquisition."[347]

The multilevel analysis employed, emphasized the importance of security concerns within the context of each state's threat perceptions and stressed on the need for complementing the security approach with two other decision-making models ; the cognitive approach with its emphasis on attitudinal prisms and worldviews of decision-makers in relation to important normative constructs such as "prestige" and "science"; and the bureaucratic perspective with its emphasis on institutional in-fighting and power-seeking bureaucrats.

[347] Lavoy, "Nuclear Myths," 193.

The intention of this multilevel approach was to reduce the recurrent tendency to emphasize security motives at the expense of other variables, by illustrating the merits of other approaches and how each approach explained a portion of reality which the other one failed to explain. Consequently, a more comprehensive outlook was achieved and a much more detailed picture emerged for the reasons for nuclear proliferation and the dynamics of nuclear decision-making. Moreover, this innovative approach helped to bridge the gap between international relations and foreign policy decision-making by illustrating the necessity of having both work side by side to further our empirical endeavors.

After studying each case study separately, this chapter will serve an integrative utility by comparing the Israeli and Indian cases of nuclear proliferation. This comparative analysis will take place on both a conceptual level, in relation to the theoretical models employed, and on an empirical level, as it relates to the particular details of each case study. Finally, the Israeli and Indian cases of proliferation will be compared to other cases of Third World proliferation and non-proliferation in order to ascertain whether those two cases are "generalizable" or not.

The Israeli and Indian cases of proliferation, suggest that security was, to different degrees, a necessary but insufficient cause for proliferation to occur. A multitude of factors entered into the nuclear politics of both countries and ultimately culminated in a situation where the decision to "go nuclear" was an outcome of several variables all of which contributed, in one way or another, to that ultimate decision. The degree each factor influenced the nuclear decision in any country is largely related to the domestic and systemic environment within which each country found itself. In the case of Israel, security was much more of an important factor in its

decision to develop nuclear weapons than India. This is due to the former's overwhelming and pervasive sense of insecurity manifested in the prospect of annihilation that it has faced since it was first implanted in the Middle East. On the other hand, India was also faced with innumerable security threats from the US, China and Pakistan, but those threats did not directly threaten the physical survival of India or present it with the specter of annihilation. This illustrates that the security factor in nuclear proliferation becomes more predominant when states face severe security threats that seemingly cannot be addressed without nuclear weapons. Israel sought to end the threat of annihilation which it faced and impose its acceptance on its Arab neighbors. The lack of an overwhelming security threat to India, gave way to a situation where the psychological predispositions of its chief 'nuclear myth-makers' played a more predominant role in nuclear politics. Pro-bomb advocates such as Bhabha, Ramanna, Sethna and Nehru played crucial roles, since their dedication and relentless efforts to make the nuclear project work, eventually proved critical amidst a divided Indian elite.[348] Hence, in the Indian case, one could think of security as a secondary factor, acting as a 'catalyst' and serving to bolster already existing pro-nuclear trends among that country's scientific-political elite – trends that were part of that country's drive for post-colonial modernity and emerged long before any security threats materialized.

On the other hand, the predominance of the security factor in the Israel case, lead to the emergence of a near-consensus among the Israeli elite on the issue of

[348] Despite the fact that India's nuclear decision-making is extremely secretive and involves very few people, an interesting debate took place only once in India on the issue of nuclear weapons. This was in the aftermath of the Chinese test in 1964. See Frank E. Couper, "Indian Party Conflict on the Issue of Atomic Weapons," *The Journal of Developing Areas* 3 (January 1969) : 191-206.

'keeping the nuclear option open'. This was an asset for their nuclear advocates, since they managed to overcome internal dissent with relative ease in comparison to their Indian counterparts. However, there is no doubt that the development of Israel's nuclear weapons owes much to the presence of well-positioned nuclear advocates such as Ben-Gurion, Perez, Bergmann, and Dayan who manipulated Israel's domestic and international situation for their purposes. In fact, the nuclear advocates in Israel were essential in nuclear myth-making – the portrayal of nuclear weapons as the only guaranteed and ultimate means of security. Hence, nuclear advocates were responsible in pushing the program forward to become an actual reality. One must note that members of the *conventional school* in Israeli politics argued for reliance on conventional weapons and did not act to obstruct the nuclear project in any significant way nor did they encourage it either. Consequently, had all of Israel's scientific-political elites been conventionalists, Israel's weapons program might never have been established.

