

OPACITY IN AN ERA OF TRANSPARENCY:
THE POLITICS OF DE FACTO
NUCLEAR WEAPON STATES

by

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Rational deterrence theory posits that deterrence is more likely to be successful when a state credibly communicates to its adversary that it has both the capability and intent to retaliate against threats. Yet, second-generation nuclear states, which often exist in severe security environments, have largely adopted postures of nuclear ambiguity where they do not acknowledge their nuclear weapons capabilities or the circumstances under which they would use them.

To date, research has been insufficiently comparative. While some existing research offers explanations for the ambiguous nuclear postures of individual countries, it does not permit us to draw inferences across cases and assess relative explanatory power. Through comparison, both within and across cases, this project develops a more general explanation of why nuclear states choose ambiguity over a visible deterrence posture.

To this end, this project analyzes the nuclear postures of three countries: Israel, India, and Pakistan. Using process tracing and the congruence procedure methodology, I

assess the relative validity of existing explanations for each case and then compare these findings across the three cases.

This research suggests that regional security environments, characterized by disparities in power, create strong incentives for states to acquire nuclear weapons capabilities for deterrence as well as to retain an ambiguous posture. In particular, an ambiguous posture enables regional states to avoid the costs and dangers of competitive nuclear development vis-à-vis their adversaries. The three cases also suggest that patron state pressures for non-proliferation, which combine threats and incentives, are another important constraint on the nuclear posture of second-generation nuclear states. Other variables—such as the international non-proliferation regime, domestic political interests, and the personal moral reservations of some state leaders—play some role to varying degrees in individual cases. However, these effects are limited both within the broad history of individual cases as well as in cross-case comparison of the three states.

Understanding these constraints is helpful for evaluating the efficacy of policy tools designed to prevent the spread of nuclear weapons as well as how to manage crises and conflicts between regional nuclear-armed states.

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. THEORY AND METHODOLOGY.....	9
I. Literature on Nuclear Deterrence and Opacity.....	10
II. Possible Explanations.....	29
III. Methodology.....	56
III. ISRAEL.....	62
I. Description of Israeli Ambiguity.....	65
II. Patron State Pressures: U.S.-Israeli Partnership in Opacity.....	67
III. Regional Security Environment.....	108
IV. International Non-Proliferation Regime.....	127
V. Domestic Politics Factors.....	139
IV. INDIA.....	153
I. Explaining the 1974 Indian Nuclear Test.....	159
II. Explaining Indian Nuclear Ambiguity, 1974-1990.....	234
III. Explaining the 1998 Nuclear Tests.....	305
V. PAKISTAN.....	353
I. Explaining Pakistani Ambiguity, 1972-1998.....	355
II. Explaining the 1998 Pakistani Tests.....	466
VI. COMPARISON BETWEEN CASES AND FACTORS.....	493
I. Regional Security Environment.....	494
II. Patron State Incentives.....	508
III. International Non-Proliferation Regime.....	514
IV. Domestic Political Interests: Party/Interest Group Politics.....	518
V. Moral or Strategic Culture Explanations.....	522
VII. CONCLUSION.....	530
BIBLIOGRAPHY.....	537

LIST OF FIGURES

Figure	Page
1. Hypotheses Related to Nuclear Opacity	54
2. Summary of the Presence of Explanatory Factors in the Israel Case	152
3. Indian Nuclear Decisions by Political Party	342
4. Political and Moral Stance of Indian Leadership Regarding Nuclear Decisions.....	347
5. Summary of the Presence of Explanatory Factors in the Indian Case.....	352
6. Summary of the Presence of Explanatory Factors in the Pakistan Case.....	492
7. Summary of Evidentiary Support for Regional Security Environment Hypothesis and Predictions.....	508
8. Summary of Evidentiary Support for Patron State Hypothesis and Predictions	513
9. Summary of Evidentiary Support for International Non-Proliferation Regime Hypothesis and Predictions.....	518
10. Summary of Evidentiary Support for Domestic Politics Hypothesis and Predictions.....	522
11. Summary of Evidentiary Support for Moral and Strategic Culture Hypothesis and Predictions.....	525

CHAPTER I

INTRODUCTION

Rational deterrence theory suggests that states, which are attempting to deter the actions of another state, increase the likelihood of success by having the necessary capabilities and intentions to retaliate and credibly communicating the same to the challenging state. Yet, second-generation nuclear states, despite being regionally situated in severe security environments marked by a series of wars over the last half-century, have not openly utilized their nuclear capability in a way consistent with deterrence theory. Instead, undeclared nuclear states have pursued policies of opacity in which they largely deny the possession of nuclear weapons and refrain from publicly issuing nuclear declarations or threats.

Why do second-generation nuclear states pursue policies of nuclear opacity, which may result in making deterrence less effective than declaring capabilities and intentions? The first five states to acquire nuclear weapons, the United States, Russia, Britain, France and China, have all followed a development path whereby they have openly declared their nuclear status through a variety of mechanisms. In contrast, the second wave of nuclearized states—including Israel, India, and Pakistan—have followed policies of secrecy regarding their nuclear status. For example, Israel is characterized as

having an “almost fanatical tradition of secrecy”¹ and its official stance on nuclear proliferation is a vaguely worded statement that it will not be the first state to introduce nuclear weapons into the Middle East. Similarly, India and Pakistan, despite their 1998 nuclear tests “effectively maintain a high level of secrecy” regarding the properties of their nuclear weapons, command and control organization, operational plans, nuclear strategies and general force structures.²

The result of this secrecy is an ambiguous nuclear status, which ultimately makes it much more difficult for other states to accurately read the capabilities and intentions of their adversaries and increases the possibility of deterrence failure based on miscalculation and misperception.³ Given these consequences, why then do these states insist on policies of nuclear ambiguity?⁴ The dangers of miscalculation, particularly in violence prone regions such as the Middle East and South Asia, and in the shadow of nuclear weapons, suggest the importance of understanding the reasons for state decisions.

¹ Michael Handel, Israel's Political-Military Doctrine, Harvard University, Center for International Affairs, Occasional Papers, no. 30 (Cambridge: July 1973), 12, 50. Quoted in Stephen Van Evera, Causes of War (Ithaca: Cornell University Press, 1999), 139.

² Rodney W. Jones, “Minimum Nuclear Deterrence Postures in South Asia: An Overview,” Report prepared for Defense Threat Reduction Agency Advanced Systems and Concepts Office, 1 October 2001, 6.

³ Avner Cohen and Benjamin Frankel, "Opaque Nuclear Proliferation," in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co., 1991), 32.

⁴ This project uses the terms ambiguous and opaque interchangeably. There is some debate regarding the efficacy of ‘opaque’ or ‘ambiguous’ deterrence. If other states are aware of the nuclear capability, does it provide for some level of deterrence? While scholars are divided on this point, there is a general consensus that deterrence is enhanced with openness, leaving opaque deterrence, as a suboptimal outcome compared to visible deterrence.

In addition to the diminished effectiveness of deterrence, there are several other implications stemming from policies of nuclear opacity.⁵ When states engage in opaque nuclear proliferation, there are “organizational and technical reasons” that increase the likelihood of accidents and unsafe policies.⁶ Additionally, since the nuclear development programs are compartmentalized within the government and conducted in secret, there is often little outside feedback and it is difficult to hold program administrators accountable to external policymakers.⁷ Further, states with opaque nuclear arsenals, functioning under a veil of secrecy, inhibit debate within state domestic populations, and in some cases among the leadership. Not only does such secrecy threaten adequate civilian policy evaluation,⁸ but it also seriously undermines democratic principles within these states.⁹ Finally, another implication of opacity is that international efforts to manage proliferation through arms control and other mechanisms are hindered in discussion, negotiation, and verification.

This project evaluates several explanations for varying degrees nuclear openness or opacity, the dependent variable, by assessing the relative validity of international and

⁵ There may be other motives for acquiring nuclear weapons such as prestige. Still, there is no reason on its surface why if a state is seeking prestige it should not make it known what its capabilities are if successful. Moreover, prestige is not mutually exclusive with deterrence motivations and may also be present to some extent. Thus, the puzzle remains. Why, if both motives suggest a more open nuclear status, is such a policy is not implemented?

⁶ Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate* (New York: W. W. Norton & Company, 1995), 81, and Scott D. Sagan, "The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons," *International Security* 18, no. 4 (Spring 1994).

⁷ Cohen, "Opaque Nuclear Proliferation," 34.

⁸ Stephen Van Evera, "Why States Believe Foolish Ideas: Non-Self-Evaluation by Government and Society," Presented at the Annual Meeting of the American Political Science Association (1988).

⁹ Sagan and Waltz, *The Spread of Nuclear Weapons: A Debate*, 81. Cohen, "Opaque Nuclear Proliferation," 33.

domestic level hypotheses. The first international level explanation focuses on the regional security environment as a cause of nuclear proliferation, which also creates incentives to adopt a policy of ambiguity. From this perspective, regional states acquire a nuclear capability in order to deter their adversaries. At the same time, second-generation nuclear states face a number of challenges in their development and can ill-afford to engage in competitive arms races and other policies that increase the probability of conflict. Thus, nuclear ambiguity can be explained as way for regional adversaries to dampen competitive policies and reduce the transition risks associated with developing nuclear arsenals.

The second international level explanation that is evaluated in this study focuses on the role of patron states in shaping their client states' foreign policies. From this perspective, stronger states are motivated to prevent the spread of nuclear weapons, or at least to prefer that it remains hidden. Using economic and military inducements, as well as the threat of sanctions, patron states are credited with pressuring their client states into maintaining an ambiguous nuclear posture.

The third explanation stemming from the international level is based on the norms and institutional framework of the non-proliferation regime. The propositions sourced in this perspective suggest that the international non-proliferation regime imposes material and normative costs on nuclear proliferators. As such, second-generation nuclear states seek to avoid these costs by not openly acknowledging their nuclear capabilities.

There are two variants of the domestic level explanation, domestic politics and moral and/or cultural constraints. In terms of the domestic politics, the decision to pursue

a nuclear weapons option is usually a controversial decision. There are often deep divisions between state leaders as to whether nuclear weapons will effectively provide for state security, given the financial costs and other risks associated with the program. As such, in governments where such decisions require a consensus, there may be compromises reached as to the state's nuclear posture to avoid some of the feared costs. Alternatively, in states with centralized decision-making, leaders that would suffer costs by instituting an open nuclear posture would reject this option.

The other domestic level explanation focuses on the particular moral or cultural attributes of state leaders. In particular, given the destructive nature of nuclear weapons, many leaders have expressed moral reservations about relying on weapons of mass destruction for state security. This reluctance, it is hypothesized, translates into an unwillingness to fully embrace an overt nuclear posture.

This study finds that when the hypotheses are tested against the cases of Israel, India, and Pakistan, the evidence most strongly points to the presence of international factors as causing these states to choose nuclear opacity. In particular, a state's regional security environment and U.S. promotion of its non-proliferation policies have powerful influences on a second-generation nuclear state's posture. In all three of these cases, insecurity has compelled each state to pursue nuclear weapons to provide for deterrence.

At the same time, disparities in nuclear development created incentives for each state to avoid taking an open posture that would be provocative to its regional adversaries and their allies. In the case of Israel, this meant preserving its nuclear monopoly and favorable conventional balance that would be threatened by regional states either

developing a counterbalancing nuclear option or seeking external assistance from their allies. For India, while it was much stronger than its historic adversary Pakistan, New Delhi was cautious about competing in nuclear terms with a much stronger China, at least until it could achieve relative parity in nuclear terms. Additionally, China's predisposition to assist Pakistan's nuclear and conventional programs was a further incentive to not provoke Islamabad. And Pakistan lagged substantially behind India, giving it few reasons to publicly compete in a race that it was sure to lose. However, Pakistan's hand was forced by India deciding to test in 1998, and it quickly followed suit lest the Indians believed that Pakistan did not actually have a nuclear weapons capability.

In terms of patron state pressures, the United States was the main great power that both had the incentive to stop nuclear non-proliferation, and was willing to use its leverage with client states to influence their foreign policies. While Washington recognized that it would likely not be able to stop these three states from acquiring nuclear weapons, it did seek to at least slow down the programs and keep them out of the public eye so that other proliferators were not encouraged to follow suit.

U.S. pressure was particularly effective with Israel and Pakistan to the extent that there were economic and military ties between the states. However, there are limitations to the United States' ability to influence other state's foreign policies, as demonstrated by Pakistan's decision to test in 1998 in response to India. The Indians were also responsive to U.S. pressures, mainly during the 1980s and 1990s as India sought to open up trade and technology linkages with the Americans. Having established these ties, the Indians

correctly calculated that the U.S. would be unwilling to punish them for long after the 1998 tests.

While there is also some evidence supporting the international non-proliferation regime and domestic level explanations, closer analysis suggests that the regional security environment and U.S. threats and inducements also informed these factors. As such, their own independent effect is diminished. As to the non-proliferation regime, all three states avoided obligations that would limit their ability to produce nuclear weapons. The regime mattered to some material extent in slowing down India and Pakistan's programs, but there is little evidence to suggest that any of the three states embraced the principles and norms promulgated by the regime in general.

Similarly, there is some evidence in support of the proposition that domestic politics mattered. The strongest evidence is from the Indian case, where domestic politics was a source of pressure on Indira Gandhi's government to test in 1974. Additionally, the nationalist Bharatiya Janata Party ("BJP") came to power in 1998, which helps to explain the timing of that test. However, when evaluating India's overall history, the domestic political factors was neither a necessary nor sufficient condition for India testing. Rather, each leader had to evaluate the existing constraints as to whether testing was opportune. And given these rather case specific features, there is no generalizable statement that encompasses the varied domestic political factors in each case.

Moreover, there is even less evidence suggesting that normative or cultural constraints are primarily responsible for states choosing nuclear opacity. While

individual leaders may have had strong moral reservations about relying on weapons of mass destruction, there is little evidence suggesting that they did not fully evaluate their options and they continued to pursue a nuclear option nonetheless.

This dissertation proceeds according to the following format. Chapter Two details existing deterrence literature, derives hypotheses, and discusses the methodological approach of process tracing and the congruence procedure. Chapter Three is a case study analyzing the origins of Israel's nuclear opacity. Chapter Four and Five are cases studies on South Asia, specifically the Indian and Pakistani nuclear programs and associated ambiguous postures from 1974 until 1998 when both states tested and openly declared themselves nuclear weapons states. Chapter Six compares and analyzes the results from the three empirical chapters. Chapter Seven concludes with the findings and implications of this study.

CHAPTER II

THEORY AND METHODOLOGY

The following chapter outlines the theoretical foundations and methodological approach informing this project. The first section reviews nuclear deterrence literature and discusses how the second wave of nuclear proliferation challenges the assumptions of deterrence theory. This is followed by a review of existing research on opacity, which primarily addresses the historical nuclear development within a particular country of study. While focusing on individual countries is helpful in identifying potential explanatory variables in particular cases, it does not permit us to draw inferences across cases and assess relative explanatory power. Through comparison of the explanatory variables, this project seeks to develop a more general theoretical framework that can explain why nuclear states would choose opacity over a visible deterrence posture.

To this end, the second section outlines hypotheses and derives predictions of observable data according to each theoretical perspective. This discussion focuses on international variables—the regional security environment, patron state pressures, and the international non-proliferation regime—and domestic level factors—party and interest groups politics, and moral and cultural constraints.

The final section discusses the case selection of Israel, India, and Pakistan. I also outline the congruence procedure and process tracing methodologies used in this study.

I. Literature on Nuclear Deterrence and Opacity

A. Nuclear Deterrence

Early in the Cold War, the intense rivalry between the United States and the Soviet Union led to a nuclear arms race. It was not immediately clear how the addition of these new weapons, with substantially increased capacity for destruction, would affect the likelihood of conflict between the two competing states. Over time scholars and policymakers theorized that stable, mutual deterrence was established between the superpowers based on mutually assured destruction.¹ The key to this stability is maintaining effective deterrence.

Deterrence is generally understood as the threat of punishment or retaliation by one state to prevent another state from undertaking undesirable actions.² It is primarily a peacetime objective and fails by definition when conflict, or other unwanted action, is

¹ For some scholars, this was the result of the “nuclear revolution,” meaning that the security dilemma could be mitigated and great powers could peacefully coexist under conditions of defense dominance where each side was assured a second-strike capability. See, e.g., Robert Jervis, The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon (Ithaca: Cornell University Press, 1989); Charles L. Glaser, Analyzing Strategic Nuclear Policy (Princeton: Princeton University Press, 1990); Stephen Van Evera, Causes of War: Power and the Roots of Conflict (Ithaca: Cornell University Press, 1999). “Offensive” or structural realists accept the peace inducing effects of nuclear weapons among great powers, but still find that states engage in competitive security policies at the conventional level. See, e.g., John J. Mearsheimer, The Tragedy of Great Power Politics (New York: W.W. Norton & Co., 2001), 130-133; Kenneth N. Waltz, “The Origins of War in Neorealist Theory,” in The Origin and Prevention of Major Wars, Robert Rotberg and Theodore Rabb, eds. (Cambridge: Cambridge University Press, 1988), 48-52. However, consensus about the effects of nuclear weapons is not universal and John Mueller argues that the “long peace” between the U.S. and the Soviets was based on the obsolescence of major war, rather than deterrence. John Mueller, “The Essential Irrelevance of Nuclear Weapons: Stability in the Postwar World,” International Security 13, no. 2 (Fall 1988), 55-79.

² Robert J. Art, “The Four Functions of Force,” in The Use of Force, Robert J. Art and Kenneth N. Waltz, eds. (Lanham: University Press of America, 1993) 4; Janice Gross Stein, “Deterrence and Reassurance,” in Behavior Society and Nuclear War, Tetlock, et al., eds. (Oxford: Oxford University Press, 1991), 9.

initiated by an aggressor.³ Deterrence therefore involves “the use of threats to induce the opponent to behave in desirable ways.”⁴

During the Cold War and after, substantial scholarly work was devoted to understanding the conditions under which deterrence is most likely to succeed or fail. This academic and policy discussion has, in large part, revolved around the basic assumptions of rational deterrence theory and empirical criticisms of the model.⁵

Rational deterrence theory is predicated on the assumptions that states behave as rational, unitary actors.⁶ Whether a state is willing to initiate a war with another state is based on a rational calculation of the costs and benefits of going to war. In its simplest form, a state will refrain from attacking another state when the costs are perceived to exceed the benefits. That is, “[i]f a country knows that it is likely to lose a long, nasty war in the process, it will probably not seek to press its claims against a rival.”⁷ For deterrence to be effective, then, it is important to convince the would-be challenger that the costs of attacking are too high.⁸ The defending state is more likely to successfully

³ Glenn H. Snyder, “Deterrence and Defense,” in *The Use of Force*, Robert J. Art and Kenneth N. Waltz, eds. (Lanham: University Press of America, 1993), 351.

⁴ Christopher H. Achen and Duncan Snidal, “Rational Deterrence Theory and Comparative Case Studies,” *World Politics* 41, no. 2 (January 1989), 151.

⁵ Rational deterrence theory is also referred to as “classical” deterrence theory. See Paul C. Stern, et al., “Deterrence in the Nuclear Age,” in *Perspectives on Deterrence*, Paul C. Stern, et al., eds. (Oxford: Oxford University Press, 1989), 5. A significant part of this debate also revolves around methodological differences. See, for example, Alexander L. George and Richard Smoke, “Deterrence and Foreign Policy,” *World Politics* 41, no. 2 (January 1989).

⁶ Rational deterrence theory, as developed in the abstract during the 1950s and 1960s posited these assumptions. For a review, see Paul C. Stern, “Deterrence in the Nuclear Age,” 5.

⁷ Achen and Snidal, “Rational Deterrence Theory,” 150.

⁸ Achen and Snidal, “Rational Deterrence Theory,” 151.

deter a would-be attacker if the defender: (1) possesses the necessary military capabilities to respond; (2) has the political will to use them; and (3) can credibly communicate its capability and resolve to the challenging state.⁹

Conversely, rational deterrence theory predicts that deterrence will be more likely to fail if one of the above three elements is missing. Therefore, states should demonstrate or otherwise communicate their military capabilities and attempt to issue credible threats to bolster deterrence. Furthermore, the destructive potential of nuclear weapons “makes either unilateral or mutual nuclear deterrence appear far more likely to be successful than did the preceding conceptions. If leaders were to take steps to minimize miscalculation—making their military capabilities obvious, making their threats clear, controlling for accidents, and so on—there is no obvious reason why deterrence could not successfully continue for some time.”¹⁰ However, as discussed below, second-generation nuclear states do not follow these prescriptions: they do not make their nuclear military capabilities obvious and/or take steps to credibly communicate their resolve.

1. The Role of Capabilities for Deterrence

For effective deterrence, “a state must have, or at least appear to have, the ability to actually impose sufficiently high costs on an adversary. This is the role of a state’s

⁹ Robert J. Art, “The Four Functions of Force,” 4. While not always explicit, it is further assumed that the challenging state has some ability to accurately assess the defending state’s capabilities, intentions, and communications. See Paul C. Stern, “Deterrence in the Nuclear Age,” 6.

¹⁰ Patrick M. Morgan, *Deterrence: A Conceptual Analysis* (Beverly Hills: Sage Publications, 1983), 61.

punitive capabilities.”¹¹ In the modern nuclear age, a sufficient nuclear capability that threatens unacceptable harm on the challenging state is achievable.

First, a credible nuclear retaliatory capability is attainable by a determined proliferator. The basic requirements for a sufficient retaliatory force are to construct at least a rudimentary nuclear device and protect it so it is deliverable.¹² Most states that choose to have nuclear weapons are able, with varying degrees of challenges, to acquire at least a basic capability if they are determined enough to invest the resources. Moreover, once a state has developed a nuclear weapons capability, given the ease with which nuclear weapons can be hidden and delivered, protecting and maintaining its retaliatory ability is manageable.¹³ For these reasons, even a nascent nuclear capability is generally deemed sufficient to raise the costs to the challenger of an attack to unacceptable levels, even if the target’s precise capability is unknown to the challenger.¹⁴

Second, the costs of nuclear retaliation are relatively easy to calculate. The enormously destructive capacity of nuclear weapons simplifies the calculations for would-be aggressors. Because any nuclear attack is likely to be too costly, calculating the damage from nuclear weapons is relatively straightforward. Indeed, “the key effect of nuclear weapons is to allow both analysts and policy makers to greatly simplify the

¹¹ Robert Powell, Nuclear Deterrence Theory: The Search for Credibility (Cambridge: Cambridge University Press, 1990), 8.

¹² Kenneth N. Waltz, “More May Be Better,” in The Spread of Nuclear Weapons: A Debate Renewed, Scott D. Sagan and Kenneth N. Waltz, eds. (New York: W.W. Norton & Company, 2003), 20-23.

¹³ Waltz, “More May Be Better,” 20-23. Because even relatively few weapons can inflict unacceptable damage, states can employ various measures to hide and protect at least a small stock of deliverable weapons. Further, “[m]eans of delivery are neither difficult to devise nor hard to procure,” Ibid., 21.

¹⁴ Waltz, “More May Be Better,” 20-23.

essence of computing how much of a threat is needed to deter what kind of attack.”¹⁵

Therefore, states likely will not miscalculate the destructive capability of a nuclear-armed adversary.

Because it is relatively easy to have a sufficient and protectable capability, which a rational challenger can assess accurately enough, it is presumed that a nuclear-armed state seeking to deter a challenger will sufficiently demonstrate through testing and public declarations its ability to inflict unacceptable harm. As such, both rational deterrence theory and its critics largely assume that a nuclear-armed state seeking to deter another will communicate its capability to a potential challenger. This is the pattern set by the first generation of nuclear states. The U.S., Soviet Union, U.K., France, and China all publicly tested and declared their nuclear weapons, making it relatively easy for other states to assess their capabilities.

For these reasons, most research on nuclear deterrence has presumed that a state’s nuclear status is clear, particularly since the defender has a strong incentive to demonstrate its capability for the purposes of deterrence. Accordingly, most research has focused not on the possession of nuclear capability per se, but on the problem of how to make credible a promise to use this capability to retaliate.

2. Credible Threats

According to rational deterrence theory, “sufficiently strong, clear, credible threats will deter” would-be challengers.¹⁶ Conversely, there is the expectation that

¹⁵ Morgan, Deterrence: A Conceptual Analysis, 61.

deterrence will fail when “the retaliatory threat is absent, incredible, or less valuable than the prize.”¹⁷

Successful nuclear deterrence depends on the credibility of the defender’s promise to retaliate.¹⁸ The enormously destructive power of nuclear weapons means that making deterrent threats credible to a nuclear-armed adversary is problematic. Credible threats are often unbelievable under conditions of mutually assured destruction because there are few interests that are perceived to be worth attacking over when the risk of retaliation means annihilation. The ability to issue credible threats is especially problematic in cases of extended deterrence or conflicts that do not threaten the territorial integrity of the nuclear state.¹⁹ For this reason, it is important for states to bolster the credibility of their threats.

Costly signals are one way for a defending state to increase the credibility of its resolve under conditions of uncertainty. Because the challenging state may be unsure of whether the threats issued by the defending state are credible or simply a bluff, the defending state can communicate its resolve by undertaking a costly enough action to signal to the other side its resolve.²⁰ The defending state thus “signal[s] its intentions by

¹⁶ Achen and Snidal, “Rational Deterrence Theory,” 149. They also “point to historical examples in which the threat of retaliation was clear and credible, yet deterrence failed.” *Ibid.*

¹⁷ Achen and Snidal, “Rational Deterrence Theory,” 152.

¹⁸ Achen and Snidal, “Rational Deterrence Theory,” 152.

¹⁹ Paul K. Huth, Extended Deterrence and the Prevention of War (New Haven: Yale University Press, 1988).

²⁰ James D. Morrow, “The Strategic Setting of Choices: Signaling, Commitment, and Negotiation in International Politics,” in Strategic Choice and International Relations, David Lake and Robert Powell, eds. (Princeton: Princeton University Press, 1999). See also James D. Fearon, “Signaling versus the Balance of

taking actions that inflict costs it is willing to bear but other types [of states] are not.”²¹

This allows the challenging state to determine that it is facing a resolute defender and back down.²² However, if the costly action is one that the potential aggressor cannot distinguish from a similar action by a bluffing state, the credibility problem remains.

Credibility may also be enhanced by the “threat that leaves something to chance.”

The logic here is that a crisis between two adversaries risks getting out of control if the defending state takes lower level, responsive steps that increase the likelihood of escalation. This escalation may then lead to a massive nuclear retaliation.²³ A threat is thus enhanced as “a response that carries some risk of war can be plausible, even reasonable at the time when a final, ultimate decision to have a general war would be implausible or unreasonable.”²⁴

A further option is to exercise limited but severe retaliatory options to enhance credibility.²⁵ The basis of this approach is to achieve deterrence by threatening unacceptable costs, even though limited in comparison to massive retaliation. Credibility is achieved by threatening or exercising a limited option, which demonstrates that the

Power and Interests: An Empirical Test of a Crisis Bargaining Model,” Journal of Conflict Resolution 38, no. 2 (June 1994).

²¹ Morrow, “The Strategic Setting,” 88.

²² Morrow, “The Strategic Setting,” 90.

²³ Thomas C. Schelling, The Strategy of Conflict (Cambridge: Harvard University Press, 1960).

²⁴ Thomas C. Schelling, Arms and Influence (New Haven: Yale University Press, 1966), 89.

²⁵ Powell, Nuclear Deterrence Theory. See in particular Chapter Two “The Nuclear Revolution and the Problem of Credibility,” 6-32.

defending state is willing to take further action.²⁶ The key here, however, is that the limited option be enough to demonstrate resolve, but still leave the adversary with enough that it will not retaliate in order to preserve what is left.²⁷ This option is posited as effective under conditions of uncertainty, where a challenging state may not know the intent or level of resolve in its adversary.²⁸

3. Criticisms of Rational Deterrence Theory

While rational deterrence theory delineates the logic of nuclear deterrence, the assumptions underpinning the perspective are subject to various criticisms on empirical grounds. Broadly, critical approaches focus on the real world application of rational deterrence theory, and the validity of the assumption that states behave as rational, unitary actors.

The initial criticism of rational deterrence theory sought to make the model's abstract concepts more historically grounded, such that the theory could actually inform policy making. This important contribution suggested that rational deterrence theory fit the best at the strategic level of conflict.²⁹ However, at lower levels of conflict, such as limited war and crisis and preventive diplomacy, complexity and context limit the

²⁶ Powell, Nuclear Deterrence Theory, 17.

²⁷ Powell, Nuclear Deterrence Theory, 17.

²⁸ Uncertainty for Powell is incomplete information as to the type of state; that is whether they are resolute or irresolute, in the deterrence relationship. Uncertainty does not refer to a lack of knowledge about whether another state has actually achieved a nuclear capability.

²⁹ Alexander L. George and Richard M. Smoke, Deterrence in American Foreign Policy: Theory and Practice (New York: Columbia University Press, 1974).

applicability of rational deterrence assumptions.³⁰ Under these conditions, deterrence operates with more actors, variables, and changing environments. This complexity and context-dependence is not encompassed in modeling the strategic interaction of two players, with clear objectives that remain static.³¹ With the proliferation of factors at lower levels of conflict, deterrence is “dependent not upon comparatively few technical variables, known with high confidence on both sides, but upon a multitude of variables...that fluctuate over time and are highly dependent on the context of the situation.”³² For this reason, rational deterrence theory, and its primary focus on strategic interaction, is of limited utility when applied to conflicts that are at the sub-strategic level.

Other research suggests that states do not actually behave as either assumed or predicted by rational deterrence models. These works challenge rational deterrence theory’s assumptions that there is a “rational decision maker, perfect information, and a politically neutral environment.”³³ One line of criticism focuses on the assumption that states behave as rational actors. This research generally tends to focus on cognitive impediments to rational calculations at the group or individual level. Various authors argue that case studies of deterrence failures suggest that the presumed rational calculations did not take place for a variety of reasons, including imperfect information,

³⁰ George and Smoke, Deterrence in American Foreign Policy, 49-55.

³¹ George and Smoke, Deterrence in American Foreign Policy, 54.

³² George and Smoke, Deterrence in American Foreign Policy, 54.

³³ Richard Ned Lebow and Janice Gross Stein, “Rational Deterrence Theory: I Think, Therefore I Deter,” World Politics 41, no. 2 (January 1989), 224.

misperception, and psychological biases.³⁴ Even the incorporation of incomplete information into rational deterrence models is insufficient because “[s]tudies of deterrence and intelligence failures find that error rarely results from inadequate information but is almost always due to theory and stress driven interpretations of evidence.”³⁵ Thus, from this perspective, it is not the lack of information, but miscalculation or misperception of available information that leads to deterrence failures.

Another source of criticism accepts that states are rational actors, but contends that they still behave differently than predicted by rational deterrence theory. State decision-making is influenced by other factors such as domestic political considerations and norms. For example, Lebow and Stein have found that in some circumstances, leaders are pressured by domestic politics to engage in a war that they risk losing.³⁶ This then causes leaders to initiate a conflict that they rationally calculate they will lose, because they perceive the domestic consequences of not responding as more costly than losing a war.³⁷ Similarly, T.V. Paul contends that deterrence theory must also take into account, “along with psychological and domestic variables, normative factors [that] have a place in outcomes of deterrence as well as war initiations.”³⁸ From Paul’s perspective,

³⁴ See, e.g., Robert Jervis, “Deterrence Theory Revisited,” *World Politics* 31, no. 2 (January 1979); Irving Janis and L. Mann, *Decision-Making: A Psychological Analysis* (New York: Free Press, 1977).

³⁵ Lebow and Stein, “Rational Deterrence Theory,” 217. They specifically address Robert Powell’s work on incorporating uncertainty into rational deterrence theory.

³⁶ Lebow and Stein, “Rational Deterrence Theory,” 211.

³⁷ Lebow and Stein, “Rational Deterrence Theory,” 211.

³⁸ T.V. Paul, “Nuclear Taboo and War Initiation in Regional Conflicts,” *Journal of Conflict Resolution* 39, no. 4 (December 1995), 711.

the nuclear taboo restrains states' political will, which in turn diminishes the defending state's ability to deter a non-nuclear challenger because the threats are not credible.

In short, according to these perspectives, rational deterrence theory fails to accurately predict deterrence outcomes because it does not adequately account for other variables that matter. Explaining deterrence failures or success therefore must not only account for the strategic interactions affecting rational calculations, but also the domestic political calculations and norms that influence state leaders.

There are substantial differences between the supporters of rational deterrence theory and its critics in assessing the theory's ability to explain and predict state behavior. Nonetheless, both sets of research agendas share a common, fundamental assumption that states seeking to deter challengers will openly acknowledge and demonstrate their nuclear capabilities and issue threats. For example, rational deterrence theory expects that states seeking to deter others will communicate its capabilities and intentions as "deterrence works only if the deterrent capability is known and feared by one's adversaries."³⁹ Therefore, "[i]n the end, A must communicate to B both its capabilities and its intentions."⁴⁰

Similarly, critics of rational deterrence theory also assume the same conditions of openness when assessing deterrence outcomes. This means circumstances under which "the deterrer carefully defined the unacceptable behavior, threatened retaliation, had the capability to implement the threat, demonstrated resolve, but the challenger still

³⁹ Avner Cohen, Israel and the Bomb (New York: Columbia University Press, 1998), 238.

⁴⁰ Morgan, Deterrence: A Conceptual Analysis, 87.

proceeded to use force.”⁴¹ Indeed, for Lebow and Stein, this “highly restrictive definition of failure” was deliberately chosen for methodological purposes in order to test for the failures of rational deterrence theory by “exclud[ing] cases where challengers resorted to force but defenders did not attempt to deter or did so ineptly.”⁴² In short, both rational deterrence theory and its critics incorporate the assumption that states seeking to deter challengers communicate their capabilities and intentions.⁴³ As discussed below, this shared expectation is problematic when applied to second-generation nuclear states.

4. Second-Generation Nuclear States and Deterrence

As more states began developing nuclear arsenals, researchers began studying the proliferation patterns of second-generation nuclear states. This work has found that second-generation nuclear states do not follow the same path of force and threat visibility as the first five nuclear states. Instead of adopting a highly visible nuclear status—militarily, politically, and technologically—more recent proliferators have chosen a more “complex model” that entails denying or shielding their nuclear capabilities and intentions.⁴⁴

⁴¹ Lebow and Stein, “Rational Deterrence Theory,” 220.

⁴² Lebow and Stein, “Rational Deterrence Theory,” 220.

⁴³ While critics adopt these assumptions for methodological reasons in order to directly address the foundations of rational deterrence theory, the outcome is essentially the same where the research is focused on states seeking to communicate their capabilities and intentions.

⁴⁴ Avner Cohen and Benjamin Frankel, “Opaque Nuclear Proliferation,” in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co, 1991), 14.

This empirical difference between the proliferation patterns of first- and second-generation nuclear states casts doubt on the applicability of the rational deterrence model. Rational deterrence theory's assumptions reflect the open or visible behavior of first generation nuclear states.⁴⁵ Lessons learned from the Cold War were primarily based on the experiences of the U.S. and USSR, where both great powers had visible nuclear postures.⁴⁶ For this reason, deterrence has largely been "predicated on nuclear weapons being readily observable. Visibility was deemed essential for the purpose of effective deterrence. The adversary had to be able to 'see' one's nuclear devices and assess their capability and survivability in order to take them into account in his {sic} deterrence calculations."⁴⁷

However, the assumption that nuclear-armed states will communicate in some fashion their nuclear weapons capability and conditions under which the state would retaliate does not apply to second-generation nuclear states. States employing opaque postures generally do not follow this model of deterrence in two important ways.

First, second-generation nuclear states often do not publicly confirm the possession of nuclear weapons. How does a state deter without acknowledging that it has the retaliatory ability to do so? As to deterrence theory, "[t]here is little in the literature to tell us how a country should plan to use its nuclear weapons to deter its adversaries while

⁴⁵ Benjamin Frankel, "An Anxious Decade: Nuclear Proliferation in the 1990s," in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co, 1991), 8.

⁴⁶ Cohen and Frankel, "Opaque Nuclear Proliferation," 14.

⁴⁷ Cohen and Frankel, "Opaque Nuclear Proliferation," 17.

denying the possession of these weapons. Even if one party has an inkling that the other party is in possession of nuclear weapons, the act of denial or their possession creates a situation different from the deterrence conditions prevailing between the superpowers.”⁴⁸ Moreover, “[d]eterrence theory has been predicated on the rational calculation of risks and benefits by both sides in a crisis. Opaque proliferation makes it very difficult—if not impossible—to know what one is faced with as far as the other side’s nuclear capabilities are concerned. Rational decisions, difficult to make under any circumstances, are even more so under opacity.”⁴⁹

Second, for deterrence to work, it is important to communicate to the challenging state the clearly defined unacceptable action and how the defending state will respond.⁵⁰ As opaque nuclear states do not acknowledge their capability, they have also refrained from issuing explicit threats or promulgating nuclear doctrines that indicate the circumstances in which they will respond with nuclear retaliation. Some believe that deterrence is more likely to fail between second-generation nuclear states because their capability and intentions are not clearly communicated, leaving an adversary to guess at the conditions under which retaliation may occur.⁵¹ Moreover, since the deterrent is not

⁴⁸ Cohen and Frankel, “Opaque Nuclear Proliferation,” 32. They also suggest that there are a variety of factors that could make deterrence more unstable than between the super powers.

⁴⁹ Cohen and Frankel, “Opaque Nuclear Proliferation,” 33.

⁵⁰ Stein, “Deterrence and Reassurance,” 10.

⁵¹ See, e.g., Shai Feldman, Israeli Nuclear Deterrence: A Strategy for the 1980s (New York: Columbia University Press, 1982).

acknowledged, some scholars argue that nuclear ambiguity creates a severe credibility problem regarding whether the opaque state is both able and willing to retaliate.⁵²

Even work that addresses the factors affecting credible threats and incorporates uncertainty into the rational deterrence model is of limited utility when applied to second-generation nuclear states. As an initial matter, nuclear deterrence theory largely presumes that states will act to communicate their nuclear capabilities. As such, the focus is almost entirely on how to issue credible threats. The empirical differences between the two different patterns of nuclear development also have significant implications for understanding the role of credible threats. Because second-generation nuclear states largely refrain from directly issuing nuclear threats, of the deterrence literature is largely irrelevant to understanding the behavior of these states.

B. Conceptualizing The Dependent Variable, Nuclear Opacity

What then, distinguishes opaque from open or visible nuclear postures? Second-generation nuclear states that employ an opaque nuclear stance are labeled by a variety of terms such as: opaque, undeclared, de facto, ambiguous, covert, latent, classified, and threshold states. In contrast, the first five nuclear states are referred to as declared, overt, visible, and open. Regardless of the terminology, there are several features of opacity that make it qualitatively different from that of the open or visible posture of the five declared nuclear states.

⁵² Jonathan Shimshoni, Israel and Conventional Deterrence: Border Warfare from 1953-1970 (Ithaca: Cornell University Press, 1988), 31.

At the most extreme, an opaque state does not test its nuclear capability, denies possession of nuclear weapons, does not organize the deployment of weapons, issues no direct nuclear threats, promulgates no military doctrine and insulate its nuclear program from public purview and other branches of the government.⁵³ Moreover, there is little or no debate within the government or society at large regarding these elements of the nuclear programs.⁵⁴ In short, “opaque proliferants follow a policy of calculated nuclear ambiguity, mixing a public posture of restraint with the covert development of nuclear weapons.”⁵⁵

In contrast to this characterization of opacity, declared nuclear states are more transparent with their nuclear capabilities and intentions. All five declared nuclear states have exploded nuclear devices, incorporated nuclear forces into their military structures, publicly held discussions and debates regarding appropriate nuclear strategies, and have issued nuclear threats in support of their political objectives.⁵⁶

While this characterization of opaque and visible ends of the spectrum represent ‘ideal type’ nuclear states, it is useful to think of states as falling somewhere on a continuum of relative openness on one end to primarily an opaque stance on the other. Israel most closely falls on the opaque end of the spectrum, where it has developed a sophisticated nuclear force but has not acknowledged testing and has not declared itself a

⁵³ Cohen and Frankel, "Opaque Nuclear Proliferation," 21-22.

⁵⁴ Cohen and Frankel, "Opaque Nuclear Proliferation," 21-22.

⁵⁵ Devin T. Hagerty, "The Power of Suggestion: Opaque Proliferation, Existential Deterrence, and the South Asian Nuclear Arms Competition," in The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results, Zackary S. Davis and Benjamin Frankel, eds. (Portland: Frank Cass & Co., 1993), 257.

⁵⁶ Frankel, "An Anxious Decade," 8.

nuclear weapons state. In contrast, the United States is the most visible with a history of testing, publicly declaring its nuclear posture, and generally open democratic decision-making. Pakistan falls more towards the middle of the spectrum. Pakistan exploded a nuclear device in 1998, making its capability more visible than Israel's. Yet, Pakistan is more opaque compared to the first-generation nuclear states because it has not declared its nuclear intentions and the extent of its known weapons capability remains uncertain. India is the most visible of the second-generation nuclear states, having conducted nuclear test in 1974, and follow-up tests in 1998. Further, India has begun to draft a nuclear doctrine, although there has been relatively little public government discussion regarding its capabilities and intentions.⁵⁷ Still, from 1974 to 1998, India practiced a policy of ambiguity regarding its intentions and capabilities and has done little to clarify its posture since the 1998 tests.

That said, opacity is not directly equivalent to a lack of knowledge. Even in the quintessential case of opacity, Israel, other actors have access to some information. Such information is often in the form of obliquely worded statements by leaders, leaks within the program, intelligence by other states, and speculation by experts. Given the economic, scientific and technical knowledge required to acquire a nuclear capability, it is very difficult to hide the acquisition of nuclear weapons from the international community. Opacity, then, suggests the refusal to acknowledge openly or define the parameters of a suspected nuclear program. Additionally, obliquely worded statements

⁵⁷ Embassy of India, "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine"; available from http://www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html; Internet; accessed March 2004.

may suggest a nuclear weapons capability, without actually admitting it. In this context, the ambiguous stance intentionally creates some measure of uncertainty. Thus, opacity is not a complete lack of knowledge, but general uncertainty regarding the extent, nature and intentions behind a nuclear weapons program. Of course, on the visible side of the spectrum, there is no such thing as complete transparency either. For example, the United States still maintains secrecy regarding operational and technical details that would, if known, put its second-strike capability at risk.

C. Existing Approaches to Explaining Opacity

In addition to the scholarship that seeks to clarify the conceptual differences between visible and opaque nuclear postures, there are historical and regional case studies of nuclear development in Israel, India and Pakistan that suggest reasons for opacity. For example, in explaining Israel's nuclear opacity, Avner Cohen argues that Israel's posture is largely the result of a strategic culture of secrecy that formed early to protect the program, as well as a general ambivalence about relying on nuclear deterrence for Israeli security.⁵⁸ Cohen, who has done extensive archival research and interviews with Israeli officials, acknowledges that other factors such as international constraints and domestic politics also matter. He does not, however, assess the relative explanatory power of these factors, a task that requires a comparative framework.

⁵⁸ Avner Cohen, "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars," in Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000).

Others have argued that Israel's nuclear policy is the result of domestic-level factors, primarily the parochial interests of leaders who benefit from opacity.⁵⁹ From this perspective, Israeli leaders disagreed at the outset over the wisdom of pursuing a nuclear weapons program that could jeopardize Israel's relationship with the United States, which would in turn affect Israel's economy. Opacity thus was a compromise between those who supported a nuclear program and those who did not.⁶⁰ This analysis is compelling to the extent that it details the contending domestic interests and the process of forging compromise between them, which arguably resulted in a policy of opacity. Still, this argument does not adequately account for the role of external pressures in shaping domestic preferences for opacity once the decision was made to acquire a nuclear capability. That is, in the absence of U.S. pressure, it is unlikely that Israel would have initially adopted an opaque posture. Additionally, the precise argument that developing a nuclear program might jeopardize relations with the U.S. and thus affect the economic interests of various domestic actors was not advanced in the cases of India and Pakistan.⁶¹ Thus, a cross-case comparison of the explanatory validity of this perspective is useful for determining the range of its applicability.

⁵⁹ Etel Solingen, "The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East," *International Studies Quarterly* 38, no. 2 (June 1994), 318.

⁶⁰ Solingen, "The Domestic Sources of Regional Regimes," 320.

⁶¹ Solingen does incorporate analysis of India and Pakistan into her argument that ruling coalitions that pursue economic liberalization policies are more likely to practice "nuclear restraint" in the form of joining regimes or denuclearizing. See Etel Solingen, "The Political Economy of Nuclear Restraint," *International Security* 19, no. 2 (Fall 1994). In her book length project explaining when states nuclearize or not, Solingen analyzes additional cases in East Asia and the Middle East. However, this analysis does not include India or Pakistan. See Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton: Princeton University Press, 2007).

There is also voluminous literature reviewing the history of India and Pakistan's nuclear programs. Much of this work focuses on the motivations behind the acquisition of their nuclear weapons, while largely ignoring the issue of opacity. The research seeking to explain the 1998 nuclear tests generally comes the closest to addressing the questions of opacity. To explain the 1998 nuclear tests, scholars have focused on domestic politics, a changing security environment, and general development of a nuclear capability to explain the timing of these tests.⁶² While the decisions to proceed with the tests are certainly central to understanding opacity because it is a break from the previous policy, it is by no means the only relevant event. Rather, the history of the programs and the times at which India and Pakistan seriously considered reducing opacity, but did not, are also important for understanding the factors at play in constraining their decisions to publicly demonstrate their nuclear capabilities and bolster deterrence.

II. Possible Explanations

Extant explanations of nuclear opacity fall into two general categories: international constraints and domestic level factors. I first discuss international constraints, followed by a discussion of domestic sources of opacity.

A. International Constraints

International constraints suggest that other states and the international community play a significant role in determining whether or not a state will declare its nuclear capability and intentions. There are several sources of external pressure on the

⁶² For a good overview of these arguments, see D. R. SarDesai and Raju G. C. Thomas, eds., Nuclear India in the Twenty-First Century (New York: Palgrave, 2002).

proliferating state that may lead it to choose opacity: existing rivalries with regional states; pressure from the undeclared state's patron supporter; and pressure from the international non-proliferation community as a whole. These external factors are discussed below.

1. Regional Security Environment

The nature of the adversarial relationship between the undeclared nuclear state and its rival(s) influences whether or not the undeclared state moves from an opaque posture to an overt one. Mainly, where regional states seek to contain mutual hostility from spiraling into an armed conflict—while at the same time maintaining a deterrent—it is often in the interests of both the rival and undeclared state to maintain opacity. Conversely, it is expected that under conditions of extreme insecurity, a state will demonstrate its nuclear capability.

a) The Deterrence and Spiral Model

As outlined by Robert Jervis, states engaged in competitive dynamics have two idealized ways to respond to their adversary to avoid conflict: use “sticks” to deter, or “carrots” to reassure and avoid an unintended spiral. These are different prescriptions offered by the deterrence and spiral model about how to provide for state security based on a reading of an adversary's intentions. A state's military choices may have the

unintended consequence of either signaling a lack of resolve that invites aggression, or an overly threatening posture may lead to an unintended spiral of conflict.⁶³

The deterrence model posits that “power must be met by power.”⁶⁴ When faced with an aggressive adversary, it is advisable that the defending state signal its capability and willingness to respond with threats and force.⁶⁵ This is because “moderation and conciliation are apt to be taken for weakness” and will invite aggression.⁶⁶ As related to nuclear opacity, the deterrence model implies that states should openly declare their nuclear capability as soon as it is developed, in order to cast aside any doubts about the defending state’s ability to retaliate.

In contrast, the spiral model “argues that it is often not in the state’s advantage to seek a wide margin of superiority over its adversary” and that “coercion is not likely to produce the desired results.”⁶⁷ Rather, “threats and negative sanctions, far from leading to the beneficial results predicted by deterrence theory, are often self-defeating as a costly and unstable cycle is set in motion.”⁶⁸ From this perspective, conflict may arise where both states are status quo security seekers, but misinterpret or rationally must respond to

⁶³ ⁶³ Robert Jervis, Perception and Misperception in International Politics (Princeton: Princeton University Press, 1976), 84.

⁶⁴ Jervis, Perception and Misperception, 78.

⁶⁵ Jervis, Perception and Misperception, 101.

⁶⁶ Jervis, Perception and Misperception, 59.

⁶⁷ Jervis, Perception and Misperception, 80.

⁶⁸ Jervis, Perception and Misperception, 81.

their adversary's military activities.⁶⁹ While sharing a common interest in avoiding conflict, states also must provide for their own security within an anarchical international structure.⁷⁰ As such, states tend to assume the worst from their adversaries, and respond to buildups and military force preparations. This response may lead to "the classic spiral of arms and hostility [being] set in motion."⁷¹ Arms races are one obvious manifestation of this spiral.⁷²

In short, security seeking states may face a security dilemma where "the means by which a state tries to increase its security decrease[s] the security of others."⁷³ The intensity of the security dilemma can vary over time, based on two variables: whether defensive weapons and policies can be distinguished from offensive ones, and whether the defense or offense has the advantage.⁷⁴ The security dilemma is most severe when offense is dominant and cannot be distinguished from defense.⁷⁵ When defense is dominant and distinguishable, the security dilemma can largely be ameliorated.⁷⁶ For

⁶⁹ Security dilemma dynamics leading to a spiral may also be based on rational decisions, not simply a misperception of another state's status quo, security-seeking intentions that are perceived as aggressive. See Charles L. Glaser, "The Security Dilemma Revisited," *World Politics* 50, no. 1 (October 1997), 171-201.

⁷⁰ Jervis, *Perception and Misperception*, 66.

⁷¹ Jervis, *Perception and Misperception*, 92.

⁷² Jervis, *Perception and Misperception*, 66.

⁷³ Robert Jervis, "Cooperation Under the Security Dilemma," *World Politics* 30, no. 2 (January 1978), 169.

⁷⁴ Jervis, "Cooperation Under the Security Dilemma," 186-187.

⁷⁵ Jervis, "Cooperation Under the Security Dilemma," 211.

⁷⁶ Jervis, "Cooperation Under the Security Dilemma," 211.

subscribers of the security dilemma, nuclear armed states with a secure second-strike capability fit in the latter category and can enjoy a relatively higher level of security.

Yet the transition to MAD can itself be dangerous and may reduce state security. Policies that cause spiraling risk state security if it reduces a state's ability to perform military missions and waste money.⁷⁷ Both of these considerations are highly relevant for second-generation nuclear states.

The transition to a distinguishable, defense dominance position can be unstable and create insecurity among adversaries as power fluctuates. Until both states in a rivalry have achieved a secure, second-strike capability, the other side's forces are a potential offensive threat, especially where there are concerns about the survivability of one's own forces. This "action-reaction process shifts the offense-defense balance, the result is a change—a decrease or an increase—in military capabilities."⁷⁸ This means the transition to MAD may be accompanied by shifts in power that can lead to first-move advantages and windows of opportunity and vulnerability because of the impact of nuclear weapons on the offense-defense balance.⁷⁹ This may lead to a spiral of conflict where each side is competing in an arms race to gain an advantage or at least ensure it does not lag behind the developments of its adversary. Further, prior to reaching MAD, or MAD based on

⁷⁷ Glaser, "The Security Dilemma Revisited," 175.

⁷⁸ Glaser, "The Security Dilemma Revisited," 176.

⁷⁹ See Stephen Van Evera, *Causes of War: Power and the Roots of Conflict*, for an analysis of how power shift and first move advantages are more likely to lead to conflict; Charles L. Glaser, "When are Arms Races Dangerous? Rational versus Suboptimal Arming," *International Security* 28, no. 4 (Spring 2004), 75.

unstable mutual deterrence,⁸⁰ competition can be cost intensive, and may require diverting from conventional programs. However, if states can survive this transition, then once they reach MAD, “the nuclear arms race should peter out once the [states] deploy[] robust assured destruction capabilities, which could provide additional security.”⁸¹

Moreover, in addition to reducing its ability to perform military missions, the spiral may change “the adversary’s beliefs about the state’s motives, convincing the adversary that the state is inherently more dangerous than it had previously believed.”⁸² This fuels unnecessary competitive dynamics that waste state resources, “leaving it no more secure but less prosperous.”⁸³ This concern is particularly relevant for the developing states at issue here with finite resources.

On the other hand, “a state can sometimes use restraint in building military forces to reduce the adversary’s concerns about its” aggressive intentions.⁸⁴ That is, restraint is used to reduce insecurity by signaling that the building state does not have aggressive intentions. A state can communicate benign intention by exercising unilateral restraint and maintaining its “military capability below what it would choose for adequate

⁸⁰ It is hypothesized that deterrence between regional adversaries may be less stable than that between the U.S. and the Soviet Union because of ongoing hostilities, territorial claims, shorter retaliation times, and lack of civilian oversight and developed systems to prevent accidents.

⁸¹ Glaser, “When are Arms Races Dangerous?” 75.

⁸² Glaser, “The Security Dilemma Revisited,” 178.

⁸³ Glaser, “The Security Dilemma Revisited,” 183.

⁸⁴ Glaser, “The Security Dilemma Revisited,” 181.

deterrence and defense were it not considering the effects of signaling.”⁸⁵ Of relevance here, opacity provides states with the ability to signal restraint by not publicly exploiting every nuclear advance a state makes, or by not directly linking nuclear weapons to official state policy as related to an adversary’s military conduct. Nonetheless, signaling restraint does run the risk that the adversary will interpret this conduct as demonstrating a lack of resolve, which may in turn encourage an adversary to press for its claims.⁸⁶

b) Opacity for Deterrence and Reassurance

In reality, while the deterrence and spiral model suggest different prescriptions depending on the motivations of an adversary, there is often uncertainty as to an adversary’s motives. This means that “except in extreme cases of near certainty, the theory calls for a mix of spiral and deterrence model policies.”⁸⁷ This requires a status quo state to balance its competitive options for military capabilities and to signal deterrence, while at the same time seeking to signal benign motives.⁸⁸

For these reasons, in regions where local states seek to contain mutual hostility from spiraling into an armed conflict, it is often in the interests of both the rival and undeclared state to maintain opacity. Opacity is a policy that mixes the prescriptions of the deterrence and spiral model by simultaneously developing a nuclear capability as a hedge but at the same time, refraining from demonstrating this capability that would

⁸⁵ Glaser, “The Security Dilemma Revisited,” 181.

⁸⁶ Glaser, “The Security Dilemma Revisited,” 181.

⁸⁷ Glaser, “When are Arms Races Dangerous?” 57.

⁸⁸ Glaser, “When are Arms Races Dangerous?” 55.

provoke the other side from responding in the same manner. In short, opacity is a chosen strategy that seeks to combine reassurance and deterrence to simultaneously prevent aggression while preventing a spiral into hostilities.

If a state clarifies its nuclear capabilities and intentions, it pressures the rival state to respond to the nuclear developments of its adversary. Otherwise, in the transition to MAD, a state may find itself subject to the offensive capabilities of its adversary without comparable retaliation in turn. Further, if a state declares its nuclear capabilities, it creates incentives for its adversary to seek to bolster its own deterrence credibility by demonstrating resolve. These actions may in turn lead to an open arms race, characterized by the rapid development and accumulation of weapons, which requires a substantial investment of time and financial resources to compete. A competitive arms race is often not in the interest of a developing state that is required to adopt foreign policies that balance security goals and economic development.⁸⁹ Since undertaking a nuclear weapons program is an expensive and difficult processes, the rival state may prefer to not have to expend resources on an open competition.

Instead, states may engage in tacit bargaining, where they seek to establish common gain and have an affordable and manageable nuclear weapons program.⁹⁰ By remaining opaque, the undeclared nuclear state is able to signal some level of restraint

⁸⁹ Michael D. McGinnis, "A Rational Model of Regional Rivalry," *International Studies Quarterly* 34 (1990), 112.

⁹⁰ This also allows them some flexibility in posturing independent from the domestic political pressure. See the related discussion on nuclear nationalism in the domestic politics section.

and seek to ameliorate a spiral of conflict with its adversaries.⁹¹ This serves the function of minimizing public challenges and perhaps allows some level of backroom diplomacy to maintain lower levels of antagonism.⁹² Even if the undeclared state assumes that the rival state will eventually develop a response, the undeclared states potentially can slow down this process by not highlighting differences in development and refraining from goading its adversary into responding to each development.

In addition to the undeclared state seeking to minimize the threat of its nuclear developments, its adversary often also has an interest in maintaining this fiction. In this sense, there is tacit cooperation between the undeclared and rival state, in which both have incentives to not publicly address the nuclear status. For the adversary, it also faces resource constraints and has an incentive to avoid a costly arms race, one that it may also lose. This tacit cooperation between adversaries may be threatened by domestic political pressures to respond to other's gains, if publicly acknowledged. Opacity mitigates some level of political pressure on rival states to match nuclear capabilities and put leaders in untenable conflict situations.⁹³

In short, given the security risks associated with a competitive arms race, and the benefits of restraint, there are a number of incentives for both the undeclared state and its

⁹¹.Jervis, Perception and Misperception.

⁹² Neil Joeck, "Maintaining Nuclear Stability in South Asia," Adelphi Paper 312 (New York: Oxford University Press for IISS, 1997) and Neil Joeck, "Tacit Bargaining and Stable Proliferation," in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co., 1991).

⁹³ Solingen, "The Domestic Sources of Regional Regimes," 324. How long this will remain the case is open to question as some Middle Eastern states are now openly acknowledging Israel's nuclear status. Additionally, Israel's nuclear capability has been referenced in justification for the development of chemical and biological arsenals.

rival to refrain from openly addressing the undeclared state's nuclear status. Opacity is thus a mechanism to decrease the potential for conflict and expense that an open arms race creates. This theoretical basis suggests the following hypothesis:

H₁: Nuclear opacity is a strategy employed by a nuclear state seeking to deter its adversary, while simultaneously refraining from provoking an openly competitive arms race or armed conflict.

If this hypothesis explains second-generation nuclear postures, then there should be evidence of the opaque state seeking to use its nuclear program to obtain some benefit of deterrence. This would likely entail signaling to an adversary that the opaque state has the ability to quickly change its nuclear policy if the circumstances warrant it. However, because deterrence actions have the potential to escalate conflict between adversaries, efforts to bolster deterrence by an opaque state are likely subtle and heavily reliant on uncertainty. This would be consistent with the countervailing goal of preventing a competitive arms race.

Thus, leaders should also demonstrate conservative behavior that is sensitive to the costs of the nuclear program and potential risks of reallocating resources from conventional weapons systems and economic development. There should be an absence of "crash" programs that significantly change the developmental pace between the adversaries. Likely there would also be a lack of highly publicized development breakthroughs and leaders refraining from issuing nuclear threats during times of heightened crisis. At the same time, states that are seeking to avoid competition would be unlikely to refer to more advanced nuclear developments of its adversary, lest it would have to acknowledge its own deficiencies. Moreover, there should be evidence of

some—although not necessarily extensive given the adversarial relationship—types of cooperation that reduces competition incentives. Examples of such measures include regional confidence-building or agreements to refrain from attacking each other's nuclear facilities.

On the other hand, an arms competition may become more attractive for a state that enjoys a substantial power advantage, as it would be able to outstrip its adversary in an arms race. Conversely, in a severe security environment a state may be compelled to rely on its nuclear capabilities if it cannot rely solely on its conventional capability. In either of these instances, at each end of the security continuum, it is more likely that a state will forego a policy of opacity and choose to clarify its nuclear capabilities and intentions.

Hypothesis 1 would be disconfirmed if there is little evidence of restraint among the state. The lack of restraint would suggest other factors are stronger incentives for maintaining opacity, as there would be no logical reason to be engaged in competitive nuclear policies without garnering the deterrence benefits of an overtly recognized capability. Further, if the undeclared state believed that it was inevitable that the rival state would acquire nuclear weapons, or an overt nuclear posture, then there is little incentive for it to remain opaque. Opacity in this instance would more likely be explained by other factors than the prospect of the rival state also refraining from a visible stance.

2. Patron State Incentives

Patron states that seek to promote non-proliferation, or opacity as an alternative, are also a source of constraint on the undeclared state. Within this framework, regional powers have an incentive to acquire arms and military and economic aid from global powers in order to increase their own security.⁹⁴ More powerful, global states may have an interest in providing economic and military assistance to these weaker states to promote their own interests. Weaker states may also be motivated to cooperate with a more powerful state—even if it is not yet formally receiving aid—where there is the future prospect of cooperation.⁹⁵

Nonetheless, even though states may find a common interest in cooperating, competitive interests exist as well. As such, the supplier state will seek to influence the decisions of the recipient state by providing military and economic aid. In return for this assistance, the recipient state is obligated to “abstain from a political course which might put in jeopardy the continuation of military aid.”⁹⁶ Thus, while “[r]egional powers use military expenditures, arms imports, and alignment concessions to improve their security, [doing so] results in economic, dependence, and alignment costs.”⁹⁷ Here, the costs are refraining from relying on an overt nuclear posture.

⁹⁴ McGinnis, “A Rational Model of Regional Rivalry,” 112.

⁹⁵ See Solingen, Nuclear Logics.

⁹⁶ Hans Morgenthau, “A Political Theory of Foreign Aid,” The American Political Science Review 56, no. 2 (June 1962), 303.

⁹⁷ McGinnis, “A Rational Model of Regional Rivalry,” 125.

The provision of military and economic assistance by a patron state to a client state is expected to give the supplier state leverage over the recipient state.⁹⁸ The extent of the patron state leverage is determined by several factors, including: (1) the value of the aid; (2) how readily available it is from other sources; (3) how dependent the client state is on the patron state; and (4) a relatively low degree of motivation regarding concessions from the client state.⁹⁹ Because substantial influence requires the existence of all of these factors, it is predicted that foreign aid often plays little role in the client state's foreign policy stance. Client states that are able to easily gain economic and military assistance from other patrons, which reduces their dependency¹⁰⁰ on the existing patron state, and have strong reasons to not concede on an issue, are the least likely to predicate their behavior on the receipt of aid. The exception to this is when "the recipients are so vulnerable and dependent that they are forced to follow the patron's wishes even when those wishes conflict with their own."¹⁰¹

Further, regional states are not without influence on their more powerful patrons. Rather, the relationship is often characterized by mutual influence.¹⁰² Bargaining power between the supplier state and its recipient is determined by the relative value of the

⁹⁸ Stephen Walt, The Origins of Alliances (Ithaca: Cornell University Press, 1987), 41. Walt uses alignment and alliance interchangeably to discuss both formal and informal cooperation. *Ibid.*, 12.

⁹⁹ Walt, Origins of Alliances, 43-44.

¹⁰⁰ Dependency is a function of the degree of threat facing the state combined with degree of assistance the supplier state can provide and the availability of alternative means to meet the threat. Glenn Snyder, Alliance Politics (Ithaca: Cornell University Press, 1997), 31.

¹⁰¹ Walt, Origins of Alliances, 45.

¹⁰² McGinnis, "A Rational Model of Regional Rivalry," 114.

relationship and the comparative availability and attractiveness of other alternatives.¹⁰³ Additionally, the patron state may not be able to cut off aid to a client state if the patron state's domestic political processes make the threat incredible.¹⁰⁴ Patron states may also be unwilling to cut off or reduce assistance if it would endanger the client state.¹⁰⁵ These constraints have the effect of further reducing the supplier state's leverage over the recipient state.

Regarding nuclear opacity, the great powers have sought to prevent the spread of nuclear proliferation among regional states. During the Cold War, the superpowers agreed that the spread of nuclear weapons was not in their interests and have employed a variety of mechanisms to slow horizontal proliferation. One tool is the bilateral relationship between the superpowers and its client states.

However, the extent to which non-proliferation policies have been pursued, particularly between the patron and client state, has varied over time and such policies have generally been ineffective in stopping the proliferation of second-generation nuclear states. Given the difficulties in stopping determined proliferators short of military attack, the United States in particular has sought to minimize the impact of proliferation by providing incentives for continued opacity. Yet, in essence, "the only thing that the United States had been able to do was to delay and delegitimize proliferators' nuclear

¹⁰³ Snyder, Alliance Politics, 75.

¹⁰⁴ Walt, Origins of Alliances, 44.

¹⁰⁵ Robert O. Keohane, "The Big Influence of Small Allies," Foreign Policy no. 2 (Spring 1971).

efforts, and prevent both open nuclear threats and ‘red lines’ as publicly defined deterrents, fearing situations that might be uncontrollable.”¹⁰⁶

Further, while the US may be able to ignore dealing with proliferation developments given the general secrecy surrounding the programs, it would not be able to look the other way in the face of an open nuclear disclosure. The United States, or other patron states, would be forced to make difficult decisions whether to cut off assistance to second-generation nuclear states or risk publicly undermining the credibility of its non-proliferation efforts. The undeclared state, since it risks losing bilateral financial and conventional military aid from its patron if it openly defies nonproliferation efforts has incentives to remain opaque unless it is forced by security considerations to reveal its nuclear capabilities.

Nonetheless, there are limits to the extent to which external pressures can prevent states from openly disclosing in severe security environments. In the absence, however, of exacerbating security factors, patron states can provide incentives in the form of threats and inducements to keep nuclear proliferation opaque. In this way, both the undeclared state and patron state share an interest in an opaque nuclear posture and both are complicit in maintaining this position.

This suggests the following hypothesis:

H₂: Nuclear opacity is the result of patron state threats and inducements.

If this hypothesis is true, we should observe the patron state either explicitly or implicitly link the provision of assistance to the nuclear posture chosen by the recipient

¹⁰⁶ Shlomo Aronson, The Politics and Strategy of Nuclear Weapons in the Middle East: Opacity, Theory and Reality, 1960-1991 (Albany: State University of New York Press, 1992), 262.

state. Further, the more the client state is dependent on the aid, as well as the higher priority that the supplier state puts on opacity, the more likely it is that a state will choose an ambiguous posture. At the same time, the recipient state should have some leverage with its patron if it is valuable to the relationship, and even more so if the supplier state will continue to support its client regardless of its nuclear stance. It is also important to note that if opacity is both in the patron and the client's state interest, notwithstanding the dynamics of the supplier relationship, the logic here does not apply.

Of course, the reverse of this logic would disconfirm this hypothesis. First, if there is no link made between economic and military aid to the client state in return for nuclear restraint, then it suggests that the patron state would supply the same regardless of the undeclared state's actions. Second, if the amount of aid is minimal, nonexistent, or if it does not really affect the client state's calculations for other reasons, this suggests that aid and other forms of threats and inducements are not linked to the client states' behavior. Third, if the patron state publicly refers to the client state's nuclear capability, then it is not perpetuating or supporting the undeclared states opaque stance. Finally, if the patron states make only symbolic or minimal responses to more visible postures, then there is little credibility in threatening to withhold aid.

3. International Non-Proliferation Regime

The final source of international constraints is that of the international non-proliferation regime. International opinion serves as a source of external pressure on an undeclared state by making the acquisition of nuclear weapons unacceptable according to international standards of conduct. While second-generation proliferators have remained

determined to acquire a nuclear capability despite the costs of doing so based on the non-proliferation regime, they have sought to do so in such a way as to not provoke an international response.

Therefore, some scholars contend that nuclear opacity is in response to an international presumption of nuclear non-proliferation.¹⁰⁷ From this perspective, states that seek to develop a nuclear weapons capability do so against the prevailing sentiment that prohibits proliferation. Essentially, from this perspective, “opaque nuclear proliferation has become the strategy of choice for acquiring nuclear weapons at a time when the desire to possess such weapons is viewed as illegitimate.”¹⁰⁸ As such, second-generation nuclear states seek to avoid the costs of going against the norm of nuclear non-proliferation.

Generally, many states in the international system have a shared interest in preventing the spread of nuclear weapons. These states have joined together and cooperated in forming formal institutions and organizations designed to prevent both horizontal and vertical proliferation. These institutional frameworks include the Nuclear Nonproliferation Treaty (“NPT”), the International Atomic Energy Agency (“IAEA”), and the smaller Nuclear Suppliers Group. Additionally, there are a host of regional organizations and confidence-building procedures designed to obviate the need for nuclear weapons. Together, these international and regional efforts have created a presumption against the spread of nuclear weapons, such that states wishing to swim

¹⁰⁷ See, e.g., Frankel, “An Anxious Decade.”

¹⁰⁸ Cohen and Frankel, “Opaque Nuclear Proliferation,” 23.

against the tide of international opinion must do so against a strong current. Political obstacles, which did not exist for the first five nuclear states, are now in the path of states wishing to openly acquire nuclear weapons. In short, some scholars argue that,

It is the effectiveness of the non-proliferation regime's efforts to delegitimize the open acquisition of nuclear weapons that has stimulated many of the fundamental changes between patterns of the first and second generation of proliferation. It is the establishment of the pattern of non-proliferation as an international norm that has prompted opaque proliferation. The non-proliferation regime has thus sired an invisible, underground proliferation.¹⁰⁹

The United States has taken the lead in creating and enforcing this international cooperation against horizontal proliferation. As such, it plays an important role in sustaining the norms, regimes, and institutions related to non-proliferation.¹¹⁰ At the same time, the international community further perpetuates opacity by not acknowledging the de facto nuclear capabilities of undeclared states. For example, the existing members of the NPT refuse to allow Israel, India and Pakistan to join as nuclear states. Instead, the P-5 continues to call for these states to join the NPT as non-nuclear states and to abide by its provisions as such. Moreover, when states act outside of the accepted frameworks, they are condemned by other states for their actions. Overall, this institutional framework makes it more difficult and costly for states to develop nuclear arsenals, even without the cooperation of non-member states.

Significantly, Israel, India, and Pakistan are not members of these institutional frameworks. Yet, regime restraints come from more than membership in these

¹⁰⁹ Cohen and Frankel, "Opaque Nuclear Proliferation," 17.

¹¹⁰ Randy J. Rydell, "Opaque Proliferation and the Public Agenda," in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co, 1991), 127.

organizations. Regime theory suggests that other aspects of these regimes constrain the nuclear activities of these proliferators. The nuclear non-proliferation regime is not confined to just the formal institutions designed to prevent the spread of nuclear weapons. Rather, the international non-proliferation regime consists of “principles, norms, rules and decision-making procedures around which actor expectations converge in a given issue-area.”¹¹¹ These principles and norms combine to create a “system of injunctions about international behavior.”¹¹² The result, from this perspective, is the creation of an international norm that horizontal proliferation is an illegitimate activity such that states cannot publicly declare their interest in acquiring nuclear weapons.¹¹³ Additionally, this regime attaches significant importance to “open detonations” based on the behavior of first-generation nuclear states. As such, this type of openness has served as a baseline against which forbidden nuclear behavior is evaluated. In short, from this perspective, the development of the non-proliferation norm thus explains the difference in the pattern between first and second-generation nuclear proliferators. The fundamental change in the pattern between these states was caused by the development of the institutional frameworks and the regime.

Thus, for the opaque nuclear state, the costs and benefits of openly declaring its nuclear capabilities and intentions are outweighed by the incentives to remain ambiguous

¹¹¹ Stephen D. Krasner, “Structural Causes and Regime Consequences: Regimes as Intervening Variables,” in Stephen D. Krasner, ed. *International Regimes* (Ithaca: Cornell University Press, 1983), 1. In this regime, the United States has been the unquestioned leader in establishing the institutional and organizational mechanisms to prevent the spread of horizontal proliferation.

¹¹² Cohen and Frankel, “Opaque Nuclear Proliferation,” 16.

¹¹³ Cohen and Frankel, “Opaque Nuclear Proliferation,” 16.

in the face of external constraints. The implication is that opaque nuclear states will remain so as long as there is international pressure to do so and the benefits of open deterrence do not exceed the international costs. If the opaque state faces an increasingly hostile security environment with its rival, then the benefits of open deterrence at some point will outweigh the costs of declaring its nuclear status. The veil of opacity may also be pierced if the costs of external pressure decrease or if other states begin to openly acknowledge the nuclear status of the opaque state.

This theoretical approach suggests the following hypothesis:

H₃: Nuclear opacity is the result of undeclared states fearing the costs of the international community's response to open nuclear policies given international norms against proliferation.

Based on this perspective, second-generation states should reflect, at a minimum, concern that they will be internationally isolated if they undertake open proliferation. Proliferators should calculate the response of the United States and others supporting the non-proliferation regime. Under a robust regime, proliferators would expect costs imposed from other states if they openly demonstrated their nuclear capabilities in violation of the international norm.¹¹⁴

Even stronger support of the role of the international regime is if there is evidence that second-generation states have internalized the norms against non-proliferation such that they genuinely embrace its concepts by seeking to slow or stop the spread of nuclear weapons, or at least condemn those that would publicly demonstrate their capabilities.

¹¹⁴ Roger K. Smith, "Opaque Proliferation and the Fate of the Non-Proliferation Regime," in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. (Portland: Frank Cass & Co, 1991), 96.

Strong evidence of having internalized the norms would consist of states not even considering testing even though they have developed the capability.

Conversely, this hypothesis would be disconfirmed if there was little or no international response to previous moves to disclose nuclear proliferation efforts. It would be further disconfirmed if there was little evidence that that undeclared state considered international responses in its calculation of its nuclear policy.

B. Domestic Sources of Opacity

There are two domestic sources of opacity. The first explanation suggests that leaders of particular political parties or interest groups have conflicting preferences as to whether the state should develop nuclear weapons, and if it does so, whether the capability should be open or not. Opacity, from this perspective, is the result of a compromise solution between divergent interests as to the state's nuclear status. The second domestic source of opacity focuses on the domestic normative and cultural prohibitions against relying on an overt nuclear posture for security. These explanations are discussed below.

1. Opacity Based on Domestic Interests

Some domestic political actors have interests that would be adversely affected by a visible nuclear weapons capability and resist efforts towards openness. There are also a variety of interests that support an open posture. Opposition to, as well as support of, an open nuclear capability is generally formed along a spectrum of interests.

Initially, it is useful to distinguish between actors who oppose the development of nuclear weapons in general, and those that oppose making such information public once the decision is made to pursue the program. On the one hand, some actors prefer not to develop nuclear weapons, and further oppose an open posture for reasons that it is too costly or believe that such openness will not contribute to state security. Others may oppose developing a nuclear weapons capability, but once the decision has been made to invest the resources, believe that a more open posture is the best course of action. Finally, there are those that both support developing a nuclear option and prefer that the state's nuclear capability be openly acknowledged for the purposes of enhancing state security. In short, just because an actor did or did not oppose the decision to develop a nuclear capability does not necessarily mandate that they promote opacity as well. A summary of these positions on a continuum is as follows:

<u>Oppose nuc. option</u>	<u>Oppose nuc. option</u>	<u>Support nuc. option</u>	<u>Support nuc. option</u>
Oppose openness	Support openness	Oppose openness	Support openness

Domestic constituencies may oppose an overt nuclear posture for a variety of reasons. Some resist openness on the basis of cost and reallocation of resources from other programs, such as scientists who are opposed to nuclear weapons programs that take funding from their research, and industrial and commercial actors that are sensitive to the threat of bilateral and multilateral sanctions imposed by outside sources in the event of disclosure.¹¹⁵ Another significant source of opposition may include beneficiaries of conventional military resources, who fear a loss of resources. Still others express

¹¹⁵ Solingen, "The Domestic Sources of Regional Regimes," 318-325.

doubts about the usefulness of nuclear weapons for providing security and are often skeptical about the wisdom of the decision to develop nuclear weapons in general. Other support for opacity may come from groups seeking to develop and protect the nuclear program in the face of domestic resistance from other salient actors, but generally support the nuclear program.

On the other hand, pressure for openness exists from those that believe state security is best achieved through an open nuclear capability, and those that seek legitimacy and perhaps primacy of the nuclear program, such as some scientists and the military branches in charge of the nuclear arsenal. Further, public opinion can be an important source of pressure towards openness, particularly in states that foster “nuclear nationalism.” In cases of nuclear nationalism, leaders have to consider maintaining the support of its domestic populations, which are generally supportive of a nuclear option. While widespread public support does not automatically force a policy of openness, it gives leaders that support an open option further support for their position. In short, there are domestic level winners and losers related to resource allocation, prestige, and vulnerability to external pressures on interests.

For these reasons, according to domestic political explanations, political party or interest group politics are an important cause of opacity based on the different parochial interests of actors and institutions.¹¹⁶ This suggests the following hypothesis:

H₄: Nuclear opacity is based on the convergence of interests of domestic actors that benefit from an undeclared status and who would suffer costs if the state’s nuclear capabilities and intentions were declared.

¹¹⁶ Solingen, “The Domestic Sources of Regional Regimes,” 319.

This perspective suggests a particular causal chain leading to opacity when the dominant decision-makers prefer transparency. In particular, there should be evidence of some discussion, debate, or other indicators of the opposition views being taken into account by the deciding leadership that prefers an open nuclear stance. That is, the particular interests opposed to openness must effectively have enough power to influence the ultimate decision. The strongest support for this position would be evidence confirming that the controlling leadership supported an open posture, but acquiesced to the concerns of those who opposed this policy.

Conversely, leadership that opposes an open stance and the development of nuclear weapons, but moves toward openness or continues development suggests some compromise with other interests. Again, there would have to be evidence of both the controlling leadership preferences and minority preferences that were taken into account to show a relationship. And, obviously, this hypothesis would also be disconfirmed if there was a general domestic consensus among leaders preferring openness based on their own interests, but the policy remained one of opacity.

2. Opacity as a Result of Normative and Cultural Prohibitions

While the norms of the non-proliferation regime imposes some level of cost on a proliferating state, domestic level strategic culture arguments focus on the deep-rooted norms within a state to explain the level of nuclear transparency. Even though acknowledging some practical considerations regarding the security environments and mixed motives for acquiring nuclear weapons, the argument is that cultural and

normative constraints have helped shape how states respond to the process of acquiring a nuclear capability and formulate their strategy to deal with the same. Similar elements of cultural explanations further stress a general state ambivalence about the development of a nuclear capability.

This perspective suggests the following hypothesis:

H₅: Nuclear opacity is based on normative and cultural constraints amongst the leaders of the undeclared states, which reflect deeply held reservations about the role of nuclear weapons in providing for state security.

If this perspective is accurate, then at a minimum, leadership should generally resist basing state security on nuclear weapons, absent the threat of total destruction. In particular, there should be a general absence of reliance on nuclear weapons for security, including an overall resistance to planning and implementing a nuclear deterrent strategy. A more extreme version suggests that leadership overall would not even consider nuclear deterrence an option, even in circumstances of obvious military utility. A further part of this theoretical basis suggests that “unthinkable” aspect of nuclear weapons, or at least their non-use outside of threatened state annihilation, is thoroughly ingrained in state leadership. This suggests that there would be little questioning of existing policy and very slow change, if at all, over time.

Thus, state hesitation to be open about its nuclear program are hypothesized to be a product of both international and domestic level factors. Figure 1 summarizes these potential explanations and associated predictions.

Figure 1 – Hypotheses Related to Nuclear Opacity

Explanation	Predictions	Examples
H ₁ : Regional Security Environment		
	Signal that the opaque state has the ability to quickly change its nuclear policy if the circumstances warrant it.	Policy statements, advertising technology developments, characterizations of nuclear program - should increase during times of crisis if trying to deter.
	Paced nuclear development by the opaque state.	Absence of "crash" nuclear program, sensitivity to costs, concerns about reallocating resources from conv. or domestic programs, refrain from highly publicized breakthroughs, not issue direct public nuclear threats during a crisis, no reference to more advanced capabilities.
	Some limited cooperation with adversary to reduce risks during transition.	Regional confidence-building measures, agreements to refrain from attacking nuclear facilities.
H ₂ : Patron State Pressures		
	Existence of issue linkages based on threats or inducements from the patron state.	Non-proliferation measures that require cut off of assistance or sanctions, policy statements or other communications linking restraint to cooperation.
	Highly dependent states will exhibit more conforming behavior than less dependent states.	
	Non-proliferation pressures will be more effective when a high priority for the patron state.	

Figure 1 – Hypotheses related to nuclear opacity (continued)

Explanation	Predictions	Examples
H ₃ : Int'l Non-proliferation Regime		
	Opaque state is concerned about the costs that would be imposed by members of the non-proliferation regime.	Statements or other indicia that opaque state is evaluating the potential costs that would be imposed by going against the regime.
	Recognition that there is an int'l norm against testing and non-proliferation, and to break it would isolate the opaque state.	Evidence that opaque state fears being cast as an irresponsible state. Uses the norms to promote own non-proliferation interests.
	Opaque state has internalized ideas about the validity of the int'l regime and the dangers of nuclear proliferation.	Opaque state seeks to promote, or at least not directly undermine the non-proliferation regime.
H ₄ : Party/Interest Group Politics		
Decision-making is based on compromise between interest groups.	Should see evidence of bargaining process, parsing of interests, and compromise solution of opacity.	
Alternatively, the decision maker controls nuclear policy, does not have to take other preferences into account, and prefers an opaque stance based on own domestic interests that would be adversely affected by an open posture.	Control over decision-making, have particular interests that would be affected by an open posture, and make decisions based on these interests.	
H ₅ : Moral/Cultural Constraints		
	Expressions of doubt or lack of reliance on nuclear weapons for security.	
	Leaders do not consider the use of nuclear weapons as an option even when militarily useful.	
	Little questioning or reevaluation of existing policy.	

III. Methodology

This research project is centered on evaluating the proposed explanations of nuclear opacity through case studies. As outlined above, there are multiple plausible explanations for state decisions to declare their nuclear status. This project assesses the relative validity of these explanations through case studies of the nuclear postures of Israel, India, and Pakistan.

A. Case Selection

This dissertation includes three case studies of undeclared nuclear states, Israel, India and Pakistan. The universe of countries with nuclear weapons is extremely limited. For this reason, I have chosen to study the available cases of opaque nuclear states—that is states that have acquired a deliverable nuclear capability for the purposes of deterrence but still maintain opacity.

The Israeli case provides the basis for the ‘quintessential’ opaque nuclear case as it remains the most secretive, having never publicly tested or declared itself a nuclear weapons state. There is more variation on the dependent variable, nuclear opacity, in the cases of India and Pakistan as they tested in 1998. Prior to testing, both states maintained an ambiguous posture for decades, and despite the 1998 tests remain relatively opaque compared to the declared states.

There are three undeclared nuclear cases that are being excluded from the analysis, including Argentina, Brazil, and South Africa. The primary reason that Argentina and Brazil are excluded is that it is unclear that they ever developed enough of a capability that it would have been rational for them to go public.

South Africa did develop an arsenal of six nuclear bombs, which its leader gave up in the early 1990's. It is not readily apparent that South Africa sought to develop a nuclear arsenal for immediate deterrence purposes. The problem for the purposes of this study is that without having a deterrence dynamic—which presumes a visible posture—there is no compelling puzzle as to why South Africa did not publicly acknowledge the capability. Because this study is limited to cases of states seeking to deter their adversaries, there is no apparent reason to include South Africa. This is not to say that the case is not worth further exploration, but for the narrower purposes of understanding deterrence dynamics, it offers less than the selected cases.

Finally, this project is not dealing with currently proliferating states such as North Korea and Iran. These states are essentially third-generation nuclear states, with their primary nuclear development occurring decades later in a different global security environment. This distinguishes them in fundamental ways from the cases analyzed here. Furthermore, the specifics of each case also suggest that there are different factors informing North Korea and Iran's programs. For example, North Korea's nuclear weapons program does not appear to be security driven, such that it is seeking to deter a regional adversary. Rather, its behavior appears to fit more closely to seeking attention, as it varies between extremes in rhetoric from nuclear posturing to indicating that it will cooperate with international non-proliferation agreements.

B. The Congruence Procedure and Process Tracing

I employ two within-case methodologies—the congruence procedure and process tracing—as a way to test whether the evidence supports the various hypotheses. The

congruence procedure operates by comparing whether the theoretically predicted value of the dependent variable matches observed value of the dependent variable, given the independent variables observed in the study. If the dependent variable's outcome is consistent with the predicted result, based on the observed independent variables, then the possibility of a causal relationship is strengthened.¹¹⁷

The congruence procedure can be substantially strengthened by also using process tracing. The method of process tracing attempts to identify the causal path explaining how the independent variable leads to the resulting dependent variable.¹¹⁸ In essence, process tracing is linking the independent variable to the dependent variable by identifying the causal connection, process, and mechanisms between them. This method is conducted by testing whether the observed processes match those predicted by a theory.¹¹⁹ This involves “identifying steps in a causal process leading to the outcome of a given dependent variable of a particular case in a particular historical context.”¹²⁰ I then compare the results across the cases.

In terms of data collection, Alexander George's method of structured, focused comparison is designed to elicit similar data across cases. By asking general questions of each case, comparable data is obtained from each, which can then be compared with

¹¹⁷ Alexander L. George and Andrew Bennett, Case Studies and Theory Development in the Social Sciences (Cambridge, Mass.: The MIT Press, 2005), 179.

¹¹⁸ George and Bennett, Case Studies and Theory Development, 183.

¹¹⁹ George and Bennett, Case Studies and Theory Development, 217.

¹²⁰ George and Bennett, Case Studies and Theory Development, 176.

other cases.¹²¹ Consistent with this approach, the evidence collected is designed to answer the following questions:¹²²

1. What are the undeclared state's incentives for acquiring nuclear weapons?
2. What threats or inducements were proffered by the patron states to promote opacity?
3. Did the undeclared state have fears of international responses to nuclear development, testing and other forms of openness?
4. Are there contending domestic political factions that support opacity within the undeclared state?
5. What role did common beliefs and values as related to nuclear weapons influence state leadership?
6. What were the reasons that made the undeclared state consider declaring?
7. Has the variation within opaque and nuclear states cohered with the expectations of the hypotheses?
8. Are there factors outside of the hypotheses that have influenced undeclared state behavior?

The main source of evidence for the country specific case studies is secondary literature, which provides historical accounts for each state. This body of secondary works mainly consists of historical scholarship, published security analyses, and media sources. I sought to verify the accuracy of this literature with as many other sources as possible, including primary material such as government documents and leadership memoirs when available. Additionally, I used available primary sources such as the minutes of meetings, memos, cables, congressional resolutions and other data that

¹²¹ George and Bennett, *Case Studies and Theory Development*, 86.

¹²² Alexander L. George, "Case Studies and Theory Development: The Method of Structured, Focused Comparison," in *Diplomacy: New Approaches in History, Theory, and Policy*, Paul Gordon Lauren, ed. (New York: Macmillan Press and Co., 1979).

documents U.S. perceptions of the programs and its efforts to affect the declaratory status of the other states, either bilaterally or through the non-proliferation regime.

C. Methodological Challenges

There are several difficulties associated with this methodology. Given that the nuclear programs are secret, obtaining accurate information is difficult. Nonetheless, there are extensive historical accounts of all the nuclear development of all three cases. And as more and better data has become available over the last few years,¹²³ it has not only confirmed much of the previous scholarship, but has also underscored that there is a fairly accurate understanding of the programs in general even if the details have been in question. Moreover, evaluating whether the theoretical explanations accurately account for what is observable, in terms of processes and mechanisms, can be helpful for determining if some explanations are less credible. Further, this research agenda remains salient for understanding current state behavior and deserves study in whatever form available.

A second possible criticism of the proposed methodology is that there is very little variation on the dependent variable within the cases of nuclear opacity. That is, Israel has taken no steps to openly declare its capability, while India has conducted nuclear tests at different times and Pakistan once. Even with the nuclear tests, there remain many

¹²³ For example, Israel in the mid-1990's declassified some of its documents relating to the origins of its nuclear weapons program in the 1960's. See Avner Cohen, "Stumbling Into Opacity: The United States, Israel, and the Atom, 1960-1963," *Security Studies* 4, no. 2 (Winter 1994-1995). Cohen was also able to gain access to a number of interviews and other primary source materials for *Israel and the Bomb*. Hersh was also able to access key figures involved in the Israeli government and interview them for his project, Seymour M. Hersh, *The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy* (New York: Random House, 1991).

areas of opacity within South Asian cases.¹²⁴ There are several ways that I sought to handle this issue given the universe of available cases. All three of the cases contain ‘critical junctures’ in the historical accounts where leaders grappled with their country’s nuclear status. These potential turning points are analyzed for the factors that explain the decisions not to openly declare. Additionally, the Indian case provides within-case variation, as India tested in 1974 and then remained ambiguous until the 1998 test. This variation on the dependent variable, combined with several historical junctures where Indian leaders chose not to test, allowed me to make multiple within-case observations.¹²⁵

The third potential criticism of the methodology is that the universe of cases is rather limited and at the same time encompasses very different regions. That is, the ability to draw contingent generalizations may be limited based on the relative lack of declared and non-declared nuclear states in general. There simply may not be enough cases for a general theory of state behavior. Furthermore, the cases of opacity may not be comparable, also making it difficult to develop a generalized theory. Still, this subset of declared and undeclared nuclear states represents an important research agenda given the relevance of nuclear weapons.

¹²⁴ Rodney W. Jones, “Minimum Nuclear Deterrence Postures in South Asia: An Overview,” Report Prepared for the Defense Threat Reduction Agency (Reston, Virginia: Policy Architects International, 2001).

¹²⁵ Stephen Van Evera, Guide to Methods For Students of Political Science (Ithaca: Cornell University Press, 1997), uses the term cases, and Gary King, Robert O. Keohane, and Sidney Verba, Designing Social Inquiry: Scientific Inference in Qualitative Research (Princeton: Princeton University Press, 1994), refers to observations. Both are referring to the same concept.

CHAPTER III

ISRAEL

Israel has a sophisticated nuclear arsenal and delivery capability. It is estimated that Israel has developed between one and two hundred nuclear weapons. This includes a thermonuclear capability and tactical nuclear weapons. Israel has also developed delivery mechanisms via land, air, and sea, giving it a second-strike capability. Notwithstanding these capabilities, and a now widespread understanding that Israel is a nuclear weapons state, Israeli leaders still neither publicly admit nor deny its nuclear arsenal and instead reaffirm the longstanding commitment to not be the first state to introduce nuclear weapons into the Middle East.

Israel's ambiguous nuclear policy is largely the result of Israeli leaders balancing countervailing external pressures from its patron state, the United States, and its regional security requirements. The official Israeli nuclear policy was developed in the 1960s as a result of U.S. non-proliferation pressures. Washington was concerned that an overt Israeli nuclear program would further fuel conflict in the Middle East between the regional states, and had the potential of becoming an internationalized problem if it spurred the Soviets to greater involvement in the area. As such, the U.S. formulated a policy designed to fulfill its own foreign policy goals of dampening the Arab-Israeli conflict through continued engagement in the region and promoting international non-

proliferation. Washington first pressured Israel to give up its nuclear ambitions, and failing that, to keep them hidden. To this end, the U.S. sought to inspect the Dimona reactor, and publicly tie Israel to its statements that its nuclear program was for entirely peaceful purposes.

It was under continued diplomatic pressure from the U.S. that Israeli leaders first formulated the current policy, which was further refined to include promises that Israel would not test nor declare itself a nuclear weapons state. The newly adopted posture in the 1960s was further entrenched as the U.S. became a major supporter of Israel's conventional systems through economic aid and military assistance. Because Israel's security needs vis-à-vis its regional adversaries were largely met through conventional superiority, it could live with deterrence through uncertainty with an ambiguous posture. In this way, opacity served as a useful compromise to both the Americans and Israelis because it provided for the foreign policy goals of each.

While U.S. pressures directly resulted in the initial formulation of Israel's nuclear policy, Israel's regional security environment also played a primary role in both creating incentives for acquiring nuclear weapons and maintaining ambiguity. From its independence, Israel has operated within a severe security environment with its early years marked by wars with its surrounding neighbors. Israeli leaders chose to develop a nuclear weapons capability with the intent that it would serve as a deterrent against hostile Arab states in the Middle East, particularly in the face of an overwhelming conventional coalition or the potential use of chemical or biological weapons.

At the same time, as the policy of deliberate ambiguity developed, the Israelis found it more advantageous to their strategic position to rely on U.S. economic and military assistance, which assured conventional superiority and required less dependence on nuclear deterrence. Israel's ambiguous nuclear posture also reduced incentives for other Middle Eastern states to acquire nuclear weapons or call on the Soviets to intervene on their behalf against a nuclear Israel. This in turn assisted Israel in maintaining the conventional balance of power in its favor and its nuclear monopoly. Israel's opaque nuclear posture has thus been maintained over time in response to both its relationship with the United States and regional dynamics.

Further, the effects of international non-proliferation regime were not significant in causing Israel to initially choosing its nuclear stance. The regime was in its infancy during the time that Israel developed and achieved a nuclear option. Israel also avoided NPT treaty commitments so that it would not be obligated to limit its nuclear development. To the extent that the international non-proliferation regime mattered, it was primarily based on direct U.S. pressures against proliferation in the form of encouraging Israel to subject the Dimona reactor to inspections and safeguards, and accede to the newly formed international non-proliferation agreements.

Additionally, there is not particularly strong evidence supporting the proposition that Israel's nuclear posture is primarily the result of domestic political compromises. While there was disagreement as to the security value of developing a nuclear option, Israel's Prime Ministers behaved in a remarkably consistent fashion in furthering the program at each stage as Israeli leaders grappled with overwhelming security concerns.

Additionally, there is direct evidence that the current formulation came into existence from diplomatic dialogue with the U.S., prior to Israel having actually achieved a nuclear weapons capability.

Similarly, the evidence suggests that Israeli security planners marched forward in developing a sophisticated nuclear arsenal, and considered a variety of scenarios in which it would use nuclear weapons. This militates against the explanation that Israel's nuclear ambiguity was the result of a strategic culture that ossified existing policy without further review.

The following details the above dynamics. The first section describes Israel's ambiguous nuclear posture. This is followed by a discussion of U.S. patron state pressures, regional incentives for nuclear weapons and ambiguity, the limited role of the international non-proliferation regime, the contentious domestic politics at the time, and the theory that continued ambiguity is at least in part based on Israel's strategic culture.

I. Description of Israeli Ambiguity

Notwithstanding Israel's estimated sophisticated nuclear arsenal, its official stance has remained remarkably consistent for over forty years—that Israel will not be the first state in the Middle East to introduce nuclear weapons. This is currently Israel's nuclear policy, as settled on during diplomatic meetings between U.S. and Israeli representatives during the 1960s, and often repeated by both sides throughout the ensuing years.

Prior to this formulation, Israeli officials used various explanations for the construction of the Dimona reactor. For example, U.S. requests for information about the

facility were met with different explanations ranging from textile factories to metallurgical research facilities.¹ Indeed, the inquiries reportedly led to the U.S. receiving seven different explanations about the nature of the building.²

As Israel was under increasing pressure to justify constructing a new, more powerful nuclear reactor, then Prime Minister Ben-Gurion publicly characterized the Dimona facility as being designed “exclusively for peaceful purposes,” like the American provided Soreq 5 MW research reactor.³ By 1963, Prime Minister Eshkol’s government settled on the existing policy that Israel would not be the first state to introduce nuclear weapons into the Middle East. Prime Ministers Golda Meir and Yitzhak Rabin provided the exact same reassurance to the U.S. government.

Subsequently, no Israeli government has official strayed from this policy, through either a declaration that Israel is a nuclear weapons state, or through publicly testing and claiming responsibility for the latter. This distinction between official and unofficial sources is important, to the extent that some former Israeli government leaders and academics have argued for a more robust nuclear posture, based on the assumption that Israel does indeed possess nuclear weapons.

¹ Zaki Shalom, Israel’s Nuclear Option: Behind the Scenes Diplomacy Between Dimona and Washington (Portland: Sussex Academic Press and Jaffee Center for Strategic Studies, 2005), 11.

² Alan Dowty, “Israeli Perspectives on Nuclear Proliferation,” in Security, Order, and the Bomb: Nuclear Weapons in the Politics and Defence Planning of Non-Nuclear Weapon States, Johan Jorgen Host, ed. (Oslo: Universitetsforlaget, 1972), 142.

³ Odgen R. Reid to State Department, “Israeli Prime Minister David Ben-Gurion’s Responses to Questions Asked in the Knesset Concerning a New Israeli Nuclear Reactor,” 21 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00722, 1.

For example, former Foreign Minister Moshe Dayan told the *New York Times* in 1981 that while Israel would not be the first state to introduce nuclear weapons into the Middle East despite having the capability, it also “shouldn’t be too late.”⁴ Similarly, writing in the early 1980s, scholar Shai Feldman has recommended that Israel have an open nuclear posture for deterrence purposes.⁵ And by 1986, a former nuclear technician who worked at Dimona, Mordechai Vanunu, provided photographs and information about Israel’s nuclear program. It has further been speculated that Israel participated in an unclaimed, joint nuclear test with South Africa—the Vela incident—located in the southern Indian Ocean in 1979.

The steadfast official Israeli response to these public airings of Israel’s nuclear program has been to stick to its official policy that Israel will not be the first state to introduce nuclear weapons into the Middle East. In short, Israel has never officially acknowledged that it possesses nuclear weapons, and effectively does not deny it either. Its stance, that it would not be the first to “introduce” nuclear weapons, left enough ambiguity to serve the purpose of deterrence but also enabled it to avoid the costs of openness, as discussed below.

II. Patron State Pressures: U.S.-Israeli Partnership in Opacity

Beginning in the early 1960s, the U.S. sought to use its influence with Israeli leaders to persuade them to forego nuclear weapons. During this time, there was some limited direct provision of conventional military assistance, which would increase

⁴ “Dayan Says Israelis Have The Capacity to Produce A-Bombs,” *New York Times* (25 June 1981), A1.

⁵ See, e.g., Shai Feldman, *Israeli Nuclear Deterrence: A Strategy for the 1980s* (New York: Columbia University Press, 1982).

exponentially after the 1967 Six Day War, and again after the 1973 Yom Kippur War. For its part, Israel first sought security guarantees from the U.S., which were unavailing. Israeli security planners also sought to engage the U.S. to gain more access to economic and military assistance, which would result in stronger relations over time.

But early on, from the late 1950s through the early 1960s, Israel was insecure and this created a deep vulnerability to U.S. pressures even without the existing, relatively weaker linkages.⁶ Thus, U.S. pressure in the form of diplomacy, economic assistance, and nascent military cooperation with the potential for increased assistance was sufficiently strong to keep Israel's nuclear ambitions guarded, although it was not enough to stop the acquisition of nuclear weapons. Stronger ties would be forged simultaneously with the Israeli's developing nuclear capability from the mid-1960s through the early 1970s, further reinforcing Israel's nuclear posture and enabling Israel to rely mainly on conventional forces.