The role of bureaucratic politics was very important in both the Indian and Israeli cases of proliferation. In fact, the bureaucratic model of decision-making worked to put decision-makers within their institutional context and illustrate the pulling and hauling which is characteristic of bureaucratic politics. In both cases, chief bureaucrats residing over key scientific establishments played a major role in the decision to build nuclear weapons by pacifying their bureaucratic opponents and overcoming their dissent. In this regard, the roles of Homi Bhabha of India and Ernest David Bergmann of Israel were of extreme importance in terms of their ability to monopolize the scientific institutions necessary for producing the bomb.

However, according to bureaucratic theory, decision-makers pursue policies that increase dependence on their organizations. Nevertheless, one could find chief bureaucrats pursuing policies that reflect their own personal predispositions and ideosyncracies and not necessarily the mainstream interests of their organization. For instance, despite the Israeli military's known preference for reliance on conventional weapons, Moshe Dayan moved his country's nuclear program from an unexercised option to an actual 'bomb in the basement' during his position as Minister of Defense in Golda Meir's cabinet.[349] In some other instances, bureaucrats occupying the same position might pursue different policies due to their different worldviews. When Vikram Sarabhai was head of the IAEC, India's nuclear program stalled due to his personal disdain for nuclear weapons. However, when pro-bomb advocates such as Bhabha, Sethna, or Ramanna occupied the same position, India's nuclear program was furthered. Hence, it is safe to say that in both countries, in terms of the reasons for nuclear proliferation, bureaucratic politics were much less important than security or cognitive factors.

In terms of nuclear decision-making, both countries reflect a very tight decision-making structure that involves a very small number of decision-makers who take their decisions in secret. In both cases, the role of the Prime Minister and the Head of the Atomic Energy Commission were of utmost importance. In this sense, one could speak of an elitist decision-making structure that operates in the form of a "government within a government".

For the period under study, both India and Israel chose opacity as their preferred nuclear posture. This illustrates sensitivity to international pressures lead by

[349] Bar-Joseph, "The Hidden Debate," 215.

the superpowers to limit proliferation and awareness of the biases inherent in the international system towards new proliferators. However, whereas Israel has maintained this posture to date, India has adopted a more overt nuclear posture which became apparent in the aftermath of its PNE of 1974 and again recently in the tests which took place in May 1998. Indian nuclear testing is largely due to the 'prestige' factor which is much more prevalent in its case of proliferation, as opposed to that of Israel in which such a factor is absent. This factor was clear in the worldview of India's chief decision-makers who saw nuclear weapons as prestigious tools of national security and symbols of modernity and successful post-colonial state building. Moreover, an Israeli public display of nuclear prowess manifested in an overt posture or a nuclear test might have jeopardized its security by encouraging a number of its larger neighboring Arab and Muslim states to seek nuclear weapons as a result of an increased domestic pressure on their regimes to build such weapons. In this regard, Israel's posture of 'deterrence through ambiguity' and opaque proliferation proved very useful.

The security model was very useful in explaining the multitude of purposes that Israel's nuclear weapons could be used for. In fact, for the period under study, Israel demonstrated an elaborate understanding of the specific strategic utilities of nuclear weapons and contemplated a wide range of nuclear strategies. As previously mentioned, Israeli strategists contemplated the use of nuclear weapons for compellence, deterrence (proportionate and cumulative), war-making (using tactical nuclear weapons on the battlefield or large scale nuclear attacks on population centers), or securing political benefits in negotiations by playing the nuclear card. On the other hand, in the Indian case, there was no elaborate identification of specific

nuclear strategies and a great deal of 'ad-hoc' strategic thinking that mostly circulated around the 'prestige' of acquiring nuclear weapons and conducting nuclear tests. In fact, throughout the period under study, India adopted a form of 'crude deterrence' and still had not developed a military strategy or operational plans for nuclear weapons.[350] This situation changed as late as 1985 when Rajiv Ghandi first formed a small group, including Ramanna and K. Subrahmanyam, to consider India's defense planning needs.[351] In essence, the cognitive model was very useful in accounting for the ad-hocism centered around prestige that was characteristic of India's strategic thinking. Moreover, this pattern of strategic thinking coincides with the worldview of pro-bomb advocates in India – those who saw India's nuclear weapons as serving a prestige function. In fact, the prestige factor in India's nuclear testing and the country's lack of a well-established strategic doctrine with regards to the specific uses of nuclear weapons was both recognized and criticized by the anti-bomb leader of the IAEC, Vikram Sarabhai: "those who have studied military strategy would also agree that paper tigers do not provide security…..if you want to rely on the atomic bomb for safeguarding your security in the sense that say the US or the USSR have got, a series of balanced deterrents; this is not achieved by exploding the bomb."[352]