The following discusses how the construction of the Dimona reactor sparked U.S. concerns about nuclearizing the Middle East and increased Soviet intervention in the region. In response, the U.S. undertook a number of measures to minimize the effects of the Israeli nuclear program on the region. This included pressuring Israel to open up Dimona to inspections, and diplomatic measures linking the provision of U.S. aid to Israeli nuclear restraint. In the end, Israel was willing to give up an overt posture and the U.S. was willing to provide the Israelis with enough conventional support to minimize

⁶ The U.S. publicly refused to directly provide Israel with weapons until it sold some anti-aircraft missiles as "defensive" weapons in 1962. However, during this time period the U.S. provided other states with conventional assistance that was then funneled to Israel, as was planned.

the circumstances in which they would publicly acknowledge a nuclear weapons capability.

A. Israel's Nuclear Program Spurs U.S. Interest

From the beginning of the Israeli nuclear weapons program, secrecy was paramount to shield the construction of the Dimona nuclear reactor. Later, as evidence became increasingly available that the Dimona reactor would be capable of producing weapons grade plutonium, U.S. concerns were heightened about Israeli nuclear intentions. This led to U.S. actions to prevent Israel from developing nuclear weapons, and failing that, to keep Israel's nuclear capability secret.

The construction of the Dimona reactor was necessary for the Israeli weapons program and became the main source of contention between Israel and the U.S. Prior to this, under the Atoms for Peace program in the late 1950s, the United States provided Israel with the small 5 MW Soreq research reactor. U.S. supply and funding for this facility was contingent on Israeli agreement to not produce plutonium for weapons and was ultimately subject to IAEA safeguards. Interestingly, against some nuclear scientists' wishes, Ben-Gurion "forbade using the American reactor to produce plutonium, and ordered that the agreement be adhered to meticulously."⁷ This suggests that while Ben-Gurion was determined to pursue a nuclear option against foreseeable American objection, he would not do so at all costs. As such, the Israelis needed to find

⁷ Michael Karpin, The Bomb in the Basement: How Israel Went Nuclear and What That Means for the World (New York: Simon & Schuster Paperbacks, 2006), 55.

an alternate source to support their nuclear weapons program with plutonium. They turned to France for assistance.⁸

Israel and France signed a secret agreement to build the Dimona reactor in the Negev desert. Both states sought to keep the contract private, in part, to keep the activities hidden from the Americans until the reactor was far enough along that it would be a *fait accompli*. This was because the U.S. could exert political pressure on both states to forego the contract if it became public. The initial secrecy regarding the construction of the reactor thus helped to shield it from interference. To this end, France and Israel were successful in keeping the project hidden from public purview for several years from 1957-1960. However, the surrounding secrecy would be an issue once the project was visible, requiring both an Israeli explanation as to the purpose of the reactor as well as justification of why it was kept hidden from the rest of the world.

By 1960, the first documented hint of suspicion regarding Israeli nuclear intentions came from the U.S. embassy in Israel. The U.S. embassy personnel reported that the Israelis “may be pursuing the exploitation of its uranium resources more actively than it is publically {sic} willing to admit.”⁹ Moreover, the ongoing construction on the Dimona reactor could not be kept hidden forever. It soon became apparent that Israel was building a nuclear reactor in the desert and the United States was immediately

⁸ France was also a major conventional weapons supplier to Israel early on. And because France during this early period had few proliferation reservations, it was not a significant source of patron state pressure on Israel to remain ambiguous.

⁹ James M. Ealum to U.S. Department of State, “Israel’s Uranium Potential,” Israel, 26 August 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00671, 2.

suspicious as to the nuclear weapons potential of the reactor. For example, U.S. intelligence received a report in December 1960, at the end of the Eisenhower administration, suggesting that, “‘Israel, with French assistance is building a powerful nuclear reactor in the Negev, with the intention of producing weapons-grade plutonium.’”¹⁰

U.S. suspicions were further aroused, not only by the physical contours of the developing reactor, but also by the Israeli and French silence as to the nature and purpose of the project. This silence portended in the American mind the potential for a source for nuclear weapons, not withstanding subsequent Israeli denials. As reported to the Foreign Affairs Committee of the U.S. Congress, the Dimona reactor has:

“‘been a disturbing element in the whole Middle East picture, largely because of the fact that this reactor apparently has been under construction for some time without anything public having been said about it. Certainly we had never been told about it, even though we have cooperated with Israel on the building of a small nuclear experimental reactor...it is considerably larger than any need for an experimental reactor in Israel, but the present statements of the Israeli Government are that this is still experimental, leading to a power reactor.’”¹¹

With President Eisenhower on his way out, it would be left to the incoming Kennedy administration to formulate a strategy to address the implications stemming from the Dimona reactor. And because President Kennedy was concerned about limiting the nuclear arms race, he would pay significant attention to Israel’s nuclear aspirations as

¹⁰ Karpin, *The Bomb in the Basement*, 146. There is some suggestion that this was a way to leak the information to the U.S. without angering the French. *Ibid.* 147.

¹¹ Christain A. Herter, Jr., “Regarding Israel’s Nuclear Capability,” statement to U.S. Senate Foreign Relations Committee, 6 January 1961, *Nuclear Non-Proliferation* (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00739, 4.

part of his foreign policy agenda.¹² Stemming from these U.S. concerns, the two countries would engage in an intensive dialogue that would set the basis for Israel's calculated policy of nuclear ambiguity.

At the beginning of this conversation, the U.S. privately demanded explanations for the new Israeli facility. These requests for information were met with various explanations that reportedly ranged from textile factories to metallurgical research facilities.¹³ Indeed, the inquiries reportedly led to the U.S. receiving seven different explanations about the nature of the building.¹⁴

The United States was not the only curious observer of the Dimona progress. Shortly after the U.S. began detecting the Dimona construction, the inevitable media reports began to filter out that the Israelis were building the reactor. Israel responded by denying that the reactor was for anything but "peaceful purposes." For example, in responding to a London Daily Express article, the Israeli press quoted Chairman of the Israeli AEC, Ernest Bergmann, denying that Israel was approaching the stage of producing atomic bomb as "flattering but false" and "grossly exaggerated."¹⁵ Other denials suggested that the article was "absurd."¹⁶ The Israeli Embassy in London further issued a flat denial that Israel had neither the means nor the intent to make a bomb.¹⁷

¹² Karpin, The Bomb in the Basement, 180.

¹³ Shalom, Israel's Nuclear Option, 11.

¹⁴ Dowty, "Israeli Perspectives on Nuclear Proliferation," 142.

¹⁵ Ogden R. Reid to State Department, "Israeli Press Reports on Alleged Nuclear Power Plant Construction," 18 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00718, 1.

¹⁶ Reid, "Israeli Press Reports on Alleged Nuclear Power Plant Construction," no. NP00718, 1.

Similarly, shortly after media reports about the reactor, Prime Minister Ben-Gurion publicly answered Knesset questions. There he framed the Dimona reactor as being “like the American reactor, is designed exclusively for peaceful purposes, and was constructed under the direction of Israeli experts.”¹⁸ Ben-Gurion further stated that “[t]he Government of Israel, as is well-known, proposed general and total disarmament in Israel and neighboring Arab states, on condition that there would be a mutual right of inspection.”¹⁹ At the same time, while emphasizing the peaceful purposes of the reactor, Israeli officials stressed that it was a small country in terms of means and population and did not have the capability of realizing a nuclear weapons capability.²⁰ Israeli denials that it lacked the capability to produce nuclear weapons would be dropped over time and replaced with suggestions that it lacked the intention.

As Israel began to publicly acknowledge that Dimona was a nuclear reactor, but deny its nuclear weapons aspirations, this development was significant enough that it required a response from the United States. In anticipation of Ben-Gurion’s announcement before the Knesset about Israel’s peaceful nuclear program, the U.S. government prepared the standard public statement that would be carefully adhered to in subsequent years. Mainly, the United States would seek to reaffirm its non-proliferation

¹⁷ Reid, “Israeli Press Reports on Alleged Nuclear Power Plant Construction,” no. NP00718, 1.

¹⁸ Reid, “Israeli Prime Minister David Ben-Gurion’s Responses to Questions Asked in the Knesset Concerning a New Israeli Nuclear Reactor,” no. NP00722, 1. Here, France escapes suspicion.

¹⁹ Reid, “Israeli Prime Minister David Ben-Gurion’s Responses to Questions Asked in the Knesset Concerning a New Israeli Nuclear Reactor,” no. NP00722, 2.

²⁰ Karpin, *The Bomb in the Basement*, 100.

interests while distancing itself from the Israeli program to avoid any suggestion that Washington was colluding with Israel.

For example, prepared comments noted that “[i]t is firmly established and well-known United States policy that we oppose the proliferation of nuclear weapons throughout the world, and our law does not permit us to assist other countries to develop nuclear weapons capabilities.”²¹ Rather, the extent of U.S. assistance was limited to the small Soreq research reactor under the Atoms for Peace program, which the U.S. participated in with many countries throughout the world. In this way, Washington could avoid “being drawn into implications of...U.S. association with an alleged Israeli weapons program.”²² Additionally, the U.S. publicly welcomed the Israeli statements that the program was entirely for peaceful purposes. In subsequent negotiations, U.S. diplomacy would seek to hold Israel to its public and private comments that it did not intend to produce nuclear weapons. This approach would enable the U.S. to continue to publicly push for non-proliferation measures and Middle East peace.

Indeed, this public façade adopted by the United States would be maintained even as U.S. knowledge and suspicion of Israel’s nuclear intentions became more certain over time. For example, by 1964 the Johnson administration had information that “Israel now has the technical capability to develop a bomb...[it] could detonate its first nuclear device

²¹ U.S. Department of State, “Suggested Press Guidance for Chairman McCone if Asked About Reported Israeli Atomic Weapons Development,” secret, 17 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00717, 1.

²² U.S. Department of State, “Suggested Press Guidance for Chairman McCone if Asked About Reported Israeli Atomic Weapons Development,” no. NP00717, 2.

two to three years after a decision to develop a weapons capability.”²³ Even more evidence had accumulated by 1968 with continued Dimona secrecy, the inability to fully inspect the reactor, suspected pilfering of nuclear materials by Israel, continued nuclear cooperation with France, and Israel’s own acknowledgement that it had the ability to produce fission explosives.²⁴

Nonetheless, the United States did not seek to publicly confront Israel about its nuclear ambitions. Instead it chose to pressure Israel in private, combining threats and inducements to first seek to prevent Israel from going nuclear, and failing that, to keep its capability hidden from public purview. These private efforts to dissuade Israel from going nuclear created tensions between the two states until it was resolved. As Rabin noted in his memoirs, “[t]he nuclear issue for many years lay like a disturbing shadow over the relations between Israel and the United States.”²⁵

Ultimately, these efforts at a behind the scenes resolution resulted in the initial policy of Israeli opacity that continues today. The following details why leadership in Washington was opposed to a public Israeli nuclear capability and the measures the U.S. took to influence Israeli leaders to prevent public disclosure of the nuclear weapons program.

²³ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” 12 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01079, 17-18.

²⁴ Peter Pry, Israel’s Nuclear Arsenal (Boulder: Westview Press, 1984), 40.

²⁵ Quoted in Karpin, The Bomb in the Basement, 301.

B. U.S. Opposition to Israeli Nuclear Proliferation

The evidence suggests that the United State was deeply concerned with the prospect of an Israeli nuclear weapons program, fearing that it would have both regional and international ramifications. In particular, Washington believed that Israeli nuclear weapons would further fuel conflict in the Middle East by increasing Arab state incentives to acquire nuclear weapons, and may have triggered an attack on the Israeli facilities that could spill into a broader conflict. Moreover, the United States, with its stance clearly lodged in non-proliferation, would lose whatever influence it was seeking to cultivate in the Middle East, to possibly be replaced by the Soviet Union that might have been willing to provide nuclear guarantees or assistance. While these fears were not realized, they were a source of anxiety for U.S. officials and the reasons for pressuring the Israelis in an effort to convince them to forego a nuclear program.

1. Regional Middle East Concerns

Generally, Washington was concerned that the continued horizontal spread of nuclear weapons would undermine U.S. efforts to curb proliferation. Additionally, the United States feared that the introduction of nuclear weapons into the Middle East by Israel would have profound regional implications by increasing the propensity for conflict. As the Johnson administration noted, the “[p]roduction of nuclear weapons and delivery capabilities may complicate or endanger the political stability within a region, yielding undesirable playback effects on the country that goes the national nuclear

route.”²⁶ Because the U.S. sought at this time to remain neutral between the states in the Middle East, as well as prevent the Soviets from gaining influence in the region, Washington feared that nuclear weapons would substantially complicate this balance.

First, the United States was interested in preventing the spread of nuclear weapons generally, and more specifically in the Middle East. An open Israeli nuclear program ran counter to this policy because it increased the incentives for regional Arab states to acquire their own nuclear capability as a counter. Further, while the other states in the region were not immediately capable of creating a comparable indigenous program, they could seek assistance from other states to supplement their technical deficiencies. Another option for the Arab states was to seek a nuclear guarantee from the Soviet Union. From the U.S. perspective, this possible continued widening of the Cold War to the Middle East with a nuclear dimension could have significant international implications, which it sought to avoid.

Second, there were substantial concerns that an Israeli introduction of weapons into the regional landscape would increase the propensity for direct conflict through preventive war. One scenario is that Egypt would attack the Dimona facility to neutralize the nuclear program and thereby spark a wider war. For its part, Egyptian responses to Dimona further heightened this concern on behalf of the United States. For example, Egypt’s Nasser indicated that if Israel was producing nuclear weapons, he would necessarily have to launch a “protective war.”²⁷ In 1965, the Israeli nuclear program

²⁶ Walt W. Rostow, “A Way of Thinking About Nuclear Proliferation,” 19 November 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01046, 3.

²⁷ Shalom, Israel’s Nuclear Option, 57.

was declared by Egypt as a *casus belli*, with “[p]reventive war is the only way to preempt the acquisition of nuclear might by Israel.”²⁸ The United States government appeared to take these statements seriously, noting that “for its own survival, the UAR probably sees advantages in preventing the use of nuclear weapons, and therefore also their introduction into the area.”²⁹

For these reasons, the United States has sought to prevent an Arab-Israeli war caused by Israel’s nuclear program.³⁰ One of the first approaches the U.S. would take was to reassure Nasser of Israel’s peaceful nuclear intentions. At the same time, the United States would pressure Israel to open up its facilities for inspection for the purpose of demonstrating that Israel was not building nuclear weapons.³¹ This strategy, the U.S. argued, was in both its own and Israel’s interest in order to protect the Dimona facility from attack and prevent the Soviets from assisting Egypt.³²

While the United States was concerned about Arab state responses to Israel’s nuclear program, U.S. leaders also felt that Israel was disregarding these potential problems in its pursuit of a nuclear option. As such, Washington would seek to highlight its regional concerns in an effort to dissuade a public Israeli nuclear capability. At the

²⁸ Shlomo Aronson, Israel’s Nuclear Programme, the Six Day War and its Ramifications (London: King’s College, 1999), 28, citing *Jumhuria* (Cairo), translated by Hazav, Israeli Intelligence Translation Service, (March 12, 1966).

²⁹ Aronson, Israel’s Nuclear Programme, 30.

³⁰ Aronson, Israel’s Nuclear Programme, 4.

³¹ U.S. fears in this regard are helpful in keeping the U.S. engaged and also putting pressure on Israel. That is, Nasser had every incentive to fuel these fears.

³² Shalom, Israel’s Nuclear Option, 77.

same time, this strategy was designed to refrain from putting so much pressure on Israel as to damage the relationship between Washington and Tel Aviv. As Rostow suggested under the Johnson administration,

“[w]ith respect to Israel, the familiar question is whether there is a combination of stick and carrot, of pressure and reassurance, we can mount without wrecking either our relation to Israel or our tenuous links to the Arabs. A heightening of Israeli anxiety about an Arab nuclear capability is an asset we can and should use.”³³

Similarly, the U.S. also sought to bring to the Israel’s attention American concerns over the potential for Soviet nuclear involvement in the Middle East.

2. Risk of Soviet Nuclear Assistance or Intervention on Behalf of Arab States

The United States was also very concerned that the Israeli nuclear program would cause the Arab states to seek atomic cooperation with Soviet Union. As noted at the time to the U.S. Foreign Affairs Committee, the Israeli nuclear program “[r]ight or wrong, it throws all the Arab States {sic} over to the Russian side of the fence,” which has “introduced a new element into the whole Middle East, which is a disquieting element.”³⁴ Similarly, Dean Rusk advised then President Kennedy that “Israel’s acquisition of nuclear weapons would have grave repercussions in the Middle East, not the least of

³³ Rostow, “A Way of Thinking About Nuclear Proliferation,” no. NP01046, 17.

³⁴ Herter, “Regarding Israel’s Nuclear Capability,” no. NP00739, 5.

which might be the probable stationing of Soviet nuclear weapons on the soil of Israel's embittered Arab neighbors."³⁵

From the U.S. policymaker perspective, "we just can't imagine anything more disastrous from our point of view than if Israel were to explode a nuclear device. I can't think of anything that would drive the Arab world more tumultuously into the arms of the Soviet."³⁶ While Rusk acknowledged that Israel's Prime Minister Ben-Gurion had made both public and private reassurances to the U.S. that the Israelis "committed themselves categorically"³⁷ to not making nuclear weapons. However, there was still concern about the effects of the Dimona reactor on regional states because Israel had not sooner revealed its progress on the facility, nor opened it up for inspections.

Of the Arab states, Egypt was one of the most likely at the time to have a strong incentive to acquire a nuclear capability in response to Israel. However, Egypt did not have the indigenous ability to create a weapons option; this would necessitate turning to an external benefactor. The United States feared that the most likely Egyptian patron would be the Soviet Union. For example, in 1963 the United State predicted that the UAR "alone or in combination with other Arab States, does not have the capability of producing a nuclear weapon in the foreseeable future . . . If Nasser could not devise a

³⁵ Dean Rusk to President John F. Kennedy, "Israel's Atomic Energy Activities," secret memorandum, 30 January 1961, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00745, 1.

³⁶ Herter, "Regarding Israel's Nuclear Capability," no. NP00739, 8.

³⁷ Herter, "Regarding Israel's Nuclear Capability," no. NP00739, 8.

counter to an Israeli nuclear threat on his own, he probably would turn to the USSR to try to ensure his protection.”³⁸

Moreover, the United States feared that it would be seen as being in collusion with the Israelis if Washington did not take some steps to stop the nuclear program. Not only would this further tilt the Arab states towards the Soviets, but could exacerbate tensions in the Middle East. For example, the 1963 National Security Estimate suggested that “the Arabs would blame the West, including the US, for the increased Israeli threat In an atmosphere of this kind, there would always be the possibility that one or the other side would initiate hostile action to safeguard its ultimate security.”³⁹ Moreover, with both U.S. and Soviet involvement, there was the additional problem that a regional conflict had the potential of becoming international.

These concerns further prompted each presidential administration to quietly sit on any subsequently acquired information about the Israeli nuclear program. For example, in 1968 CIA director Richard Helms reportedly informed President Johnson that Israel had atomic bombs.⁴⁰ President Johnson’s response was to order “Helms not to tell anyone else, not even the secretaries of state and defense,” given the concern of how the Arab states and Soviets would respond to such news.⁴¹

³⁸ Central Intelligence Agency, “The Advanced Weapons Programs of the UAR and Israel,” heavily excised secret National Intelligence Estimate, 8 May 1963, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Proquest, 2008), no. WM00059, 6.

³⁹ Central Intelligence Agency, “The Advanced Weapons Programs of the UAR and Israel,” no. WM00059, 6.

⁴⁰ Pry, Israel’s Nuclear Arsenal, 40.

⁴¹ Pry, Israel’s Nuclear Arsenal, 40.

Not only would Washington refuse to publicly divulge information it had about the Israeli nuclear program, but it also pressured Israeli leaders into keeping the program hidden. While the United States understood the security rationale behind the Israeli development of a nuclear option, Washington feared that this

“narrow but intense anxiety brings the Israelis close to the point of ignoring the negative arguments of a general pacific kind; and the possible playback effects of what it does on the decision of Cairo. It does not contemplate a confrontation with one of the superpowers; and, therefore, the relationship with the U.S. and possible damage to that relationship are the only major restraints on proceeding to achieve a national nuclear capability.”⁴²

That is, since the Israelis did not fully appreciate the dangers of its nuclear program on regional and international dynamics to Washington’s satisfaction, the United States would use its relationship as leverage with Israelis in order to dampen the effects of the program.

C. U.S. Policy Towards Israel’s Nuclear Program

Given U.S. concerns outlined above, Washington formulated a policy designed to pressure the Israelis to give up their nuclear ambitions, or at least to minimize the repercussions by keeping it out of public purview. Publicly, the U.S. would accept Israel’s stance that the Dimona reactor was only for peaceful purposes. The U.S. also sought to reassure regional Arab states initially that the reactor was as Israel represented it to be. Privately, the Kennedy, Johnson, and Nixon presidential administrations would seek to use a combination of inspections and conventional and economic assistance linkages to discourage Israeli proliferation.

⁴² Rostow, “A Way of Thinking About Nuclear Proliferation,” no. NP01046, 12.

Nonetheless, while Washington hoped that these measures would be enough for Israeli leaders to forego nuclear development, the U.S. was also not willing to impose substantial enough pressure to rupture its relationship with Israel. For its part, Israel was at the time vulnerable to U.S. pressures given its need for both conventional military weapons and economic support, but still determined to acquire the ultimate insurance. The result was a compromise between Tel Aviv and Washington that settled on the policy of nuclear opacity.

The following details U.S. efforts to provide assurances to other states as to Israel's nuclear intentions, while at the same time seeking influence Israeli nuclear policy. The U.S. did this by seeking inspection rights to the Dimona reactor, increasing the provision of conventional arms to Israel under the justification that if the latter felt secure it would not need nuclear weapons, and highlighting to Israeli leaders the expense of a nuclear weapons program.

1. Downplay Rumors & Provide Reassurances

Given Washington's concerns that nuclear weapons would proliferate in the Middle East and further destabilize the region, U.S. officials sought to publicly downplay to the rest of the world the significance of the Dimona reactor. Additionally, Washington sought to reassure the Arab states in the Middle East that the U.S. took nuclear proliferation seriously. Vital to these early efforts was keeping the issue out of the public eye and to quell media reports.

The Kennedy administration first formulated this strategy in response to Ben-Gurion's public acknowledgement of the Dimona reactor to the Knesset. After Ben-

Gurion's Knesset appearance, the State Department issued a statement in response that the United States welcomed the Government of Israel's statements concerning the peaceful character of Israeli atomic energy activities and that Israel had no intention of producing nuclear weapons.⁴³ The State Department further indicated in a careful statement that it believed that the "Israel atomic energy program as made public does not represent cause for special concern."⁴⁴ In doing so, the U.S. publicly accepted the official Israel position on the reactor.

Nonetheless, from the U.S. perspective, the sooner the public's interest in Dimona waned, the better. Kennedy reportedly met with Ben-Gurion and indicated that it was in both states' common interests that other countries did not believe that Israel was proliferating.⁴⁵ As articulated at home, the Kennedy administration did not believe that,

"the extended public speculation regarding the Israeli atomic energy program will advance the interests of the United States, and we have taken and will continue to take any feasible measure to damp down speculation on this matter and in particular to avoid giving occasion for renewed suspicions and possible undesirable reactions in the Arab world. We believe that persistent but quiet diplomatic approaches are most likely to be productive."⁴⁶

Consistent with this approach, the U.S. government instructed its diplomatic corps to reassure host governments that there was little cause for excitement over the press

⁴³ Christian A. Herter, "Press Guidance for Discussion of Israeli Nuclear Energy Activities," 22 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00726, 2-3.

⁴⁴ Herter, "Press Guidance for Discussion of Israeli Nuclear Energy Activities," no. NP00726, 3.

⁴⁵ Shalom, Israel's Nuclear Option, 29.

⁴⁶ William B. Macomber to James T. Ramey, "Additional Recent Information on the Israeli Atomic Energy Program," 19 January 1961, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00744, 1-2.

reports of the Israeli reactor. For example, one set of instructions read: “FYI. Dept considerably disturbed by large amount of info re USG interest in Israel’s atomic program which has leaked into American and world press. Effect has been to create more excitement than facts as revealed by Israelis warrant. Dept will do what it can in Washington and hopes addressee posts can assist in stilling atmosphere.”⁴⁷

At the same time, the United States wanted to distance itself from Dimona and underscore its commitment to non-proliferation. Specifically the United States sought to impress on other countries that it was not involved with the Dimona reactor and that Israel was not a special case that would be ignored. Rather, “the United States Government at all levels, including the highest, takes serious view of the Israeli nuclear activity and is determined to oppose the proliferation of nuclear weapons capabilities as firmly in Israel as elsewhere.”⁴⁸ Washington also stated that its nuclear assistance was limited to the Soreq research reactor, the kind that the U.S. government had assisted 30 other countries with.⁴⁹ To further assuage fears and put the reactor in context, the United States government also suggested that Dimona was smaller than many others currently being built, including facilities being constructed by India.⁵⁰ Reportedly, the initial announcement by Ben-Gurion that the reactor was for peaceful purposes and subsequent

⁴⁷ Herter, “Press Guidance for Discussion of Israeli Nuclear Energy Activities,” no. NP00726, 3.

⁴⁸ Dean Rusk, “U.S. Government Is Committed at Every Level to Stopping Nuclear Proliferation In Israel and Elsewhere,” 3 March 1961, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00755, 1.

⁴⁹ Herter, “Press Guidance for Discussion of Israeli Nuclear Energy Activities,” no. NP00726, 1.

⁵⁰ Rusk, “U.S. Government Is Committed at Every Level to Stopping Nuclear Proliferation In Israel and Elsewhere,” no. NP00755, 2.

U.S. efforts to downplay the significance of Dimona had the desired effect of taking the “pressures off the Arabs to achieve a balancing atomic capability.”⁵¹

Still, the secrecy surrounding Dimona would continue to foster suspicion. This prompted the U.S. to continue to pressure Israel to open up the facility to inspections. Moreover, by keeping the issue simmering below public purview, the United States and Israel were able to engage in the quiet diplomacy that protected U.S. non-proliferation interests while allowing the Israelis to come to terms with the regional and international implications of their program. For the United States, the first item on the diplomatic agenda was to directly pressure Israel into allowing inspection of the Dimona reactor.

2. Direct Pressure on Israel

Following Ben-Gurion’s characterization of the Dimona reactor in the Knesset as for peaceful purposes, the United States sought to tie Israel to this claim by inspecting the reactor and verifying these intentions. While the U.S. had some success doing so initially, overtime and as the Israelis further developed a weapons capacity, it not longer became a feasible option for both governments.

As the United States ultimately gave up pushing for further inspections and accepted that the facility would not be subject to IAEA safeguards, U.S. policymakers considered a variety of measures that might induce Israel to forego a nuclear weapons option. For example, they considered the efficacy of a formal security guarantee, coordinating a U.S.-Israeli contingency plan against possible Arab attack, limiting UAR

⁵¹ Karpin, The Bomb in the Basement, 189.

missile development and applying IAEA safeguards at UAR nuclear facilities, as well as economic and political sanctions.⁵²

Still, despite strong U.S. interests in non-proliferation, some of the above tools were not practical or feasible in the long run. The United States wanted to maintain a good relationship with Israel while at the same time fostering better ties with the Arab states. The purpose of maintaining this balance was to reduce the propensity for conflict in the Middle East while at the same time preventing the Soviets from gaining increased influence in the region. As such, the United States could neither provide absolutely for Israel's security nor could it exert all leverage available to it to convince the Israeli leaders to not develop a nuclear option. As U.S. policymakers recognized early on, "[t]he need for the US to maintain a position of balance between the Arabs and Israel in order to be able to exert a moderating influence on Near East tensions, reduces our ability to provide these inducements or apply these sanctions."⁵³ The result was that the U.S. applied "rather fine-grained attempts" to apply pressure on Israel on an "ad hoc" basis⁵⁴ rather than employing the entire arsenal of tools available.

As such, U.S. conventional weapons and economic assistance remained the primary sources of leverage for convincing the Israelis to maintain an opaque nuclear posture. As summarized from the U.S. government perspective,

⁵² U.S. Department of State, "Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons," no. NP01079, 20.

⁵³ U.S. Department of State, "Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons," no. NP01079, 20.

⁵⁴ Rostow, "A Way of Thinking About Nuclear Proliferation," no. NP01046, 1. Rostow characterized U.S. efforts as not apply extensive pressure. This is different than later statements but suggests that the U.S. utilized some the tools it had, but did not use all of them for maximum effect. There is also the difference from candid characterization and that relayed to the Israelis.

“the intensity of USG opposition to nuclear proliferation has been forcefully brought home to Israel frequently and recently, together with the realization that the development of an Israel nuclear weapon would lead to sharp displeasure accompanied by severe curtailment of the American support in other fields which Israel needs so badly.”⁵⁵

As it turned out, while such pressure was not enough to stop the Israel nuclear weapons program, it was sufficient to keep it opaque.

The following discusses the formative years of the Israeli program and U.S. efforts to persuade the Israelis not to publicly declare itself a nuclear weapons state when it had the capacity. The evidence suggests that both the U.S. and Israel struggled with a formula that would meet both countries countervailing interests. The result over the course of several years was an understanding between the two countries that Israel would not give up its nuclear option, but would refrain from being the first country in the Middle East to introduce nuclear weapons.

a) Dimona Reactor Inspections

After the revelation that Israel was building a reactor in the Negev desert with French assistance, the U.S. under President Kennedy began an earnest dialogue to convince Israeli to forgo a nuclear weapons option. In contrast to the American assisted Soreq facility, which was subjected to U.S. oversight and governed by a bi-lateral agreement that prohibited military use,⁵⁶ the Dimona reactor had no such restrictions

⁵⁵ William N. Dale to State Department, “Current Status of the Dimona Reactor,” 9 April 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01114, 1.

⁵⁶ U.S. Department of Defense, “Public Affairs Guidance 14C – Israel Nuclear Reactors,” 6 January 1961, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00738, 2.

from any state, including France. The concern of course, was that Dimona facility would be capable when it became operational of producing weapons grade plutonium, which could be used in an explosion of a nuclear device.⁵⁷ As such, the Kennedy administration wanted access to Dimona to verify that it was indeed what the Israelis represented—that it was designed for peaceful nuclear energy and not to build weapons.

The primary tactic the administration used was to urge the Israelis to grant visitation and inspection rights to the new facility. Initially, the U.S. plan was to pressure Israel to place Dimona under international safeguards when it became operational.⁵⁸ As reasoned by the Kennedy administration:

It would seem to us that if in fact Ben Gurion is telling truth in his statement to Knesset and Israeli Ambassador's reply to Secretary, most effective manner by which Israel could allay hysterical Arab suspicions would be for Israel to invite International Atomic Energy Organization to send inspectors to check out the Beersheba reactor and report that it is solely used for peaceful purposes. Here there might also be opportunity for exercise of principle of continuous, effective inspection which is key element in our proposals for control of armaments.⁵⁹

The Israelis quickly rejected the prospect of general international inspection. Tel Aviv reasoned in its general response that “[w]hile Israel accepts the general principle of international safeguards to assure the peaceful use of atomic energy, it believes also in

⁵⁷ Herter, “Regarding Israel’s Nuclear Capability,” no. NP00739, 8.

⁵⁸ Herter, “Regarding Israel’s Nuclear Capability,” no. NP00739, 9.

⁵⁹ Robert M. McClintock to State Department, “Israeli Invitation to the IAEA to Visit Nuclear Power Sites Would Allay Arab Fears,” 27 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00731, 1.

equality; thus it does not propose to open the Dimona reactor to international inspection until such inspection applies to comparable reactors everywhere.”⁶⁰

As Israel was unwilling to subject the facility to international safeguards, this mainly left the option of informal visits by American scientists. It was difficult for Israel to deny access to U.S. scientists given their public representations about the nature of the facility. Further, from the Kennedy administration’s perspective, if the reactor was indeed for peaceful purposes, the inspections would serve the important function of allowing the U.S. to reassure the Arab states. The administration further hoped that such inspections would allow for continuing oversight in accordance with U.S. non-proliferation goals.

Starting with the Kennedy administration, Washington was able to negotiate a series of informal visits to Dimona by American scientists from 1961 through 1969. Once some limited visits were conducted, the United States used the reported information to then reassure other regional states of Israel’s benign nuclear intention. For example, after a visit in the spring of 1961, the U.S. concluded that that “Dimona project appeared of type and magnitude described publicly by Israel...our experts found no evidence Israelis preparing produce weapons. We noted, accordingly, that observations US scientists tended to support public and private assurances re peaceful intent Dimona project. We further noted that highest levels this government opposed to proliferation nuclear weapons production capabilities and had so informed Israel.”⁶¹ Similarly, after a

⁶⁰ Macomber, “Additional Recent Information on the Israeli Atomic Energy Program,” no. NP00744, 4.

⁶¹ Dean Rusk to U.S. Embassies, “Israel’s Dimona Reactor,” 31 October 1962, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00922, 1.

visit the following year, Washington reported that “[r]ecently there has been a further visit by American scientists to Dimona reactor. This enables us to renew statements of June 1961 that latest observations again confirm Israeli statements that reactor intended for peaceful purposes only. There NO repeat NO evidence of preparation for nuclear weapons production.”⁶²

Nonetheless, the inspections were contentious and short-lived. By June 1965, the U.S. visits were being publicly picked up by the press,⁶³ which would further hasten the demise of the inspections. The Israelis resented the now public intrusion on their sovereignty and suggestions were rife that American scientists were not actually privy to Dimona’s real purpose as the visits were carefully structured. Eventually, by the Nixon administration, Washington stopped requesting the visits. This change in American policy was viewed by some as tacit acceptance that Israel was continuing with its nuclear plans and the U.S. could not longer pretend otherwise. From the U.S. perspective, there were concerns that if Israel were engaged in nuclear weapons activities that were not detected by U.S. inspections, then the U.S. would be implicated if the nuclear activities then became public.⁶⁴

⁶² Rusk, “Israel’s Dimona Reactor,” no. NP00922, 1.

⁶³ George W. Ball to U.S. Embassies, “U.S. Inspections Verify That The Israeli Reactors Are For Peaceful Purposes Only,” 28 June 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01171, 1.

⁶⁴ Leonard S. Spector, Nuclear Proliferation Today, (Cambridge: Ballinger Publishing Co., 1984), 375.

b) Conventional Weapons Linkages

With prospects for the inspection regime dimming, U.S. presidential administrations also sought to link U.S. supplied conventional weapons to Israel's nuclear posture. It was rationalized that Israel would be less willing to develop a nuclear weapons option if they were more secure in conventional terms. Moreover, the implicit threat that the U.S. could stop cooperating in the face of a public nuclear weapons program was clearly understood by Israeli leaders.

Since its independence, Israel has faced a severe security environment in the Middle East. With neighbors that threatened its existence, and the threat of a potentially overwhelming conventional coalition from its adversaries, Israeli leaders pursued the nuclear option as a weapon of last resort. While the United States did not embrace Israeli nuclear deterrence as a preferred strategy, the leaders in Washington appeared to understand the security reasons motivating Israel to develop a nuclear capability. For example, U.S. officials understood that,

“[i]n the case of Israel the argument for the development of a national nuclear capability is almost uniquely military; that is, as a reserve deterrent power in a moment of desperate confrontation with Cairo. In particular, the Israeli, with their extraordinarily heightened sense of vulnerability, are worried about an Arab attack conducted so swiftly as to make U.S. or Western support too late to be effective.”⁶⁵

It made sense, then, from an American perspective, that any efforts to convince the Israelis to forego the nuclear option would have to necessarily address its military insecurity. As the CIA reported, “there would be a better than even chance that Israel

⁶⁵ Rostow, “A Way of Thinking About Nuclear Proliferation,” no. NP01046, 12.

would develop such weapons if it felt that it was unable to maintain its military superiority over the Arabs.”⁶⁶

As previously discussed, a formal guarantee from the U.S. was not an option from the leaders in Washington who also hoped to cultivate cooperation with the Arab states. Additionally, it became less and less likely over time that Israel would sacrifice its nuclear ambitions for any guarantees, fearing that such promises would not come to fruition in the height of a crisis, or would come too late. Succinctly stated, Tel Aviv did not “consider present US assurances adequate to protect Israel against attack.”⁶⁷

As such, the primary channel through which the United States could exert pressure, or provide reassurances, was through the provision of conventional military assistance. By arranging to supply the Israelis with conventional weapons, Washington hoped to open an avenue of influence that entailed both inducements and threats. The logic was that if Israel felt that it had conventional superiority over its neighbors, then it would not be forced to rely on a nuclear deterrent. Further, as the Americans correctly understood, the Israelis sought “a close military association with the United States to supplement its independent military deterrent.”⁶⁸ In short, the hope was that “providing for Israel’s conventional military needs would result in two major benefits to the United States: it would endow Israel with a sufficient deterrent capability that would reduce the

⁶⁶ Central Intelligence Agency, “Nuclear Weapons Programs Around the World,” 3 December 1964, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Proquest, 2008), no. WM00093, 11.

⁶⁷ State Department, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 19.

⁶⁸ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 19.

danger of an Arab-initiated attack, and this in turn would lower Israel's motivation for developing a nuclear option."⁶⁹

Consistent with this approach, both the Kennedy and Johnson administrations simultaneously provided increased conventional weapons assistance while also seeking to minimize Israeli efforts to acquire nuclear weapons. For example, under the Kennedy administration, the United States sold HAWK-SAM missiles to Israel as an inducement to steer them away from nuclear weapons development.⁷⁰ Assistance would grow under the Johnson administration as he hoped to allay Israeli "fears of the Arabs and of their precarious military situation so that they would turn away from the bomb."⁷¹ As such, Washington also directly sold Israel offensive weapons with forty-eight Skyhawk planes and two hundred Patton tanks.⁷²

In exchange for U.S. military assistance, the Israelis were required to pledge that they would not use the weapons for their nuclear weapons program and to reaffirm the promise to not be the first state to introduce nuclear weapons into the region. This meant that despite some presidential advisors' recommendations, the sale of the Skyhawk planes was not conditional on requiring the Israelis to completely give up their nuclear program.⁷³

⁶⁹ Shalom, Israel's Nuclear Option, 74.

⁷⁰ Pry, Israel's Nuclear Arsenal, 12.

⁷¹ Pry, Israel's Nuclear Arsenal, 11.

⁷² Karpin, The Bomb in the Basement, 257.

⁷³ Karpin, The Bomb in the Basement, 300. Rusk, Clifford and Warnke sought to convince Johnson to not sell the planes without this condition. President Johnson did not require it. In other words, he had accepted that Dimona was not going away.

While the Americans used the promise of increased access to U.S. conventional military systems to extract promises of nuclear restraint from the Israelis, it is also important to note that Israel was not without leverage. Indeed, given U.S. interests in the region, and its clear stance on non-proliferation, the Israelis had an implicit threat that they could choose an open nuclear posture in the event of a conventional shortfall. Prime Minister Eshkol recognized this and saw the nuclear program, in addition to providing Israel with a last resort nuclear capability, as a bargaining chip vis-à-vis the U.S.⁷⁴ And, as previously discussed, U.S. officials recognized this in their justification for increasing American aid to Israel as a way to ensure that the Israelis were not tempted to go nuclear because they could feel secure with their conventional superiority.

Shortly thereafter, Israel purchased fifty Phantom fighters from the U.S. As public speculation at the time suggested, the “US would not have sold Phantoms without an assurance from Israel that it would not go nuclear and would possibly even adhere to the NPT...this line of reasoning is founded on the assumption that the US is actively exploiting the leverage conferred by Phantoms to ‘Buy off’ the Israeli nuclear weapons program.”⁷⁵ While Israel was willing to make promises that it would not use the planes to carry nuclear weapons, it also “made it entirely clear that it opposed any linkage between the sale of fighter planes and Washington’s demands of Israel on the Dimona

⁷⁴ Avner Cohen, Israel and the Bomb (New York: Columbia University Press, 1998), 240.

⁷⁵ David K.E. Bruce to State Department, “Israel’s Nuclear Policy,” 16 January 1969, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Proquest, 2008), no. WM00134, 2.

issue.”⁷⁶ For his part, Kissinger considered withholding the delivery of the Phantoms as an option to exert additional leverage on Tel Aviv if needed to achieve Israeli reassurances.⁷⁷

Still, there were obvious limits to the amount of pressure the U.S. was willing to impose. Washington did not want to take measures that would be counterproductive by making Israel more insecure conventionally. Additionally, the Israelis imposed their own conditions by refusing American efforts to link conventional assistance with activity at Dimona. And ultimately both sides recognized that they shared an interest in continued cooperation. Further, as time went on, such cooperation would be threatened as a matter of American law if Israel publicly acknowledged its growing nuclear capability. In this event, under the Glenn and Symington Amendments, military and economic assistance to any country acquiring nuclear weapons would, by requirement, be cut off.⁷⁸ Thus, neither side had a strong interest in revealing the Israeli program.

Despite these limitations, the importance of U.S. conventional support on Israel is rated of very high importance in affecting Israeli opacity according to some former officials. Reportedly:

“Late ambassador Paul C. Warnke confirmed that the United States had conditioned the supply of offensive weapons to Israel on its refraining from conducting nuclear tests. If Israel carried out a test, the United States had the legal instruments not only to cease the supply of attack weapons,

⁷⁶ Shalom, Israel's Nuclear Option, 134.

⁷⁷ State Department, “Review Group Consideration of Response to NSSM-40,” 30 June 1969, Kissinger Transcripts (Washington D.C.: The National Security Archive and Proquest, 2008), no. KT00030, 2-5.

⁷⁸ Honore M. Catudal, Jr., Israel's Nuclear Weaponry: A New Arms Race in the Middle East (London: Grey Seal Books, 1991), 11.

but also to demand that Israel return some of the armaments already supplied. Warnke added that Israel had adopted the nuclear ambiguity policy at America's insistence. He put it like this: 'I think we preferred the fact that Israel was not declaring that it had targeted some potential enemy with nuclear weapons.'"⁷⁹

Thus, in the end, the Americans were partially successful. The Israelis were strongly motivated to cooperate with the U.S. in order to gain access to more sophisticated conventional weapons than they would have otherwise had. However, Tel Aviv was only willing to trade so far, limiting the quid pro quo to an opaque nuclear stance rather than giving up the entire program.

c) U.S. Economic Leverage

Over time, the economic assistance the United States provided to Israel was substantial for the small country and continued to grow with each successive presidential administration. For example, U.S. aid to Israel was \$40 million dollars during the last year of the Kennedy administration.⁸⁰ By 1965, the Johnson administration raised it some 80 percent to reach \$71 million, and the following year another increase of 80 percent, and aid totaled \$130 million.⁸¹ There were further increases under the Nixon administration, with aid increasing to the \$500-\$600 million range, compared to the

⁷⁹ Quoted in Karpin, The Bomb in the Basement, 343.

⁸⁰ Karpin, The Bomb in the Basement, note 9, 377.

⁸¹ Karpin, The Bomb in the Basement, note 9, 377.

previous \$100 million per year.⁸² Similarly, after the 1973 Yom Kippur War, aid jumped to \$2.6 billion for fiscal 1974 and a similar level in fiscal 1976.⁸³

This assistance also provided the Americans with another source of leverage over the Israeli nuclear program. For example, Washington confronted Israel about its \$80 million dollar nuclear project, which was significant given the amount of U.S. aid Israel received.⁸⁴ Similarly, the Israelis were informed that their missile program (required over the long run to deliver nuclear weapons) was “hellishly expensive,” which was intended to convey to Tel Aviv that “it would not be allowed to fritter away such sums on defense projects whose effectiveness the administration doubted.”⁸⁵

Given the American grip on the purse strings, it was further implied that with U.S. financial support and opposition to the spread of nuclear weapons, the continuation of the nuclear program could have “gravest consequences” for the U.S.-Israeli cooperation.⁸⁶ In 1965, the Johnson administration also hinted that it considered imposing economic sanctions on Israel if it continued down the nuclear path. And “[w]ith the Israeli economy entering a steep economic slump, the White House expressed surprise at

⁸² Charles Lipson, “American Support for Israel: History, Sources, Limits,” in U.S.-Israeli Relations at the Crossroads, Gabriel Sheffer, ed., (Portland: Frank Cass, 1997), 141.

⁸³ Lipson, “American Support for Israel,” 141.

⁸⁴ Shalom, Israel’s Nuclear Option, 12.

⁸⁵ Shalom, Israel’s Nuclear Option, 82.

⁸⁶ Shalom, Israel’s Nuclear Option, 12.

Israel's willingness to divert vast sums on exorbitant projects such as the Dimona reactor and French surface-to-surface missiles."⁸⁷

While the United States never followed through with its threats, their existence suggests that the Israelis were put on notice that the U.S. took the Dimona activities very seriously. Moreover, because U.S. domestic law required a cut off in assistance to newly nuclearized states, Israel could be certain that publicly declaring their capability or testing would result in a loss of American support.

Additionally, the evidence suggests that Israeli leaders were acutely aware of the costs of the nuclear program, making them sensitive to the difficulties in paying for conventional weapons. For example, one Knesset member responded to Ben-Gurion's Dimona statement that "the production of nuclear arms is a veritable suicide for small countries all the more as such production does not prevent those countries from allocating huge sums of money for conventional armament."⁸⁸ This also made them more vulnerable to U.S. forms of economic and conventional pressures. Concerns such as these provided further incentives to keep Israel's nuclear progress hidden from public view so as to not trigger a cut off in U.S. financial and conventional weapons assistance.

D. The Truce Between the U.S. & Israel

With the foregoing factors informing negotiations, Washington and Tel Aviv engaged in an ongoing, intensive dialogue over the course of several years as to Israel's nuclear ambitions. The result of these diplomatic exchanges and negotiations was the

⁸⁷ Shalom, *Israel's Nuclear Option*, 127.

⁸⁸ John F. Shaw to State Department, "Ben Gurion on Israel's Two Reactors," 17 August 1962, *Nuclear Non-Proliferation* (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00898, 2.

agreed upon formula that Israel would not be the first state to introduce nuclear weapons into the Middle East.

The basis of this understanding began under the Kennedy administration and was prompted under pressure to open up Dimona to inspections. During one of the meetings to discuss Israeli nuclear intentions, Shimon Peres met with President Kennedy as a representative of Ben-Gurion. During this meeting, Kennedy reportedly directly asked Peres if Israel was making an atomic bomb. Unprepared for this direct approach, Peres improvised by stating, “I can say to you clearly that we shall not introduce atomic weapons into the region. We will certainly not be the first to do so. We have no interest in it, indeed the contrary is true. Our interest is in lessening of the tension of the arms race, event to total disarmament.”⁸⁹

Successive Israeli governments would similarly seek to deflect U.S. pressure by characterizing the reactor as peaceful. For example, Prime Minister Levi Eshkol followed the precedent set before him stating in 1963 that “I desire to confirm Mr. Ben-Gurion’s clear assurance on the [peaceful] character and purpose of the Dimona reactor.”⁹⁰ For its part, the U.S. continued to push for a clearer definition of what the “introduction” of nuclear weapons in the region would mean according to the Israeli government. The documents and reports from this time suggest a struggle to formulate a stance that would accommodate U.S. interests in opacity while at the same time provide for Israeli deterrence needs.

⁸⁹ Quoted in Karpin, *The Bomb in the Basement*, 251.

⁹⁰ Dale, “Current Status of the Dimona Reactor,” no. NP01114, 1.

This understanding was reached in a dialogue between Warnke representing the United States and Rabin and Israeli Air Force commander Hod. In the conversation, the discussion centered on whether testing and a public announcement would constitute an “introduction.” Initially, Rabin agreed that introduction meant a physical presence of nuclear weapons.⁹¹ However, Commander Hod suggested that testing was important to whether or not nuclear weapons were introduced.⁹² From here, the Israeli perspective developed that simply having nuclear weapons was not enough. Rather, according to Rabin, “a state possessed nuclear weapons only if they had been tested and proven functional.”⁹³ Rabin also noted that an additional component to introducing weapons to the region included “notoriety.”⁹⁴ When specifically asked whether an advertised, but untested nuclear weapon would be considered an introduction, Rabin replied “Yes. That would be introduction.”⁹⁵ In short, from the Israeli perspective, either a public announcement or testing constituted introducing nuclear weapons into the Middle East.

Rabin in particular was concerned with the requirements of deterrence as well. From his perspective, “‘introduction’ of nuclear weapons were intended to deter the other side, not destroy it. Therefore, each side had to be aware of the other’s nuclear arsenal.”⁹⁶ Similarly, he is reported as saying, “[t]here must be public acknowledgement.

⁹¹ Shalom, Israel’s Nuclear Option, 163

⁹² Shalom, Israel’s Nuclear Option, 163.

⁹³ Shalom, Israel’s Nuclear Option, 164.

⁹⁴ Karpin, The Bomb in the Basement, 311.

⁹⁵ Karpin, The Bomb in the Basement, 311.

⁹⁶ Shalom, Israel’s Nuclear Option, 164.

The purpose of nuclear weapons is not to use the weapon itself, but to use its deterrent power. I don't believe any power that has nuclear weapons plans to use them, although you cannot ever be sure. Ninety-nine percent of their value is deterrence."⁹⁷

From this dialogue, an understanding solidified as to Israel's policy of opacity. The United States was not fully satisfied with the Israeli perspective that either testing or openly declaring were the only way to introduce nuclear weapons, and considered Israeli possession of nuclear weapons as introduction.⁹⁸ The concern from Washington was that the Israeli formulation left it with considerable room to maneuver. It left open the option for Israel to develop nuclear weapons but to not "introduce" them through testing or public declaration.⁹⁹

Phrased another way, "[s]uch a pledge can be interpreted as a 'no first use or test' policy, ruling out public announcement ('introduction') of a bomb but not its actual development, full or partial."¹⁰⁰ This leeway was, of course, what made the formula work for the Israelis, given their determination to develop a nuclear deterrent. Not only could Israel develop nuclear weapons without violating its agreement with the United States, but also it allowed Israel some measure of deterrence through uncertainty because

⁹⁷ Quoted in Karpin, The Bomb in the Basement, 311.

⁹⁸ Shalom, Israel's Nuclear Option, 165-166.

⁹⁹ Shalom, Israel's Nuclear Option, 166.

¹⁰⁰ Dowty, "Israeli Perspectives on Nuclear Proliferation," 143.

Israel still had the ability to develop weapons. In short, by this statement, Israel does not deny that it has nuclear weapons.¹⁰¹

While the U.S. clearly would have preferred a different formula, there was both an understanding in Washington for the reasons behind the Israeli need for a deterrent, as well as resignation that the U.S. was not willing to sacrifice its relationship with them to prevent it. As such, the American goal shifted to persuading Israel to keep its promise not to be the first state to introduce nuclear weapons into the region. As Warnke noted, the U.S. was concerned about the risks stemming from Israel being a nuclear power, but this risk would be even greater if they acknowledged they were a nuclear power.¹⁰² In short, Warnke summarized the U.S. position as “[w]e hoped that we would persuade Israel not to develop nuclear weapons. So my own sense was, if it became a declared nuclear power then there was a greater risk of proliferation. If you got one keep it undercover, don’t publicly advertise the fact that you are a nuclear power.”¹⁰³

Since that formulation, the U.S. has sought to hold the Israelis to the public posture of denial even as it became apparent that Israel had a nuclear option and would not roll it back. At the same time, Washington remained equally committed to not publicly recognizing or revealing Israel’s nuclear progress; it chose to remain complicit even in the face of clear evidence. For example, by 1968, some of the top leadership in the Washington considered it a foregone conclusion that the Israelis had the bomb.

¹⁰¹ Warren H. Donnelly, “Israel and Nuclear Weapons,” 8 August 1988, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP02605, 3.

¹⁰² Karpin, The Bomb in the Basement, 303.

¹⁰³ Karpin, The Bomb in the Basement, 303.

However, they were so obsessive about the secrecy of the program, the information was strictly limited. As Carl Duckett later revealed, the “CIA had drafted a National Intelligence Estimate on Israel’s nuclear capability in 1968. In it was the conclusion that the Israelis had nuclear weapons. He showed it to Mr. Helms. Helms told him not to publish it and he would take it up with President Johnson. Mr. Helms later related that he had spoken to the President, that the President was concerned, and that he had said ‘Don’t tell anyone else, even Dean Rusk and Robert McNamara.’”¹⁰⁴

The crucial understanding reached between Israel and the United States under the Kennedy and Johnson administrations—mainly that Israel would not be the first state to introduce nuclear weapons into the region—was further entrenched under the Nixon administration. The Nixon administration eventually reached a meeting of the minds between Nixon, Kissinger and Golda Meir, that Israeli nuclear weapons were inevitable and simply had to determine the best way to manage the relationship. To be sure, relations were not always entirely smooth, but during the Nixon administration, Israeli leaders felt safe “coming clean” with its program to the U.S.

As Golda Meir has previously advocated to Ben-Gurion, Israel now had the opportunity to be directly honest with the United States regarding its nuclear capabilities and intention. As Prime Minister, she met with Nixon and held “a serious and sincere

¹⁰⁴ Nuclear Regulatory Commission, “Inquiry into the Testimony of the Executive Director for Operations,” February 1978, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01567, 5.

discussion on Israel's strategic weapons and to tell the truth," as she had wanted to do since the beginning.¹⁰⁵

The revelations were no surprise to the White House, particularly Kissinger who believed that nuclear weapons were inevitable given the security environment. Indeed, Kissinger reportedly believed that rather than fighting India and Israel in their pursuit of nuclear weapons, the administration should assist, or at least not hinder them, in order to strengthen the West.¹⁰⁶ Nonetheless, he still sought to formulate a policy that would be advantageous to U.S. interests in the region.

From Kissinger's perspective, Washington could live with a secret nuclear program; however, the real issue was that Israel's missile program would reveal Tel Aviv's true nuclear intentions. As detailed in a meeting to assess options for addressing Israel's program, policy analysts determined that,

"if Israel signs the NPT and gives appropriate assurances on not deploying nuclear weapons, we could live with a secret research and development program. Missiles, however, are a special problem. Once deployed, the world would be convinced that Israel had nuclear warheads. It just didn't make sense to have a highly expensive missile that would land somewhere within a half-mile of the target to carry only 'five hundred pounds' (sic) of high explosive."¹⁰⁷

It seems as if even that the missile program wasn't necessarily opposed by Kissinger, in principle. Rather, the publicity was of greater concern. Indeed, there was the idea that if

¹⁰⁵ Karpin, The Bomb in the Basement, 315.

¹⁰⁶ Karpin, The Bomb in the Basement, 316.

¹⁰⁷ State Department, "Review Group Consideration of Response to NSSM-40," no. KT00030, 2-3.

Israel agreed to not deploy missiles but kept them hidden, this would not be “completely inconsistent with U.S. interests.”¹⁰⁸

At the same meeting, U.S. officials discussed options that focused on Israel keeping its nuclear capabilities secret. Ideas floated at the meeting included: 1) seeking Israeli adherence to the NPT; 2) seeking private, bilateral assurances that Israel would not deploy or test nuclear explosive devices; 3) creating circumstances in which Israel would not “announce” a nuclear capability and would maintain secrecy on its research and development activity; and 4) gaining Israel’s agreement not to carry forward any further developments in the weapons field.¹⁰⁹

As with prior administrations, the Nixon presidency wanted to avoid any possible accusations of collusion with the Israelis. Consistent with previous U.S. policy, the best way to do this was with the opaque nuclear posture. As explicitly determined,

“[t]here was some discussion of whether in light of belief that Israel had developed nuclear weapons, we could now seek to get agreement from Israel that it would not develop a nuclear explosive device. The consensus was that we should, that this would serve to force Israel to ‘hide’ its program, and that this would limit any aspect of collusion.”¹¹⁰

And as before, Washington remained concerned that an Israeli test would provoke the Arab states.¹¹¹ Given the context of this relationship, and while recognizing that the Nixon/Meir documents are not declassified, there is a general belief that Nixon promised

¹⁰⁸ State Department, “Review Group Consideration of Response to NSSM-40,” no. KT00030, 3.

¹⁰⁹ State Department, “Review Group Consideration of Response to NSSM-40,” no. KT00030, 3.

¹¹⁰ State Department, “Review Group Consideration of Response to NSSM-40,” no. KT00030, 5.

¹¹¹ Karpin, The Bomb in the Basement, 318.

that Israel will have ready access to U.S. conventional weapons in exchange for the Israeli bomb staying “in the basement,” absent circumstances of extreme emergency.¹¹² This outcome was the result of “intensive, ongoing dialogue that began with the Kennedy, Johnson and Nixon administrations. Essentially, the policy of nuclear opacity is tied to a secret, multi-layered set of understandings between the two countries, so that Israel cannot abandon this policy without American approval.”¹¹³

On the basis of the now candid relationship between the two states that continued to grow closer, the negotiated policy has appeared to work extraordinarily well for both sides. For Israel, it perceives that it has garnered some measure of deterrence through uncertainty with the very existence of Dimona. Indeed, as time marched on, suspicions, hints, and unofficial revelations such as through former Dimona technician Mordechai Vanunu, there is little doubt that Israel has developed a sophisticated nuclear capability. And clearly Israel maintains a formidable conventional arsenal, assisted in no small measure by the United States. From the perspective of the United States, it has kept itself publicly distanced from the Israeli nuclear program while maintaining them as an ally. Additionally, Washington was free to push its non-proliferation agenda, while simultaneously seeking regional Middle East peace and minimizing Soviet intervention in the area during the Cold War. An overt Israeli nuclear arsenal would have jeopardized the American ability to pursue these foreign policy goals.¹¹⁴

¹¹² Karpin, The Bomb in the Basement, 318.

¹¹³ Shalom, Israel's Nuclear Option, 174.

¹¹⁴ Donnelly, “Israel and Nuclear Weapons,” no. NP02605, 3.

III. Regional Security Environment

Regional pressures ultimately influenced Israel's decision to retain an opaque nuclear posture. However, Israeli leaders initially grappled with the countervailing pressures of seeking to achieve and maintain a nuclear monopoly while deterring its Arab enemies. Deterrence required, at a minimum, some uncertainty as to Israel's nuclear status prior to it having a deliverable capability. As such, Israel resisted early efforts to reassure other regional states as to its capabilities and intentions. Yet, at the same time, if Israel appeared to achieve a nuclear capability, this would place substantial pressure on its regional neighbors to respond in order to counter the Israeli threat while catering to their domestic populations. Over time, once it became apparent that the region would not be quickly nuclearized, and indeed the majority of the Arab states preferred a non-nuclear path, Israel's chosen posture of opacity was reinforced. This enabled Israel to preserve its nuclear monopoly and rely mainly on conventional superiority. Israel's nuclear posture further reduced the risk that the Soviet Union would either provide nuclear assistance or intervene on behalf of Arab states and shift the conventional balance of power away from Israel's favor.

On the other side of the equation, the financial, technological, and lack of external support from other states militated against a nuclear solution for most Arab states in the Middle East. Additionally, because Israel was largely seen as acquiring a nuclear capability for its own survival, rather than to dominate the region, security did not require mutual deterrence as long as Israel refrained from issuing nuclear threats. However, choosing to not acquire nuclear weapons was not a foregone conclusion, given the status

of the conflict in the Middle East and rhetoric used to unite the domestic populations against Israel. This meant that if Arab leaders acknowledged Israeli nuclear capability, they would have to justify to their domestic constituents their overall lack of a response. Israeli opacity allowed them to forego a nuclear response, while issuing threats that they would respond if Israel crossed the nuclear threshold.

Finally, the United States played a role in the regional dynamics. Washington's interest was to prevent the spread of nuclear weapons, minimize Middle East conflicts, and limit Soviet intervention in the region. It did so by seeking to pressure Israel to reassure its neighbors regarding the nuclear issues, and other attempts to reduce incentives that would lead to further horizontal proliferation. The cumulative effects of these factors are discussed below.

A. Israeli Nuclear Deterrence and Maintaining the Monopoly

Israel's deterrence posture was conducive to maintaining a policy of nuclear ambiguity for several reasons. Early in its development, Israel sought to garner some measure of deterrence through uncertainty, at least until it developed a deliverable capability. By that time, the benefits of an opaque stance were becoming more apparent. Additionally, because Israel sought to maintain a nuclear monopoly in the region, and its nuclear capability was reserved as 'weapons of last resort', it neither needed to demonstrate its capability, nor had the incentive to do so in the absence of threats to state survival.

1. Deterrence Through Uncertainty

Israel developed a nuclear weapons capability in order to deter its regional enemies, which had combined superior resources and a population that could threaten Israel's existence. This meant that Israel considered the deterrent effects of its nuclear program both during the initial development phase when it did not yet have a capability, and thereafter when it had the capability but the already established policy of nuclear opacity. It is during the former time period that Israel necessarily relied on "deterrence through uncertainty" by seeking to keep its enemies guessing as to its capabilities until it actually achieved nuclear option. Uncertainty meant both disguising Israel's actual intentions to achieve a bomb capability while at the same time keeping other states questioning the accuracy of this stance. This is, of course, a fine line between deterrence through uncertainty and provoking one's adversaries to counteract a nuclear threat, while also seeking to reassure friendly states.

For example, the London Daily Express reported that U.S. officials considered Israeli denials related to Dimona to be a "cover-up to avert the strong reaction the Israelis expect from Abdul Nasser and other anti-Israel leaders in the Middle East."¹¹⁵ Yet, this is in contrast with some Israeli leaders seeking to prevent the U.S. with "reassuring" Nasser.¹¹⁶ Indeed, Israel was resistant to U.S. efforts to inspect the Dimona facility and then pass on the "peaceful" nature of the program to Egyptian leaders. Instead, Israeli leaders argued that "'[i]n certain circumstances a virtuous woman may not want to

¹¹⁵ Reid, "Israeli Press Reports on Alleged Nuclear Power Plant Construction," no. NP00718, 1.

¹¹⁶ Likely early on this was also, in part, to prevent inspections by the U.S., which wanted to see Dimona and then pass on information to Egypt that the reactor was for peaceful purposes.

appear virtuous.’ (Chaim Yahil in May 1963, referring to a US request to reassure President Nasser about the peaceful nature of activities at Dimona.)”¹¹⁷

Along these lines, Shimon Peres argued to U.S. leaders that it was in “Israel’s highest interest to leave Nasser in a state of uncertainty regarding the level of development and objectives of the Dimona Project.”¹¹⁸ Otherwise, “if the reactor were monitored by an international team . . . nothing suspicious would be discovered, and the information would be relayed to Egypt. Egypt could breathe more easily, but this would detract from Israel’s deterrence power.”¹¹⁹ Similarly, as incoming Prime Minister Eshkol rejected American requests to reassure Nasser, as it was good for Nasser to worry about Israel’s capabilities since Nasser often threatened war on Israel.¹²⁰ Eshkol further communicated to President Johnson that Nasser was building an Egyptian nuclear capability, which he would do even if he was reassured that Dimona was for peaceful purposes only.¹²¹ Therefore, although Israel “was not engaged in nuclear weapons production,”¹²² it would not be in its interests to communicate the same to its enemies. This stance was premised as least in part on the belief that Middle East proliferation was inevitable.

¹¹⁷ Dale, “Current Status of the Dimona Reactor,” no. NP01114, 1.

¹¹⁸ Shalom, Israel’s Nuclear Option, 24.

¹¹⁹ Shalom, Israel’s Nuclear Option, 24.

¹²⁰ Cohen, Israel And The Bomb, 199.

¹²¹ Shalom, Israel’s Nuclear Option, 95.

¹²² Quoted in Karpin, The Bomb in the Basement, 252.

Early Israeli efforts to establish deterrence through uncertainty was not lost on U.S. leadership. For example, an airgram sent to the State Department during the Johnson administration with “Deterrence by uncertainty” written in the margins next to “[t]he shroud of secrecy on Dimona was and is part of an overall security blanket to keep the Arabs from being sure about any facet of Israel’s strength.”¹²³ Further, as reported from an American perspective, Washington did not believe that Dimona was simply a bluff to create a question of an Israeli nuclear deterrence and rather accurately estimated that the facility was designed to develop a weapons capability:

“High officials of the GOI have frequently admitted, however, that they are quite glad to “keep Nasser worried” on this subject. This element of psychological warfare is stated by Israeli officials to be the reason for the extraordinary security precautions which have surrounded Dimona from its inception. The extent to which this bluff is actually useful to Israel is debatable; it may even be counterproductive through creating a distrust stimulating the Arabs to greater efforts (nuclear and otherwise) against Israel. In any case, it seems unlikely that any large fraction of the \$60 million already spent at Dimona can be justified in terms of the bluff value of the installation.”¹²⁴

Indeed, U.S. officials noted that when viewed as a security safeguard by being capable of making nuclear weapons in a very short period of time “if the international situation should appear to require it” then “it is quite remarkable how much progress Israel has made along the path to a nuclear weapon.”¹²⁵

¹²³ Walworth Barbour to State Department, “Leading Nuclear Scientist Discusses Nuclear Policy,” 29 June 1966, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01172, 1.

¹²⁴ Dale, “Current Status of the Dimona Reactor,” no. NP01114, 2.

¹²⁵ Dale, “Current Status of the Dimona Reactor,” no. NP01114, 2.

2. Maintaining the Nuclear Monopoly

Israel was the first state in the Middle East to develop a nuclear option, giving it a regional nuclear monopoly. At the same time that Israel sought to deter its adversaries, it also formulated a policy of denying other states in the region the same nuclear capability if possible. Israel's goal of achieving and maintaining a nuclear monopoly in the Middle East required twin efforts: to acquire its own nuclear option while simultaneously preventing another Arab state from doing the same.

As previously discussed, opacity assisted the Israelis in their own efforts because it shielded the program external interference during its infancy. That is, Israel had to ensure that it could protect its own nascent capability being developed at Dimona long enough to successfully have a credible deterrent. Furthermore, to maintain its monopoly, Israel sought to reduce Arab state incentives and capability to acquire their own nuclear option. Opacity eventually became important for minimizing some Arab states' incentives, notably Egypt during the 1960s and 1970s, to acquire their own nuclear capability.

Israel had strong incentives to prevent other regional states from acquiring a similar capability that would dilute its own threat. The nuclear monopoly means that Israel retains the ultimate trump card for its security, one that could be used if necessary against a non-nuclear state in dire circumstances. For this reason, Israel developed the longstanding policy that it will not tolerate nuclear weapons in the region.

This policy has, at times, required extraordinary efforts by the Israelis. There are numerous instances of suspected Israeli sabotage of nuclear equipment destined for Arab

states in the Middle East.¹²⁶ Additionally, during the construction of Iraq's Osirak reactor, the Israelis are suspected of having sabotaged the facility three times prior to destroying the facility.¹²⁷ And of course, the most prominent example of Israel's determination to retain a nuclear monopoly was demonstrated by the 1981 Israeli attack on the Osirak reactor. This event was understood by Arab states as Israel's attempt to make its nuclear monopoly in the Middle East permanent.¹²⁸

What is further particularly notable about the attack on Osirak was the muted U.S. response. Washington condemned the attack as destabilizing and promised to investigate allegations that the Israelis used U.S. jets to conduct the strike. If so, then the U.S. government would have been mandated under the Arms Export Control Act to cut off military assistance, as required when a country substantially violates the terms of the transfer agreement. Privately, the U.S. government evaluated whether the Israeli use of U.S. arms may have violated the agreement in "legitimate self-defense."¹²⁹ Finally, the U.S. conducted a review and suspended the delivery of four F-15 planes that were scheduled to be shipped.¹³⁰ This was of little consequence to Israel's nuclear policy at

¹²⁶ Pry, Israel's Nuclear Arsenal, 34.

¹²⁷ Catudal, Israel's Nuclear Weaponry, 101.

¹²⁸ Shai Feldman, "Israeli Deterrence and the Gulf War," in Deterrence in the Middle East: Where Theory and Practice Converge, Aharon Klieman and Ariel Levite, eds. JCSS Study no. 22 (Boulder: Westview Press, 1993), 126.

¹²⁹ Robert M. Kimmitt to Richard V. Allen, "Israeli Strike—Legal Aspects," NSC Memorandum, 11 June 1981, Terrorism and U.S. Policy (Washington D.C.: The National Security Archive and Proquest, 2008), no. TE00672, 1.

¹³⁰ Walter J. Stoessel, Jr. to U.S. Embassy, Saudi Arabia, "Saud's Remark on Issues and Answers," 15 June 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01899, 3.

this time as the CIA had already estimated that Israel possessed between ten and twenty nuclear weapons that could be delivered as either bombs or with the indigenously produced Jericho missiles.¹³¹ In short, Israel was determined to maintain its monopoly status and it did not face substantial resistance by the U.S. or other states in doing so, given the threat of spreading nuclear proliferation.

Eventually, and for the reasons set forth more fully below, Israel's intent to keep other states from developing a nuclear capability in the Middle East became a further incentive for keeping its capability discreet. Mainly, as other states in the region did not have readily available options to counter the Israeli nuclear progress, maintaining a nuclear monopoly continued to be a viable strategy. This subtle but important recognition occurred under Prime Minister Eshkol's tenure, when he became concerned that Israeli activities would increase Egypt's motivation to acquire nuclear weapons. As such, maintaining opacity was seen as a potential way to "deter the Egyptians while at the same time communicating reports designed to calm them."¹³² In short, there became no reason to provoke its adversaries with a visible nuclear posture if a primary goal was to reduce their motivation for acquiring a counter capability. At the same time, as discussed below, Arab states have largely not acknowledged Israel's nuclear capability, instead relying on threats to respond if Israel openly acknowledged its nuclear capability.

¹³¹ Judith Miller, "3 Nations Widening Nuclear Contacts," New York Times Article, 28 June 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01902, 2.

¹³² Shalom, Israel's Nuclear Option, 143.

B. Regional Benefits from Ambiguity

Initially, regional constraints did not factor heavily into Israeli calculations. Rather, Israel seemed resigned that the Middle East would become nuclearized and sought to gain as much as possible from its own potential deterrence by minimizing reassurances to Arab states. It was the United States that was primarily concerned with Arab and Soviet responses, and in seeking to minimize these fears, pressured Israel to keep its nuclear ambitions muted. Over time, as the Middle East did not swiftly transform into a nuclear arena, either from indigenous development or Soviet involvement, the benefits of opacity became apparent. Regional considerations then played a more significant role in providing benefits that further weighed in favor of maintaining opacity. That is, the regional constraints were more indirect in that they were channeled through the U.S., which in turn was the primary source of pressure.

1. Early U.S. Reassurances & Muted Arab Response

Israeli ambiguity, coupled with U.S. efforts to reassure Arab states of Israel's benign nuclear intentions, served initially to buy Israel time to complete the Dimona reactor. When construction of the Dimona reactor became public in the early 1960s, it heightened anxiety among Israel's Arab neighbors as to Israeli intentions. While the U.S. sought to reassure the region and downplay the significance of the reactor, several Arab states issued statements expressing their concern and threatening that they would respond by acquiring a nuclear capability themselves.

For example, Nasser's response to Ben-Gurion's announcement in the Knesset in 1960 was that Egypt would, if Israel developed nuclear weapons, launch a preemptive war.¹³³ The Dimona reactor would also lead to an increased determination to build a larger reactor, where previously they had done nothing more than talk about it.¹³⁴ In response to U.S. efforts to assure the Government of Jordan, its representatives stressed that if "Israel has intention making atom bomb later on Arabs will not delay getting their own."¹³⁵ Similarly, the U.S. embassy in Lebanon noted there were still calls for an Arab bomb in response to Dimona, although efforts there to reduce the anxiety were working to the extent that the government toned down its rhetoric and there were less newspaper reports.¹³⁶

For its part, the U.S. was actively trying to reassure the Arab states as to Israel's peaceful intentions. It sought to communicate that the U.S. was in no way involved in Dimona and that it had received Israeli reassurances that it had no nuclear intentions.¹³⁷ Washington also signaled that it was committed to maintaining its stance towards non-

¹³³ Karpin, The Bomb in the Basement, 200.

¹³⁴ Karpin, The Bomb in the Basement, 189.

¹³⁵ Sheldon T. Mills to State Department, "Appraisal of Atomic Developments in Israel Is Given to Jordan," 24 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00729, 1.

¹³⁶ Robert M. McClintock to State Department, "Lebanese Foreign Minister is Questioned About the Israel Nuclear Reactor," 29 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00732, 1.

¹³⁷ William C. Lakeland to State Department, "Embassy's Efforts to Set the Record Straight on Israeli Atomic Energy Activities," 30 December 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00733, 1.

proliferation and would continue to follow the Israeli development closely.¹³⁸

Apparently, these efforts were at least partly successful through 1965. It was reported that the Dimona matter was mentioned occasionally between the Americans and Egyptians from 1961 through 1965, and that United States “seemed to take the Israeli reactor far more seriously than Egypt did.”¹³⁹

2. Increase in Public Threats

Still, by the late 1960s and early 1970s, there was considerable concern again among the Arabs states that Israel was pursuing a weapons option.¹⁴⁰ Without a public Israeli nuclear weapons program, there was less incentive for other states in the region to acquire that same.¹⁴¹ With Israeli nuclear weapons, Egypt was the most vulnerable to attack and “for its own survival, the UAR probably sees advantages in preventing the use of nuclear weapons, and therefore also their introduction into the area.”¹⁴² Furthermore, Egypt also stood to lose the most politically. With Egypt ostensibly the political leader in the region, U.S. estimates concluded that “Nasser’s image as the dynamic leader of Arab nationalism is strengthened by his ability to display advanced military technology. It is

¹³⁸ Macomber, “Additional Recent Information on the Israeli Atomic Energy Program,” no. NP00744, 1-2.

¹³⁹ Karpin, The Bomb in the Basement, 202.

¹⁴⁰ Pry, Israel’s Nuclear Arsenal, 30. Nonetheless, this did not stop the 1973 war, either because it was a war of limited objectives, or the Soviets might intervene and thus keep the Israelis from using nuclear force, or Egypt and Syria did not really believe that Israel had in fact developed a nuclear capability yet. See, e.g., *Ibid.*, 31. However, later reports suggest that Israeli leaders did in fact prepare nuclear bombs but then the battle turned to Israel’s favor. *Ibid.*, 31-32.

¹⁴¹ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 23.

¹⁴² U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 23.

clear that the UAR's political position would be weakened if Israel were to acquire a nuclear status and the UAR did not."¹⁴³

In response renewed suspicions of Israeli intentions, several of the Arab states increased their own rhetoric with threats that they considered the Dimona reactor a *casus belli*, given the potential threat it posed to other states. As public rhetoric increased there were further specific threats to conduct a preemptive attack the Dimona facility. For example, by 1966 Nasser was publicly and privately threatening to possibly launch a preemptive strike on Israel before Dimona went fully nuclear.¹⁴⁴ According to U.S. analysts, the Israeli threat that would motivate this attack would be if it became apparent that the Israelis either had, or would shortly have, nuclear weapons. If this were the case, then "the Egyptian objective would be to destroy the Israel facilities as quickly and as effectively as possible and then retire behind the frontier counting on international public opinion and pressure to prevent Israel from retaliating."¹⁴⁵ The Egyptians would label such actions, if taken, as defensive.¹⁴⁶

Additionally, public statements were issued that the Israeli program justified regional proliferation. Indeed, the "most frequent Arab response to the development of Israel's nuclear weapons has been to threaten to procure them themselves."¹⁴⁷ For

¹⁴³ U.S. Department of State, "Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons," no. NP01079, 22.

¹⁴⁴ Aronson, Israel's Nuclear Programme, 54.

¹⁴⁵ Aronson, Israel's Nuclear Programme, 28-29.

¹⁴⁶ Aronson, Israel's Nuclear Programme, 28-29.

¹⁴⁷ Catudal, Israel's Nuclear Weaponry, 96.

example, by 1974, President Sadat promised that “if Israel intends to introduce nuclear weapons into this area [the Middle East], we too will find a way of acquiring such weapons.”¹⁴⁸ The Syrians similarly threatened that an Israeli nuclear option left the Arabs with the choice of either preventing Israel from gaining them or countering them with their own acquisition. Of these two alternatives, President Assad suggested that the alternative of acquiring weapons was more promising as a response.¹⁴⁹ Along the same lines, by the mid-1970s, Iraqi leaders were justifying the Osirak reactor as a necessary response to Israel’s nuclear weapons program.

C. Factors Militating Against Arab Nuclear Weapons

Despite these public and private threats, the regional states did not have the indigenous capability to counter Israel in the nuclear field in the 1960s. Egypt was the most likely candidate, based both on motivation and resources. However, Washington was convinced that Egypt did not have the facilities.¹⁵⁰ Egypt’s program also faced a severe shortage of personnel, materials, and money.¹⁵¹ Indeed, the economic factor alone

¹⁴⁸ Catudal, Israel’s Nuclear Weaponry, 96.

¹⁴⁹ Catudal, Israel’s Nuclear Weaponry, 96, quoting interview on Cairo Radio, December 17, 1976.

¹⁵⁰ Herter, “Regarding Israel’s Nuclear Capability,” no. NP00739, 8.

¹⁵¹ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 23.

was “almost overwhelmingly against [Egypt] developing a nuclear weapon.”¹⁵² In short, based on technological and economic deficiencies, it was estimated that Egypt did not have the capability to undertake a national nuclear weapons program in the foreseeable future.¹⁵³

The U.S. was still concerned that Egypt might try nonetheless to acquire a nuclear capability from external sources. Washington thus sought to work out a qualitative arms limitation solution in the Middle East to prevent a nuclear arms race.¹⁵⁴ There was some success on this front as Nasser eventually gave reassurances to the U.S. that Egypt would not develop nuclear weapons.¹⁵⁵

However, the concern remained that if Egypt had to respond to a publicly nuclear Israel, Soviet provisions of nuclear weapons could potentially be a reality. In particular, Washington believed that the potential existed for Egypt, lacking its own indigenous capability, to turn to the Soviets for nuclear and conventional support in order to balance against the growing Israeli capability. According to U.S. estimates:

“If Israel were to develop a nuclear weapon, the pressure on the UAR military would be so great that it would seek every means to obtain a matching deterrent. Since it is unlikely the UAR could develop its own nuclear weapon, the UAR would press the Soviet Union...to supply the means or the weapons. The Soviet Union would almost certainly not

¹⁵² U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 23.

¹⁵³ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 23-24.

¹⁵⁴ Herter, “Regarding Israel’s Nuclear Capability,” no. NP00739, 8.

¹⁵⁵ Dean Rusk to Lyndon B. Johnson, “Second McCloy Mission on Near East Arms,” 22 August 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00991, 1.

supply weapons, but it might use the opportunity to acquire a nuclear missile base in the UAR and concomitant leverage over UAR foreign policy.”¹⁵⁶

Consistent with these concerns, there were some reports that the Egyptians did approach the Soviets for nuclear assistance. The evidence suggests that the Soviets refused to provide either nuclear weapons or the technology to develop them.¹⁵⁷ Yet, there is also information that the “Soviets extended a vague nuclear guarantee to Egypt late in 1965. According to a carefully worded press report from Cairo on February 4, 1966, Soviet Deputy Minister of Defense Marshal Grechko ‘reportedly refused to provide Egypt with nuclear weapons but pledged protection if Israel developed or obtained such arms.’”¹⁵⁸

While the Soviets appeared less than enthusiastic about supplying Arab states with nuclear weapons, technology, or even security guarantees, it was uncertain at the time whether or not the Soviets would inject themselves into the conflict and was reason to practice nuclear restraint. This has led some analysts to conclude that Moscow therefore also seemed to prefer that Israel keep its nuclear activities secret.¹⁵⁹

Israel would have an additional conventional problem by provoking Moscow’s client states. Soviet officials told the West that if Israel attacked Syria, even in a

¹⁵⁶ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 22.

¹⁵⁷ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 24.

¹⁵⁸ Catudal, *Israel’s Nuclear Weaponry*, 62 citing Shlomo Aronson, “The Nuclear Dimension of the Arab-Israeli Conflict: The Case of the Yom Kippur War,” *The Jerusalem Journal of International Relations* 7, nos. 1-2 (1984), 112.

¹⁵⁹ Shai Feldman, “Superpower Nonproliferation Policies: The Case of the Middle East,” in *The Soviet-American Competition in the Middle East*, Steven L. Spiegel, et al., eds. (Lexington: D.C. Heath and Company, 1988), 104-106.

conventional capacity, the USSR would assist its ally with military force, and even possibly tactical nuclear weapons if necessary.¹⁶⁰ This necessarily meant that Israeli security planners had to calculate the potential and accompanied risks of Soviet intervention on behalf of its client states.

In short, openly declaring would increase the incentives for outside powers to transfer nuclear weapons or technology to an Arab state and “would thus endanger the advantages of Israel’s conventional superiority which, so long as it lasts, is still preferable to any other conceivable military situation.”¹⁶¹ Of even more concern, the evidence suggests that the “Soviet views of Israel’s nuclear option played at least an important role in Israeli deliberations regarding Egypt’s challenge in May 1967.”¹⁶² After the 1967 war, there was reportedly some concern by the Israeli leaders that the Soviet Union would preemptively strike the Dimona facility and thereby kill the nascent nuclear weapons program.¹⁶³ For these reasons, from Israel’s perspective, it had little incentive to exacerbate relations or a regional arms race by demonstrating its nuclear capabilities.

With few prospects for either acquiring their own nuclear capability, or garnering Soviet assistance—at least while Israel remained opaque—Egypt also sought to downplay the significance of Israel’s nuclear capability. Part of this reason was

¹⁶⁰ Catudal, Israel’s Nuclear Weaponry, 93, citing Leonard C. Spector, New Nuclear Nations (New York: Vintage Books, 1985), 134.

¹⁶¹ Dowty, “Israeli Perspectives on Nuclear Proliferation,” 146.

¹⁶² Aronson, Israel’s Nuclear Programme.

¹⁶³ Pry, Israel’s Nuclear Arsenal, 19.

practical.¹⁶⁴ By not directly acknowledging the Israeli capability, it reduced incentives for the Arab states to develop a nuclear response. Opacity enabled the Egyptian government to avoid explaining its relative lack of response to the Israeli program.¹⁶⁵ Otherwise, the “formal recognition that Israel had nuclear weapons would have forced ruling coalitions to counter that capability, in response to popular dissatisfaction with the idea of an Israeli nuclear monopoly.”¹⁶⁶

Nuclear restraint by the Arab states would have been much more difficult to accomplish if Israel had thrown down the gauntlet by overtly acknowledging its nuclear capabilities and intentions. However, as matters stood, the Egyptians and other Arab states could live with the Israeli program to the extent that it was not an open issue between the states. In particular, Egyptian security motivations to acquire nuclear weapons were minimal.¹⁶⁷ Thus, as summarized by Warnke:

“Ambiguity gives the Arab states a good excuse for not doing more to eliminate Israel . . . I think there is a feeling in part of the Arab states that they cannot do anything about it and I think that they are happy that way. They are happy not being in a position in which somebody is going to say, ‘Why don’t you attack Israel, why don’t you bomb Jerusalem?’ So I think that everybody is more comfortable with the situation that exists than they would be with any other situation.”¹⁶⁸

¹⁶⁴ For a psychological explanation for this approach, see Gabriel Ben-Dor, “Arab Rationality and Deterrence,” in Deterrence in the Middle East: Where Theory and Practice Converge, Aharon Klieman and Ariel Levite, eds. JCSS Study no. 22 (Boulder: Westview Press, 1993), 91.

¹⁶⁵ Shalom, Israel’s Nuclear Option, 16.

¹⁶⁶ Etel Solingen, “The Domestic Sources of Regional Regimes,” International Studies Quarterly 38, no. 2 (June 1994), 324.

¹⁶⁷ Certainly, if the region moves towards nuclear weapons beyond Israel, such as acquisition by Iran or Saudi Arabia, this could significantly change this factor in the future.

¹⁶⁸ Karpin, The Bomb in the Basement, 344, quoting Paul Warnke.

Further, by not proliferating, regional states sought to have the international non-proliferation focus on Israel. Indeed, another strategy employed by Egypt and the other Arab states was to bolster the non-proliferation regime and keep other powers engaged to put pressure on Israel. In particular, regional states have urged Israel to join the Nuclear Nonproliferation Treaty and accept inspections by the International Atomic Energy Agency.

For example, in 1981, President Saddam Hussein indicated that Israel should announce that it would destroy its nuclear weapons, agree to international inspections, at which time the Arab states would provide a written commitment to not produce nuclear weapons.¹⁶⁹ Egypt also sought to underline its non-proliferation credentials with the U.S., promising that the UAR did not intend introduce nuclear weapons into the region and “Nasser has on several occasions condemned nuclear testing and described nuclear war as one of the greatest dangers facing mankind.”¹⁷⁰ While these efforts failed to lead to any real results, they provided other states with another avenue to justify their non-proliferation in the name of peace.

In sum, the broad stroke approach of Arab states in response to the developing Israeli nuclear potential was to issue threats that they would respond in kind. However, it is notable that these threats were issued in the event Israel went nuclear, and did not actually accord Israel status as a nuclear weapons state. This has allowed the Arab states

¹⁶⁹ Catudal, *Israel's Nuclear Weaponry*, citing interview with *Al-Anba* (Kuwait), 19 January 1981.

¹⁷⁰ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 25.

to threaten a costly response without actually undertaking one.¹⁷¹ It has also relieved them of the costs of going nuclear, without having to justify to their domestic populations their reasons for not responding to Israel's nuclear option. For these reasons, these states have chosen to also support and maintain Israel's policy of nuclear opacity.

Even in the face of increasing evidence of Israel's nuclear capability, both the Israeli policy of opacity and the Arab stance towards it has remained remarkably consistent. For example, even after Mordechai Vanunu's publicly disclosed that Israel had nuclear weapons, the Israeli government continued to not acknowledge that Israel had nuclear weapons and repeated that it would not be the first state to introduce them into the Middle East. Additionally, Arab reactions to the press reports stemming from the Vanunu incident were muted. Rather, the "only notable Arab response has been request by several Arab delegations to the United Nations for a debate on Israel's nuclear weapons program in the current General Assembly session."¹⁷²

More recently, the Arab League publicly declared that its member states would withdraw from the Nuclear Nonproliferation Treaty if Israel officially announced possession of nuclear weapons.¹⁷³ The League also insisted that if Israel went public, they would seek to have the U.N. Security Council pressure Israel to destroy the weapons

¹⁷¹ Iraq was a notable exception to this general position. However, Israel was not the only state factoring into Saddam Hussein's calculations, and there is considerable speculation that Iran's posture was a substantial driver in the program, notwithstanding the public justifications by the Iraqi regime.

¹⁷² Patricia Murphy, State Department, "U.S.-U.K. Bilaterals: Israeli Nuclear Issues," 18 November 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP02380, 3-4.

¹⁷³ The Associated Press, "Arab League will call for leaving nuclear treaty if Israel admits to atomic weapons," International Herald Tribune (5 March 2008).

and bring its other atomic installation under international inspection.¹⁷⁴ This statement is remarkable in that it is seeking to publicly tie Israel to its policy of opacity. It also suggests that the Arab states continue to rely on and refer to the international non-proliferation regime in the hope that it will put pressure on Israel to maintain its stance.

IV. International Non-Proliferation Regime

The Israeli nuclear program escaped some of the more overt pressures from the international non-proliferation regime because the Dimona reactor, the basis for the Israeli nuclear option, was built and operational before the U.S. cooperated with other nuclear states to deny technology to non-recognized nuclear weapon states. Nonetheless, the U.S. did seek Israel's cooperation in establishing the institutions and framework of the inspections regime. Interestingly, Israel did cede early on to U.S. pressures and signed the Limited Test Ban Treaty. However, Israel has largely remained outside of nuclear non-proliferation regime, firmly rejecting international efforts to inspect and safeguard Dimona,¹⁷⁵ as well as refusing to sign the landmark Nuclear Nonproliferation Treaty in 1968. Consistent with its stance on the LTBT, Israel has signed the Comprehensive Test Ban Treaty, although the Knesset has not ratified it.

The dynamics of the U.S. led non-proliferation regime and effects on the Israeli nuclear posture are discussed below. The primary lesson derived from this interaction is that to the extent the non-proliferation regime mattered for Israel, it was because the U.S.

¹⁷⁴ The Associated Press, "Arab League will call for leaving nuclear treaty if Israel admits to atomic weapons," International Herald Tribune (5 March 2008).

¹⁷⁵ As previously discussed, Israel allowed early U.S. inspections of Dimona, carefully limited and without a formal framework providing for them to continue.

was the driver behind the regime during this period. As such, the normative constraints that are now accepted and attributed to the international regime were not yet established and played little role in determining Israeli opacity initially. Instead, it was U.S. pressure on Tel Aviv, as well as other states to stop nuclear cooperation with Israel, that mattered to any relevant degree within this international framework. Clearly, these efforts were less effective than U.S. direct pressures, given the increasingly close relationship with Israel over time.

A. U.S. Non-proliferation Interests

Washington was interested in engaging Israel in the nascent non-proliferation regime it was promoting to prevent the horizontal spread of nuclear weapons. As previously discussed, the U.S. was further concerned that Israeli nuclear weapons would lead to other Arab states proliferating the Middle East.

To encourage acceptance and compliance with the institutions and regimes the U.S. was establishing, Washington was willing to remind Israel, as well as other states in the Middle East, that it was contributing significant financial assistance to their domestic programs. This part of the strategy was to make

“periodic high-level US public statements emphasizing our opposition to the introduction of nuclear weapons into the Near East. The sanctions would not have to be spelled out. But since Israel and the UAR are heavily dependent on our aid (especially the former), we should leave no doubt of the decisive action we would take in this field should steps be taken toward the introduction of nuclear weapons into the area.”¹⁷⁶

¹⁷⁶ U.S. Department of State, “Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons,” no. NP01079, 26.

Further increasingly this threat over time was the fact that Congressional legislation ensured that the Presidency was not supporting a state that was seeking a nuclear capability. This culminated in the 1978 Nuclear Non-Proliferation Act that mandated U.S. imposed sanctions on any state that used U.S. assistance for nuclear weapons explosions or other purposes.

Nonetheless, Washington, while being willing to press privately for Israeli cooperation, did not want to make public threats that it would impose sanctions. Instead, for example, the message was transmitted “indirectly such as through congressional speeches and articles, or in publications by journalists and scholars. In this way, the U.S. Government would be free to apply explicit pressures where they are likely to do more good than harm.”¹⁷⁷ For example, a congressional resolution was recommended to highlight the urgency of non-proliferation and that the “development of nuclear weapons rather than the development of nuclear energy for peaceful purposes, is a factor to be taken into account in determining the future economic relations of the U.S. with such country.”¹⁷⁸

¹⁷⁷ Arms Control and Disarmament Agency, “Proposed Program Under NSAM No. 335,” 31 July 1965, Presidential Directives (Washington D.C.: The National Security Archive and Proquest, 2008), no. PD01128, 6.

¹⁷⁸ Arms Control and Disarmament Agency, “Proposed Program Under NSAM No. 335,” no. PD01128, 7.

As this suggests, Washington was only willing to go so far in pressuring other states compliance and it sought to balance the message. Of particular concern was that if the U.S. threatened to cut off support, this strategy could backfire and cause allies to acquire nuclear insurance out of fear that it could not rely on the U.S.¹⁷⁹ Additionally, the U.S. did not want to cut off relations in the event that the nuclear option was still chosen. In short, U.S. policy was to “try to avoid getting into a position where it would be difficult to maintain good relationships with a country if it does decide to acquire nuclear weapons.”¹⁸⁰

Israeli opacity was particularly important as the U.S. wanted to remove itself from suspicion that it was acting with collusion with Israel. Not only would this matter for brokering peace, but also for promoting its international non-proliferation agenda. It avoided the appearance of U.S. cooperating with Israel that would delegitimize its other non-proliferation efforts, in particular towards Pakistan in coming years, which would overall weaken U.S. non-proliferation policies. Therefore, the U.S. had to publicly maintain its non-proliferation policy towards all states, otherwise, “[i]f we acquiesce {sic} to Israeli possession of the bomb, it makes it difficult for us to tell any other country it should not acquire one.”¹⁸¹

This also meant that the U.S. had a further incentive to keep ongoing Israeli nuclear progress below the public eye. This stance was maintained even in the

¹⁷⁹ Arms Control and Disarmament Agency, “Proposed Program Under NSAM No. 335,” no. PD01128, 6.

¹⁸⁰ Arms Control and Disarmament Agency, “Proposed Program Under NSAM No. 335,” no. PD01128, 6.

¹⁸¹ “Experts Accept Claim about Israel's Nuclear Capability,” 8 January 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP02407, 3.

face of clear evidence otherwise. For example, by 1986 Mordechai Vanunu, a technician at Dimona, publicly revealed the facility's secrets. While U.S. and British experts believed the veracity of his statements, "[f]or political reasons, neither U.S. nor Israeli officials publicly acknowledge that Israel is a nuclear power. Admission that Israel has the bomb would pose severe problems for the U.S. government, which has an official policy of discouraging nuclear proliferation and denying aid to nations that are developing atomic weapons."¹⁸²

For these reasons, opacity remained an important "second-best" option for the U.S. and Israel. Israel's opaque nuclear posture allowed the U.S. to maintain its non-proliferation stance worldwide while at the same time continuing cooperation with Israel. Nonetheless, early on Washington had some early success in persuading Israel to sign the Limited Test Ban Treaty. However, it failed to garner Israeli acceptance of the Nuclear Non-proliferation Treaty, which Israel would have had to sign as a non-nuclear power. In short, the most the U.S. was able to accomplish was Israeli opacity, but not for Tel Aviv to give up a nuclear option.

B. Partial and Comprehensive Test-Ban Treaties

By mid-1962, the United States was prepared to push for more international standards and cooperation that would limit the diffusion of nuclear weapons. At the same time, U.S. estimates clearly showed it was anticipating an Israeli nuclear weapons option.

¹⁸² "Experts Accept Claim about Israel's Nuclear Capability," no. NP02407, 3. Israeli officials did not deny Vanunu's claims.

In a secret memorandum, the U.S. government estimated which states were likely to acquire nuclear weapons with and without the Test Ban Treaty. The overall conclusion was that the Test Ban Agreement would increase the costs of producing nuclear weapons and, in turn, slow the diffusion. In part, the agreement would delegitimize testing during a period of time when that more countries were considering “going nuclear.”¹⁸³ The agreement signaled that that signing states did not welcome new proliferators and made it more likely that they would take measures to further discourage proliferation. From the U.S. perspective:

“Although the ending of testing would have an important effect on diffusion (especially a comprehensive ban) a more important factor will be the pressures the U.S., the USSR and other are willing to employ in restraining others from testing...In some cases, we and others, would probably have to employ stronger incentives and sanctions than has seriously been considered so far. However, a comprehensive test ban would make it more likely that stronger steps could be taken and would be effective.”¹⁸⁴

In terms of Israel, the U.S. estimated that despite the high costs of nuclear weapons, Israel faced significant pressures to continue to develop an option.¹⁸⁵ That is, the U.S. also accurately predicted that in the next ten years (1972) Israel was likely to produce nuclear weapons.¹⁸⁶ The report further noted that that Israel would likely be able

¹⁸³ Robert S. McNamara to John F. Kennedy, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” 27 July 1962, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00892, 4.

¹⁸⁴ McNamara, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” no. NP00892, 5.

¹⁸⁵ McNamara, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” no. NP00892, 2.

¹⁸⁶ McNamara, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” no. NP00892, 2.

to test around 1966-67.¹⁸⁷ Thus, in order to convince Israel to sign the Test Ban Treaty, analysts believed that “Israel, would require a mixture of positive incentives (e.g., sharing of weapons) or penalties (economic or military) before signing. In some cases it might take the joint action of the U.S., and USSR to coerce states into signing and observing the agreements.”¹⁸⁸

Israel ultimately decided to join the treaty, and signed shortly after the United States and Soviet Union. Given Israel’s determined effort to develop a nuclear capability, why did it forgo the option to test early on by signing the Partial Test Ban Treaty? Related, why would it later reject signing the Nuclear Non-Proliferation Treaty? And why would Israel follow the rejection of the NPT with later signing, although not ratifying, the Comprehensive Test Ban Treaty? While there are not clear evidentiary sources that suggest a definitive reason why Israel would give up the right to nuclear testing, there are a few considerations that likely informed Israeli decision-making.

First, there was the physical reality limiting the ability for Israel to conduct a nuclear test on its own territory. Because Israel had relatively little open space away from population centers on which to test, it was faced with geographic constraints. This meant, as one analyst argued, that “Israel welcomed the treaty, and a few days later became the twenty-third country to sign it. It had nothing to lose. Israel never planned to

¹⁸⁷ McNamara, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” no. NP00892, 6.

¹⁸⁸ McNamara, “The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement,” no. NP00892, 2.

conduct nuclear tests in the atmosphere or in space, or even underground for that matter.”¹⁸⁹

Additionally, there were significant political constraints imposed by the United States, and Israel was still seeking to develop its nuclear capability at Dimona. Because Israel could live at the time with non-visible posture, signing the Limited Test Ban Treaty was palatable. Later, when the NPT came up, Kissinger and Nixon had already decided that they would press less heavily, particularly since they viewed Israeli nuclear weapons as inevitable. And giving up its nuclear option was something that Israel did not seriously consider.

In terms of the Comprehensive Test Ban Treaty, Israel’s previously made decision not test would similarly explain why Israel was willing to sign this treaty some thirty years later. Because Israel had likely already decided against testing, and possibly has acquired enough prior data to now rely on computer simulations, it could sign the CTBT in 1996 without concern that it would limit Israel’s already existent and sophisticated nuclear program.¹⁹⁰ Nonetheless, the Knesset has yet to ratify the agreement, which has further hindered the agreement from being entered into force. Tel Aviv is likely in no hurry to ratify the agreement to the extent that the treaty also stalled in the U.S. and has not been ratified by Congress. This means that the U.S. is not a particularly strong source of pressure on Israel to ratify the agreement. Additionally, because neither Egypt nor

¹⁸⁹ Karpin, *The Bomb in the Basement*, 234.