On a normative level, it seemed clear that the desire for 'scientific achievement' played an important role in the worldview of both Israeli and Indian

[350] Perkovich, *India's Nuclear Bomb* , 272.

[351] Ibid., 273.

[352] Ibid., 121.

decision-makers. This perception of nuclear weapons as possessing some intrinsic normative significance, could be the result of what Martha Finnemore and Kathryn Sikkink call, the diffusion of "prominence norms" in the international system.[353] In other words, "norms held by states widely viewed as successful" are likely to diffuse internationally and act as models for emulation by other states. Israel and India saw the West as technologically and scientifically advanced and one of the ultimate manifestations of this was their possession of nuclear weapons. Hence, for the chief decision-makers in both states, it was science that brought the West to its current stage of development and therefore they worked to emulate this scientific achievement by manufacturing nuclear weapons for themselves. For example, Ben-Gurion referred to the atomic revolution as "an unprecedented transformation of the history of civilization," and in relation to American achievement in the nuclear field, he suggested that "what Einstein, Oppenheimer and Teller…..made for the United States, could also be done by scientists in Israel."[354] The perception of science as synonymous to post-colonial modernity was also clear in Nehru's worldview: "I firmly believe that is through the method and spirit of science that we can ultimately solve our problems."[355] For Nehru, "India became colonized because of its lack of technological sophistication."[356]

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[353] Finnemore and Skinik, "International Norm Dynamics," 906.

[354] Cohen, *Israel and the Bomb* , 11-12.

[355] Abraham, *The Making of the Indian Atomic Bomb* , 46.

[356] Ibid., 29.

On the other hand, the Indians added another normative component to nuclear weapons by not only thinking of them as representing the hallmark of scientific achievement but also referring to them as tools of much-needed prestige after a long colonial heritage – a feature which was absent in the Israeli case. It is noted that when India conducted its nuclear test in 1974, the *Indian Express* reported that "India's nuclear blast has catapulted her into the front rank of nations. No longer is she dismissed as a 'pitiful giant'."[357] The *Economic Times* recorded that the Indian people now felt 'inches taller'.[358] While India needed a demonstration of prestige by detonating a nuclear device, Israeli decision-makers did not contemplate such a necessity in their nuclear calculations. Note Ben-Gurion's statement in this regard: "No other people is superior to us in its intellectual prowess."[359]

In relation to other cases of proliferation and non-proliferation in the Third World, the Indian and Israeli cases and the theoretical models associated with them are very instructive. In fact, both cases can provide a tentative typology with which to judge the relative weight of security, cognitive, and bureaucratic factors in the movement towards nuclear proliferation in other developing countries. First, in order to assess the reasons for nuclear proliferation in any given country, an understanding of the strategic threats that are faced by that country must be established. Second, an examination of the time and sequence in which those countries developed nuclear

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[357] Perkovich, *India's Nuclear Bomb* , 179.

[358] Ibid.

[359] Cohen, *Israel and the Bomb* , 10.

weapons and how that relates to their strategic threat perceptions is of extreme importance. In other words, did the country in question embark upon a nuclear weapons program before or after its security was seriously challenged? The Indian case illustrated that when countries start to think of nuclear weapons before serious strategic threats have mushroomed, this entails that 'nuclear myth-making' and the quest for prestige are supreme. Third, one must also look at elite divisiveness on the issue of nuclear weapons within the decision-making structure. As the case of Israel suggested, the relative cohesiveness of the political-scientific elite on the nuclear issue, indicates that the security factor should be given more weight in relation to other factors leading to nuclear proliferation. On the other hand, the Indian case illustrated that when elite divisiveness is great, one must go beyond security and examine other variables such as well-timed interventions by key nuclear myth-makers or bureaucratic politics, since, in such a case, they could be more important than security as facilitators of proliferation. Fourth, the dynamic process of institutional competition must be recognized. In other words, what institutions are there to gain (or to lose) from nuclear weapons acquisitions? How do they play their differences and overcome bureaucratic dissent? The Israeli and Indian cases illustrated that success in monopolizing scientific institutions is crucial in the development of nuclear weapons. Fifth, the depth of strategic thinking on nuclear strategy, in any given country, must be examined. One could infer from the Indian case that the presence of 'ad-hocism' in nuclear strategy and the absence of an elaborate strategic doctrine governing the use of nuclear weapons indicates that the most likely motivation behind the acquisition of nuclear weapons is not security but prestige. On the other hand, the Israeli case suggested that the security factor is predominant since a well thought-out nuclear