¹⁹⁰ There was considerable speculation that Israel acquired testing data early on from the French, had possibly tested in conjunction with South Africa in 1979, and had acquired U.S. supercomputers by 1994, enabling complex calculations that obviated the need for physical testing of sophisticated systems.

Iran have ratified the agreement, it is unlikely that Israel will do so until either of these states accedes to the treaty.

C. Nuclear Non-proliferation Treaty

Israel was just on the cusp of having a nuclear explosive capability when the U.S. began to push for the nuclear non-proliferation treaty in the mid-1960s. This timing, as well as the implications of the treaty likely made it undesirable from Israel's perspective to join. In particular, if Israel joined the treaty as a non-nuclear state, which was the framework that was established and the only option available to it, then it would likely have degraded its deterrence, based on uncertainty, posture. To this day, Israel remains a non-signatory, despite the varied sources of pressure it endured in resisting the treaty.

Signing the NPT would have had more significant implications for Israel than the Limited Test Ban Treaty. If Israel signed the NPT, then it would effectively be signaling that it accepted a non-nuclear status. Israel recognized that signing the treaty would effectively negate any existing security it had achieved by preserving its nuclear option for future use.¹⁹¹ At the same time, Israel recognized that the U.S. movement towards the treaty would have profound implications for the Israeli nuclear program. Reportedly, Ben-Gurion was in a hurry to complete Dimona "before a NPT made the bomb internationally illegal and thus would impair the Israeli effort to get it more than ever."¹⁹²

For its part, because the Israelis had signed the Limited Test Ban Treaty, the United States was hopeful that it could similarly induce Tel Aviv to sign and ratify the

¹⁹¹ Catudal, Israel's Nuclear Weaponry, 44.

¹⁹² Aronson, Israel's Nuclear Programme, 20.

Nuclear Non-Proliferation Treaty. As estimated at the time, Washington believed that it had the economic clout to persuade the Israelis to join the treaty:

“Israel may well be seeking a nuclear weapon capability, and has the technical resources to succeed. Nevertheless, Israel was apparently persuaded, both by domestic and foreign opinion, to sign the limited test ban treaty. If these inducements prove insufficient for a non-proliferation treaty, there is little doubt that the United States (with or without the help of the UK and France) could exert upon Israel sufficient economic pressure to obtain Israeli adherence to the treaty at the same time as the Arab states sign it.”¹⁹³

In addition to economic leverage, Washington hoped that a critical mass would be reached in the Middle East with Arab states signing the treaty, which would then put pressure on Israel to also comply with its terms. However, accounting for Israeli security was also seen as essential to gaining Israeli cooperation. At a minimum, it was viewed that Israel would also be likely to sign if the agreement contained an escape clause similar to that in the Limited Test Ban Treaty. Moreover, Israel was more likely to sign if Tel Aviv “received some assurances of aid from the Western governments in the event of an overwhelming Arab attack,” although the U.S. calculated that this last condition might be “watered down or waived in view of the substantial economic leverage which the US can wield in any negotiations with Israel.”¹⁹⁴

In seeking to convince Israel, U.S. officials stressed also its well-worn arguments, highlighting the “ineffectiveness of Israel’s opacity policy as a deterrent factor,” and

¹⁹³ “Value and Feasibility of a Nuclear Non-Proliferation Treaty,” 10 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008) no. NP01070, 13-14.

¹⁹⁴ U.S. Department of State, “Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement,” 12 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP01078, 6.

argued that the “policy of international opacity contained the grave risk of precipitating undesirable responses in the Arab world.”¹⁹⁵ Initially, some within the U.S. government favored pressuring the Israelis by linking the sale of the American Phantom jets to the NPT; Israel rejected this strategy.¹⁹⁶

Further, Washington contemplated the ability for the French to pressure Israel into signing, given their previously close military cooperation. At the same time, the U.S. was concerned that the French would hinder progress towards the treaty. As contemplated at the time,

“Paris does have some leverage with Tel Aviv because of French military and technological assistance to Israel...If France saw some advantage in establishing a close link with Israel...Israel might see fit to withstand U.S. pressure to sign a test ban and a non-proliferation agreement. This unpleasant scenario is not likely to take place, but its possibility does highlight the potential for mischief held by those governments that might actively oppose a test ban treaty or a non-proliferation agreement.”¹⁹⁷

Ironically, more reliable from the U.S. perspective was the similar Soviet interest in also stopping the spread of horizontal nuclear weapons. Along these lines, it was reported from the Israeli Mossad that the Soviets sent Foreign Minister Andrei Gromyko to Washington in order combine superpower pressure to stop the construction of Dimona.¹⁹⁸

¹⁹⁵ Shalom, Israel's Nuclear Option, 149.

¹⁹⁶ Shalom, Israel's Nuclear Option, 155.

¹⁹⁷ U.S. Department of State, “Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement,” no. NP01078, 6.

¹⁹⁸ Aronson, Israel's Nuclear Programme, 20.

Ultimately, however, it was recognized in Washington that Israel was always going to avoid any commitments in either public or private that would limit its ability to produce nuclear weapons.¹⁹⁹ Instead, Israel continued to move steadily forward to having the capability to assemble its developing weapons option. This reality combined with the pragmatic approach of Kissinger and Nixon resulted in whatever pressure existed as being short lived in respect to joining the NPT. Rather, Kissinger decided that Israel should not be pressured to adopt the NPT treaty, or to reveal its nuclear intentions or existing capability.²⁰⁰ For their part, the Israelis justified their rejection of the treaty in terms of the regional conflict. They argued that the Arab states could still arm themselves with nuclear weapons even if they signed the treaty and that “although Israel was not a nuclear state, its technological capability was a factor of immense power in the regional and international arena.”²⁰¹

In short, Israel was at the forefront of the non-proliferation regime. This was of benefit because Israel was able to complete Dimona and reject joining the NPT as a non-nuclear weapon state. Doing so helped it to preserve its nuclear option and also signal that it would not give up this ability. At the same time, ambiguity was helpful in that Israel was able to avoid a public clash with the United States, which clearly favored the newly minted agreement. In this way, the two states could continue to cooperate, but

¹⁹⁹ U.S. Department of State, “Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement,” no. NP01078, 5-6.

²⁰⁰ Karpin, *The Bomb in the Basement*, 318.

²⁰¹ Shalom, *Israel’s Nuclear Option*, 152.

without either side having to give up what they considered vital to their own foreign policies.

As this analysis suggests, these decisions were made before the institutional and normative aspects of the international non-proliferation regime were firmly established. As such, these approaches have limited explanatory power in explaining Israeli decisions at the time as well as the choice of opacity. Over time, as the regime continued, it became an additional factor in the Israeli calculation. However, there is little evidence to suggest that the regime helped to create the initial policy of opacity, as much as U.S. and Israeli interests coincided enough with the ability to manage very divergent policy interests.

V. Domestic Politics Factors

There are two domestic political arguments related to Israel's formal policy of nuclear opacity. The first is based on a political economy explanation for states' nuclear policies. As applied to the Israeli case, the argument is that ambiguity was the result of compromise between leaders who were deeply divided as to whether Israel should acquire nuclear weapons, and where leaders stood in this debate depended on their economic model preferences. While this explanation is an accurate description of the nuclear debate that went on during the 1950s and early 1960s, it is not particularly compelling to the extent that there is little evidence that Israeli leaders were concerned mainly with economic policy. Rather, security factors trumped, and with that the concomitant capability to pay for both a conventional and nuclear force.

The second explanation suggests that Israeli strategic culture has been an important factor in maintaining nuclear ambiguity. In particular, Israeli leaders have not fully addressed the implications of acquiring a nuclear capability and this is a reason for the ongoing policy. However, the historical record suggests that Israeli nuclear policy is often subject to review, and continued advancements have incorporated the nuclear capability into Israel's defense planning. This suggests a more dynamic policy than institutionalized norms and processes that have ossified into existing policy. These arguments are discussed below.

A. The Domestic Political Compromise Explanation

The central argument that Israel's nuclear policy is a function of domestic politics is from Etel Solingen's work. In her general theory, Solingen sets out a political economy explanation for states' nuclear policies. More specifically, she argues that actors preferring an internationalist economic strategy—which includes access to markets, capital, investments, and technology—are less likely to pursue nuclear weapons programs.²⁰² In contrast, “inward-oriented coalitions” are more likely develop nuclear weapons as these actors have a higher tolerance for bearing the external costs imposed by this policy choice.²⁰³ Based on these models, she argues:

“[L]eaders and ruling coalitions interpret security issues through the prism of their own efforts to accumulate and retain power at home. Internationalizing leaders define economic growth and global access as crucial for advancing state security, rejecting nuclear weapons if the latter

²⁰² Etel Solingen, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East* (Princeton: Princeton University Press, 2007), 40-41. See also Etel Solingen, “The Political Economy of Nuclear Restraint.”

²⁰³ Solingen, *Nuclear Logics*, 43, 51.

endanger those core objectives. Conversely, inward-oriented leaders thrive by defining security as ‘self-help’ while protecting and promoting constituencies that variously favor economic, political, strategic, religious or cultural autonomy.”²⁰⁴

In terms of explaining Israel’s longstanding policy of nuclear opacity, Solingen applies a “hybrid” model of domestic political survival. From this she contends that Israeli leaders settled on nuclear ambiguity, in part, as a response to deep divisions within Ben-Gurion’s government as to whether nuclear weapons would provide for Israeli security. The main divisions at the time were between those that preferred nuclear weapons for deterrence purposes, and others who were concerned with the costs of the program and the likely effects of nuclearizing the Middle East. However, the evidence that she cites more strongly supports the proposition that Israel’s nuclear policy was not primarily the result of political economic preferences. Rather, Israel’s leaders had to contend with countervailing factors such as U.S. pressures and regional concerns that created both incentives for developing a nuclear option while also creating security risks—these were the central concerns.

The divisions among the Israeli leaders at the time were centered on how to best provide for state security, and Israel’s economic model was tertiary to this discussion. The discussions reflected the Israeli leaders’ preoccupation with the security implications flowing from a nuclear program, and created divisions within parties as well as within Ben-Gurion’s cabinet over the issue. Nuclear proponents such as Ben-Gurion, Moshe Dayan, and Shimon Peres believed that an Israeli nuclear option would provide an

²⁰⁴ Solingen, *Nuclear Logics*, 52-53. This explanation is also subject to the criticism that more secure states can afford the luxury of trading away nuclear programs and having economic goals as a higher priority. This suggests that security is a condition precedent for an internationalized economy, not the other way around.

effective deterrence against a much stronger Arab coalition of conventional forces, as well as chemical and biological weapons.

Others were less sanguine about the ability for nuclear weapons to ultimately provide for Israeli security. For example, Yisrael Galili and Yigal Allon opposed basing Israeli security on nuclear weapons because they believed that it would contribute to an arms race in the region, would weaken Israel's conventional capabilities through resource reallocation to the nuclear program, and, given Israel's small size, it would not be able to establish stable deterrence through a secure second-strike capability.²⁰⁵ Levi Eshkol and Pinhas Sapir shared these concerns, and also were particularly opposed to spending money on Dimona in the face of the Egyptian build up of conventional forces in the early 1960s.²⁰⁶

Yet, despite these divisions, Israeli policy remained remarkably consistent across different leaders in this early time period for the nuclear program. This is, in part, from the relatively constant external pressures creating similar incentives that Israeli leaders had to respond to, including deflecting U.S. pressures and maintaining a primacy of conventional forces. For example, Ben-Gurion himself recognized the need for conventional weapons. In 1962 he came to the conclusion that Israel should primarily

²⁰⁵ Yair Evron, Israel's Nuclear Dilemma, 6-7. For proponents of nuclear weapons, they initially believed that they would be cheaper in the long run as fewer conventional forces would have to be purchased. See Solingen, Nuclear Logics, 192.

²⁰⁶ Seymour M. Hirsh, The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy (New York: Random House, 1991), 65. For example, by 1961, Egypt's military expenditures had reached almost \$340 million and were about twice as much as what Israel was spending. *Ibid.*

rely on a conventional capability, with nuclear weapons as instruments last resort.²⁰⁷ At the same time, Eshkol himself protected the nascent Israeli nuclear capability when becoming Prime Minister in 1963. Notably, he rejected the NPT and continued the nuclear weapons program even in the face of withering U.S. pressure.

Economic considerations certainly played a role in this overall debate, given the vast sums of money Israel was spending on military equipment, combined with external dependence, and a relatively stagnate and small economy. However, Israeli motivation for cooperating with the U.S. was not primarily based on a desire for a liberal internationalized economy; the Israelis wanted economic and military support, regardless of the economic model embraced by the patron state.

Because of these motivating security factors, Israel's nuclear policy has been remarkably consistent, notwithstanding variations in the economic policy preferences of its leaders. Moreover, the contours of the debate at the time that the policy was formulated, combined with the direct evidence of U.S. pressures resulting in the framing of Israel's official nuclear stance, suggest that the main issues facing Israel's leaders were how to accommodate countervailing security pressures.

Solingen's explanation is consistent with this analysis to the extent that it recognizes the importance of external actors in affecting the preferences, or at least calculations, of domestic political leaders. However, by placing a premium on domestic political leaders' different preferences, her argument effectively eliminates regional considerations, and does not adequately capture the importance of U.S. direct pressures in

²⁰⁷ Yair Evron, Israel's Nuclear Dilemma, 6-7.

the Israeli case. In short, Solingen's explanation does not accurately capture the complexity of the external dynamics facing Israel's leaders.²⁰⁸

Rather, there was a primacy of factors fundamentally affecting Israel's security, such as access to conventional arms, economic assistance, maintaining allies, and considering regional implications from Israeli actions. This had less to do with Israeli leaders' domestic political economic preferences as much as figuring out how to balance these countervailing security considerations.

Finally, while there is evidence of disagreement among Israeli leaders as to whether Israel should develop a nuclear weapons program, this debate was held largely outside of the context of whether the nuclear option should be open. Ben-Gurion began the nuclear weapons program by constructing Dimona from funding sources mainly external to the Israeli government.²⁰⁹ There was little compromise here and the question of Israel should adopt an open posture was not yet ripe. When Eshkol became Prime Minister in 1963, Dimona was just coming online. He could have sought to kill the nuclear weapons program but did not. At the same time, Israel was just beginning to develop a bomb capability when Tel Aviv agreed with Washington to keep Israel's nuclear stance ambiguous. In short, Israel's posture of nuclear opacity was adopted prior to it having a capability to test or otherwise declare. This effectively foreclosed debate

²⁰⁸ Solingen herself recognizes the limits of her explanation to some extent by concluding that Israel is not a strong ground for testing her theory given the severe security environment in which the Israelis operated within when choosing a nuclear option. See Solingen, *Nuclear Logics*, 209.

²⁰⁹ Cohen, *Israel and the Bomb*, 70.

about Israel's particular nuclear posture because it had already been determined with the U.S. by the time Israel achieved a nuclear capability.

B. Ambiguity as a Function of Strategic Culture Explanation

A second domestic level explanation for Israel's nuclear posture focuses on the culture of secrecy that has developed around the program. Avner Cohen posits that Israeli leaders' responses to the nuclear issue are in large part a function of their existing security environment in the Middle East, within the larger context of the Holocaust experience. On the one hand, this meant that Israel pursued a nuclear option in the early days of statehood as a form of 'worst-case' insurance against annihilation. At the same time, Cohen argues that given the international norms of non-use²¹⁰ combined with the horrors of indiscriminate violence, Israeli leaders and populations at large are uneasy with the idea of a nuclear threat.²¹¹ The result, Cohen contends, is that Israel's nuclear policy is a result of Israel's political culture and reflects deep ambivalence about nuclear weapons.²¹²

In support of this position, he maintains that Israeli leaders refrained from issuing nuclear threats during the 1967 and 1973 wars, even though it had the nuclear capability to do so. He argues that policymakers were restrained from thinking through the deterrence uses of nuclear weapons given,

²¹⁰ Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," *International Security* 53, no. 3 (Summer 1999).

²¹¹ Avner Cohen and Benjamin Frankel, "Opaque Nuclear Proliferation," in *Opaque Nuclear Proliferation: Methodological and Policy Implications*, Benjamin Frankel, ed. (Portland: Frank Cass & Co, 1991), 28.

²¹² Cohen and Frankel, "Opaque Nuclear Proliferation," 27-28.

the very apocalyptic nature of planning the unthinkable, particularly under conditions of opacity, generated cognitive and cultural obstacles to articulating nuclear doctrines and command and control procedures. Israeli leaders remain reluctant to think, let alone to plan, the unthinkable. Indeed, over time, a strategic culture has developed in Israel that nuclear weapons are near taboo and should not be used, short of situations that threaten the country's existence.²¹³

He further acknowledges that early events shaped Israel's nuclear policy in the 1950s and 1960s, but contends that since then opacity has been maintained by Israel's national security culture.²¹⁴

While it is true that nuclear weapons are not normally directly discussed in public forums, it would be a mistake to give this evidence too much weight. As Cohen himself acknowledges, the Israeli nuclear program and subsequent policy of opacity was the result of security concerns combined with U.S. pressures. As to maintaining the posture, the evidence suggests that Israeli leaders are not as reluctant to plan for the "unthinkable" behind closed doors.

Even leaders such as Eshkol, who had concerns about the undertaking a nuclear weapons program, himself furthered it on becoming Prime Minister. Reports suggest that it was under Eshkol's leadership, one to two rudimentary bombs were constructed by the 1967 Six Day War, which was Israel's first nuclear alert.²¹⁵ Similarly, during the 1973

²¹³ Avner Cohen, "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars," in Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R Lavoy, Scott D. Sagan, and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000), 105.

²¹⁴ Cohen, "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars," 343.

²¹⁵ See, e.g., Warner D. Farr, "The Third Temple's Holy Of Holies: Israel's Nuclear Weapons," Counterproliferation Paper No. 2, U.S. Air Force Counterproliferation Center (September 1999), 10.

Yom Kippur War, thirteen bombs were reportedly assembled during Israel's second nuclear alert.²¹⁶ Subsequent leaders have also authorized continued development, including a thermonuclear capability, tactical nuclear weapons, and by 2003 it was estimated that Israel had achieved a secure second-strike capability with land, air, and sea-based delivery systems.²¹⁷ Additionally, nuclear weapons are seen as an appropriate response to chemical and biological attacks by other states, and Israel itself has developed the same capabilities. This evidence suggests the primacy of security factors, combined with prudence in maintaining regional and international relations, have largely dominated Israeli thinking.

VI. Conclusions

The evidence in the Israeli case supports the finding that Israel's ambiguous nuclear posture primarily resulted from American pressure, and was further reinforced by regional dynamics. There is less support for the propositions that Israel's nuclear policy is mainly the result of the international non-proliferation regime, domestic political compromise, or strategic culture factors.

Beginning in the early 1960s, the United States became concerned about Israel's nuclear intentions with the construction of the Dimona reactor. From an American perspective, Israeli nuclear weapons would cut against U.S. interests in generally preventing horizontal proliferation, would encourage regional tensions in the Middle East, and would possibly cause Soviet intervention on behalf of the latter's Arab client

²¹⁶ Farr, "The Third Temple's Holy Of Holies," 12.

²¹⁷ Joseph Cirincione, Deadly Arsenal: Nuclear, Biological and Chemical Threats (Washington D.C.: Carnegie Endowment for International Peace, 2005).

states. Based on these concerns, U.S. Presidents Kennedy, Johnson, and Nixon sought to first pressure the Israelis to forego a nuclear option, and failing that, to keep its nuclear capability hidden. To this end, U.S. officials employed diplomatic pressures, and inducements and implicit threats based on economic and military assistance to convince the Israelis to adopt a restrained nuclear posture.

Based on these pressures, Israeli leaders, mainly under the Ben-Gurion, Eshkol, and Meir administrations, allowed periodic U.S. inspections of the Dimona reactor and sought to reassure leaders in Washington that their nuclear program was for peaceful purposes only. The Israelis were under no illusion, however, that they would give up a nuclear option in light of their regional security problems. During the course of resolving these conflicting interests, a compromise was struck between Washington and Tel Aviv. As first articulated by Shimon Peres, under direct questioning from President Kennedy, Israel would not be the first state to introduce nuclear weapons into the Middle East. As further dialogue established, “introduce” included either a public declaration or a nuclear test.

As this suggests, the U.S. explicitly linked its economic and military assistance to Israel’s posture of nuclear restraint. At the time, the Israelis were vulnerable to this pressure, and in any event, wanted to primarily rely on a conventional capability, which could be helped significantly by cooperating with the U.S. But because nuclear weapons were also seen as important insurance for Israeli survival, its leaders will unwilling to entirely trade away or limit the nuclear weapons program. Thus, in the end, both sides

compromised, resulting existing Israeli nuclear policy that both states still actively maintain.

Over time the policy proved beneficial to both sides' goals and has been continued. As a result of this policy, Israel was able to ensure conventional superiority while still being able to retain its nuclear weapons capability—both of which have contributed to a more secure Israel from its neighbors. Further, the policy allowed the U.S. to continue to provide Israel with economic and military assistance while at the same time maintaining a distance from the nuclear program and potential charges of collusion. This permitted Washington the freedom to push its non-proliferation foreign policy agenda with more legitimacy than it would otherwise have.

At the same time, Israel's regional security environment also played an important role in creating incentives for Israeli leaders to both choose to develop nuclear weapons and to refrain from publicly demonstrating its nuclear capabilities. In particular, Israeli security planners feared an overwhelming Arab coalition, or later on the use of chemical and biological weapons. Nuclear weapons were seen as a way for Israel to deter these threats, and provide it with worst-case insurance in the event that its survival was threatened. Based on Israel's relative insecurity during the late 1950s and mid-1960s, Israeli leaders sought to benefit from uncertainty related its nuclear capability to bolster deterrence. At this time, Prime Minister Ben-Gurion and later Eshkol resisted U.S. requests to reassure the Egyptians that Israel's program was entirely for peaceful purposes, arguing that it was in Israel's best interests that there was uncertainty as to its capabilities. Additionally, the formulation that Israel would not be the first to introduce

nuclear weapons neither limited Israel's ability to acquire the capability, nor provided reassurances that it would not do so.

As time went on, additional benefits to an ambiguous nuclear posture became apparent. In particular, during the 1960s, the Arab states generally lacked the economic and technological ability to build nuclear weapons. This enabled Israel to establish a nuclear monopoly, which it sought to maintain. By keeping its nuclear capabilities ambiguous, the Israelis reduced incentives for its regional adversaries to pursue a counterbalancing response through acquiring nuclear technology or guarantees from other states. In particular, Israeli leaders did not want Egypt or other Arab states provoked into developing their own nuclear arsenals or seeking nuclear assurances or technology from the Soviets. While the Soviets were less willing to provide nuclear assistance, they were much more likely to intervene conventionally on behalf of the Arab states. This also factored heavily into Israel's calculations. And for states such as Iraq that nonetheless marched forward with a nuclear program, Israel maintained its monopoly by force.

Taken together, there is evidence that the regional security environment created countervailing pressures on Israel's nuclear policy. On the one hand, its relative insecurity counseled for a more open nuclear posture, except that this would hinder Israel's conventional program because of U.S. limitations. And the Israeli leadership identified early on that maintaining conventional superiority was a higher priority over relying on a nuclear deterrent, and the budgeting reflected these concerns. A policy of nuclear ambiguity also assisted Israel in dampening a nuclear arms competition in the Middle East, or at least more than otherwise would have occurred with an open posture.

Yet, at the same time, there were few avenues for explicit agreements to limit nuclear weapons.

To the extent that the nascent non-proliferation regime mattered, it was because of U.S. direct pressures on Israel to accede to the newly formed international treaties. Israel signed the Limited Test Ban Treaty at the behest of the U.S., and likely because it did not anticipate conducting atmospheric tests. And by the time the Comprehensive Test Ban Treaty came up for signature in 1996, Israel had already developed a nuclear arsenal, although it still is making no moves toward ratification. Israel also avoided the commitments of the NPT, mainly because it would relegate Israel to a non-nuclear weapons status and limit its ability to have nuclear weapons. In short, there is little evidence that the regime itself has significantly materially impacted Israel's nuclear program, or that Israel is particularly concerned with international opinion as related to its security decisions. And there is little evidence that Israel has internalized non-proliferation norms to the extent that it seeks to support them.

Further, the evidence supports a stronger finding that Israeli ambiguity was function of the bargain struck between Washington and Tel Aviv, rather than among the domestic political interests of Israeli leaders. The discussion at the time revealed an overwhelming concern with the best ways to provide for Israeli security.

Notwithstanding some differences in the best way to accomplish this, there was a general consensus that Israel must retain conventional superiority. Additionally, Israeli leaders remained remarkably consistent in their nuclear policies, regardless of differences they may have had with their predecessors. This also suggests the relative importance of

the external factors in affecting Israeli calculations. And other discussions related to Israel's economic policy remained tertiary in the nuclear weapons context.

Similarly, the evidence suggests that Israeli leaders have made the decision to further advance their nuclear capability, as well as considered circumstances in which they would use nuclear weapons. This suggests that, contrary to the position that Israeli leaders have maintained opacity because of its existing strategic culture, nuclear weapons have fully been incorporated into Israel's security planning, and that Israel's policy of nuclear ambiguity is subject to review in the face of threats to its security. Figure 2 summarizes the hypotheses in the context of the Israeli case.

Figure 2 – Summary of the Presence of Explanatory Factors in the Israel Case.

Hypothesis	Predictions	Evidence Measures
Reg. Sec. Env.	Deterrence Signals	High
	Conservative Nuclear Strategy	High
	Limited Cooperation	Low/medium
Patron State	Issue Linkages	High
	Conforming Dependent States	Medium/high
	Nuclear Priority for Patron	Medium/high
Int'l Non-Prolif. Regime	Material Costs	Low
	Norm Recognition	Low
	Internalized Norms	Low
Domestic Politics	Bargaining and Compromise	Low
	Posture is in interest of centralized decision-makers	Low
Moral/Cultural Constraints	Expressions of Nuclear Doubt	Low
	Nuclear Weapons Not an Option	Low
	Lack of questioning existing policy	Low

CHAPTER IV

INDIA

India's regional security environment, informed by the series of wars with China and Pakistan, has motivated it to acquire a nuclear weapons capability. Still, throughout most of India's nuclear weapons development, it has maintained an ambiguous public posture where its quantitative and qualitative capabilities have remained "uncertain to the Indian public and the outside world."¹

Only twice has India publicly demonstrated its progress by conducting a series of underground nuclear tests at its Pokhran test site in the Rajasthan Desert. The first time India tested an atomic device was in 1974 during Indira Gandhi's tenure as Prime Minister. Gandhi referred to the test as a 'peaceful nuclear explosion' and chose to revert to an ambiguous nuclear posture in which India clarified neither its nuclear capabilities nor intentions. The second time India conducted nuclear tests was in May 1998, almost twenty-four years to the day after the first time India tested, when Atal Behari Vajpayee and the Bharatiya Janata Party (BJP) came to power. Vajpayee officially chose to

¹ George Perkovich, India's Nuclear Bomb: The Impact on Global Proliferation (Berkeley: University of California Press, 1999), 2.

‘induct’ India’s nuclear weapons capability by carrying out a total five tests on May 11th and 13th and formally declaring to the world that India was a nuclear weapons state.²

This watershed event in 1998 represents a significant turning point in Indian nuclear development compared to the decades-long trend of not testing. Given this variation over time in India’s nuclear posture, as well as differences with the first five declared nuclear states, this chapter seeks to answer two questions related to India’s nuclear posture. First, why did India develop its nuclear capability in secrecy from its 1974 test until 1998?³ Second, why did India choose to briefly lift this veil of secrecy in 1998?

Analysts seeking to explain India’s particular nuclear stance largely point to external and internal constraints that have forced India to hide its nuclear capabilities and intentions. Some researchers have focused on external constraints and suggest that the United States and other material restrictions imposed by the non-proliferation regime at the bequest of the United States, have caused India’s nuclear development to be conducted ‘underground’ in order to minimize interference with its nuclear

² For Vajpayee’s official statements to the press and the Lok Sabha, India’s parliament, see Embassy of India, “Prime Minister’s Statements and Interview,” available from [http://www.indianembassy.org/pic/nuclear/pm\(interview\).htm](http://www.indianembassy.org/pic/nuclear/pm(interview).htm); accessed March 2004. One of the devices was reportedly thermonuclear. Even after the tests in 1998 Indian officials did not define India’s future nuclear posture and Indian officials gave contradictory statements regarding the state of readiness and plans for future weaponization. See Devin T. Hagerty, "South Asia's Big Bangs: Causes, Consequences, and Prospects," *Australian Journal of International Affairs* 53, no. 1 (1999), 23. India has moved towards no first use policy. See the draft at Embassy of India, “Draft Report of National Security Advisory Board on Indian Nuclear Doctrine Embassy of India,” available at http://www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html; accessed March 2004.

³ It is widely believed that India made the decision to weaponize in 1987 and had achieved the ability to use aircraft as a delivery method by 1990. See Eric Arnett, "Nuclear Tests by India and Pakistan," in *SIPRI Yearbook 1999: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, comp. (Oxford: Oxford University Press, 1999), 371. India’s missile delivery option came to fruition in 1994 with the deployment of the Prithvi class.

development.⁴ In order to explain India's change in posture in 1998, others argue that India's security environment became even more precarious at the end of the Cold War with its loss of the Soviet Union as a political and military ally. In this changing strategic context, India tested its nuclear weapons in an effort to fend off renewed U.S. non-proliferation pressures in the 1990s while bolstering its security position against China and growing Pakistani nuclear and missile capabilities.⁵

In contrast, regional specialists often contend that domestic compulsions within India can explain the years of public restraint from 1974 until the 1998 nuclear tests. There are two variants of the domestic politics argument. The first strand suggests that the Congress Party, largely in power during most of India's nuclear weapons development, did not prioritize the public demonstration of Indian nuclear capabilities.

⁴ Frankel suggests this answer in Benjamin Frankel, ed., Opaque Nuclear Proliferation: Methodological and Policy Implications (Portland: Frank Cass & Co, 1991), although does not detail precisely how the US was able to influence Indian leaders into forgoing a nuclear option for most of its history. Bradley A. Thayer, "The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime," Security Studies 4, no. 3 (Spring 1995), also suggests the non-proliferation regime, mainly pointing to the United States as the driving force. See also Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," International Organizations 53, no. 3 (Summer 1999), for influences of the non-proliferation regime. Many Indian scholars do not acknowledge outside influences, generally given Indian efforts to maintain an independent identity. An important exception to this is journalist Raj Chengappa, Weapons of Peace: The Secret Story of India's Quest to Be a Nuclear Power (New Delhi: Harper Collins Publishers India, 2000), who details the pressures the U.S. brought to bear on the Indian nuclear program.

⁵ Notably in this camp is Jaswant Singh, the Foreign Minister under Vajpayee in 1998. Similarly, other scholars such as T. V. Paul, "India, the International System and Nuclear Weapons," in Nuclear India in the Twenty-First Century, D. R. SarDesai and Raju G. C. Thomas, eds. (New York: Palgrave, 2002) and Power Versus Prudence: Why Nations Forgo Nuclear Weapons (Montreal: McGill University Press, 2000), Sumit Ganguly, "India's Pathway to Pokhran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program," International Security 23, no. 4 (Spring 1999), Mohan Malik, "Nuclear Proliferation In Asia: The China Factor," Australian Journal of International Affairs 53, no. 1 (1999), Ashok Kapur, "Nuclear Development of India and Pakistan," in Nuclear Rivalry and International Order, Jorn Gjelstad and Olav Njolstad, eds. (London: Sage Publications, 1996), and C. Raja Mohan, Crossing the Rubicon: The Shaping of India's New Foreign Policy (New York: Palgrave Macmillan, 2004), all suggest one or more of these factors combined to create conditions forcing India to publicly declare its nuclear capabilities.

When the moderate Congress and United Front parties were swept aside in the 1998 elections, the 'chauvinistic' and 'jingoistic' nationalist BJP party inducted nuclear weapons as part of the party platform they were elected on.⁶

The second variant of the domestic politics argument focuses on the moral leadership and reservation of Indian leaders, who have been influenced by ahimsa, or the belief in nonviolence embodied in Gandhian doctrine.⁷ In particular, this explanation suggests that the moral and ethical constraints of Indian leaders have militated against relying on open deterrence or making significant changes in India's posture.⁸ From this perspective, Vajpayee represented a radical departure from previous Indian Prime Ministers and took a decidedly different nationalist approach to state security with little moral compunction or reservation.

This study finds that India's regional security environment has significantly contributed to its nuclear posture. Chinese nuclear weapons advancements motivated the Indians to respond with a nuclear test as soon as they achieved the technical capability to do so in 1974. However, the test caused Pakistan to accelerate its own nuclear program

⁶ Most news analysis attributed the tests to this factor, as well as Neil Joeck, "Nuclear Developments in India and Pakistan," Access Asia Review 2, no. 2 (July 1999).

⁷ Interestingly enough, early on U.S. government analysts also found this to be a factor in Indian development through Nehru, who died in 1964 from a heart attack. However, they also recognized that Desai, who was similarly morally opposed to nuclear weapons faced increasing pressures to further develop India's nuclear capability. See, Warren H. Donnelly, "India and Nuclear Weapons," Issue Brief, 5 January 1988, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02577.

⁸ George Perkovich, "What Makes the Indian Bomb Tick?," in Nuclear India in the Twenty-First Century, D. R. SarDesai and Raju G. C. Thomas, eds. (New York: Palgrave, 2002), and India's Nuclear Bomb, suggests this is an important factor, as well Jacques E. C. Hymans, "Why Do States Acquire Nuclear Weapons? Comparing the Cases of India and France," in Nuclear India in the Twenty-First Century, D. R. Sar Desai and Raju G. C. Thomas, eds. (New York: Palgrave, 2002). For a cultural explanation of why many Indian citizens support a nuclear capability in general, see Itty Abraham, The Making of the Indian Atomic Bomb (New York: Zed Books, 1998).

with Chinese assistance. This fact, combined with Indian efforts to rely on international non-proliferation pressures to constrain Pakistan and India's own lack of long-range delivery capability provided little incentive for India to take the initiative and test first. However, once Pakistan's program was a reality with missiles that could reach most of India, combined with Indian capability to reach Chinese targets, there was less reason for India to maintain an ambiguous posture rather than to move forward and seek to establish a credible nuclear deterrent vis-à-vis its regional adversaries.

Moreover, important advancements in India's economic, scientific, and political arenas during the 1990s created conditions which allowed India to temporarily withstand external constraints on its nuclear posture and test in 1998. In particular, the evidence suggests that most of Indian nuclear development has been marked by U.S. material constraints in the form of economic and technological denial and inducements. The Indians, bargaining from a position of weakness, sought not to disrupt this tenuous link after its 1974 test at Pokhran and for much of the Cold War. During the 1990s, Indian scientific and economic growth, as well as a general warming trend in the relationship with the United States, enabled India to deflect U.S. non-proliferation pressures while moving forward with its nuclear development.

This finding is particularly surprising given that U.S. and Indian relations have been poor during most of India's post-independence history and one would expect that the U.S. would have little patron state leverage to influence Indian nuclear policy. The vagaries of the Cold War in which the U.S. supported Pakistan against Soviet influence and perceived Indian 'tilt' towards the Soviets has dampened many aid and trade efforts

that would be seen as significant leverage on India's nuclear policy. Indeed, the fact that the U.S. was able to influence Indian policy at all is testament to both India's relative position in the international system and its desire to be considered a great power in the future.⁹

This argument suggests that India was adjusting its nuclear posture as neither a response to short-term security factors nor immediate domestic agendas. Rather, India's security environment, while marked by uncertainty regarding the drawdown of the Soviet Union, was on balance more secure than it had been in previous times vis-à-vis Pakistan, China and the United States. Additionally, domestic influences have played a lesser role than external politics in explaining India's nuclear posture, given the efforts by governments other than the BJP to further India's nuclear developments for decades prior to and leading up to the actual tests in 1998. This evidence also effectively contradicts moral restraint as an explanation. Nonetheless, Vajpayee and the BJP were more willing to invoke international and regional backlash, which does help explain the timing of the test, even if neither a necessary nor sufficient condition.

Moreover, this research found little evidence supporting the proposition that India seriously considered the non-proliferation regime a significant factor in its nuclear policy. Indeed, several states such as France and Russia have been relatively supportive of Indian nuclear development for most of its history and others such as the UK and China have only been mildly critical of India's nuclear ambitions. The following chapter analyzes

⁹ Indian designs on great power status are well postulated. See T. V. Paul and Baldev Raj Nayar, India in the World Order (Cambridge: Cambridge University Press, 2003), Paul, Power Versus Prudence, and Ganguly, "India's Pathway to Pokhran II."

the role of India's regional security environment, patron state incentives, the international non-proliferation regime, and domestic politics on the 1974 test, the following period of ambiguity from 1974-1998, and the 1998 nuclear tests.

I. Explaining the 1974 Indian Nuclear Test

Prime Minister Indira Gandhi of the Congress Party was the first Indian leader to approve the testing of a nuclear explosive device. In May 1974, she gave final authorization to conduct the test, significantly characterized as a “peaceful nuclear explosion,” at the Pokhran site in the Rajasthan Desert. Prior to the “smiling Buddha” test, Indian Prime Ministers had explicitly vowed that India would not acquire nuclear weapons. Nonetheless, New Delhi had reserved the option to conduct peaceful nuclear explosions (PNEs) even as U.S. and other states concerned about proliferation claimed that there was no difference between testing for weapons purposes and peaceful experimentation.

The evidence suggests that India's decision to test was largely in response to Chinese nuclear developments, where China had “gone nuclear” with its public tests in 1964 and continued to advance its weapons program. As to the timing of the tests, India tested as soon as it had the technological capability to do so. For these reasons, India's initial decision to test in 1974 poses less of a puzzle than its subsequent ambiguous posture for over twenty years until the 1998 tests.

Nonetheless, India's characterization of the 1974 test is interesting from a deterrence perspective. The test was a break from India's prior stance, to the extent that India demonstrated that it had the capability to conduct a nuclear explosion. At the same

time, by publicly characterizing the event as a peaceful nuclear explosion, India's nuclear policy remained consistent with its previous longstanding position that explicitly denied that India would produce nuclear weapons. India's nuclear policy also changed in two subtle but important ways prior to the test. First, Indian Prime Ministers began to acknowledge that the no-weapons policy was subject to review. Second, a couple of years before the test, Indian leaders began to justify the scientific utility for peaceful nuclear explosions.

The decision to test and its characterization was based in part on the regional security environment in which India operated vis-à-vis China, where India lagged behind Chinese capabilities and development. India's insecurity motivated its leaders to create a nuclear option, but at the same time refrain from directly acknowledging this as India was in no position to compete with the far advanced Chinese nuclear capabilities. India's security as related to its other adversary, Pakistan, also mattered. Mainly, India had to ensure that it had an adequate conventional capability to maintain superiority over Pakistan, which limited India's ability to reallocated resources to an expensive nuclear weapons program.

As for patron state pressures or international non-proliferation policy, these factors played less of a role in Indian calculations leading up to the 1974 explosion. The test was a watershed event, which prompted a more serious U.S. non-proliferation policy and caused Pakistan to accelerate its nuclear development. The combination of these factors after the test became important constraints on limiting a more open demonstration of continued Indian nuclear development.

Domestic politics played some role, although it was not in and of itself determinative. After the Chinese nuclear test and its continued accelerated advancement, Indian Prime Ministers faced increasing calls from domestic actors for the government to adopt a more robust nuclear policy. However, India's nuclear capability lagged and it wasn't until 1974 that its scientists had developed the necessary technological requirements for a test. The timing of the test was thus primarily based on scientific advancement. This finding disputes two commonly attributed explanations for the 1974 test: that Prime Minister Gandhi tested at that time as a diversionary tactic to boost popularity, and that previous Prime Ministers had not tested because they held a moral aversion to nuclear weapons. The following discusses each of these factors.

A. Regional Security Environment

Both China and Pakistan figured predominantly in India's security calculations leading up to 1974. India had fought and lost a border war with China in 1962, China began nuclear testing in 1964, and India fought and won two wars against Pakistan in 1965 and 1971. India was also acutely aware of the potential for Chinese and Pakistani collusion. For these reasons, India's public nuclear posture exaggerated how quickly India could develop a weapons capability, while New Delhi also deemphasized its interest by arguing that India was choosing to forego this route.

The reality, however, was that India lagged behind China in the nuclear field and simply did not have the capability to respond. India began working in the wake of the Chinese nuclear tests to rectify this disparity, although it chose to not directly compete with China by continuing a steady buildup (rather than a crash program) and maintained a

disinterested posture in nuclear weapons, which included labeling its 1974 nuclear test as a peaceful nuclear explosion (“PNE”). Nonetheless, swift Chinese advancements with its nuclear weapons program spurred ongoing debates within India as to how it would handle this threat to its security. In response to increasing calls for India to adopt a more robust nuclear policy in response to China, Prime Minister Shastri added a qualifier to India’s traditional posture—that India’s nuclear policy was subject to change if necessary. Again, India did not have the capability at this time to actually respond. But its leaders began to lay the groundwork by leaving its policy subject to review, and as India became closer to being able to test, a public justification for PNEs.

1. Chinese Nuclear Testing Affects India’s Nuclear Posture

Prior to the first Chinese nuclear test, there were few public indications that India would pursue a nuclear weapons capability. The Nehru government had pledged that the nuclear program was entirely devoted to the development of peaceful uses of nuclear weapons, and other states found this position credible.¹⁰ Even as it became increasingly clear that China was developing a weapons program, Prime Minister Nehru stated that India did not intend to make nuclear bombs, and indeed, was not even thinking about making bombs.¹¹

Yet, Prime Minister Nehru also built flexibility into India’s nuclear posture, such that it could change if circumstances necessitated it. For example, Nehru, who reportedly

¹⁰ Central Intelligence Agency, “Indian Nuclear Energy Program,” Confidential Scientific Intelligence Report, 25 March 1958, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00026, 2.

¹¹ Cited in G.G. Mirchandani, India's Nuclear Dilemma (New Delhi: Popular Book Services, 1968), 22.

had a strong personal aversion to the development of nuclear weapons, strongly supported from the beginning India's nuclear energy development.¹² Nehru also appointed Dr. Homi Bhabha as head of the AEC. This was significant as Dr. Bhabha was a well-known advocate of India developing a weapons option, and privately indicated early on that "India might be interested in atomic weapons in the future."¹³

Prime Minister Nehru also suggested, prior to the Chinese test in 1964, that India's atomic energy program was well advanced, even more so than the Chinese program.¹⁴ As early as 1958, Prime Minister Nehru signaled that India's nuclear development gave it the capability to build nuclear weapons, but chose not to use it. For example, in response to a question about what India would do if another state in Asia had nuclear weapons, he stated that "[w]e have the technical know-how for manufacturing the atom bomb. We can do it in three or four years if we divert sufficient resources in that direction. But, we have given the world an assurance that we shall never do so. We shall never use our knowledge of nuclear science for purposes of war."¹⁵

Even with these public pronouncements, U.S. estimates suggested that while India was reluctant to pursue nuclear weapons, its policy was still dependent on the perceived

¹² Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 3.

¹³ U.S. Atomic Energy Commission, "Development of an Indian Nuclear Reactor," Confidential Memorandum of Conversation, 19 November 1960, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP00701, 3.

¹⁴ Cited in Mirchandani, India's Nuclear Dilemma, 22.

¹⁵ Cited in Mirchandani, India's Nuclear Dilemma, 231

threat from China.¹⁶ From the Indian perspective, this threat began to increase substantially based on both an existing border dispute with China and the Chinese nuclear weapons program. By 1959, the relationship between India and China began to deteriorate, which had a “deep impact” on India’s security concerns.¹⁷ The border problems between India and China led to India’s defeat in 1962 war.

China also began to make significant advancements in its nuclear program. As the U.S. accurately predicted, if China acquired a nuclear weapons capability, this eventuality might compel India to follow suit.¹⁸ Such a decision would be made reluctantly, as India was perceived as having strong “emotional and political opposition” to nuclear weapons, as well as cost considerations and economic growth priorities.¹⁹ Nonetheless, testing by China would create security concerns within India that it would be subject to Chinese pressure and force New Delhi to rely even more on external states for support if it did not develop its own independent option.²⁰

¹⁶ Secretary of Defense, “The Diffusion of Nuclear Weapons with and without a Test Ban Agreement,” Memorandum to the President, 12 February 1963, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. 00941.

¹⁷ White House, “Memorandum of Conference with the President,” Secret Memorandum of Conversation, 13 November 1959, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP00602, 4.

¹⁸ Central Intelligence Agency, “Likelihood and Consequences of the Development of Nuclear Capabilities by Additional Countries,” Secret, National Intelligence Estimate, 20 September 1960, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00043, 2.

¹⁹ Central Intelligence Agency, “Likelihood and Consequences of the Development of Nuclear Capabilities by Additional Countries,” no. WM00043, 6.

²⁰ Central Intelligence Agency, “Nuclear Weapons and Delivery Capabilities of Free World Countries Other than the U.S. and U.K.,” Secret National Intelligence Estimate, 21 September 1961, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00052, 9.

Because of Indian security concerns, three years prior to the Chinese test in 1964, there were indications that India was “deliberately improving its overall capabilities in the nuclear field, possibly in anticipation that a future decision to develop an operational nuclear capability may be required.”²¹ Nonetheless, consistent with its previous posture, India retained a public stance that it would not develop nuclear weapons even though it had the technical ability. This stance changed fundamentally, albeit subtly, with the explosion of the Chinese nuclear test.

In October 1964, China tested its first nuclear device at Lop Nur. While it was widely understood that China was pursuing a nuclear weapons program, the advanced bomb design and uranium materials used came as a surprise.²² This meant that China would “become a much bigger nuclear power sooner than has been expected.”²³

Initially, the primary effect of the Chinese detonation was political rather than military for India. According to U.S. analysts, China had achieved the same technological feat as the great powers, strengthened its position vis-à-vis the Soviet Union (with whom relations had substantially cooled), and undermined India’s leadership role with the unaligned states.²⁴ The initial test was not militarily significant however as

²¹ Central Intelligence Agency, “Nuclear Weapons and Delivery Capabilities,” no. WM00052, 9.

²² Chester Bowles to U.S. Department of State, “Views of Overseas Indian Correspondents on the Chinese Nuclear Detonation,” Limited Official Use, Cable 1271, 24 October 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01022, 1.

²³ Bowles, “Views of Overseas Indian Correspondents on the Chinese Nuclear Detonation,” no. NP01022, 1.

²⁴ Central Intelligence Agency, “Nuclear Weapons Programs around the World,” Top Secret Memorandum, 4 December 1964, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00093, 6.

Chinese delivery systems were marginal.²⁵ There was some concern however that China might become more aggressive in its posture towards India as a result of the Chinese bomb.²⁶

The sophistication of the device exploded meant that China would have a relatively advanced system once it furthered its delivery capabilities.²⁷ This strengthened Indian fears that China would gain an overwhelming military superiority over India. This would pose a substantial threat to Indian security, whose leaders feared that China would use its nuclear capability either for blackmail or in an armed conflict against a non-nuclear armed India. The Chinese nuclear test also added onto existing Indian feelings of vulnerability generated from the 1962 border conflict with China, notwithstanding the fact that both the U.S. and USSR provided India with conventional military aid at this time.²⁸ Moreover, the Indians were concerned that world recognition that China was a nuclear weapons power would give it greater weight in international negotiations, at the expense of India.²⁹ Based on these combined factors, the pressures to obtain nuclear

²⁵ Central Intelligence Agency, "Nuclear Weapons Programs around the World," no. WM00093, 6.

²⁶ Chester Bowles to U.S. Department of State, "News Articles on the Chinese Nuclear Detonation," Unclassified Cable 1203, 17 October 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01002, 2.

²⁷ Central Intelligence Agency, "Nuclear Weapons Programs around the World," no. WM00093.

²⁸ U.S. Department of Defense, "The Indian Nuclear Problem," Secret Report, 24 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01086, 1.

²⁹ Central Intelligence Agency, "Nuclear Weapons Programs around the World," no. WM00093. U.S. assessments also noted that India feared that it would lose standing among other less developed nations.

weapons was becoming “irresistible” in the face of continued Chinese nuclear testing and developments.³⁰

However, in 1964 India was ill-equipped to respond with a nuclear capability of its own, notwithstanding Dr. Bhabha’s report that India could produce a nuclear bomb within 18 months.³¹ Instead, new Prime Minister Lal Bahadur Shastri condemned the Chinese test as a threat to world peace,³² and reaffirmed that India would not develop nuclear weapons.³³ However, after reiterating the official policy of abstaining from a nuclear weapons program, Indian leadership undertook a significant reevaluation of whether India should pursue a testing and weapons program. This resulting debate led Prime Minister Shastri to publicly suggest that India could change its posture if necessary, while he privately increased India’s nuclear capabilities, in particular the ability to conduct a nuclear test.

The Chinese nuclear tests thus fundamentally altered India’s nuclear posture. After the tests, India’s leaders began to hedge on whether it would indefinitely forswear nuclear weapons, and behind the scenes began readying its nuclear program for testing. This posture differed from India’s longstanding policy to explicitly forswear a nuclear weapons option, and reflected a growing concern with India’s regional security environment. The following discusses the parameters of the debate leading to this

³⁰ U.S. Department of Defense, “The Indian Nuclear Problem,” no. NP01086, 1.

³¹ George Perkovich, *India's Nuclear Bomb*, 490; Mirchandani, *India's Nuclear Dilemma*, 25-26.

³² George Perkovich, *India's Nuclear Bomb*, 490; Mirchandani, *India's Nuclear Dilemma*, 26.

³³ Central Intelligence Agency, “Nuclear Weapons Programs around the World,” no. WM00093.

change, the regional security issues informing Indira Gandhi's ultimate decision to test in 1974, and India's continued efforts to develop a nuclear weapons capability.

a) Factors Informing India's Nuclear Debate

The very public Chinese program led Indian leaders to seriously reevaluate India's security requirements. This discussion centered on how to best provide for Indian security and whether nuclear weapons were an integral component. The primary factors informing India's nuclear debate was whether India would enter into an unnecessary arms race with either of its regional adversaries, how to balance nuclear weapons development with its conventional resource requirements, and the cost and type of force structure necessary for stable deterrence. In short, India had to decide how to transition to a nuclear weapons state with a credible deterrent if it chose the weapons route. This debate was important as it set the parameters on Indian thinking that informed its leadership in the subsequent decades, as well as provided well-rehearsed arguments in later years for domestic political interests.

(1) Potential to Increase Tensions with Regional Adversaries

If India chose a nuclear weapons route, the decision would have significant security implications for its neighbors, China and Pakistan. At a minimum, there would be the risk of further disrupting already poor relations with both states. A potentially more dangerous outcome would be if a competitive dynamic resulted in a costly arms race.

As to China, if India developed nuclear bombs, and at least a rudimentary delivery capability, it would force Beijing to reevaluate its military policy towards India, and would likely be viewed by Chinese leaders as adding to the country's strategic defense problems.³⁴ Because India lacked these capabilities at the time, if they were intent on competing with China in the short run, it would have required undertaking a crash program in an effort to catch up. This effort would have increased the possibility of provoking an arms race, if indeed India was successful in making significant gains with its program. This possibility caused Indian leaders to caution prudence in India's response to Chinese testing, noting that "nothing would suit Mao Tse-Tung's book better than our being hustled into a nuclear race."³⁵ A recognition that India lagged considerably behind China further counseled against seeking to directly compete with China by quickly and significantly bolstering India's nuclear weapons program.

Prior to developing a delivery system capable of targeting China's population centers however, Indian testing of a nuclear device would not change the balance of power, even by perception as China was already well ahead in testing. Even if India tested in response to the Chinese tests, the lag in development meant that China would "explode far more advanced bombs by time India matches China's recent

³⁴ Theodore L. Eliot, U.S. Department of State, to Henry A. Kissinger, "NSSM 156 on Indian Nuclear Developments," Secret Cover Memorandum, 11 September 1972, Presidential Directives II (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. PR01075, 13.

³⁵ Chester Bowles to U.S. Department of State, "Debate among the Indians As to What Should Be Done in the Wake of the Chinese Nuclear Detonation," Confidential Cable 1323, 29 October 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01031, 2.

achievement.”³⁶ Simple testing, however, without an accompanied delivery system or provocative statements, was unlikely to create serious protest by China. China itself continued to test and refused to sign or comply with the Partial Test Ban Treaty at the time. This made China unlikely to even publicly castigate an Indian testing program.

The risk of an arms race and deteriorating relations, if India chose a weapons option, was much more likely with Pakistan. Indeed, advances in India’s nuclear program “would severely jolt Islamabad.”³⁷ The Pakistani security calculations were considerably different from China, as Pakistan was both conventionally weaker than India and its nuclear program was far less developed. Moreover, India had acquired its Canberra bombers in 1958, giving it the ability to deliver nuclear bombs into Pakistani territory. Therefore, any Indian decisions that would move it closer to acquiring a nuclear capability made Pakistan extremely insecure.

For these reasons, Indian analysts understood that if it acquired nuclear weapons, it would make Pakistan more inclined to seek them as well.³⁸ Not only would Pakistan “try desperately to follow suit,” but it likely try to seek nuclear assistance from China.³⁹ If actual program assistance was not forthcoming, Pakistan would likely seek from China

³⁶ Bowles, “Debate among the Indians,” no. NP01031, 4.

³⁷ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 13.

³⁸ Central Intelligence Agency, “India’s Nuclear Weapons Policy,” Secret Special National Intelligence Estimate, SNIE 31-1-65, 21 October 1965, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00107, 4.

³⁹ “Value and Feasibility of a Nuclear Non-Proliferation Treaty,” Confidential Internal Paper, 10 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01070, 13.

and the U.S. assurances of protection against Indian “nuclear blackmail.”⁴⁰ India already feared collusion between Pakistan and China, which was further heightened after the 1965 and 1971 Indo-Pak wars because of China’s support of Pakistan. Finally, India’s nuclear program would interfere with the normalization of relations between India and Pakistan after their conventional conflicts.

In short, India’s choice of how to respond to China’s nuclear testing and advancing weapons program had significant implications for relations with its neighbors. In particular, Indian leaders that opposed a complete reversal of Indian nuclear policy by undertaking a testing and weapons program feared the risk of an arms race with China and Pakistan. While India could likely dampen the competition with China, any move by New Delhi to demonstrate an increased weapons development was likely to encourage a direct Pakistani response, one that realistically could be aided by China.

(2) Conventional Threats & Resource Allocations

Some Indian leaders opposed any nuclear decision that would affect India’s conventional ability to respond to threats from China and Pakistan. China’s initial nuclear tests were not themselves military significant as they were not accompanied by a delivery capability that could reach India. This fact was recognized by Indian Defense Minister Y.B. Chavan, who publicly downplayed the China test.⁴¹ He instead

⁴⁰ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 11-12.

⁴¹ Mirchandani, India's Nuclear Dilemma, 26.

emphasized that the primary short-term threat to India was from Chinese conventional forces.⁴²

Because the Chinese military threat was primarily convention, the best way for India meet the threat was by modernizing Indian conventional forces and “an expensive Indian nuclear weapons program would divert scarce resources from this end.”⁴³ If India instead chose to not make reductions in its non-nuclear forces, then to increase its defense budget for nuclear weapons would require diverting resources from its economic development programs.⁴⁴ As such, some Indian leaders understood that they could face resource problems as the expense of a ramped up nuclear program.⁴⁵

Additionally, as the 1965 Indo-Pak war demonstrated, India needed to have sufficient conventional military forces to deal with a Pakistan supported by China. As Indian leaders who disapproved a nuclear weapons program pointed out, “during the recent crisis, India was able to deal with both Pakistan and Communist China simultaneously with conventional arms, and that what is needed is added strength of this sort.”⁴⁶ Prime Minister Shastri further reinforced this position, stating that from “the purely practical point it is more important that we build up our own conventional

⁴² Mirchandani, India's Nuclear Dilemma, 26.

⁴³ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 10.

⁴⁴ U.S. Department of Defense, “The Indian Nuclear Problem,” no. NP01086, 4.

⁴⁵ U.S. Department of Defense, “The Indian Nuclear Problem,” no. NP01086, 5.

⁴⁶ Central Intelligence Agency, “India's Nuclear Weapons Policy,” no. WM00107, 4.

weapons and strengthen ourselves.”⁴⁷ India’s military similarly preferred using available funds to build up India’s conventional military strength, and did not readily push for nuclear weapons in the wake of China’s test.⁴⁸

Finally, and in response to the political dimension of prestige, opponents of a more robust nuclear weapons program argued that “a reversal of Nehru's traditional position after all India has said about the evils of nuclear weapons would damage its international prestige.”⁴⁹ This meant that for some, a weapons program would serve neither military nor political purposes.

In short, the initial Chinese nuclear tests did not readily threaten India from a military perspective, although this would change sooner than later. Opponents of a full-fledged nuclear weapons program argued against the merits of diverting scarce resources away from conventional weapons systems that were needed to deal with existing conventional threats from China and Pakistan. Nonetheless, these initial responses were largely the outgrowth of military assessments in the mid-1960s and would be subject to revision as China’s nuclear arsenal and delivery capabilities improved. Additionally, once it became apparent that Pakistan was also pursuing nuclear weapons, India would be forced to deal with this more immediate threat, notwithstanding the heavy costs. But as an initial matter, India was not required to institute a crash nuclear weapons program to respond to a military threat from China.

⁴⁷ Central Intelligence Agency, “Scientific Intelligence Digest: The Indian Nuclear Weapons Program and Delivery Capabilities,” Secret Periodical, December 1965, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00109, 1.

⁴⁸ Central Intelligence Agency, “India's Nuclear Weapons Policy,” no. WM00107, 4.

⁴⁹ Central Intelligence Agency, “India's Nuclear Weapons Policy,” no. WM00107, 4.

(3) System Requirements for Stable Deterrence

The Chinese nuclear test in 1964 prompted Indian leaders to begin to more seriously evaluate the type of nuclear weapons systems it would need to deter China in the longer term. One dimension of this debate centered around the type of nuclear force and delivery system that would be required to have a meaningful response when China developed its capability enough to militarily threaten India. Moreover, whether such a system would be worth the costs was an additional factor. This debate was significant as it was the beginning of Indian leaders undertaking these assessments. Prior to this point, the government had not really estimated what a significant weapons system would cost or how it would be used.⁵⁰

Proponents of a nuclear weapons program tended to exaggerate how quickly and cheaply India could develop at least a rudimentary device and delivery system. For example, they often relied on Dr. Bhabha's optimistic estimation that India could conduct a nuclear explosion in 18 months, at a relatively cheap cost. As it turns out, Dr. Bhabha both underestimated the costs of a nuclear explosion and the amount of time required to develop the explosive devices.⁵¹ Bomb proponents also felt that the costs were justified, no matter what they were.

Opponents tended to argue that even if India sought to credibly deter China with its own nuclear weapons program, the costs to develop a sophisticated second-strike force

⁵⁰ Bowles, "Discussion of Indian Nuclear Capabilities and Intentions," no. NP01101, 2.

⁵¹ Chester Bowles, "Jerome Weisner's Report on Visit to India and Discussion of Indian Nuclear Capabilities and Intentions," Secret Cable, 21 January 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01101, 2.

with adequate delivery systems would be exorbitant. For India, as a developing country, even building a “few crude weapons and an unsophisticated delivery system” would be an economic burden costing several hundred million dollars in the 1960s.⁵² A more sophisticated program relying on modern aircraft or missiles with nuclear warheads would cost several billion dollars during the same timeframe.⁵³ Based on the distance to Chinese targets, India would have to develop the latter option with long-range bombers or missiles. As then Prime Minister Shastri recognized, “[o]nce we produce a bomb we have to build for it the necessary carriers, rockets, etc. It starts a process of escalation which has no end in the swiftly developing military technology of our times.”⁵⁴ India would also have to maintain sufficient conventional forces, given its territorial dispute with China that led to the 1962 war.

Moreover, India would have to rely in significant part on indigenously developing these systems, as the major nuclear powers with these delivery mechanisms at the time—the U.S. and USSR—were not sharing this type of advanced technology.⁵⁵ Because India would have to develop the more ambitious program to credibly deter to a Chinese threat, this left some opponents with the opinion that “the cost of a meaningful weapons system will be prohibitive.”⁵⁶ This meant that without long-range bombers or missiles, an Indian

⁵² Central Intelligence Agency, “Nuclear Weapons and Delivery Capabilities,” no. WM00052, 5.

⁵³ Central Intelligence Agency, “Nuclear Weapons and Delivery Capabilities,” no. WM00052, 5.

⁵⁴ Central Intelligence Agency, “Scientific Intelligence Digest,” no. WM00109, 1.

⁵⁵ “Value and Feasibility of a Nuclear Non-Proliferation Treaty,” no. NP01070, 12-13.

⁵⁶ Central Intelligence Agency, “India's Nuclear Weapons Policy,” no. WM00107, 4.

nuclear capability vis-à-vis China would have a marginal impact.⁵⁷ Further, because such a program would be very expensive, it would likely entail diverting “scarce resources from badly needed economic and social development programs.”⁵⁸ Even if India made advanced delivery systems a priority, it still lacked a sufficient economic base from which to compete with China, in particular because China was already much further along with its development.⁵⁹

An additional concern was that even with just a rudimentary force that lacked a long-range delivery system it could lead to increased tensions with China, which may then weaken India’s national security in the short term.⁶⁰ And of course, there was the ongoing concern that any of these actions could lead to an increase in tensions, potentially leading to an arms race. In short, New Delhi was aware that there would be transitional vulnerability for a considerable period of time as it moved towards a weapons option, and then to a second-strike capability.⁶¹

b) India’s Short-Term Strategy as China Continues Nuclear Development

Notwithstanding increased Indian debate over the proper course of action, India’s actual options were limited during the 1960s because it had not yet developed the

⁵⁷ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 17.

⁵⁸ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 10.

⁵⁹ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 10.

⁶⁰ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 10.

⁶¹ Walt W. Rostow, “A Way of Thinking about Nuclear Proliferation,” Confidential Internal Paper, 19 November 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01046, 10.

capability to test or deliver a rudimentary nuclear device. India's Air Force had purchased Canberra bombers from Britain in 1958, which had the range to carry bombs to targets in Pakistan, but could not range the higher population areas in China.⁶² In addition, India only had enough plutonium to build at most one or two bombs. Indian capacity would increase in 1968 and 1971 as two additional atomic power stations, Tarapur and Rajasthan stations respectively, came online; however, this meant in the interim that India had a relative dearth of sufficient nuclear material to construct nuclear bombs.

At the same time, China continued developing and testing nuclear weapons, which further ratcheted up the pressure on the Indian government to respond. The Chinese program was developing quickly and by 1967 China conducted its sixth nuclear weapons test, which was thermonuclear. Additionally, China had moved some troops into the disputed area with India.

The continued and very public advancements of the Chinese nuclear program are credited as creating a significant incentive for India to test its own device, followed by the long-term development of a substantial nuclear program with advanced delivery systems. The level of threat the Indians felt from the Chinese nuclear program was largely a function of the pace and scope of China's own nuclear development—and whether China continued to support Pakistan in any conflict with India, as it had done

⁶² Shyam Bhatia, India's Nuclear Bomb (Sahibabad: Vikas Publishing House, 1979) 127.

during the 1965 war.⁶³ Both of these conditions continued and increased Indian threat perceptions of both of its neighbors.

Based on these incentives, U.S. estimates predicted that while Prime Minister Shastri did not want to start a program, it was still likely that India would in the future test a nuclear device and begin to develop weapons.⁶⁴ This shift in opinion was based on the sentiment that an independent nuclear deterrent was needed to in the event of another confrontation with India's regional adversaries, as no nuclear power would risk a devastating attack on its own soil, particularly if for the sake of another country.⁶⁵ In short, as China continued to test, the pressure on Indian leadership to respond with a credible nuclear deterrent increased.

However, New Delhi lacked the technical ability to respond to Chinese advancements with its own nuclear tests. This left India's leaders with a strategy that sought to minimize the impact of the continued Chinese testing, while India further developed its own nuclear capabilities. This included emphasizing existing Indian capabilities, which were under continued development, while simultaneously noting Indian restraint. In particular, the statements that India's nuclear policies were subject to change, as well as underscoring that India had the right to conduct PNEs represented a shift in India's nuclear stance. Indian leaders also sought support from the international community to constrain China's program, and Prime Ministers Shastri and later Indira

⁶³ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 6.

⁶⁴ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 1.

⁶⁵ Joint Committee on Atomic Energy, "Concerns Whether Some Information Presented in a Newsweek Article Is Classified," Letter, 19 August 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01131, 55.

Gandhi privately took measures to prepare India to conduct its nuclear test in 1974. The following discusses these dynamics.

(1) India's Public Nuclear Policy Subtly Shifts

In response to continued Chinese nuclear development, Indian Prime Ministers shifted away from Nehru's previous stance that India would not develop nuclear weapons. The new public posture combined India's traditional approach of highlighting its restraint, while suggesting that it nonetheless had the capability to make nuclear weapons, with statements that India's nuclear policy was subject to review, and that it had the right to conduct peaceful nuclear explosions. These latter two themes were introduced in the wake of continued Chinese testing and, as a break from India's previous policy, set the framework for the Indian test as soon as it had the technical capability to do so.

For example, India's ambassador to the U.S., B.K. Nehru, requested that the U.S. Secretary of State publicly announce that "India, like Communist China, has potential to produce nuclear weapons but as good citizen of world India has no intention of producing nuclear weapons" and to commend India for its policy.⁶⁶ India further affirmed that it "could make and explode a bomb tomorrow but we have not the desire nor the intention. We are pledge to peace and we will only use {sic} atomic science for peaceful purposes."⁶⁷ Prime Minister Shastri further stated that India would "try to eliminate the threat and terror of nuclear weapons rather than enter into competition with other

⁶⁶ Perkovich, *India's Nuclear Bomb*, 489.

⁶⁷ Bowles, "Debate among the Indians," no. NP01031, 2.

countries to make or produce atom bombs.”⁶⁸ This position was underscored by the declaration that “India had made a firm commitment to restrict its nuclear program to the peaceful use of nuclear energy...[and] India’s views on this subject are very strong.”⁶⁹ At the same time, India further downplayed the military importance of the Chinese nuclear explosion, saying that it has “‘made little difference’ to India’s defense preparations as India was not producing the atom bomb.”⁷⁰

Overall, this initial stance was largely consistent with how former Prime Minister Nehru had characterized the Indian nuclear program by generally suggesting that India had the capability to produce nuclear weapons, but chose restraint instead. To some extent, this position both before and after the Chinese tests was an exaggeration of India’s nuclear development at the time. By the mid-1960s, India had perhaps enough plutonium for a couple of weapons, and had not yet begun to work on an explosives design. This suggests that Indian leaders were seeking to bolster the state of their nuclear program, while also seeking to garner political leverage by emphasizing that India was behaving responsibly in the international community by not pursuing atomic weapons.

However, there were also two changes to India’s historic formulation described above, following China’s nuclear testing. First, as part of India’s theme of restraint, its leaders also began to more openly discuss the concept of peaceful nuclear explosions. By

⁶⁸ Mirchandani, India's Nuclear Dilemma, 29.

⁶⁹ L. Douglas Heck to U.S. Department of State, “India's Nuclear Policy in the Wake of ChiCom [Chinese Communist] Nuclear Detonation,” Confidential Airgram no. A-411, 23 October 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01016.

⁷⁰ Bowles, “Debate among the Indians,” no. NP01031, 2.

1971 Indian leaders were openly justifying that India retained the option to conduct peaceful nuclear explosions. While retaining the option to conduct peaceful explosions was consistent with previous Indian policy from the beginning of its nuclear development, publicly addressing this possibility represented a shift in India's nuclear stance. The Gandhi administration thus began to lay the ideational groundwork so that when India did test, it could characterize it as peaceful, rather than as a signal that India intended to build nuclear weapons.

Second, Indian leaders began to acknowledge that its no-bomb position was subject to change. Prior to the Chinese tests, Nehru had declared without reservation that India would not build nuclear weapons. However, subsequent leaders who had to address the advancing Chinese nuclear capabilities began to hedge and sought to leave the option publicly open in light its security environment.

For example, then Prime Minister Shastri, who was very reluctant to pursue an advanced system because of the required costs, nonetheless still noted that if “if China developed her nuclear power and perfected the delivery system, ‘then we will certainly have to consider as to what we have to do.’”⁷¹ New Delhi also informed Washington that while India was committed to maintaining its nuclear program limited to peaceful purposes, it left open the option that it may have to alter its present policy.⁷² Similarly, subsequent Prime Minister Gandhi sought to reassure parliament by noting that the

⁷¹ Central Intelligence Agency, “Scientific Intelligence Digest,” no. WM00109, 1.

⁷² L. Douglas Heck to U.S. Department of State, “India's Nuclear Policy in the Wake of ChiCom [Chinese Communist] Nuclear Detonation,” no. NP01016.

government was “building up its atomic power,” albeit for peaceful purposes.⁷³ She further stated that peaceful nuclear development increased “know-how and other competence,” and that its existing policy of peaceful uses of nuclear energy was under “constant review.”⁷⁴ Indian leaders had now begun to acknowledge that Indian nuclear policy was subject to review, and further opened the door to a nuclear option.

In short, in the wake of the Chinese tests, India’s public stance was one of restraint but that this policy was subject to change, depending on the nature and scope of the Chinese program. While India would also retain its characterization of its program as peaceful, by now publicly justifying reasons for peaceful nuclear explosions further laid the foundation that Prime Minister Gandhi would rely on when testing in 1974.

(2) Soliciting International Support

India also sought to use its position of restraint to urge other states to seek to constrain the Chinese program while providing India with increased support in the face of its nuclear adversary. For example, with rumors of an imminent Chinese test in September 1964, Prime Minister Shastri urged other states to “persuade China to desist from developing nuclear weapons,” while noting that India’s nuclear establishment was firmly ordered to only develop peaceful uses of atomic energy.⁷⁵

At the same time, India linked its response to the Chinese test on whether or not the great powers provided India with protection from China. As communicated to

⁷³ Mirchandani, *India's Nuclear Dilemma*, 45-46.

⁷⁴ Mirchandani, *India's Nuclear Dilemma*, 45-46.

⁷⁵ Mirchandani, *India's Nuclear Dilemma*, 25.

Washington, New Delhi's decision about whether it would develop nuclear weapons was contingent on the great powers' response to the Chinese nuclear developments, and the implications for Indian security.⁷⁶ Thus, if the great powers "succeeded in persuading China through political and diplomatic means not to take advantage of its new military strength then India could feel secure. Otherwise [India] would feel threatened by a militarily superior China and would have to take steps to safeguard her national security."⁷⁷ Similarly, Prime Minister Shastri indicated that India would retain the bomb option unless it received guarantees from both the Soviet Union and the West that India would be protected against attack from its enemies.⁷⁸

However, any hope that the U.S. or international community at large would either assist India or restrain China was short lived, if it was ever a realistic option. While some Indian leaders may have initially been comforted by President Johnson's assurances that the U.S. would "come to the aid of any nation menaced by China,"⁷⁹ by 1965 Indo-U.S. relations significantly worsened when the U.S. cutoff arms supplies to both India and Pakistan during the war. Other nuclear powers were also not inclined to extend the security guarantees that India sought. Further, the Chinese nuclear program continued to

⁷⁶ Harold W. Jacobson to U.S. Department of State, "[Excised] Views on India and the Bomb," Confidential Airgram, A-499, 27 November 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01050, 1.

⁷⁷ Jacobson, "[Excised] Views on India and the Bomb," no. NP01050, 1.

⁷⁸ Joint Committee on Atomic Energy, "Concerns Whether Some Information Presented in a Newsweek Article Is Classified," no. NP01131, 57.

⁷⁹ Central Intelligence Agency, "Indian Government Policy on Development of Nuclear Weapon[s]," Classification Excised, Intelligence Information Cable, 24 October 1964, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00088, 1.

develop apace. Thus, the pressure remained on India to resolve its insecurity vis-à-vis its nuclear neighbor.

(3) Continued Indian Nuclear Development

While India's public posture shifted in slight, but important ways, its Prime Ministers undertook measures to further the nuclear explosives program, which would further lay the foundation for the nuclear weapons program. These decisions were made behind the scenes, with few parliamentary or cabinet members being consulted. As such, they were largely hidden from public purview.

Prime Minister Shastri had the initial task of determining how to respond to the Chinese nuclear program. Under his direction, the government began to more seriously evaluate and develop an Indian nuclear option. Immediately following the first Chinese nuclear test, Shastri directed the Indian military services to prepare a study with recommendations on the military implications of the Chinese test for India.⁸⁰ Part of this included an estimate of what would be involved in conducting an underground explosion, and whether India should develop its own bomb capability as a "hedge" against China.⁸¹

U.S. reports also indicated that the Indians were increasing their military research and development efforts.⁸² As part of this research, in 1965 Shastri permitted nuclear

⁸⁰ Defense Intelligence Agency, "Press Coverage of India's Developing Nuclear Capability," Secret Cable, 7 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01060, 2.

⁸¹ Bowles, "Debate among the Indians," no. NP01031, 3.

⁸² Central Intelligence Agency, "The Indian Nuclear Weapons Capability," Classification Unknown, Memorandum, 18 October 1965, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00106, 1.

explosive technology to go forward, although labeled as for peaceful purposes only. There was also some evidence that the Indians were “interested in establishing a high explosives test site involving advanced instrumentation for research which could be related to nuclear weapons development.”⁸³ The practical effect is that these measures brought “India much closer to the point where it could develop its own nuclear weapons if necessary to repel a nuclear threat from China or any other hostile nuclear power.”⁸⁴ By 1971, under the leadership of Prime Minister Indira Gandhi, there were reports that India’s space and atomic energy programs were well under way, with a “new tempo evident in rocketry research.”⁸⁵ By 1973 India had achieved the necessary technical advancements to test, which it did under Indira Gandhi’s leadership shortly thereafter.

Publicly, however, there were few indications of these decisions, beyond making the case being able to conduct peaceful nuclear explosions. Rather, Indian leaders made a public case for wanting to avoid a costly nuclear arms race. For example, Prime Minister Indira Gandhi stated that “nuclear weapons are no substitute for military preparedness, involving conventional weapons. The choice before us involves not only the question of making a few atom bombs, but of engaging in an arms race with sophisticated nuclear warheads and an effective missile delivery system.”⁸⁶

⁸³ Central Intelligence Agency, “Scientific Intelligence Digest,” no. WM00109, 11.

⁸⁴ Bhatia, India’s Nuclear Bomb, 132.

⁸⁵ Kenneth B. Keating to U.S. Department of State, “Indian Space and Atomic Energy Programs,” Unclassified Airgram, 23 July 1971, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01301, 1.

⁸⁶ J.P. Jain, Nuclear India, vol. 2 (New Delhi: Radiant, 1974), 201-202.

Gandhi further argued that nuclear weapons would not enhance Indian national security and would instead jeopardize its internal security due the economic burden the program would impose.⁸⁷ She similarly noted that Indian leaders “have discussed this question deeply and rejected the idea of making a bomb. Once we launch into making it, we would have to incur heavy expenses to keep abreast of nuclear weaponry and at the same time maintain conventional equipment.”⁸⁸ Indian Chairman of the AEC, Vikram Sarabhai, also declared his support for the government’s non-nuclear stance because India did not have “the money to devote to the long-range missiles, radar, electronics, or industrial base that would be required to support a nuclear deterrent.”⁸⁹ Nonetheless, Indian leadership kept the option of changing India policy open, and noted that Indian scientists continued to study underground nuclear explosive research, albeit for peaceful purposes only.⁹⁰

2. Pakistan

While China’s nuclear advancements posed the primary consideration informing India’s nuclear concerns, Pakistan was not irrelevant to Indian security calculations prior to the 1974 test. Pakistan factored into India calculations in two ways: first, whether

⁸⁷ Jain, Nuclear India, 201-202.

⁸⁸ Cited in Perkovich, India's Nuclear Bomb, 159.

⁸⁹ Virkram Sarabhai, press conference, 1 June 1966, in Jain, Nuclear India, 179. Notwithstanding these public pronouncements, the U.S. government estimated that India had increased its defense budget fourfold from 1957-1965 and while it would face cost problems for delivery mechanisms, it would not be the overriding concern and India would be able to produce a missile delivery system in about 10 years. Central Intelligence Agency, “India's Nuclear Weapons Policy,” no. WM00107, 5.

⁹⁰ The New York Times, “Informational Bank Abstracts,” 3 May 1972, in Lexis-Nexis Academic Universe, 3 May 1972, www.lexis-nexis.com.

India needed nuclear weapons to deal with its adversary and second, how an Indian nuclear weapons option would affect Pakistan's nuclear ambitions. India was conventionally superior to Pakistan, and preferred that Islamabad did not acquire nuclear weapons; these preferences militated against India openly pursuing a weapons option.

As previously discussed, India during the 1960s and early 1970s had concerns related to the costs of a nuclear weapons program. To some extent, the cost would be less within this dyad because New Delhi already had at least a rudimentary delivery system against targets in Pakistan. However, a nuclear option could only be affordable if it did not take resources away from India's existing conventional superiority. This was no small concern to India, given that it fought two wars with Pakistan during this time period, and was also extremely concerned with Chinese assistance to Pakistan.

It was the addition of China to the Pakistani equation that prompted some Indian leaders to demand that India develop nuclear weapons "in the face of the collusion between China and Pakistan."⁹¹ However, Prime Minister Shastri explicitly rejected this argument, noting that "despite the continued threat of aggression from China, which has developed nuclear weapons, government has continued to adhere to the decision not to go in for nuclear weapons but to work for their elimination. It is hardly necessary to alter this decision in the light of the conflict with Pakistan."⁹²

Military assessments generally agreed with this stance. For example, Major General Son Dutt argued that India would not gain much security from nuclear

⁹¹ Letter quoted in Mirchandani, *India's Nuclear Dilemma*, 39.

⁹² Quoted in Mirchandani, *India's Nuclear Dilemma*, 40-41.

weapons.⁹³ While recognizing the increased threat from Pakistani and Chinese cooperation, Dutt contended that developing a rudimentary nuclear capability would not provide effective deterrence while undermining India's moral stance and irritating other nuclear powers.⁹⁴ He further recommended that a better course of action for India would be to attempt to stabilize relations with Pakistan rather than going the nuclear weapons route.⁹⁵ Similarly, Indian Defence Minister Ram defended government policies that were modernizing the army, which would provide the best defense of India's borders through conventional means.⁹⁶

Washington also understood that Indian decision-making was contingent, in part, on maintaining conventional superiority over Pakistan. This necessarily implicated the U.S. role in South Asia, and the quality and quantity of weapons Washington was willing to provide Pakistan. In particular, the resumption of arms sales to Pakistan would increase the incentive for India to acquire nuclear weapons if the conventional imbalance did not remain in the region.⁹⁷

Moreover, Indian leaders were concerned that nuclear weapons would likely strain relations with Pakistan, and likely motivate the latter to develop their own nuclear weapons capability. There was also considerable concern that Pakistan would approach

⁹³ Major General D. Som Dutt, "India and the Bomb," Adelphi Paper Series, no. 30 (London: International Institute for Strategic Studies, 1966).

⁹⁴ Som Dutt, "India and the Bomb."

⁹⁵ Som Dutt, "India and the Bomb."

⁹⁶ Perkovich, India's Nuclear Bomb, 169.

⁹⁷ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 28.

China for assistance in this regard. For example, there were rumors in 1968 that Pakistan was planning to test an atom bomb, or that there might be Sino-Pakistani collusion on this front. In response, Prime Minister Gandhi contended that Pakistan did not have the capability to build a bomb, although it could conceivably get one from “somewhere or the other.”⁹⁸ Given Pakistan’s increased cooperation with China, the latter was the likely reference. She further that “[i]f we make one Pakistan will definitely get a bomb.... We are anxious not to do anything which will precipitate a crisis.”⁹⁹

In short, because India retained conventional superiority over Pakistan, it had little incentive to pursue a nuclear weapons program. However, this calculation could change if India lost its conventional edge, or Pakistan began developing nuclear weapons. While the former did not occur, there were vocal calls within some of the Pakistani leadership during the 1960s for Pakistan to acquire nuclear weapons to make up for its conventional deficiencies. These calls increased after Pakistan lost the 1971 war, and the same year, its weapons program was initiated. At that point, India had few incentives to not acquire a nuclear weapons capability, but still many reasons to hide this decision during development. Still, in 1974 when India finally gained the ability to test, it was not facing an immediate security threat from either China or Pakistan. Rather, New Delhi was preparing for a longer-term threat from China and Pakistan, when the latter achieved a nuclear weapons capability.

⁹⁸ Mirchandani, *India's Nuclear Dilemma*, 43.

⁹⁹ Mirchandani, *India's Nuclear Dilemma*, 43.

B. Patron State Incentives

With its colonial history, Indian leaders carefully crafted a foreign policy that sought to minimize dependence on other states. As leader of the non-aligned movement, India further attempted, although often unsuccessfully, to maintain equidistance between the U.S. and USSR during the Cold War. At the same time, India was a developing state with incentives to build cooperative relations with patron states to garner economic and military assistance.

Based on this approach to foreign policy, as well as differing patron state views on non-proliferation, India's nuclear energy program was vulnerable from Western state suppliers. However, leading up to the 1974 test, India's relations with the U.S. in particular were at a low point and there were not significant cooperation with economic programs or conventional weapons. India relied primarily on the Soviet Union for its conventional weapons, and Moscow was not willing to damage its relationship with New Delhi over the nuclear issue. The following discusses the extent to which the U.S. had some leverage over the Indian decision to test, as well as India's relationships with the Soviet Union, and the Western nuclear suppliers, the UK, France, and Canada.

1. Indo-U.S. Relations

By the early to mid-1960's, Washington was aware that India's nuclear program could potentially produce nuclear weapons.¹⁰⁰ In July 1972, Prime Minister Gandhi

¹⁰⁰ Secretary of State Dean Rusk to U.S. Embassies, "United States Government Is Committed at Every Level to Stopping Nuclear Proliferation in Israel and Elsewhere," airgram, circular CG-769, 3 March 1961, Nuclear Non-Proliferation (Washington, D.C.: The National Security Archive and Chadwick-Healey,

reiterated that India's nuclear policy was to investigate the possibility of peaceful nuclear explosions, but not to develop nuclear weapons.¹⁰¹ Nonetheless, the U.S. estimated that the chances were "about even" that India would detonate a nuclear device within the next few years from this 1972 assessment.¹⁰² The United States wanted to avoid this outcome.

Before the Indian test in 1974, and increasing significantly after 1974, the United States has sought to use its economic and technological leverage to induce Indian nuclear restraint. However, the U.S. did not have significant avenues of cooperation with India in the preceding years leading up to the test and had a limited ability to influence Indian policy. In particular, by 1974 the United States did not have a significant amount of leverage over Indian policy as relations were at a particularly low point in history.¹⁰³ There were enough issue linkages to give the Indians pause, but not enough to prevent the 1974 test in the face of India's other concerns.

2. The China Problem and U.S. Non-Proliferation Interests

The United States recognized that the Chinese nuclear weapons program created strong incentives for India to develop its own nuclear weapons for deterrence. However, Washington perceived an Indian nuclear option as contrary to U.S. interests. Broadly, U.S. interests were to prevent the worldwide spread of nuclear weapons, have stability in

1992), no. NP00755. The United States appeared to have overestimated Indian nuclear weapons capabilities, believing a number of times that the program was more advanced than it actually was.

¹⁰¹ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 1.

¹⁰² Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 1.

¹⁰³ For a history of the mostly contentious Cold War relationship between the world's two largest democracies, see Dennis Kux, The United States and Pakistan, 1947-2000: Disenchanted Allies (Baltimore: Johns Hopkins University Press, 2001).

South Asia, and a “mutually satisfactory relationship with India.”¹⁰⁴ From the U.S. perspective, if India developed nuclear weapons, it would reduce other states inhibitions in following suit worldwide.

In terms of South Asia, Washington feared that an Indian decision to develop weapons would be destabilizing by “adding fresh complications to Sino-Soviet relations and risking new troubles with Pakistan.”¹⁰⁵ Because an Indian nuclear program would in turn threaten Pakistan, the U.S. concluded that, “our problem would be how to steady the Pakistanis.”¹⁰⁶ There was the additional problem that Pakistan might also turn to China for further assistance in the face of an Indian threat.¹⁰⁷ Additionally, a nuclear weapons program could threaten to undermine India’s already fragile economy, which the U.S. desired to see develop for future political stability.¹⁰⁸

For these reasons, Washington sought to convince India to remain a non-nuclear weapons state. Failing this, the hope was to convince India to refrain from testing or otherwise demonstrating its nuclear development. Even if India ultimately decided to test, the U.S. hoped to forestall this decision as long as possible even if this was not a permanent solution.¹⁰⁹ From a U.S. perspective, “[e]ven if India eventually commences testing, a further delay would assist our non-proliferation efforts by allowing more time

¹⁰⁴ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 2.

¹⁰⁵ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 21.

¹⁰⁶ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 5.

¹⁰⁷ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 7-8.

¹⁰⁸ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 7-8.

¹⁰⁹ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 8.

for the NPT regime to become firmly established.”¹¹⁰ In terms of South Asian stability, “[c]ontinued Indian restraint would provide further time for developing long-term approaches, for permitting more favorable evolution in India-Pak relations and perhaps within Communist China, and for taking steps which might ease the impact of an Indian decision if our efforts to prevent it should not be proven successful.”¹¹¹

In short, because an Indian nuclear decision would conflict with U.S. interests, Washington’s objective was to “do what we can to avert or delay an Indian test, and if these efforts fail, to limit the harmful repercussions.”¹¹² The strategy employed by Washington then, was “designed to develop arguments and provide incentives that reinforce existing Indian policy and make a PNE or weapons program look less attractive.”¹¹³ Below is a discussion of the efforts the U.S. to persuade India to forego or delay nuclear testing.

3. U.S. Non-proliferation Pressures

Given U.S. interests in Indian non-proliferation, Washington pressed Indian leaders to maintain the existing policy of nuclear restraint. To this end, the U.S. engaged Indian leaders in dialogue as to the implications of a nuclear weapons program. Washington suggested that pursuing a program would be expensive and provide marginal

¹¹⁰ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 22.

¹¹¹ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 8.

¹¹² Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 2.

¹¹³ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 22. As discussed below, because the U.S. characterized PNEs as indistinguishable from a weapons explosive device, it sought to limit all testing.

security returns, while detracting from Indian economic growth, and potentially affecting the bilateral aid relationship with the U.S. Washington was however unwilling to impose any punitive measures because U.S. officials perceived that, combined with the worsening bilateral relationship with India, sanctions would be counterproductive and compel India to test.

First, the U.S. leaders sought to convince India to both forego a nuclear test, and a much more ambitious program of developing a nuclear arsenal with a deliverable range to China based on cost and marginal security benefits. In the course of this dialogue, the U.S. signaled its position by engaging Indian leaders “into serious talks on dangers and implications of proliferation.”¹¹⁴ To this end, Washington sought to emphasize the economic costs and technical difficulties associated with the development of a nuclear option.¹¹⁵

Further, while a nuclear test would be less costly than developing a nuclear force, it would also do little to contribute to Indian security.¹¹⁶ To achieve security benefits vis-à-vis China, India would have to incur much greater costs and technical difficulties to achieve a deterrence force. A “useful capability” for deterrence purposes would require

¹¹⁴ U.S. Department of State, “Discussion with Indian Officials about U.S.-India Nuclear Cooperation,” Secret Cable 1393, 12 January 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01095, 2.

¹¹⁵ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 1.

¹¹⁶ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 25.

warheads, and relatively long-range delivery mechanisms, which would be much more costly to acquire and keep up to date.¹¹⁷

Moreover, Washington suggested that the focus should be on improving India's economic performance and limiting defense expenditures.¹¹⁸ Otherwise, spending scarce resources on building a nuclear capability, rather than allocating and investing money in other domestic projects, would damage India's economic development.¹¹⁹

There was also an implicit threat that if India chose to pursue a weapons route, the U.S. may cut off economic assistance. This was communicated to the Indians by suggesting that the U.S. Congress would likely balk at providing any type of aid that could be used to subsidize a nuclear weapons program.¹²⁰ After all, if India could afford the luxury of atomic bombs, it probably does not need outside development assistance.¹²¹ And even though the U.S. was unwilling to directly link its assistance to non-proliferation, it achieved this result by seeking to limit India's defense expenditures overall. U.S. leaders had "made it clear that our willingness to follow through is

¹¹⁷ Rostow, "The Indian Nuclear Weapons Problem," no. PD01151, 10.

¹¹⁸ Rostow, "The Indian Nuclear Weapons Problem," no. PD01151, 1.

¹¹⁹ U.S. Department of State, "Background Paper On Factors Which Could Influence National Decisions Concerning Acquisition Of Nuclear Weapons," Secret Background Paper, 12 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01079 and U.S. Department of Defense, "The Indian Nuclear Problem," no. NP01086.

¹²⁰ Rostow, "The Indian Nuclear Weapons Problem," no. PD01151, 2.

¹²¹ U.S. Department of State, "Background Paper On Factors Which Could Influence National Decisions Concerning Acquisition Of Nuclear Weapons," no. NP01079 and U.S. Department of Defense, "The Indian Nuclear Problem," no. NP01086.

contingent” in part on India limiting its defense expenditures.¹²² The result is that “[t]his adds to pressures on India to forego—or at least delay—a nuclear weapons effort.”¹²³

At the same time, the White House was hesitant to use direct threats, such as cutting back or eliminating economic aid, because it was concerned that doing so would be counterproductive to U.S. Cold War interests. U.S. officials calculated that too tough a stance on New Delhi might turn the Indians to greater reliance on the Soviet Union.¹²⁴ Washington understood that there were limits to the pressure it could impose on the Indians at the time as related to economic leverage, and still accomplish its varied objectives.

A second avenue to influence Indian nuclear policy was through existing U.S. bilateral agreements for atomic energy. The agreements provided that the U.S. supply enriched uranium for the Tarapur reactor and heavy water for the CIRUS reactor, and heavy water that originated in the U.S. was used in RAPP I, the Canadian built reactor.¹²⁵ For its part, the U.S. interpreted these agreements as prohibiting any type of nuclear device, regardless of whether it was a PNE or not. The Indians disagreed. The basis of the dispute is important to the extent that it would determine U.S. actions in the event that India chose to test.

Anticipating that India would label its test a PNE, the U.S. sought to foreclose this option by characterizing PNEs as indistinguishable from a test for weapons purposes.

¹²² Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 9.

¹²³ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 9.

¹²⁴ Rostow, “The Indian Nuclear Weapons Problem,” no. PD01151, 9.

¹²⁵ RAPP I entailed a trilateral treaty.

Washington's position was that "peaceful and military nuclear explosive technologies cannot be distinguished."¹²⁶ Further, according to Washington's interpretation, U.S. supplied materials were prohibited from being used in any explosive device, even those labeled a PNE. For the U.S., the "any nuclear explosive device, though it be intended for benign economic purposes, could also be used for destructive purposes. The development of [PNEs], therefore, is tantamount to the development of nuclear weapons. Consequently, the United States would consider it incompatible with existing United States-Indian agreements for American nuclear assistance to be employed in the development of peaceful nuclear explosive devices."¹²⁷ U.S. representatives reiterated this position to the Indians in March 1972, in response to rumors that India may conduct a PNE.¹²⁸

The U.S. interpretation meant that, "Indian nuclear testing would require a review of US cooperation in the atomic energy and space fields."¹²⁹ In this way, New Delhi was on notice that atomic energy supplies from the U.S. could be in jeopardy, as well as other cooperation in the space field, in the event it conducted any nuclear test. Still, as with efforts to use economic avenues to influence Indian policy making, the U.S. refrained from issuing direct threat to India, fearing they would be counterproductive. Instead, Washington sought to inform the Indian leadership of the impact of the relationship if

¹²⁶ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075.

¹²⁷ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 2.

¹²⁸ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 35.

¹²⁹ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 2.

India tested, which was framed in terms of U.S. non-proliferation policy interests and legal problems.¹³⁰

There is some indication that these nascent non-proliferation efforts were significant enough to worry Indira Gandhi's advisors when she contemplated the 1974 tests. Mainly, her advisors were concerned that with a public demonstration of India's nuclear capabilities and no practical difference between a 'peaceful' explosive and a nuclear bomb, despite the rhetoric, that the result would be a slow down in U.S. provision of dual use technology and aid for Indian development.¹³¹ So, while Washington's veiled threats did not fall on deaf ears, they did little to resolve India's fundamental security concerns vis-à-vis China, and the continued deterioration of the relationship between the two states further diluted the force of the U.S. non-proliferation message.

4. Limits to U.S. Non-proliferation Pressures

Washington's chosen strategy reflected its relative difficulty in ultimately influencing Indian decision-making, primarily because it did not have substantial sources of leverage or issue linkages. In particular, India's security issues were still outstanding and there was a worsening of relations between the two democracies leading up to the 1974 Indian nuclear test.

The United States and India had relatively limited avenues of cooperation. Throughout the 1950's and the 1960s, the United States and India cooperated on a number of fronts. During this early time period, the U.S. provided India with agricultural

¹³⁰ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 24.

¹³¹ Chengappa, *Weapons of Peace*, 56.

and food aid on a concessional basis. Early on, India's nuclear program faced limitations based on financial and technological limitations, forcing New Delhi to rely on outside assistance in these areas.¹³² The United States also included India in its Atoms for Peace Program, which assisted India in building its first nuclear reactors and ultimately provided India with the ability to pursue dual-use nuclear development.¹³³ Indian nuclear scientists also trained in the U.S.¹³⁴

Still, one of the sticking points early in the relationship was U.S. insistence on safeguards and control provisions that accompanied U.S. bilateral agreements related to nuclear development. For its part, India was careful from the beginning of its nuclear program to limit its reliance on the U.S. to the extent that New Delhi would be required to accept safeguards that would ultimately affect its ability to develop a nuclear option. For example, Dr. Bhabha, who headed India's atomic energy program, strongly objected to U.S. efforts to impose safeguards. He characterized such measures as "onerous" and "more or less an insult to India's peaceful intentions."¹³⁵ India also declined U.S. offers for financial assistance to purchase a research reactor, based on its objections.¹³⁶ Because

¹³² Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 1.

¹³³ Canada was also a significant supplier of Indian reactors prior to the 1974 test. Part of early U.S. assistance included the provision of heavy water, which required safeguards. U.S. Atomic Energy Commission, "Commission Decision on Sale of Heavy Water to India," Memorandum, 10 October 1956, Nuclear Non-Proliferation (Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP00276. This arrangement would become particularly problematic between Washington and New Delhi after India tested in 1974, and the U.S. passed the 1978 Nuclear Non-Proliferation Act.

¹³⁴ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 7.

¹³⁵ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 2.

¹³⁶ U.S. Atomic Energy Commission, "Ninth Report on Progress of Program for International Cooperation in Peaceful Uses of Atomic Energy," Letter, 30 August 1956, Nuclear Non-Proliferation (Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP00272, 7.

India sought to maintain the independence of its program and limit external interference with its nuclear development, the U.S. had few direct avenues of nuclear cooperation to affect Indian non-proliferation policy.

In addition to the nuclear issues, the main source of tension between the U.S. and India was a result of the Indo-Pakistan wars. The United States cut off arms to both India and Pakistan during the 1965 war, and had not resumed supplying them by the 1971 war. The suspension of U.S. military aid during the 1965 war, and that the U.S. failed to prevent Pakistan from using U.S. weapons against India, was cited a proof by some Indians that India could not depend on external power for protection.¹³⁷ Moreover, India turned to the Soviets to buy conventional weapons after the U.S. refused to supply them in 1965.¹³⁸ The relationship between New Delhi and Moscow would continue to develop and resulted in a steady source of weapons for India.

By the 1971 Indo-Pakistan war, the United States had not resumed supplying military assistance and was perceived as tilting toward supporting Pakistan. Further adding insult to injury, from the Indian perspective, occurred when the U.S. sailed the USS Enterprise aircraft carrier into the Bay of Bengal during the war. This move was viewed by some India leadership as nuclear coercion and has been held up since as a reason why Indian needs a nuclear capability to withstand the diplomatic pressures of great powers. Additionally, India had little confidence that it could rely on external

¹³⁷ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 4.

¹³⁸ U.S. Information Agency, "P.M. Gandhi's U.S. Visit," Unclassified Cable 15117, 19 June 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02238, 2.

support in the face of a nuclear threat by China. None of the great powers extended security agreements, and, as discussed above, the U.S. relationship was worsening to the extent that it had stopped providing conventional assistance. Further, in the midst of contentious Cold War politics, the United States eyed India's cooperation with the Soviet Union with increasing distrust, despite India's proclamations of 'nonalignment' between either of the divisive Cold War blocks.

India, for its part, was determined to not be dependent on the United States as it struggled to consolidate post-colonial independence and throw off any appurtenances of colonialism or external U.S. influences over its internal politics. As such, India under the new leadership of Indira Gandhi in 1966 took a more nationalist stance towards external interference. For example, after 1971, Gandhi requested the U.S. stop its economic aid missions and declared that India would no longer buy food from the U.S. on a concessional basis as a symbol of India independence.¹³⁹ Moreover, there are reports that Nixon and Gandhi clearly did not get along at all,¹⁴⁰ which lead to even more resistance on Gandhi's part to accommodate U.S. non-proliferation efforts that ran contrary to India's perceived interests.

The ultimate outcome of this dismal relationship is that the United States had little direct leverage with which to persuade India not to test in 1974. As recognized in Washington, "U.S. influence has drastically diminished over the past years and our

¹³⁹ Paul and Nayar, India in the World Order.

¹⁴⁰ Perkovich, India's Nuclear Bomb.

current unilateral ability to affect an Indian nuclear decision is marginal.”¹⁴¹ Indeed, relations were so poor it was predicted that a major and overly visible U.S. initiative “would probably produce an effect opposite to that intended and hasten, rather than delay, an Indian nuclear test.”¹⁴² Washington further understood that if the U.S. resumed arms sales to Pakistan, this would also shift the Indian balance towards testing.

In short, the U.S. was realistic that it would have difficulty in successfully influencing Indian policy. Washington realized that its rather poor relations with India did not put it in a real position to influence Indian nuclear decision-making. This made it that much more important for other states exercise their influence in prevent India from going nuclear. Yet, as discussed below, while the U.S. sought to encourage other states to pressure India to not test, this was also of limited effectiveness.