doctrine is due to careful strategic planning and sound appreciation of security threats.

Some of the factors stated above might be useful in tentatively evaluating the reasons for proliferation or non-proliferation in selected countries. The case of South Africa and its decision to abandon its nuclear option may have been due to changes in the country's strategic environment and in the worldviews of its decision-makers caused by leadership transitions. President F.W. de Klerk declared to a special joint session of the South African parliament on March 24, 1993, that "at one stage South Africa did develop a limited nuclear deterrent capability," but "early in 1990 final effect was given to decisions that all the nuclear devices should be dismantled and destroyed."[360] The end to South Africa's nuclear program was due to security factors manifested in the collapse of the Soviet Union, the independence of Namibia, the cessation of hostilities in Angola, and the withdrawal of 50,000 Cuban troops from that country. Moreover, the end of apartheid and the election of De Klerk as president in September 1989 precipitated this change in strategy.[361] This exemplified the role that leadership transitions and worldviews of decision-makers has on any country's nuclear program. Moreover, on the bureaucratic front, one has to note the role that important institutions played in nuclear decision-making in South Africa. In this regard, it is worth mentioning that all decisions were taken unanimously by the head

[360] J.W. de Villiers, Roger Jardine, and Mitchell Reiss, "Why South Africa Gave Up the Bomb," *Foreign Affairs* 72 (November/December 1993) : 98.

[361] Ibid., 103.

of government in consultation with relevant cabinet ministers, the chief of the Defense Force and the chief executive of the atomic energy program.[362]

Similarly, the Pakistani case of nuclear proliferation may have been due to security concerns, well-positioned nuclear advocates, and competent bureaucracies and their accompanying interests. In terms of security concerns, Pakistan's nuclear program was intended to deter India – its much larger and militarily superior neighbor – from launching a conventional or a nuclear attack on Pakistan and to defend Pakistani territory should deterrence fail.[363] Pakistan's efforts to acquire and develop nuclear weapons were launched by Prime Minister Zulfikar Ali Bhutto in January 1972 and the program was being administered by Atomic Energy Commission Chairman, Munir Ahmed Khan. Nevertheless, if it was not for the pivotal role that Abdul Qadeer Khan, nuclear advocate and Pakistan's chief scientist, played, Pakistan's program might never have been established. Khan lead a massive clandestine international procurement effort to acquire necessary components, material, and machinery to assemble the centrifuge enrichment plant at Kahuta, east of Islamabad.[364] Officially, launched under Khan's control in July 1976 and named the Engineering Research Laboratories (Project 706), Kahuta became central to the Pakistani nuclear weapon program.[365] Due to his efforts and relentless dedication,

[362] Ibid., 102.

[363] Betts, "Incentives for Nuclear Weapons," 1058-1059.

[364] Perkovich, *India's Nuclear Bomb* ,196.

[365] Ibid.

Abdul Qadeer Khan is known as the 'father' of the Pakistani bomb.[366] On the bureaucratic front, the competition between Khan's laboratories and the Pakistani Atomic Energy Commission played a crucial role in Pakistan's weapons program. Each organization was developing its own missile systems and competing for funding and political authority to conduct tests.[367] Also, the military – as an institution – was important in Pakistani nuclear decision-making especially during the periods where the country was ruled by a military government.[368]

Both the South African and Pakistani cases illustrate, once again, that nuclear decisions require the presence of a multitude of factors. In this regard, security concerns, worldviews of decision-makers and the presence of competent bureaucracies for the implementation of nuclear decisions, become critical features of any country's nuclear program.

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[366] Ibid., 433.

[367] Ibid., 411.

[368] Betts, "Incentives for Nuclear Weapons," 1070.

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