5. Other Patron States

Prior to the 1974 nuclear test, U.S. ability to influence Indian policy was relatively weak because it lacked significant cooperation with India. Other states, including the Soviet Union, Canada, the UK, and France had stronger ties with India in areas related to conventional weapons assistance and atomic energy development. In particular, India as a less developed state was dependent on outside assistance for its atomic energy program, making it vulnerable to pressure from these supplier states. Because the United States itself did not have a great degree of effective leverage with the Indians, it sought to encourage these states to use their influence to shape Indian nuclear

¹⁴¹ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 23.

¹⁴² Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 23.

policy. Thus, the U.S. sought to indirectly affect Indian nuclear policy by convincing other states to cooperate with the goals of the non-proliferation regime. Ultimately, the Soviet Union and France were less willing to pressure India on its nuclear program, while Canada and the UK were more willing to link their cooperation with India's non-nuclear stance.

a) Soviet Influence

The United States recognized early on that the Soviet Union was a potential source of leverage over India's nuclear program, and saw some value in enlisting Soviet support to persuade India from developments that might lead to a nuclear option.¹⁴³ India's ties with the Soviets increased as New Delhi relied on Moscow for economic and conventional weapons assistance, including MiG21 aircraft a few months before the 1962 Sino-Indian war.¹⁴⁴ In 1971, India and the Soviet Union further cemented their cooperative relationship by signing the Treaty of Friendship and Cooperation. The Soviet relationship with India, which was closer than that of the U.S. because Washington stopped the provision of conventional assistance during the Indo-Pak wars, meant that Moscow was in a better position to influence Indian policy in the years directly leading up to the 1974 test.¹⁴⁵

¹⁴³ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 3.

¹⁴⁴ Bhatia, India's Nuclear Bomb, 21-22.

¹⁴⁵ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 23.

The Soviet Union was also similarly interested as the United States in preventing the spread of nuclear weapons.¹⁴⁶ This meant that early on Moscow was reluctant to actively assist Indian with creating a nuclear option. For example, when Indian scientist Dr. Bhabha inquired about the possibility of a Soviet provided reactor that would enable India to make weapons grade plutonium, his request was deferred.¹⁴⁷ Yet, while the Soviets were unwilling to directly assist the Indian nuclear weapons program, Moscow was also not inclined to strain its friendly relationship with India over the issue.¹⁴⁸ As such, the Soviet Union was unlikely to cut off aid in an effort to influence India's nuclear weapons policy, even if India conducted a peaceful nuclear explosion or pursued a nuclear weapons program.¹⁴⁹

Thus, as recognized by Washington, the Soviet Union was in a position to influence India because of ties between the two states. However, even though Soviets generally preferred nuclear non-proliferation, it was unwilling to exert any significant leverage on India because it placed a higher priority on good relations with New Delhi. This was the consistent position the Soviets took for most of India's nuclear development, notwithstanding U.S. encouragement to exercise greater leverage over New Delhi's nuclear policy. As a result, Soviet patron state pressures for non-proliferation were relatively non-existent and therefore had little affect on India's nuclear posture.

¹⁴⁶ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 14.

¹⁴⁷ U.S. Atomic Energy Commission, "Development of an Indian Nuclear Reactor," no. NP00701, 3.

¹⁴⁸ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 14.

¹⁴⁹ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 6.

b) Nuclear Cooperation with the West

Early on India relied on Canada, the UK, and France to some extent, for financial and technology assistance related to its nuclear energy program. Because India preferred to obtain its nuclear technology from Western countries, this gave them some leverage over Indian nuclear decision-making, although France declined to exert its influence for non-proliferation purposes. Given the nature of the supplier relationship at the time, this effectively put India on notice that Canada, the UK and the U.S. opposed testing, regardless of whether it was labeled a PNE, but there was little precedent for India to rely on to predict how this would ultimately affect its nuclear program. As such, the Indians were surprised by the strength of Western supplier state reactions after the 1974 tests, and the extent to which it affected India's civilian and military nuclear programs.

India developed cooperative relationships with the United Kingdom and Canada, having formal agreements with both countries for reactors, parts, and materials for the development of atomic energy.¹⁵⁰ As noted by the U.S. government, “[a] common language, favored financial arrangements with the sterling bloc area, and membership in the commonwealth direct India's bilateral or intentional activities into English or Canadian channels.”¹⁵¹ This included Tarapur reactor built in 1968 and the Rajasthan power station build with Canadian assistance that came online in 1971.¹⁵² India also had

¹⁵⁰ Central Intelligence Agency, “Indian Nuclear Energy Program,” no. WM00026, 7.

¹⁵¹ Central Intelligence Agency, “Indian Nuclear Energy Program,” no. WM00026, 7.

¹⁵² Bhatia, India's Nuclear Bomb, 129-130 (citing George Quester, The Politics of Nuclear Proliferation (Baltimore: Johns Hopkins, 1973), 58-62).

a cooperative arrangement with the French government, beginning with joint research projects.¹⁵³

In terms of multilateral actions, the U.S. periodically talked with the UK, Canada, Japan, and France about India's nuclear designs, and believed that "[w]e can continue these discussions, trying to stimulate other countries to use their influence with the Indians to prevent or delay a nuclear decision."¹⁵⁴ In particular, the U.S. felt that discussions with the Canadians and British were "particularly pertinent since an Indian nuclear weapons program might involve material provided under an Indo-Canadian agreement...and since the British currently have increased influence in New Delhi as a result of their policy in 1971."¹⁵⁵ One avenue for doing this was to put India on notice that its primary nuclear suppliers considered peaceful nuclear explosions as a violation of the agreements, although there was substantial ambiguity as the legality of this interpretation. For this reason, India knew that testing in 1974 could affect its relations with its nuclear supplier states. However, given the differing interpretations of its contractual obligations, India could legitimately argue that it was within the terms of the agreements by labeling the test a PNE.

As for France, it increasingly became a major provider of technical assistance for India's nuclear energy and space fields.¹⁵⁶ This gave France increased ability to

¹⁵³ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 7.

¹⁵⁴ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 3.

¹⁵⁵ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 31.

¹⁵⁶ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 31.

influence Indian nuclear policy, but overall the French were less inclined to promote non-proliferation policies. For example, while the French indicated that they would act as if they had signed the NPT, they nonetheless “continued to be less restrictive than the US in providing India with nuclear equipment.”¹⁵⁷ As such, it was recommended that the U.S. hold further discussions with the French, and seek their cooperation in inhibiting India developing a nuclear device and delivery systems.¹⁵⁸

Despite U.S. encouragement to India’s suppliers to assist with delaying or preventing India from developing a weapons option, the Washington was not particularly sanguine that these countries would impose severe sanctions or that they would be effective. Rather, if India chose to test, U.S. analysts expected that other states’ response would be relatively mild, with the exception of the imposition of some penalties in the scientific field. The general lack of response from other states was even more likely if India labeled its explosion a PNE and disclaimed that it was part of a weapons program.¹⁵⁹ Washington further expected that to the extent that states would take action, it would be limited to scientific and technical areas.¹⁶⁰ U.S. analysts further stated that “[w]e are doubtful how far the French and the Soviets would be willing to go. Probably

¹⁵⁷ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 32.

¹⁵⁸ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 32.

¹⁵⁹ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 4-5.

¹⁶⁰ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 4-5.

they would make some noises of displeasure, but then not join in any multilateral effort to penalized the Indians.”¹⁶¹

There is some evidence that Indian leaders were concerned about international reactions related to the 1974 test. For example, even K. Subrahmanyam, one of India’s traditionally outspoken proponents of India acquiring an overt nuclear deterrence posture, “urged that India wait until the 1980s to go nuclear, when greater resources would be in hand and India would be more able to withstand international backlash.”¹⁶² Nonetheless, it appears the Gandhi government may have underestimated potential backlash to the test, even though it was labeled a PNE. Nuclear scientist Home Sethna indicated that the Indians thought the U.S. would stick to its fuel agreements for Tarapur.¹⁶³ The Indian scientists were further surprised by Canada’s sharp reaction.¹⁶⁴

India was also able to reduce its exposure by labeling the event a PNE, and further claiming that it did not intend to develop a nuclear weapons capability. This characterization kept it firmly out of realm of declaring that it was developing a weapons option, which would have caused an even larger breach with other states. This stance was essentially consistent with its previous posture that it had reserved the right to conduct PNEs, as distinct from a weapons test. It allowed external states, while perhaps condemning the tests, the ability to maintain relations and hope to continue to forestall a weapons program. The Soviet Union in particular, while interested in preventing

¹⁶¹ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 44.

¹⁶² Perkovich, India's Nuclear Bomb, 157.

¹⁶³ Perkovich, 174.

¹⁶⁴ Perkovich, 174.

proliferation, had little interest in cutting off and maintaining separation from India over the long term.

Some Western supplier states, especially Canada, were unwilling to carry on nuclear cooperation with India following the 1974 test and it created additional difficulties in the already limited U.S.-Indian nuclear relationship. As a result, India's nuclear development was considerably slowed after the test and became much more costly as it sought to gain self-sufficiency. Given these effects, India likely underestimated the extent to which its program was vulnerable to external assistance, a lesson it learned in subsequent years following the test.

C. Nuclear Non-Proliferation Regime

The Nuclear non-proliferation regime was in its infancy during the 1960s and 1970s, and began to develop simultaneously with India's nuclear program. Relevant measures during this time period included the establishment of the IAEA for tightening export controls, the 1963 Partial Test Ban Treaty (PTBT), and the 1968 Nuclear Non-proliferation Treaty (NPT). While India was a supporter of the IAEA and the PTBT, it refrained from signing the NPT. This meant that India was obligated to keep some nuclear facilities under safeguard restrictions and a promise not to conduct nuclear explosions above the earth's surface. However, India was not constrained by the NPT to not become a nuclear weapons state. The regime, as comprised of nascent norms and institutions, was therefore not a particularly strong constraining factor prior to the 1974 test. This is despite the fact that Indian rhetoric often supported nuclear disarmament during this time.

India was initially receptive to international agreements to ban nuclear weapons. This evidence suggests that India hoped that an international regime would develop and obviate its needs for a nuclear arsenal. Early on, Prime Minister Nehru pledged that India would not use atomic energy for other than peaceful purposes.¹⁶⁵ He further pushed President Eisenhower at the U.N. General Assembly in 1960 for progress on a nuclear test ban.¹⁶⁶ Prime Minister Nehru also urged the UK, U.S. and USSR to cease nuclear weapons testing.¹⁶⁷

India's interest in a test ban treaty coincided with Washington's desire to limit the horizontal spread of nuclear weapons and in the early 1960's, Washington began pushing for a test ban treaty. From the United States perspective, without the Treaty, eight countries would have the ability to achieve a basic nuclear weapons capability by the early 1970s.¹⁶⁸ When the Partial Test Ban Treaty opened for signature in 1963, Prime Minister Nehru was one of the first world leaders to sign the Treaty, proclaiming that the agreement will "take us towards disarmament and peace."¹⁶⁹ The Treaty also was signed a year before China began conducting its first nuclear tests and India likely hoped that the agreement would have some effect on constraining its neighbor. However, China did not sign the agreement and continued atmospheric testing through 1980. And of course, the

¹⁶⁵ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 7.

¹⁶⁶ Perkovich, India's Nuclear Bomb.

¹⁶⁷ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 7.

¹⁶⁸ Secretary of Defense to the President, "The Diffusion of Nuclear Weapons with and without a Test Ban Agreement," Memorandum, 12 February 1963, Nuclear Non-Proliferation (Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP00941, 1.

¹⁶⁹ Mirchandani, India's Nuclear Dilemma, 240.

terms of the treaty do not prohibit underground explosions. With testing still an option, India probably signed the PTBT because it did not conflict with New Delhi's ability to maintain a nuclear option, unlike the NPT.

India was also a staunch supporter of the IAEA, and took an active part in the UN discussions that led to the formation of the agency.¹⁷⁰ When the IAEA was created, India became a member and subjected some of its facilities to safeguards. New Delhi refused however, as it continues to do so to this day, to accept full scope safeguards on all of its nuclear facilities.

India also sought to rely on the principles of the non-proliferation regime in responding to the threat of China's nuclear program. For example, in response to a Chinese nuclear test, Prime Minister Shastri commented that India has "always held the view that the use of nuclear weapons should be banned by agreement and all nations in the world should unite to save the humanity from destruction."¹⁷¹ New Delhi also sought Washington's support in putting forward a non-proliferation resolution to the UN as a response to Chinese testing.¹⁷² Indeed, officials in the U.S. government characterized India at the time as being "publicly committed against Indian acquisition of nuclear weapons, and has vigorously pressed for a non-proliferation treaty in the UN."¹⁷³

¹⁷⁰ Central Intelligence Agency, "Indian Nuclear Energy Program," no. WM00026, 7.

¹⁷¹ Chester Bowles to U.S. Department of State, "Prime Minister Shastri Comments on the Chinese Nuclear Detonation," Unclassified Cable 1256, 23 October 1962, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01018, 1.

¹⁷² Chester Bowles, "Recent Nuclear Developments in India," Secret Report, 18 January 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01099, 1.

¹⁷³ "Value and Feasibility of a Nuclear Non-Proliferation Treaty," no. NP01070, 11-12.

This meant that one factor that might persuade India to maintain its policy of not developing nuclear weapons was if there was “meaningful international progress in the field of disarmament.”¹⁷⁴ Washington further understood that a failure to address India’s concerns vis-à-vis China’s nuclear testing, and realistic efforts towards disarmament would create further incentives for India’s leaders to choose a nuclear weapons program,¹⁷⁵ and “an embittered and disillusioned India will almost certainly go all out to become a nuclear power.”¹⁷⁶ In light of India’s concerns, Washington predicted that the longer it took to create international agreements limiting testing and non-proliferation, the less likely India would be to join them as China proceeded with its nuclear developments.¹⁷⁷ At the same time, as Washington recognized that New Delhi would not accede to a non-proliferation treaty that failed to restrict China’s nuclear weapons program, and there was no chance that Beijing would accept such restrictions.¹⁷⁸

The Nuclear Non-Proliferation Treaty was thus a sticking point for India. Under the terms of the NPT, India would not be recognized as a nuclear weapons state and as a signatory, would have been required giving up this option. This point was nonnegotiable for India, in light of China’s status as a nuclear weapons state under the NPT. In

¹⁷⁴ Central Intelligence Agency, “India’s Nuclear Weapons Policy,” no. WM00107, 7.

¹⁷⁵ Central Intelligence Agency, “Nuclear Weapons and Delivery Capabilities,” no. WM00052, 5.

¹⁷⁶ Bowles, “Recent Nuclear Developments in India,” no. NP01099, 1.

¹⁷⁷ U.S. Department of State, “Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement,” Secret Background Paper, 12 December 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01078, 11.

¹⁷⁸ Central Intelligence Agency, “India’s Nuclear Weapons Policy,” no. WM00107, 6.

particular, India was concerned that the agreement would threaten India's security as a non-nuclear weapons state versus its nuclear-armed adversary, China.¹⁷⁹ There was the additional concern for some Indian that its lack of a nuclear weapons capability would exclude it from top-level negotiations, such as on the UN Security Council, and that China would be included because of its nuclear weapons status.¹⁸⁰

New Delhi it resisted the pressure to join the NPT on the grounds that it was discriminatory and favored the 'have' nuclear weapons states at the expense of the 'have nots', a justification that has continued through the present time.¹⁸¹ This meant that even if China signed the NPT, India would remain opposed because it codified the existing nuclear order. At the same time, while India was not willing to sign the treaty in its present form, India also sought to assure the U.S. that its "recalcitrance would not be seen as hiding a secret desire to build a bomb."¹⁸²

Even after its refusal to sign the NPT, Washington still hoped that India could be persuaded to forego its own nuclear testing, or at least to delay a decision for some time. However, efforts to convince the Indians to defer detonating a nuclear device "would be

¹⁷⁹ Office of the Assistant Secretary of Defense, "Meeting between the Secretary of Defense and Mr. L.K. Jha, Tuesday, 18 April at 10 a.m.," Memorandum of Conversation, 25 April 1967, in National Security Archive Electronic Briefing Book No. 6: India and Pakistan – On the Nuclear Threshold, Joyce Battle, ed. (Washington D.C.: The National Security Archive), accessed at <http://www.gwu.edu/~nsarchiv/NSAEBB/>

¹⁸⁰ Rostow, "A Way of Thinking about Nuclear Proliferation," no. NP01046, 9.

¹⁸¹ There is almost universal consensus among Indian's that the NPT is a hypocritical structure designed to maintain a "nuclear apartheid" between "have" and "have not" nuclear states. Moreover, most believe that the "have" states will never really seek to dismantle their capabilities, as provided for under the NPT Treaty. See Jaswant Singh, Defending India (New Delhi: St. Martin's Press, Inc., 1999), and Jaswant Singh, "Against Nuclear Apartheid," Foreign Affairs 77, no. 5 (September 1998-October 1998).

¹⁸² Office of the Assistant Secretary of Defense, "Meeting between the Secretary of Defense and Mr. L.K. Jha, Tuesday, 18 April at 10 a.m.," 2.

more likely to be successful is we were able to hold out hope of progress on a Comprehensive Test Ban or some other major disarmament step.”¹⁸³ Yet, significant progress on nuclear disarmament was elusive, and China continued to remain outside the international non-proliferation framework.

In short, India was initially an active supporter of nuclear non-proliferation and disarmament. However, the realities of its regional security environment predominated and New Delhi stopped short of agreeing to terms that would limit its future ability to acquire a nuclear option and permanently relegate it to a non-nuclear state in contrast to China. Additionally, prior to the 1974 test, there were far fewer supplier state restrictions. This meant that after the test, India was affected by the regime to the extent that it lost access to nuclear technology and materials. However, this was a minor issue prior to the 1974 test, outside of the patron state sources of leverage discussed above.

Further, while India was unwilling to participate in the formal non-proliferation framework to the extent that it would limit its weapons ability, New Delhi also did not seek to entirely ignore or undermine the process. And as Pakistan began to further its nuclear development in the 1970s, India would invoke the principles of the non-proliferation regime in response. In this way, India sought to use the existing framework, combined with Indian nuclear restraint, as a way of directing international non-proliferation constraints on its adversary.

¹⁸³ Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 37.

D. Domestic Politics

While the above explanations largely focus on India's economic and political position vis-à-vis external constraints, other scholars contend that variation in India's nuclear posture is primarily the result of domestic considerations. The domestic level explanations can be divided into two categories. The first explanation suggests that Prime Minister Indira Gandhi decided to capitalize on popular support for the tests in order to reap the political benefits for struggling and weak government. The second explanation emphasizes India's general restraint in publicly acknowledging its capabilities throughout the course of its nuclear development and suggests that India's leaders have traditionally held moral and ethical reservations against relying on nuclear weapons for state security. Prime Minister Gandhi's decision to test then in 1974 was an aberration in India's nuclear history.

The first explanation largely focuses on explaining the break with India's traditional posture to test in 1974, while the second is used to explain India's posture of denying nuclear weapons intentions both before and after the tests. Taken together, the two explanations suggest that generally India's posture was determined by its reservations regarding the nuclear weapons but that enterprising politicians, presumably not hindered by moral doubts, broke this stance to capitalize on popular sentiment.¹⁸⁴

This study finds that while domestic calculations did play a role in informing the 1974 nuclear test, it was primarily in response to the general consensus among Indian leaders that India was required to respond to China's nuclear testing. There is however

¹⁸⁴ It is interesting to note the potential contradiction between the explanations that the Indian leaders' moral stance against nuclear weapons is not shared by the general population.

little evidentiary support that the 1974 test were mainly conducted to divert attention from India's domestic woes. Additionally, while some of India's leaders expressed moral doubts about relying on a nuclear weapons capability, all of them furthered the nuclear weapons program in significant ways. This suggests that notwithstanding their personal beliefs, India's leaders approached their decision-making with an eye to India's security requirements. Moreover, the real differences between most Indian leaders centered on how to divide scarce resources in a developing country with very real security problems.

The following discusses how the political consensus for a more robust nuclear policy created permissive conditions allowing Prime Minister Gandhi to test as soon as India was technologically capable. This is followed by a critique of the diversionary and moral theories of India's nuclear posture.

1. Domestic Political Pressures

China's nuclear program led to a debate among Indian leaders as to how to best respond to this threat. Over time and coinciding with continued, public advancements of China's nuclear weapons program, a clear majority of Indians supported a nuclear option. By the time India achieved the technical capability to test, a more robust nuclear policy was long overdue according to public sentiment. A peaceful nuclear explosion allowed the Gandhi government to publicly respond to cross-party calls for an Indian response to Chinese testing. At the same time, by labeling the explosion peaceful, India could seek to mitigate international and regional reactions to the test.

a) Domestic Political Support for a More Robust Nuclear Policy

The perceived Chinese threat substantially increased Indian domestic support for testing and developing a nuclear option. This shift in opinion occurred both among the elites—scientists, policymakers, members of parliament, and the press—as well as the general population. Several of the major political parties reflected the shift, with opposition parties calling for a change in policy, as well as some members of the ruling Congress party supporting a more robust nuclear policy.

The consensus that India should not develop nuclear weapons but nuclear energy for peaceful purposes began to break down with India's loss in the 1962 Himalayan war with China.¹⁸⁵ The next year rumors began that China was developing nuclear weapons, followed by testing in 1964. Moreover, the 1965 war with Pakistan, and China's threatened intervention in the conflict, gave further impetus to those that favored developing nuclear weapons,¹⁸⁶ and added more supporters to their cause. China's explosion of a thermonuclear device in 1967 also underscored that Indian nuclear advancement lagged significantly.

These events led to calls to develop nuclear weapons by supporting members from both the opposition parties and ruling Congress Party in India.¹⁸⁷ The opposition parties, in particular the Jana Sangh (which was a precursor to the BJP), criticized the

¹⁸⁵ Bhatia, India's Nuclear Bomb, 106.

¹⁸⁶ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 3.

¹⁸⁷ Warren H. Donnelly, "India and Nuclear Weapons," Unclassified Report, 10 July 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02483, 5.

government's existing nuclear policy. For example, the Jana Sangh argued that it was "criminal folly" that India did not develop its nuclear capability before China.¹⁸⁸

Members of the ruling Congress Party were themselves split over how to respond to the Chinese tests. Reportedly, there were three different groups within the Congress Party: (1) one group that wanted the Indian nuclear question "kept under constant re-examination"; (2) a second group that included Prime Minister Shastri and opposed bomb construction; and (3) a small group that favored immediate construction of a bomb.¹⁸⁹

Of those that favored a building a bomb or rethinking the question, they reportedly took this position—not because they wished to embarrass the government on this issue—but because they had national security concerns.¹⁹⁰ There was a further concern that Indian prestige would suffer vis-à-vis China, which would diminish Indian influence. Additionally, those that supported bomb construction, both within and outside the Congress Party, did so regardless of cost or the Indian government's previously pledges to restrict itself to the peaceful uses of nuclear energy.¹⁹¹

Not everyone agreed that India should pursue nuclear weapons, as there were splits within the Congress and Swatantra parties, and the Communist Party opposed strongly opposed the development of nuclear weapons.¹⁹² As previously discussed, there

¹⁸⁸ T.T. Poulouse, "India's Nuclear Policy" in Perspectives of India's Nuclear Policy, T.T. Poulouse, ed. (New Delhi: Young Asia, 1978), 105.

¹⁸⁹ Jacobson, "[Excised] Views on India and the Bomb," no. NP01050, 2.

¹⁹⁰ Jacobson, "[Excised] Views on India and the Bomb," no. NP01050, 2.

¹⁹¹ Bowles, "Debate among the Indians," no. NP01031.

¹⁹² Bhatia, India's Nuclear Bomb, 111.

were a number of economic and regional factors counseling against the acquisition of nuclear weapons. Some opponents felt that India should first become economically strong before spending “gigantic outlays” into an atomic program,¹⁹³ and believed that India would not be able to compete against China. Other opponents were more contingent with their opinions and preferred that India first pursued great power protection, and failing that, develop a nuclear capability in response to China.¹⁹⁴ In short, where Indian leaders stood on the issue of a more robust nuclear policy was largely in response to the severity of perceived security threats and how to best manage them.

Prime Minister Shastri was himself reluctant to pursue a different nuclear course.¹⁹⁵ However, this position was subject to increasing scrutiny from members of parliament, his own government, and the Indian press as China continued to make substantial progress with its nuclear program.¹⁹⁶ The domestic debate resulted in Shastri making decisions that would enable India to test. At the same time, the reality was that India had not yet developed a nuclear explosive capability, so there was a limited range of options available to Shastri to respond to Chinese developments. Because of this technology limitation, he did not have to ultimately decide whether India should acquire

¹⁹³ Chester Bowles to U.S. Department of State, “Editorial Comments in the Indian Press Concerning the Chinese Nuclear Detonation,” Unclassified Cable 1263, 23 October 1964, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01019, 1.

¹⁹⁴ Bhatia, India's Nuclear Bomb, 113 and 121.

¹⁹⁵ Chester Bowles to U.S. Department of State, “Effect of Chinese Nuclear Tests on India's Desires to Speed Up Its Nuclear Program,” Unclassified Cable 02253, 10 February 1965, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01106, 1.

¹⁹⁶ Bowles, “Effect of Chinese Nuclear Tests on India's Desires to Speed Up Its Nuclear Program,” no. NP01106, 1.

nuclear weapons or not since India was ready to either test or produce nuclear weapons. Instead, he set in motion the nuclear explosives program that would bring India closer to having a weapons option in the future.

To this end, Prime Minister Shastri sought an estimate of how what would be involved for India to conduct an underground ‘explosion.’¹⁹⁷ He also made decisions in 1965 to develop nuclear explosives technology. Shastri further shifted from existing official policy by announcing that India would only develop nuclear energy for peaceful purposes, while at the same time he left open the possibility that India could change its policy in the future.¹⁹⁸ This change is attributed, in part, to the fact that Shastri had difficulty in getting formal Congress Party support for the maintaining the existing policy, and had to acknowledge that the policy was subject to change.¹⁹⁹ Further, by keeping nuclear policy under continuing study and reassessment, Shastri attempted to appease his critics by qualifying the original statement that Indian policy had not changed.²⁰⁰ Indira Gandhi inherited these domestic political pressures—which continued to build in conjunction with continued Chinese nuclear development—when she came to office as India’s Prime Minister in 1966. As Prime Minister, Indira Gandhi further advanced the nuclear explosives program that would enable India to test in 1974.

¹⁹⁷ Robert S. Rochlin, "Comments on Non-Proliferation Background Papers of December 12, 1964," Secret Memorandum, 31 December 1964, Japan and the U.S. (Washington, D.C.: The National Security Archive), no. JU00402, 2; Bowles, "Debate among the Indians," no. NP01031, 4.

¹⁹⁸ Perkovich, 68.

¹⁹⁹ Central Intelligence Agency, "India's Nuclear Weapons Policy," no. WM00107, 3

²⁰⁰ Defense Intelligence Agency, "Press Coverage of India's Developing Nuclear Capability," no. NP01060, 1-2.

By the late 1960s, a substantial majority of the general population favored India having an independent nuclear capability, and this sentiment was particularly strong among the educated, urban elite.²⁰¹ By 1970 and after “China’s latest success in space, a group of eminent Indian scientists, academicians, and politicians decided by an overwhelming majority over the weekend that the Government should revise its present policy and produce the atomic bomb immediately.”²⁰² The previously expressed rationales still existed, that India’s prestige had suffered with Chinese testing and that if China used nuclear weapons in Asia, India would be targeted.²⁰³ And while there was still dissent as to whether India should acquire atomic weapons, it was likely that a clear majority supported having peaceful nuclear explosive technology as one step short of actually making weapons.²⁰⁴

Prime Minister Gandhi reportedly described the pressure on her government to conduct the test as:

We don’t want a bomb; we just want an explosion. In the diplomatic field, the lack of a demonstration of our nuclear capacity has been a drawback—and one that this government thinks it will not be able to withstand much longer. Every time there is a bang from China, the pressure goes up. This government, with troubles at home and a general election next year, is in no position to withstand pressures.²⁰⁵

²⁰¹ Donnelly, “India and Nuclear Weapons,” no. NP02483, 5-6.

²⁰² The Times, “Atom Bomb Urged for India,” Article, 11 May 1970, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01281, 1.

²⁰³ The Times, “Atom Bomb Urged for India,” no. NP01281, 1.

²⁰⁴ Bhatia, India’s Nuclear Bomb, 134.

²⁰⁵ Perkovich, India’s Nuclear Bomb, 120.

This statement contains the amalgam of increasing domestic pressures based on Chinese testing, prestige concerns, and domestic problems. However, as to the comment that India did not want a bomb, the Prime Minister's private actions would belie this disclaimer, as she advanced India's bomb program and delivery systems during her tenure.

While there was considerable domestic political pressure to test, special interests appeared to play a limited or nonexistent role in the decision to test. Some Indian press reports had suggested that scientific interests played a role in the 1974 explosion. The identified special interest was that the nuclear scientific community wanted to test to regain credibility for progress that was often behind schedule with cost overruns.²⁰⁶ This would take the pressure off of India's perceived failing nuclear power program.²⁰⁷ The scientists also wanted to test the validity of their designs. However, there is little evidence that the scientists had any power to make the decision, and were limited to lobbying the Prime Minister, who had the authority to authorize the tests. Moreover, these concerns and scientific lobbying continued following the test and were directly rejected on a number of occasions. This meant that while the scientists had an avenue of influence with the Prime Minister, the latter was firmly in control of the decision-making.

The military was also kept largely out of nuclear policymaking. To the extent that its leaders weighed in on the early debate, they did so with statements and analysis

²⁰⁶ J. Bruce Amstutz to U.S. Department of State, "Journalist Alleges India Has One Atomic Bomb Ready in Reserve," Limited Official Use, Cable 03285, 4 September 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01915, 1.

²⁰⁷ Amstutz, "Journalist Alleges India Has One Atomic Bomb Ready in Reserve," no. NP01915, 1.

generally suggesting that India's primary threat remained conventional in nature, notwithstanding the continued Chinese nuclear testing. As a result, the military was wary of any program that would divert resources from conventional preparations. Yet, there was some support for continued work on a nuclear program, viewed through a long-term lens of requiring appropriate delivery systems for deterrence against China, and as long such a program did not affect the resource allocations for conventional systems.²⁰⁸

In short, the 1962 military defeat coupled with the Chinese nuclear tests in 1964 set off a wave of political debate as to how India should best respond to its changed security environment. As China continued to test, political opinion—particularly among the elites, and reflected in the political parties—demanded that the government undertake a more robust nuclear policy in response. This set in motion the decisions to develop nuclear explosive capability, which came to fruition in 1973, with the test following shortly thereafter. Thus, China caused the fundamental shift in Indian nuclear thinking, with political pressures compelling a timely response.²⁰⁹

b) Timing of the Decision to Test

Notwithstanding the domestic debate, India did not have the technological capability initially to respond to Chinese advancements. For this reason, the timing of the test was based in large part on when the capability was actually developed. That is not to discount the fact that Prime Minister Gandhi was under domestic pressure to respond—

²⁰⁸ See Mirchandani, *India's Nuclear Dilemma*, 54-56, for a survey of India's military views related to the utility of nuclear weapons to address the threat posed by China.

²⁰⁹ It is not clear when Indian leaders became aware of Pakistan's 1972 decision to pursue nuclear weapons. There is evidence that India knew of the Pakistani program following the 1974 test.

she was. However, it does suggest that arguments that are based on a public diversionary tactic as dictating the timing are much less compelling.

Indira Gandhi came to power in 1966 as Prime Minister of a country that had seen two wars within three years, and would have to face a third war with Pakistan in 1971. The very closed economy was devastated from war, and there was recurring widespread famine, internal sectarian violence, and sluggish economic growth for several years.²¹⁰ And of course, the Chinese continued to make very public gains with their declared nuclear weapons program.

Against this backdrop, it is speculated that test may have been conducted to boost Prime Minister Gandhi's popularity in advance of upcoming elections. Some observers explained the test as a way to salvage Prime Minister Gandhi's image.²¹¹ It was suggested that she decided to test "in order to give sagging Indian morale a psychological boost in the face of increasing domestic disillusionment and discontent, rampant inflation, and serious food problems."²¹² The timing of the test served to divert public opinion from the government's "mounting domestic problems," while also boosting India's international prestige.²¹³ It was also suggested that a further benefit from the test

²¹⁰ For example, Indian economic growth averaged 1.65% from 1971-1974, data compiled from the World Bank, "World Development Indicators," 1997.

²¹¹ Amstutz, "Journalist Alleges India Has One Atomic Bomb Ready in Reserve," no. NP01915, 1.

²¹² Sidney Sober, "Indian Nuclear Development – NSSM 156," Secret Cover Memorandum, 31 May 1974, Presidential Directives, Part II (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. PR01076, 4.

²¹³ Central Intelligence Agency, "Central Intelligence Bulletin—India," Top Secret, National Intelligence Bulletin, 20 May 1974, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00167, 1.

prior to upcoming elections would be to strengthen Indian nationalism, a political basis that Prime Minister Gandhi was cultivating.²¹⁴ In short, the explanation for the timing of the test in 1974 is that Prime Minister Gandhi tested as a way to boost her popularity shortly before the scheduled upcoming elections the following year.

While conducting a nuclear test could potentially further these interests,²¹⁵ the diversionary explanation for the timing suffers from two analytic deficiencies.²¹⁶ First, the groundwork for the tests, which included both the technical capability and political justifications, began years earlier and at a time that Prime Minister Gandhi was extremely popular. Second, testing a year later would have put the test in closer proximity to the scheduled elections, when she would have wanted a surge in popularity.

After coming to power in 1966 and conducting a review of India's nuclear program, Prime Minister Gandhi continued the nuclear explosives program. The design for the nuclear explosive device that would be used for India's first tests was initiated in 1968.²¹⁷ At this point, there were sufficient stocks of plutonium to begin test preparations.²¹⁸ Testing also required a fast breeder reactor to conduct theoretical

²¹⁴ Eliot, "NSSM 156 on Indian Nuclear Developments," no. PR01075, 9.

²¹⁵ While perhaps the test was politically motivated, in part, to provide a boost in popularity for the upcoming elections, it actually did little in the long run for Gandhi's political survival as the chronic internal problems remained. Gandhi declared a state of emergency and suspended the upcoming elections the year following the test.

²¹⁶ There is no written record of her decision to test, and she did not consult or inform all of her cabinet colleagues of her decision, and others were informed shortly before the test. Bhatia, India's Nuclear Bomb, 145. As Prime Minister it was within her authority to order the tests without consultation.

²¹⁷ Perkovich, 141.

²¹⁸ Bhatia, India's Nuclear Bomb, 141.

calculations. Prime Minister Gandhi approved the Purnima reactor, which was completed in 1972.²¹⁹ In 1972 she gave the final authorization to take the final steps and assemble the device, and the same year explorations for possible test sites began.²²⁰ In the meantime, Indian public rhetoric increased justifying the legitimacy of conducting PNEs. The technical issues related to testing were resolved by 1973.²²¹

The fact that she authorized the test a couple of years in advance of the actual test suggest that immediate political concerns were not the proximate cause of her decision. Furthermore, when Prime Minister Gandhi made the decisions to continue work on nuclear explosives, she enjoyed widespread public support. For example, U.S. estimates noted that “[p]ublic opinion, in its present nationalist mood, would probably favor tests, although, in the wake of India’s victory over Pakistan, the political pressures for going nuclear are less than a year ago [1971].”²²² Her political position in 1972, the year that she approved assembling a nuclear explosive device, was further described as “unassailable” given India’s victory over Pakistan in the 1971 war, and the “liberation” of Bangladesh.²²³ And finally, Indira Gandhi herself indicated that the PNE was conducted when the scientists were ready.²²⁴

²¹⁹ Bhatia, India’s Nuclear Bomb, 141.

²²⁰ Perkovich, 146 and 171.

²²¹ Abraham, The Making of the Indian Atomic Bomb, 142.

²²² Eliot, “NSSM 156 on Indian Nuclear Developments,” no. PR01075, 1.

²²³ Perkovich, 166.

²²⁴ Indira Gandhi, cited in Perkovich, 175.

The second analytic reason for questioning the diversionary explanation is that she would have garnered greater political impact by testing in 1975, the year before elections were scheduled to be held. Shortly after the tests, enthusiasm quickly waned and the previous issues related to food shortages, high prices, and labor and political unrest dominated.²²⁵ It is possible that Prime Minister Gandhi she did not accurately predict the life cycle of popularity from the tests, but it seems unlikely that as a political veteran that she expected the nuclear developments to long overshadow the immediate concerns much of the population was facing.

For these reasons, it is likely that the timing of the test was less because of the general elections coming up and more based on the continuing pressures from the Chinese program combined with having achieved the technological capability to test. This means that Prime Minister Gandhi likely would have test earlier if she would have had the option.

2. Moral Constraints

Some analysts point to moral opposition to nuclear weapons as a reason that India adopted nuclear restraint. Both prior to the 1974 test and afterwards, Indian leaders rejected acquiring a nuclear weapons capability on the basis of the enormously destructive power of the weapons. This sense of moralism appears to come largely from the ruling elite, given the general widespread support for an Indian nuclear program among the public. Thus, whether India test are not, would be contingent, at least in part,

²²⁵ U.S. Department of State, "India: Uncertainty over Nuclear Policy," Confidential Intelligence Note, 13 June 1974, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00169, 2.

on the moral preferences of the Prime Minister as the ultimate decision maker. However, this perspective is undercut by evidence that Indian Prime Ministers, even those morally opposed to nuclear weapons, furthered India's military program. This explanation also fails to explain why Indira Gandhi, who apparently had no moral compunction with nuclear weapons, did not continue testing after 1974. I first outline the basic argument for a morally informed nuclear posture, followed by evidence that suggests Indian regional security problems trumped a doctrine of nonviolence.

a) The Argument in Support of Moral Constraints

Some scholars have suggested that the Indian conceptions of morality and nonviolence are at odds with nuclear weapons development and have attributed this stance as having a significant effect on India's restrained nuclear policy.²²⁶ For example, Perkovich argues that "for decades Indian leaders and citizens genuinely expressed moral and existential doubts about possessing nuclear weapons, even as the capability to do so was in hand. This distinguished India from the six earlier nuclear-weapons states, all of whom developed and deployed nuclear weapons as soon as they physically could with no moral pause."²²⁷ These moral and ethical doubts conceivably translated into a policy of nuclear ambiguity, which put off deciding India's nuclear fate for decades.

From this perspective, since Indian independence in 1947 and throughout its nuclear development, India has sought to incorporate moral and ethical constraints on its own domestic nuclear program and in the international environment at large. This

²²⁶ Perkovich, *India's Nuclear Bomb*, 6.

²²⁷ Perkovich, *India's Nuclear Bomb*, 57.

modern moral vision largely rests on the Gandhian tradition of nonviolence. Gandhi was abhorred by the United States bombing of Hiroshima and Nagasaki at the end of World War II and “believed that the bomb would bring moral devastation on those who developed and used it.”²²⁸ Since Gandhi was assassinated shortly after Indian independence, it was his handpicked successor Jawaharlal Nehru who would have to struggle with the policy implications of combining morality and nuclear weapons.

Statements during Nehru’s administration suggest that Indian leaders strongly opposed nuclear weapons. For example, Indian Defense Minister Katju declared: “There has been a great deal of talk about nuclear weapons, atomic energy and all that. We do not want them. Our whole foreign policy is based on it. We hate bombs, atom bombs and hydrogen bombs and it would be ridiculous, I suggest, for India with its declared policies and its very limited resources to think on these lines at all.”²²⁹

In line with his personal moral beliefs, Nehru consistently proposed international measures to limit the development and spread of nuclear weapons during his tenure in office. Under his leadership, India during the 1950’s presented eight different unilateral and multilateral disarmament initiatives to the UN and argued against the moral and ethical implications of a world filled with nuclear weapons.²³⁰ Early on, India also helped found the IAEA in 1957 and signed the PTBT in 1963. India’s moral stance has

²²⁸ Cortright and Mattoo, India and the Bomb: Public Opinion and Nuclear Options, 6.

²²⁹ Bhatia, India's Nuclear Bomb, 93.

²³⁰ Aabha Dixit, "Status Quo: Maintaining Nuclear Ambiguity," in India and the Bomb: Public Opinion and Nuclear Options, David Cortright and Amitabh Mattoo, eds. (Notre Dame: Notre Dame University Press, 1996), 55.

consistently sought to promote peaceful nuclear energy, prohibition and disarmament of nuclear weapons and “equity, fairness, and justice in the negotiation of international agreements on nuclear nonproliferation.”²³¹ Integral to this international critique, India also sought to highlight the apparent hypocrisy of the non-proliferation regime, as embodied in the NPT, which sought to limit the horizontal spread of nuclear weapons while the first five nuclear states continued to refine and expand their nuclear arsenals.

In terms of India’s own domestic nuclear development, since Nehru was morally opposed to building nuclear weapons, he consistently indicated that India would not take this path while it sought to develop peaceful nuclear energy to support India’s economic and technological growth. This moral perspective was similarly reflected in Nehru’s successors and most Indian Prime Ministers, including Shastri, Desai, Rajiv Gandhi and Rao, who were all personally opposed to relying on the weaponization of India’s nuclear capabilities for state security. With the exception of Indira Gandhi of the Congress Party and Vajpayee of the BJP, most of India’s leaders articulated in domestic and international forums the importance of a moral and ethical foreign policy that prevented the development and use of nuclear weapons.

b) Weighing Moral and Ethical Constraints

There are limits to how much a moral, culturally based explanation can account for Indian nuclear policy, primarily because the actions of Indian leaders have differed substantially from their rhetoric. There is no question that many of India’s Prime

²³¹ David Cortright and Amitabh Mattoo, eds., India and the Bomb: Public Opinion and Nuclear Options (Notre Dame: Notre Dame University Press, 1996), 8.

Ministers were personally influenced by the beliefs of Gandhi and ahimsa, or nonviolence. Still, the evidence suggests that the dictates of providing for state security, both militarily and diplomatically, have compelled Indian leaders despite their moral reservations to develop nuclear weapons capabilities for India.

Nehru himself was concerned that India's previously backward military technology had allowed foreign occupation.²³² He therefore sought to support India's science and technology, including in the nuclear field. Nehru also seemed to be significantly influenced by the need to pursue nuclear capabilities, heightened by India's regional security problems. As early as 1958, while claiming that India would never build nuclear weapons, he also claimed that India could have a bomb in as early as 3-4 years.²³³ In retrospect this was clearly an exaggeration of the progress and pace of Indian development, but also suggests that Nehru was aware of the potential deterrence aspect of the bomb. As it were, India would not have the material, equipment, and designs necessary for detonating a nuclear weapon in anything like three or four years from 1958—indeed it would take until 1974 before India has the requisite research and technology to test.²³⁴

Not only did Nehru suggest a potential deterrent function for the nuclear program, he furthered the nuclear program. Nehru appointed Dr. Bhabha to the head of the Indian Atomic Energy Commission—who ardently believed in India having the capability to

²³² Donnelly, "India and Nuclear Weapons," no. NP02483, 5.

²³³ Perkovich, India's Nuclear Bomb, 35.

²³⁴ Perkovich, India's Nuclear Bomb, 35.

build nuclear weapons—and provided the resources to create a scientific base on which the nuclear explosive program would be built. Nehru also kept India from giving up the option early on under safeguard agreements.

As the Indian security environment only continued to worsen on a regional level throughout the 1960's with the 1962 border war with China, 1964 Chinese nuclear test at Lop Nur, security considerations played an important role in Nehru's decision-making. It was Nehru who, in 1962, while being "vehemently against a test" reportedly told Bhabha to "speed up efforts to develop the capability for a peaceful nuclear explosion."²³⁵ Further, during this time period that a general waning of India's global disarmament approach began with only initiating four initiatives proposed from 1960-1974.²³⁶

The moral stance was further weakened when Shastri and Indira Gandhi strayed from the rigid no-use policy and turned to more ambiguous stance based on security concerns.²³⁷ In 1964 Shastri came to power following Nehru and as "a Gandhian, was initially horrified at the prospect of India ever developing nuclear weapons."²³⁸ Shastri further sought to limit India's regional engagements to prevent an arms race given the domestic problems of food shortages and sought security commitments abroad to avoid

²³⁵ Chengappa, Weapons of Peace, 89.

²³⁶ Dixit, "Status Quo: Maintaining Nuclear Ambiguity," 58.

²³⁷ Dixit, "Status Quo: Maintaining Nuclear Ambiguity," 59.

²³⁸ Chengappa, Weapons of Peace, 89. Others dispute that Nehru truly believed in pacifism as inherited from Mahatma Gandhi. For example, Bharat Karnad argues that Nehru's moral stance was a strategy designed to deflect external pressure on India's nuclear program, which Nehru saw as having a weapons component. Nehru thus used the moral stance as a practical response to further India's security goals. Bharat Karnad, Nuclear Weapons & Indian Security: The Realist Foundations of Strategy (Delhi: Macmillan India Limited, 2002), 71.

developing a nuclear capability. However, the established nuclear weapons states were unwilling to provide guarantees and he ultimately allowed the scientists to go ahead with developing a peaceful nuclear weapons device.²³⁹ Thus, while Shastri was personally opposed to nuclear weapons, he also took a further step towards an Indian nuclear option by acknowledging to the Indian parliament that India had a right to conduct peaceful nuclear explosions, which opened the door for India to develop a bomb.²⁴⁰

Shastri died of a heart attack in 1966 and Indira Gandhi succeeded him in office. Gandhi herself did not appear to be morally concerned with the nature of nuclear weapons and made the series of decisions necessary to conduct the nuclear tests.²⁴¹ Her perspective was supported by other scientists and politicians, that according to U.S. authors, “cast Ahimsa (doctrine of harmlessness to all that lives) to the winds” in reaction to the Chinese space launch and thus would never sign the non-proliferation treaty.²⁴²

When Indira Gandhi chose to test in 1974 as soon as India had the technical ability, she carefully emphasized the “nonviolent” aspects of the tests by arguing that they were “peaceful nuclear explosion” which would ultimately help Indian development. Yet, there is little indication that she was restrained in declaring India a nuclear weapons state by focusing on the “peaceful” aspects of nuclear development because she was

²³⁹ Chengappa, Weapons of Peace, 89.

²⁴⁰ Perkovich, India's Nuclear Bomb, 83.

²⁴¹ Perkovich, India's Nuclear Bomb. Sarabhai, the top nuclear scientist she appointed after Dr. Bhabha's death, reportedly had an aversion to nuclear weapons and slowed the program down. Other literature disputes the assertion that he slowed the program down, and actually suggests he supported the explosives program. Regardless, Gandhi also appointed Dr. Ramanna who enthusiastically worked toward the Indian test.

²⁴² The Times, “Atom Bomb Urged for India,” no. NP01281, 1.

informed by the same moral considerations as her father, Nehru. Indeed, given earlier analysis in this chapter, her description of the explosion was largely seen as an international justification for what at the time was an arguably legitimate pursuit of nuclear power.

In short, even India's most vocal proponents of the evils of nuclear bombs took steps to further India's own weapons program. This suggests at a minimum, regional security concerns outweighed Indian preferences to refrain from acquiring nuclear weapons. Additionally, there were Indian leaders with no significant moral reservations that did not declare India a nuclear weapons state, including Indira Gandhi. This suggests that other factors are more relevant for determining India's nuclear posture.

II. Explaining Indian Nuclear Ambiguity, 1974-1990

These trends are despite the host of domestic challenges and significant regional security pressures that have faced India since independence in 1947. The reality is that India as a developing power has been subject to a myriad of concerns that have threatened to undermine the viability of it as a nation-state and its leaders have had to balance these demands while seeking to throw off the history of colonialism. Throughout its post-independence history, India has had to democratically govern one of world's largest and poorest populations, cope with internal identity conflicts, and fight four major wars with its neighbors China and Pakistan while simultaneously battling famine, slow economic growth and legacies of colonialism. It is against this background that India has developed, considerably through indigenous channels, a civil and military nuclear program.

In particular, the challenges of nation building have made Indian leaders vulnerable to the economic, material and technological non-proliferation constraints imposed by the United States and have led to an opaque nuclear posture for most of India's nuclear development. A state that is facing these kinds of domestic and international challenges can ill afford to be denied technology, development aid and loans, or face economic sanctions for openly defying U.S. non-proliferation efforts. These lessons were learned by India after the 1974 tests and have played an important role in Indian decision-making calculations. Not only has India sought to avoid the negative ramifications of economic and technologic denial, India has attempted, with varying degrees of intensity and success, to engage the United States enough to garner trade and advanced technology benefits. Even during the Cold War and since the early 1980s, India has identified the United States as its preferred source of high technology and trade and Indian efforts to gain access to these resources has led to mutual exchange in which India has maintained a restrained nuclear posture in return for some cooperation in these areas with the United States.²⁴³

Moreover, given the domestic demands on the economy associate with a large, divided and very poor population with basic services to provide, India could not afford to spark costly confrontations or provoking an arms race with its neighbors Pakistan and

²⁴³ Stephen P. Cohen, "Why Did India "Go Nuclear"?" in India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. (Boulder: Lynne Rienner Publishers, 2000), 16. During most of the Cold War, India had a closer political and military alliance with the Soviet Union, which provided India with a significant portion of its conventional weaponry. Further, India's economy has been relatively closed to external trade for most of its history; however, with each effort to liberalize its economy or to gain advanced technology, India has always preferred to do so with the West rather than the Soviets/Russia. Nicholas Platt to Robert C. McFarlane, "Fact Sheets for the President's Use During Meetings with Rajiv Gandhi," Memorandum, 31 May 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and ProQuest/Chadwick-Healey, 1992), no. NP02225.

China. Indian economic and scientific struggle from 1974 through the mid-1990s, combined with external constraints in the form of U.S. non-proliferation pressures, suggest important reasons for Indian restraint that has prevented it from overtly demonstrating its nuclear capabilities and intentions through 1998.

The following traces India's struggle to consolidate the state while developing a nuclear capability, with several turning points in its history, following the 1974 tests, the consideration of testing from 1980-1984, 1995 and again in 1996. The final culmination of decades of research and investment in a nuclear program finally came to fruition in 1998 when India tested a series of nuclear explosions and declared itself a nuclear weapons state. This change in posture occurred after India was able to establish a closer relationship to the United States, combined with significant economic growth and generally benign security environment during the 1990s, creating the permissive conditions for India to test its nuclear capabilities that had been in development for decades.

A. Description of Indian Ambiguity 1974-1990

After the 1974 nuclear test, Indian leaders reverted back to an ambiguous posture that did not include further peaceful nuclear explosions or declaring itself a nuclear weapons state. This stance primarily consisted of Indian leaders denying that India possessed nuclear weapons and claiming that the nuclear program was for peaceful purposes only. However, India reserved the right to change its nuclear policy, meaning it retained the option to build nuclear weapons. And as Pakistan continued to develop its nuclear weapons program, Indian leaders increasingly began to make India's restraint

contingent on Pakistani nuclear intentions and also began to further emphasize that India had the capability to produce nuclear weapons.

For example, Prime Minister Rajiv Gandhi stated in the mid-1980s that India had the ability to make nuclear weapons “for almost eleven years now, and we have not transformed that capability into weapons.”²⁴⁴ He also implied that India might change its policy and produce nuclear weapons if Pakistan went too far with its nuclear activities, as “possession of nuclear weapons by Pakistan is very disturbing. Islamabad has already attacked us three times. If they have the bomb that would change all the rules of the game.”²⁴⁵ Gandhi further stated that if India decided to become a nuclear weapons state, “it would take a few weeks or a few months.”²⁴⁶ Thus, India’s official policy was one of not producing nuclear weapons, but it maintained a hedge by reserving the option.

India also retained the right to conduct further tests, although it did not do so. While Indian leaders also did not give up the option of further testing, there were some differences between Prime Ministers as to the value of conducting further peaceful nuclear tests. For example, a few years after the test, India’s new Prime Minister Morarji Desai signaled that the government did not believe in nuclear weapons and further doubted the necessity of conducting peaceful nuclear explosions.²⁴⁷ Indira Gandhi returned to power in 1980 and she did not rule out the possibility of further tests. She

²⁴⁴ Donnelly, “India and Nuclear Weapons,” no. NP02483, 4.

²⁴⁵ Donnelly, “India and Nuclear Weapons,” no. NP02483, 4.

²⁴⁶ Donnelly, “India and Nuclear Weapons,” no. NP02483, 4.

²⁴⁷ Perkovich, India’s Nuclear Bomb, 201.

indicated that while the government was committed to the use of atomic energy for peaceful uses only, it would not hesitate from carrying out nuclear explosions or “whatever is necessary in the national interests.”²⁴⁸ While reserving the right to conduct peaceful nuclear explosions, the government nonetheless refrained from doing so.

Against this backdrop, Prime Minister Indira Gandhi considered testing in 1981 and again in 1983-1984. During the 1990s, Indian Prime Ministers again calculated the consequences of nuclear testing in 1992-1993, 1995, 1996, and then finally did so in 1998. The following discusses the circumstances causing to Indian nuclear restraint during these critical junctures.

B. Regional Security Environment

After the 1974 nuclear test, Pakistan was motivated to speed up its nuclear weapons development. This meant that from the late 1970s through the late 1980s, India’s security planners had to figure out the best way to deal with Pakistan’s growing capability. At the same time, Indian leaders had a broader interest in avoiding a regional arms race or conflict with its neighbors. Nuclear ambiguity facilitated Indian navigation of these countervailing demands.

The following details the impact of the Indian nuclear test on Pakistani nuclear motivations and India’s response to this growing threat. India initially responded by trying to reassure Islamabad that it would not produce nuclear weapons; this helped calm Pakistani fears but did not stop the latter’s efforts to develop nuclear weapons. India in

²⁴⁸ "Mrs. Gandhi Leaves Open Her Nuclear Options," Associated Press, 13 March 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

turn kept its nuclear option open while choosing restraint from testing and attacking Pakistan's nuclear facilities. India also sought to keep U.S. non-proliferation interests engaged in preventing Pakistani proliferation, and New Delhi and Pakistan were able to agree to a few nascent confidence-building measures to reduce the risk of nuclear conflict during the transition for both states. China also figured into Indian calculations, mainly as related to China's assistance to Pakistan.

1. Indian Nuclear Test Affects Chinese and Pakistani Security Calculations

Notwithstanding Indian declarations that its 1974 nuclear test was for "peaceful purposes," the test was widely perceived as a conclusive demonstration that India was capable of making nuclear weapons.²⁴⁹ That is, while uncertainty existed as to whether India intended to produce nuclear weapons, there was no question that it could do so. While the Indian test had long-term implications for China, an Indian nuclear capability did not immediately affect Chinese security. This was a troubling threat though for Pakistan as India's weaker neighbor that had neither the conventional nor nuclear ability to offset India's greater strength. The primary regional result from the demonstration was to set back Indian efforts to normalize relations with Pakistan, which in turn further motivated Islamabad to develop its own nuclear capability.

As to China, India's decision to test was based at least in part on China's nuclear status and capability.²⁵⁰ For its part, China had little public reaction to Indian test. The

²⁴⁹ Donnelly, "India and Nuclear Weapons," no. NP02483, 2.

²⁵⁰ U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," Limited Official Use, Report, 10 February 1984, Weapons of Mass Destruction (Washington D.C.: The National Security

Chinese news service made a short, factual announcement approximately 24 hours after the test and was not accompanied by government comment.²⁵¹ This muted reaction was likely based on two factors. First, in justifying its own program as peaceful and denouncing the Partial Test Ban Treaty and NPT, China had upheld the right of states to test and develop nuclear weapons.²⁵² Second, Chinese leadership likely did not perceive the Indian tests as an immediate security problem because India lacked a long-range delivery capability. While China probably calculated that the Indian nuclear weapons program would eventually develop, it would take a number of years before India was able to alter the balance of power or threaten Chinese targets.²⁵³ This meant that even though China looked on New Delhi as a rival in South Asia,²⁵⁴ there was little to gain by publicly addressing the test.

Pakistan's security calculations were substantially different from China's. The Indian decision to test was a "severe jolt to Islamabad."²⁵⁵ The immediate result was to intensify Pakistan's security concerns and setback normalization efforts between the two adversaries. Pakistani Prime Zulfikar Ali Bhutto issued a "hard-hitting" public statement

Archive and Chadwick-Healey, 1992), no. WM00283, 1. There was also some question as to how an Indian nuclear capability would affect its relationship with the USSR and the latter's interests in South Asia, particularly with regard to China.

²⁵¹ Central Intelligence Agency, "Central Intelligence Bulletin—India," no. WM00167, 2.

²⁵² Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 6; Central Intelligence Agency, "Central Intelligence Bulletin—India," no. WM00167, 2.

²⁵³ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 6.

²⁵⁴ Central Intelligence Agency, "Central Intelligence Bulletin—India," no. WM00167, 2.

²⁵⁵ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 5.

in response that Pakistan would not be intimidated by India or succumb to “nuclear blackmail.”²⁵⁶ Bhutto further declared that a no-war pact between India and Pakistan was out of the question, otherwise Pakistan would be capitulating to blackmail.²⁵⁷ Nonetheless, Pakistan was in a similar situation that India was in when China tested—Pakistan had no immediate ability to respond to the Indian tests with its own nuclear capability.

Instead Pakistan began a campaign seeking political assurances and protection from the nuclear powers, in particular the United States and China. Pakistani officials also re-approached the United States in an effort to ease existing restrictions on conventional arms supplies.²⁵⁸ Islamabad’s argument was that the Soviets were arming India and putting the Pakistani’s in a “tight squeeze” that required military aid.²⁵⁹ U.S. officials relayed to the Pakistani delegation that there was some agreement that India’s test was not merely for peaceful purposes, and that the U.S. would make a statement “supporting Pakistan’s independence and territorial integrity,” while looking into Congressional interest in renewing aid to Pakistan.²⁶⁰

²⁵⁶ Central Intelligence Agency, “Central Intelligence Bulletin—India,” no. WM00167, 2.

²⁵⁷ Central Intelligence Agency, “Central Intelligence Bulletin—India,” no. WM00167, 2.

²⁵⁸ Sober, “Press Coverage of India's Developing Nuclear Capability,” no. PR01076, i.

²⁵⁹ U.S. Department of State, “Military Supply for Pakistan,” Secret Memorandum of Conversation, 3 June 1974, *Kissinger Transcripts* (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. KT01215, 2-3.

²⁶⁰ U.S. Department of State, “Military Supply for Pakistan,” no. KT01215, 7.

The Indian test further prompted Pakistan to accelerate its own nuclear weapons program and soon began nuclear explosive design and development work.²⁶¹ Thus, Pakistan's decision to develop a nuclear weapons capability was an outgrowth of India's nuclear program and was meant to serve as a deterrent to Indian aggression.²⁶² The Pakistani rationale for pursuing nuclear weapons was that "a small nuclear program would enable the Pakistanis to do in nuclear terms what their ground and air forces could not do in conventional terms: threaten to punish any Indian attack so severely that consideration of such an attack would be deterred from the onset."²⁶³ Washington further understood that Islamabad would likely approach China and seek to expand the military relationship to include nuclear weapons,²⁶⁴ as Pakistan lagged significantly behind Indian nuclear development.

None of these developments were in New Delhi's interests. A renewal of conventional arms to Pakistan from the U.S. meant that India would have to spend more on its own forces in order to maintain its superiority. Further cooperation between China and Pakistan was also antithetical to India's interests, as not only was there conventional cooperation, but nuclear assistance would substantially speed up Pakistan's own nuclear

²⁶¹ Amstutz, "Journalist Alleges India Has One Atomic Bomb Ready in Reserve," no. NP01915, 1; U.S. Department of State, "The Pakistani Nuclear Program," Secret Briefing Paper, 23 June 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02057, 5.

²⁶² U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," Classification Excised Report, 25 June 1981, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00247, 1.

²⁶³ U.S. Defense Intelligence Agency, "Operational and Logistical Considerations in the Event of an India-Pakistan Conflict," Classification Excised Report, December 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02159, 52.

²⁶⁴ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 5.

program. Given the dearth of discussion about Pakistan prior to the tests, it is possible the Gandhi underestimated the Pakistani response. Or it is possible that Pakistan's nuclear efforts were already known and New Delhi believed that a nuclear South Asia was inevitable. Irrespective of India's calculations prior to the tests, the Indian leadership now set about managing the rift the tests created with its neighbor.

2. Indian Response to Pakistani Nuclear Developments

By the early 1980s, it was becoming apparent that Pakistan was developing a nuclear weapons capability. Adding to this concern was increasing evidence suggesting that China was assisting the Pakistani nuclear program. Additionally, the United States was again reengaged in South Asia with the Soviet invasion of Afghanistan. This meant that there was an increased flow of conventional weapons into Pakistan that caused alarm within India. At the same time, the U.S. remained a source of pressure on the Pakistani nuclear program.

Indian nuclear policy was largely a response to these security requirements combined with an effort to improve the Indian economy and technology with increased trade and contacts with the United States. India's nuclear policy sought to keep Indian options open while deflecting external pressures. India responded Pakistan's nuclear developments by signaling that India was prepared to move forward with its own program if necessary. India also gave serious consideration to either testing or attacking Pakistani nuclear facilities in the early 1980s, although decided against both of these options. Instead India pushed the United States to pressure Pakistan to stop the nuclear program—which Washington was more willing to do in the form of sanctions during the

1990s—and worked with Pakistan on a bilateral basis to reduce the risk of nuclear conflict between the two states.

a) India Keeps Its Nuclear Option Open

After the 1974 test, India publicly declared that it had no interest in developing a weapons capability. For example, India's Minister of Defense noted to the Lok Saba (lower house of parliament) that "[o]ur consistent nuclear policy, so far, has been that we would employ nuclear energy for peaceful and constructive purposes only."²⁶⁵ Indian leaders did leave open the possibility of conducting further PNEs, which was a justification to retain its nuclear explosives program while New Delhi determined the course Pakistan would chart.²⁶⁶ For example, in an address to parliament, Prime Minister Indira Gandhi stated that the government remained committed to the use of atomic energy for peaceful purpose and "would not hesitate from carrying out nuclear explosions...or whatever is necessary in the national interests."²⁶⁷

Additionally, Indian statements left open the possibility that Indian policy could change in the future. Reports of Pakistani advancements would trigger statements by Indian leaders that India's policy was under review and would respond as needed. For example, Prime Minister Indira Gandhi addressed the Indian parliament and noted that if

²⁶⁵ Robert F. Goheen, "Indian Nuclear Policy," Unclassified Cable 05298, 13 March 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01752, 1.

²⁶⁶ Central Intelligence Agency, "Indian Nuclear Policies in the 1980s," Secret Intelligence Appraisal, September 1981, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00251, 2.

²⁶⁷ "Mrs. Gandhi Leaves Open Her Nuclear Options."

Pakistan developed nuclear devices that India would be forced to revise its nuclear program and develop its own weapons.²⁶⁸ Similarly, Rajiv Gandhi stated, as Prime Minister, that India would have to review its policy to counter the imbalance that would be created if there were nuclear weapons in South Asia.²⁶⁹

Overall, India thus designed its nuclear policy with sufficient flexibility to respond to Pakistan's program, which included calculating whether Pakistan would decide to test, explode a single device or a series, and refined a weapons design.²⁷⁰ Indian statements to this end accomplished a number of purposes. It retained flexibility in India's nuclear policy to respond to Pakistani developments, while also serving as a warning to Islamabad. At the same time, by making its posture contingent on Pakistan's, India framed Pakistan as the proliferation threat. Additionally, by having its development linked with Pakistan's, India did not need to spend more than necessary to keep pace.

b) India's Restrained Response to Pakistani Proliferation

Pakistan repeatedly denied that it was developing a nuclear weapons capability, but it became increasingly clear that Islamabad had undertaken a clandestine program.²⁷¹

Pakistani Prime Minister Zia's near-term goal appeared to be to acquire a testing

²⁶⁸ S.G. Roy, "India Hints at Nuclear Race with Pakistan," United Press International, 9 April 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; S.G. Roy "India Warns Pakistan against Making Nuclear Bomb," United Press International, 10 April 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

²⁶⁹ Donnelly, "India and Nuclear Weapons," no. NP02483, 8.

²⁷⁰ Central Intelligence Agency, "Indian Nuclear Policies in the 1980s," no. WM00251, 1.

²⁷¹ U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," no. WM00283, 1.

capability, followed by the longer-term goal of establishing deterrence with India.²⁷²

There were some indications during 1981 that Pakistan was considering testing a device in 1982.²⁷³ The Indian media further reported in 1983 that Pakistan had tested nuclear triggers and Indian official alleged that Pakistan was “fairly close to manufacturing a weapon.”²⁷⁴ Pakistan denied these allegations.

In response, India continued to high priority to its own nuclear program,²⁷⁵ while evaluating whether it should continue testing or attack Pakistan’s nuclear facilities. Indian leaders decided against both of these options, although both were seriously considered. India instead chose the course of maintaining the same pace as Pakistani proliferation, while seeking to rely on U.S. pressures to constrain Islamabad’s proliferation.

First, with reports that Pakistan was considering testing, India prepared to respond accordingly. In 1981 there were signs that both states were preparing for underground nuclear tests.²⁷⁶ Indian preparations for a second nuclear test were largely viewed as a reaction to Pakistan’s nuclear activities.²⁷⁷ Prime Minister Gandhi privately

²⁷² U.S. Department of State, “The Pakistani Nuclear Program,” no. NP02057, 1.

²⁷³ “Gandhi Warns South Asia Region 'Drifting toward War,'” United Press International, 28 April 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

²⁷⁴ U.S. Information Agency, “Special Media Reaction Report No. 45--Pakistan's Testing of Nuclear Triggers,” Unclassified Cable 17173, 16 July 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02241, 1-2.

²⁷⁵ Archer K. Blood to U.S. Department of State, “Current Status of Indian Nuclear Facilities,” Confidential Cable 01647, 26 January 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01859, 1.

²⁷⁶ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option,” no. WM00247, 1.

²⁷⁷ Donnelly, “India and Nuclear Weapons,” no. NP02483, 2.

acknowledged to U.S. officials that India was prepared for a “peaceful nuclear explosion” but that a decision was not yet made as to timing. This further suggests that India was waiting on Pakistan’s decision as to whether it would test or not.²⁷⁸ Still, India test preparations served to remind Islamabad that Indian nuclear development was considerably ahead and cautioned the Pakistanis to not proceed with a testing program.²⁷⁹ Prime Minister Gandhi further warned that a Pakistani nuclear test would have “grave and irreversible” consequences for regional relations.²⁸⁰

While India was not initiating the test, it was important to New Delhi to be positioned to respond to the Pakistan’s test.²⁸¹ In particular, Pakistan’s previous position to the Indian nuclear test was that there was no such thing as a peaceful nuclear explosion.²⁸² This meant that if Pakistan tested it would be signaling that it was pursuing nuclear weapons. India would then respond in order to demonstrate both its resolve and technological superiority.²⁸³

At the same time, India was motivated to refrain from testing first. India had already proved that it had a nuclear capability and further testing at that time without

²⁷⁸ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option,” no. WM00247, 3-4.

²⁷⁹ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option,” no. WM00247, 4.

²⁸⁰ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option,” no. WM00247, 5.

²⁸¹ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option,” no. WM00247, 2. It was also considered a possibility that by this time, India may have had a “modest stockpile of nuclear devices.” Ibid.

²⁸² U.S. Department of State, “India-Pakistan: Pressures for Nuclear Proliferation,” no. WM00283, 1.

²⁸³ U.S. Department of State, “India-Pakistan: Pressures for Nuclear Proliferation,” no. WM00283, 1.

significant advancements would have added little to its posture. New Delhi also preferred to place the moral blame from testing on Pakistan,²⁸⁴ so that international reactions would largely be directed at Islamabad. An additional incentive for India to refrain from initiating testing is that it could wait and see if U.S. non-proliferation efforts would be successful vis-à-vis Pakistan. Indeed, U.S. pressure is credited as forcing Pakistan to put off its nuclear testing plans in early 1980s; otherwise Washington's renewed generosity for providing military and economic assistance in the face of the Soviet invasion of Afghanistan would be cut off by explicit requirements of U.S. domestic law. When it became clear that Pakistan would forego testing, New Delhi further signaled to Washington that it did not intend to detonate a second nuclear blast in the near term.²⁸⁵ In short, India was prepared to respond to Pakistani provocations if it tested, but Indian leaders preferred to keep the nuclear testing issue off the table.

Second, India also considered attacking Pakistani nuclear facilities during the 1980s. India first conducted a study of the feasibility of taking out Pakistan's Kahuta facility in 1981. Prime Minister Gandhi ruled out the attack in 1982 with concerns about Pakistani retaliation, although she reportedly kept the attack option on the table if Pakistan was on the verge of acquiring a weapons capability.²⁸⁶ There were also reports

²⁸⁴ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option," no. WM00247, 4.

²⁸⁵ Harry G. Barnes to U.S. Department of State, "Mrs. Gandhi Rebuffs Speculation about Nuclear Blast at Pokhran," Confidential Cable 09505, 15 May 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01955, 1. Prime Minister Gandhi reportedly approved further testing in 1983 but called it off in part because of the economic concerns discussed below.

²⁸⁶ Milton R. Benjamin, "India Said to Eye Raid on Pakistani A-Plants," *The Washington Post*, 20 December 1982, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>, A1.

in 1983 that the Indian Air Force was preparing for a pre-emptive strike, but that U.S. officials informed Pakistan, which put its Air Force on alert.²⁸⁷ As late as 1984, there were Pakistani contentions that India planned to launch an attack.²⁸⁸ There were some reports suggesting merit to Pakistan's position. India and Israel allegedly had discussed a joint strike on Pakistan's Kahuta facility.²⁸⁹ However, U.S. pressures are credited with causing Prime Minister Gandhi to veto the plan.²⁹⁰ Indian officials publicly denied all reports that India planned to attack Pakistani nuclear facilities.

There are multiple reasons why India chose against a pre-emptive strike. New Delhi could not be entirely sure that the attack would be successful in wiping out Pakistan's well-defended facilities.²⁹¹ There was the additional problem of radiation contamination, either from the Pakistani facilities or from a retaliatory strike on India's nuclear facilities. The latter would further cripple India's own nuclear program. Additionally, an attack against Pakistani facilities "almost inevitably would mean war with Pakistan."²⁹² Even if India was successful with the strike, it likely would have faced diplomatic disapprobation.²⁹³ India would risk damaging the gradually warming relations

²⁸⁷ Karnad, Nuclear Weapons & Indian Security, 347-348.

²⁸⁸ U.S. Information Agency, "Media Reaction Report No. 133," Unclassified Cable 17729, 22 July 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02332, 1.

²⁸⁹ Karnad, Nuclear Weapons & Indian Security, 349-350.

²⁹⁰ Perkovich, India's Nuclear Bomb, 258; Karnad, Nuclear Weapons & Indian Security, 349-350.

²⁹¹ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option," no. WM00247, 6.

²⁹² U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," no. WM00283, 1.

²⁹³ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option," no. WM00247, 6.

with the United States and could further provoke China, which might result in Pakistani sympathy from both states.

Instead, Indian leaders came to the realization that they would have to live with Pakistan's nuclear capability.²⁹⁴ India sought a less provocative path, one that relied on keeping paced development with Pakistan. For example, by late 1985, India was concerned that Pakistan had enough nuclear weapons grade material for constructing three to five nuclear bombs, notwithstanding Pakistani denials that its program was for peaceful purposes.²⁹⁵ While India signaled that it had not changed its nuclear policy, "the fact that Pakistan's going ahead with a nuclear weapons program introduces a new element into the entire security dimension in this region."²⁹⁶ India continued to review its nuclear policy amidst reports of Pakistani progress and it is believed that Prime Minister Gandhi made the decision to weaponize India's nuclear capability in 1987. India's delay in weaponizing its capability until Pakistan had reached this threshold is further evidence of Indian restraint.²⁹⁷

²⁹⁴ Perkovich, India's Nuclear Bomb, 240-241.

²⁹⁵ John Gunther Dean to U.S. Department of State, "Foreign Minister Speaks in Parliament on Pak Nuclear Bomb," Confidential Cable 28599, 21 November 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02280, 9. In comparison, it was estimated that India had stockpiled enough plutonium for 60 nuclear bombs, equivalent to the size of the Nagasaki bomb. West German Broadcasting, "Wanted...Bomb Business: Nuclear Aid for Pakistan and India," Transcript, 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02283, 9.

²⁹⁶ Dean, "Foreign Minister Speaks in Parliament on Pak Nuclear Bomb," no. NP02280, 1.

²⁹⁷ Indeed, Prime Minister Rao was reportedly surprised to find out in the early 1990s that India was not yet ready to deploy a deliverable nuclear capability.

India's overall strategy was relatively conservative as related to Pakistani nuclear development. India's nuclear policy reflected a desire in New Delhi to not further exacerbate regional tensions, which in turn would require increased spending on both conventional and nuclear systems. Yet, Indian readiness to test if Pakistan did so, the repeated threats to Pakistani nuclear facilities, and India's own retained option all served as a warning about seriousness with which New Delhi perceived the threat to its security from Pakistan's nuclear program. India further sought to address its security concerns by seeking to direct U.S. non-proliferation pressures on Pakistan.

c) India Seeks Assistance in Constraining Pakistan

Indian and American relations began to improve during the 1980s and throughout the 1990s. These contacts afforded Indian leaders the opportunity to press Washington in particular to take a tougher non-proliferation stance with Pakistan. As part of this effort, India would point to its own restrained nuclear posture—with the implicit threat that this could change however—that it was behaving responsibly. By restraining its own nuclear posture, Indian leaders were able to keep the U.S. non-proliferation spotlight on Pakistan.

For example, during the 1985 visit to the U.S., Prime Minister Rajiv Gandhi asked the Reagan administration to put greater pressure on Pakistan to stop if from going forward with its nuclear program.²⁹⁸ Similarly, Gandhi expressed his frustration in a

²⁹⁸ U.S. Information Agency, "Pakistan's Testing of Nuclear Triggers," no. NP02241, 6.

public interview, arguing that Pakistan was continuing a program to build nuclear weapons, which the U.S. knew about and was doing nothing to prevent.²⁹⁹

Indian officials were further concerned about the influx of economic and conventional military aid the U.S. provided Pakistan during the 1990s. The Indians contended that U.S. economic assistance was enabling the Pakistani to divert more funds to their nuclear program, and argued that Pakistan would be more likely to stop its nuclear program if Washington cut off aid.³⁰⁰ The provision of conventional weapons was also seen as upsetting the balance of power in South Asia. Indian officials argued that New Delhi was required to divert its own resources from development programs in order to counter Pakistan's increased conventional capability.³⁰¹ The Indians bristled at doing so, stating that "we are very keen not to embark on an arms race with Pakistan. Our object is to reduce the arms in the region."³⁰²

While drawing American attention to the Pakistani program, Indian officials sought to emphasize their nuclear restraint. For example, Prime Minister Gandhi characterized the 1974 test as an experiment, pointed to the fact that India had not continued a program of testing, did not have a stockpile, did not have nuclear weapons,

²⁹⁹ Donnelly, "India and Nuclear Weapons," no. NP02483, 8.

³⁰⁰ U.S. Department of State, "Transcript of Press Conference Held by PM," Press Conference, 20 October 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02534, 5.

³⁰¹ U.S. Department of State, "Indo-U.S. Joint Statement on Gandhi Visit," Confidential Memorandum, 15 June 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02233, 1.

³⁰² U.S. Department of State, "Indo-U.S. Joint Statement on Gandhi Visit," no. NP02233, 1.

and ruled out an attack on Pakistani nuclear facilities.³⁰³ At the same time, the Indian policy of restraint was subject to review, and Gandhi noted that if Pakistan produced nuclear weapons then “we would have to really re-think all our policies.”³⁰⁴ The implicit threat that India could go nuclear if Pakistan did so served to remind the Americans of the dangers of proliferation in South Asia.

Washington responded with reassurances that it was responsive to the Pakistani nuclear program, and was “doing all it could to discourage Islamabad.”³⁰⁵ As to the conventional arms concerns, the Reagan administration’s response was that its objective was to render Pakistan’s nuclear program unnecessary.³⁰⁶ Similarly, during Gandhi’s 1987 visit to Washington, U.S. officials reiterated that they understood Indian concerns and would review with Gandhi the steps Washington had taken to prevent the outbreak of a nuclear arms race in South Asia.³⁰⁷ Administration officials further praised Indian nuclear restraint by not moving from the 1974 test to a dedicated nuclear weapons program.³⁰⁸

³⁰³ Gordon L. Streeb to U.S. Department of State, “Rajiv Gandhi Airs Known Views on Pakistan,” Limited Official Use, Cable 13830, 5 June 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02226, 1-2.

³⁰⁴ Streeb, “Rajiv Gandhi Airs Known Views on Pakistan,” no. NP02226, 2.

³⁰⁵ U.S. Department of State, “Indo-U.S. Joint Statement on Gandhi Visit,” no. NP02233, 1.

³⁰⁶ U.S. Department of State, “Indo-U.S. Joint Statement on Gandhi Visit,” no. NP02233, 1.

³⁰⁷ U.S. Information Agency, “The Official Working Visit of Indian Prime Minister Rajiv Gandhi,” Press Briefing, 19 October 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02531, 6.

³⁰⁸ U.S. Information Agency, “The Official Working Visit of Indian Prime Minister Rajiv Gandhi,” no. NP02531, 6.

By 1990 Washington was willing to impose the sanctions India sought. The Soviets had withdrawn from Afghanistan, changing American priorities in the region. Additionally, there was no question that Pakistan was developing nuclear weapons. Moreover, even though India had begun weaponizing in 1987, its restrained nuclear posture enabled it to avoid sanctions, and continue with growing economic and technical cooperation with the U.S. throughout the 1990s.

d) Learning to Live With Nuclear South Asia:

Relations between India and Pakistan were often tense, if not in direct conflict, based primarily on developments in Kashmir. Tensions were further increased after the Indian test in 1974. Against this backdrop, Indian leaders at several points made an effort to normalize its relations with Pakistan and specifically rejected a more robust nuclear policy that would undermine these attempts. Further, India and Pakistan were able to implement some confidence-building measures designed to reduce the dangers of the nuclear programs.

As characterized by one commentator, the Indian tests could not have come at a worse time for the gradually improving relations between the two states shortly after the 1971 war.³⁰⁹ Prime Minister Gandhi went to work to try to allay Pakistani concerns. She wrote Bhutto a letter stating that India remained committed to its traditional policy of

³⁰⁹ U.S. Department of State, "India: Uncertainty over Nuclear Policy," no. WM00169, 3.

nuclear development for peaceful purposes only and that India would seek to settle all differences peacefully through the Simla Agreement.³¹⁰

Prime Minister Morarji Desai came to power following Indira Gandhi and further sought to improve relations with Pakistan. Desai instituted a number of measures that resulted in full diplomatic and consular relations, as well as air, land, communications, and trade links.³¹¹ Desai also refused to put pressure on Pakistan, at the behest the Soviet Union, over Afghanistan and this was viewed with considerable appreciation by Islamabad.³¹² Additionally, according to Pakistani leadership, during this time “they had had full and frank discussions with Indian officials on the nuclear question and that India accepted Pakistani assurances of peaceful intent at face value.”³¹³ For its part, India could afford to wait for further nuclear development, as estimates in early 1975 were that Pakistan was still eight to nine years away from developing an atomic device.³¹⁴

Thus, by not testing further and maintaining that the Indian nuclear program was for peaceful purposes only, this strategy was reasonably successful in reducing tensions between India and Pakistan. From the Pakistani perspective, relations were the best they

³¹⁰ Perkovich, India's Nuclear Bomb, 185.

³¹¹ U.S. Department of State, “Pakistan's Short Term Prospects,” Secret Report, 24 August 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01657, 5.

³¹² Cyrus R. Vance to U.S. Embassy Pakistan, “U.S.-Pak. Talks: Regional Issues,” Confidential Cable 277901, 24 October 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01670, 4.

³¹³ Vance, “U.S.-Pak. Talks: Regional Issues,” no. NP01670, 5.

³¹⁴ David T. Schneider to U.S. Department of State, “Indian Space and Indian and Pakistani Atomic Energy Programs,” Unclassified Airgram, 21 February 1975, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01398, 2.

had ever been in 1979, although India remained Pakistan's main long-term security threat. Tensions increased in the early 1980s as each side grappled with the best way to provide for their security in the face of both states developing nuclear weapons.

However, beginning in 1985 with Prime Minister Zia's visit to New Delhi, India and Pakistan inched forward towards confidence building. At this meeting, Zia and Gandhi announced that they had agreed to not attack each other's nuclear facilities. This announcement came at the same time that India and Pakistan were seeking to increase trade and economic ties and reduce border tensions.³¹⁵ It further reflected the gradually warming relations that began when Rajiv Gandhi came to power.³¹⁶

In particular, the India-Pakistan Non-Attack Agreement provided that both sides would refrain from directly attacking, encouraging, or participating in any action aimed at destroying or damaging any nuclear facility.³¹⁷ The agreement was formalized in writing several years later in 1988.³¹⁸ It was entered into force in 1991, and India and Pakistan exchanged lists of their nuclear facilities in 1992 and 1993. India and Pakistan also agreed to a hotline after the 1987 Brasstacks Crisis,³¹⁹ and additional notification

³¹⁵ Stephen Wilson, "India and Pakistan Pledge Not to Destroy Each Other's Nuclear Plants," Associated Press, 17 December 1985, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; Steven Weisman, "Gandhi-Zia Talks Said to Bear Fruit," The New York Times, 18 December 1985, 3.

³¹⁶ U.S. Information Agency, "Media Reaction Report No. 133," no. NP02332, 1. The major exception to this was in 1987 with the Brasstacks Crisis.

³¹⁷ Shahid Ur-Rehman, "India and Pakistan Pledge No Harm to Nuclear Facilities," Nucleonics Week, 5 January 1989, 8-9.

³¹⁸ Donnelly, "India and Nuclear Weapons," no. NP02483, 8.

³¹⁹ A specific nuclear hotline was not established until 2004. See John Lancaster, "India, Pakistan to Set Up Hotline: Talks End With Deal to Maintain Moratorium on Nuclear Testing," Washington Post Foreign Service, 21 June 2004, A12.

measures for troop movements and exercises, air-space regulations, and increased military contacts after the 1990 Indo-Pakistani crisis.

However, there were clear limits as to the extent of nuclear cooperation in South Asia. India continued to reject Pakistani proposals for a regional nuclear free zone and test ban in South Asia, arguing that Pakistan should instead stop from clandestinely developing nuclear weapons. At the same time, India continued to march forward with its own nuclear weapons development and delivery capabilities.

When Prime Minister Rao subsequently came to power in 1991 and met Bill Clinton, he indicated that in addition to concerns about economic growth, he understood that testing would potentially start an arms race in the region, something that India did not want to initiate.³²⁰ Similarly, when Deve Gowda succeeded the two-week Vajpayee government in 1996, he calculated that a test, in addition to harming the economy, would be too damaging to India's foreign relations. He is quoted as saying, “[a]part from the economy I also wanted to focus on improving relations with other countries. We had made efforts to focus on bettering relations with Pakistan. We were keen on stabilizing relations with Russia and China and improving relations with the US.”³²¹

Washington further underscored Indian concerns and urged India to develop nuclear weapons because it would exacerbate regional tensions rather than enhance national security, as well as trigger a nearly complete cut-off of financial assistance from

³²⁰ Chengappa, Weapons of Peace, 388.

³²¹ Chengappa, Weapons of Peace, 398.

the United States.³²² Even after the 1998 nuclear tests, India has maintained that it seeks a minimal nuclear deterrent and does not want to “impoverish itself by emulating the extensive and costly capabilities possessed by the US and the Soviet Union during the Cold War.”³²³

3. China

India’s security concerns vis-à-vis China was both a source of motivation for the Indian nuclear program as well as a countervailing reason to retain an ambiguous nuclear posture while India improved its weapon and delivery capabilities. China’s nuclear assistance to Pakistan was a further complicating factor that India necessarily incorporated into its nuclear policy. These dynamics are discussed below.

India’s immediate threat perceptions of China have varied over time and generally improved during India’s period of nuclear ambiguity. After the 1962 Himalayan war, followed shortly by Chinese nuclear testing in 1964, tensions gradually eased in the following decades. However, it is clear that Indian security planners have taken a long-range view of India’s role in South Asia and anticipate that Indian and Chinese policies have the potential to conflict in the future as both states continue developing. As stated by Prime Minister Gandhi to the Indian parliament, “India could handle the problem of

³²² "US Accepts India Will Not Test N-Weapon," Reuters, 19 January 1996; in Compuserve-Executive News Service; Sid Balman Jr, "India Assures US on Nuke Test," Reuters, 19 January 1996, in Compuserve-Executive News Service.

³²³ Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, Adelphi Paper no. 332 (Oxford and New York: Oxford University Press for the International Institute for Strategic Studies, 1999), 58. The idea of India maintaining a minimal but effective nuclear deterrent as a cost effective strategy has been suggested by a number of Indian strategists, including General K. Sundaraji, "India's Nuclear Weapons Policy," in Nuclear Rivalry and International Order, Jorn Gjelstad and Olav Njostad, eds. (London: Sage Publications, 1996), and K. Subrahmanyam, "Indian Nuclear Policy – 1964-98," in Nuclear India, Jasjit Singh, ed. (New Delhi: Institute for Defence Studies and Analyses, 1998).

Pakistan's nuclear program but India's security was linked with the much larger question of the presence of nuclear weapons in the Indian Ocean area and in the neighborhood of Asia."³²⁴

This means that India regards an at least a minimum nuclear deterrence capability against China as crucial for its long-term security and is a significant factor driving the Indian nuclear weapons program.³²⁵ At the same time, Indian nuclear weapons development has persistently lagged behind China's much more advanced weapons and sophisticated delivery systems.³²⁶ India signaled that it had the capability of constructing nuclear explosive devices in 1974, but it wasn't until 1996 that it made arrangements to purchase the Sukhoi-30 aircraft from Russia, which are capable of carrying nuclear bombs to high value targets in China.³²⁷

Moreover, it wasn't until 1999 that India tested its Agni-II missile with a range of 2500 km. This was India's first nuclear capable missile that could reach much of China's southern, western, and central areas. This was an enormous advancement as India's previous Agni-I was ranged at 700-800 km. Still, it wasn't until the development of the

³²⁴ James A. McGinley to U.S. Information Agency, "PM Gandhi's Parliament Statement on His U.S. Visit," Unclassified Cable 27419, 12 November 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02551, 1.

³²⁵ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option," no. WM00247, 1.

³²⁶ U.S. estimates predicted in the early 1980s that India would wait for an open weapons capability until at least the late 1980s as, in addition to the delivery requirements, by then India would have sufficient fissionable materials for a "respectable nuclear arsenal." U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option," no. WM00247, 5.

³²⁷ Certainly India had other planes that could have made one-way flights to drop nuclear bombs if necessary, but that did not constitute a particularly robust delivery mechanism. See Karnad, Nuclear Weapons & Indian Security.

Agni-III with a range of 3500 km that India could reach Beijing or Shanghai, some of the furthest high value targets.

India therefore has lacked the necessary sophisticated delivery systems to strike targets in China until the late 1990s. This meant that India was not even in the realm of being able to establish credible nuclear deterrence with China before it tested in 1998. Because of the requirements for an advanced nuclear program, India had little incentive to continue testing for purposes of addressing its security problems with China. India had already proven its explosive capability so further testing would have added little until India was closer to having delivery mechanisms. Conceivably India could have tested a thermonuclear device earlier to signal its continued advancement, but again without a delivery system this does little to establish deterrence with China. Without a clear benefit to continue testing, India's security problems with Pakistan and its efforts to increase its economic base clearly outweighed any consideration related to China specifically leading up to 1998.

While there was no clear deterrence benefit India would have gained with China, testing likely would have further exacerbated India's security with Pakistan by increasing Chinese incentives to assist the latter. India had long resented Chinese support to Pakistan during the 1965 and 1971 Indo-Pak wars. Additionally, Indian leaders were aware early on that China was assisting the Pakistani nuclear program.

For example, by the early 1980s China had already been cooperating in the nuclear field for several years. China assisted in the operation of the KANUPP power reactor at Karachi, and likely also cooperated in fissile material production, and the

provision of a nuclear device design.³²⁸ There were public reports of Chinese atomic scientists working in Pakistani nuclear plants in 1984.³²⁹ That same year the Indian press reported that Pakistan had manufactured a nuclear device, and that China may have assisted Islamabad in testing in China's Takala Makan Desert. Indian officials categorically denied this story, although Indian Foreign Secretary Rasgotra also indicated that Pakistan possibly already had a nuclear bomb.³³⁰ Nonetheless, reports of Chinese nuclear cooperation were of significant concern to India.³³¹

By the late 1980s and early 1990s, India had further concerns related to Chinese ballistic missile assistance. By this time there were reports that China provided Pakistan with M-11 missile capabilities, which could be armed with nuclear warheads.³³² Further, with a range of 300 km, New Delhi was at risk from the M-11s (designated Shaheen) when they were finally tested in 1999. Prior to this, Pakistan tested the Ghauri missile April 1998, and at a range of 1500 km could reach most of India.³³³

In this context, India had little reason to speed up and publicly demonstrate its continued nuclear development. If New Delhi had done so, then it would have further

³²⁸ U.S. Department of State, "The Pakistani Nuclear Program," no. NP02057, 6.

³²⁹ U.S. Embassy Pakistan, "Pakistan's Nuclear Program: Press Reports of Chinese Involvement," Confidential Cable 06864, 6 August 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02144, 1.

³³⁰ Harry G. Barnes to U.S. Department of State, "Indo-Pakistan Relations: Mistaken AP Story of Pakistani Nuclear Blast in China," Confidential Cable 16186, 27 March 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02123, 1.

³³¹ U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," no. WM00283, 4.

³³² It was the transfer of these missiles that led the U.S. to imposed sanctions on China in 1991 and 1993.

³³³ It is widely believed that North Korea transferred its No-dong missile technology to Pakistan, from which the Ghauri was derived.

stoked Pakistani security concerns. Pakistan's historic reaction was to then reach out to its supplier states for increased conventional assistance. In the case of China, it was also willing to provide nuclear assistance. India did not need to provide its adversaries with additional reasons to further cooperate at Indian expense. By keeping paced development with Pakistan under cover of an ambiguous posture, India ensured that it had the capability to respond while at the same time focus on its economic priorities and make steady progress towards delivery capabilities that would enable it to establish deterrence with China.

C. Patron State Incentives: Indo-U.S. Relations

Following the Indian test in 1974, U.S. and India relations were characterized by: (1) an increase in U.S. international efforts to stall horizontal proliferation, and (2) direct pressure on India in the form of already existing nuclear cooperation, promises of technology exchange, and the threat of economic repercussions. The U.S. position signaled its non-proliferation stance by encouraging compliance with the NPT and later the CTBT, tightening domestic non-proliferation laws, and engaging in diplomatic exchanges with Indian leaders. India responded to U.S. non-proliferation pressures by deflecting calls for it to join the NPT as a non-nuclear state, emphasizing its own restraint in developing a nuclear arsenal, and highlighting Pakistani nuclear weapons efforts and calling on the super powers to restrain Pakistan. Nuclear ambiguity was an important part of this strategy, enabling India to avoid provoking the U.S., keeping the pressure on Pakistan as weapons proliferator, while at the same time keeping its weapons option open.

Further, the United States was able to leverage enough material resources on the weak Indian economy via economic and technological aid to for Indian leaders to consider what an overt demonstration of Indian nuclear progress would mean for its further development and position in the international system. This strategy was successful to the extent that it coincided with Indian goals to reduce a risk of an arms race in South Asia while at the same time engaging the U.S. as India began to liberalize its economy. These dynamics are discussed more fully below.

1. U.S. Non-Proliferation Interests

The 1974 Indian nuclear test prompted the United States to more directly address growing concerns about nuclear proliferation. Generally, American interests were to maintain the NPT and to keep other threshold states from going nuclear.³³⁴ Additionally, an intensified program to stop further nuclear explosions—including those labeled “peaceful”—was identified as being within U.S. interests.³³⁵ Related to its general non-proliferation concerns, Washington was also concerned that the Indian test would further Pakistani incentives to acquire nuclear weapons. Fearing Pakistani proliferation, the U.S. wanted to hold India to its 1974 posture that the test was for peaceful purposes only, and to further “minimize the scope, pace, and military dimensions of [India’s] nuclear explosive program.”³³⁶ This meant keeping continued pressure on India to “adhere to its

³³⁴ Sober, “Press Coverage of India’s Developing Nuclear Capability,” no. PR01076, ii.

³³⁵ Robert S. Ingersoll to Gerald R. Ford, “U.S. Nuclear Non-proliferation Policy,” Secret Memorandum, 4 December 1974, Presidential Directives II (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. PR01263, 1 and 3.

³³⁶ Ingersoll, “U.S. Nuclear Non-proliferation Policy,” no. PR01263, 5.

declared intention to eschew development of military weapons capabilities.”³³⁷ And even if Washington failed to stem proliferation, it was nonetheless concluded that U.S. national security objectives would be served with an only partially effective non-proliferation strategy that at least delayed further proliferation.³³⁸

The primary method to stop further proliferation was to tighten controls of material and technology for weapons production, including requiring that exported nuclear material not be used for peaceful nuclear explosions.³³⁹ As applied to India, this approach was also designed to “make an Indian decision to seek a sophisticated weapons and delivery system as costly and as time-consuming as possible...especially with regard to India’s acquiring a ballistic missile or long-range bomber capability.”³⁴⁰ At the same time, there was reluctance in Washington to impair the prospects of better bilateral relations by threatening the withdrawal of aid to India.³⁴¹

This approach reflected the dilemma as how to most effectively influence India’s program. On the one hand, Washington was concerned that if the U.S. response was not harsh enough to the Indian test, this would be taken as a signal that the U.S. was not

³³⁷ Sober, “Press Coverage of India's Developing Nuclear Capability,” no. PR01076, 24.

³³⁸ Ingersoll, “U.S. Nuclear Non-proliferation Policy,” no. PR01263, 1-2.

³³⁹ Ingersoll, “U.S. Nuclear Non-proliferation Policy,” no. PR01263, 3.

³⁴⁰ Sober, “Press Coverage of India's Developing Nuclear Capability,” no. PR01076, iii.

³⁴¹ George S. Springsteen to Brent Scowcroft, “Indian Nuclear Developments: NSSM 156,” Secret Memorandum, 11 July 1974, Presidential Directives II (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. PR011077, 3. It was noted that other Western aid donors, with the exception of Canada, had actually pledged increased economic assistance to India and agreed to World Bank proposals for increased debt rescheduling. *Ibid.*

committed to nuclear non-proliferation. Yet the other concern was that is Washington's reaction was too punitive it would be counterproductive by reducing U.S. ability to deter Indian pursuit of nuclear weapons.³⁴² Washington was further limited with India to the extent that it did not want to drive New Delhi into closer cooperation with the Soviets. This dilemma would also be a recurring theme in U.S. policy towards Pakistan. U.S. policy towards India generally charted a course between these two extremes. U.S. nuclear export and safeguards policy slowed Indian nuclear development to some extent, but in exchange for continued ambiguity, Washington and New Delhi achieved some measures of economic and technical cooperation.

2. U.S. Non-Proliferation Policy Changes

Consistent with U.S. goals of non-proliferation, the Ford administration signaled that the U.S. was further changing its nuclear policy. In the fall of 1974, President Ford sought to strengthened non-proliferation measures with the UN. The first nuclear supplier state meeting was held in 1975, with the goal of raising the standards governing the export of nuclear supplies and materials.³⁴³

The successive Carter administration was similarly concerned with nuclear non-proliferation. President Carter signaled in April 1977 that "the United States would 'make clear to all potential recipients [of nuclear assistance] and to other nuclear suppliers that our first preference, and continuing objective, is universal adherence to the

³⁴² Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 45.

³⁴³ Robert W. Fri to Jimmy Carter, "Press Conference," Press Briefing, 28 October 1976, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01518, 1.

Non-Proliferation Treaty.”³⁴⁴ In addition to encouraging countries to sign the NPT, the Carter administration also pushed for all nuclear facilities to be placed under IAEA safeguards.³⁴⁵

The U.S. Congress also sought to increase export controls and restrict advanced technology by passing the Nuclear Nonproliferation Act in 1978. This law prohibited U.S. cooperation with civilian nuclear programs in countries that would not allow full-scope IAEA nuclear facility inspections, or manufactured or conducted peaceful nuclear explosions. This meant that because India had not “acceded to the NPT or otherwise accepted full-scope safeguards, U.S. law and policy preclude[d] any significant [nuclear] cooperation.”³⁴⁶ This change in U.S. domestic law led to a crisis in relations between Washington and New Delhi as there was an existing contractual relationship for the U.S. to provide fuel and spare parts for India’s Tarapur reactor.

3. U.S. Efforts to Leverage Nuclear Cooperation with India

Prior to the 1974 PNE, the U.S. had provided fuel for India’s Tarapur reactor, and continued to do so afterwards, with the understanding that India would refrain from

³⁴⁴ U.S. Department of State, “Report by the Secretary of State on Recent Activities by the United States Government in Encouraging Adherence to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Made Pursuant to Section 507 (b) of the International Development Cooperation Act of 1979,” Non-Classified Report, 1 November 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01686, 1.

³⁴⁵ U.S. Department of State, “Report by the Secretary of State,” no. NP01686, 1.

³⁴⁶ U.S. Department of State, “U.S.-USSR Non-Proliferation Bilaterals--Regional Aspects of Non-Proliferation,” Confidential Background Paper, 20 July 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02498, 4.

further explosions.³⁴⁷ During the Carter administration, the U.S. Congress was increasingly reluctant to continue to provide fuel for the Tarapur reactor since India would not comply with IAEA full scope safeguards on all its reactors, even though the administration sought to link the provision of fuel to the “Government of India assurances on forbearing nuclear explosives and keeping open our dialogue on nuclear issues.”³⁴⁸ In a letter to Prime Minister Gandhi in 1980, Carter indicated that he would authorize further shipments via Executive Order, if India provided the “assurances which had been available to us earlier” which entailed in part, “continued Indian forbearance concerning nuclear explosive development and testing.”³⁴⁹ The administration also suggested to Gandhi that given Congressional reluctance, she was urged to practice discretion on the nuclear issue, “during this sensitive period.”³⁵⁰ The U.S. Congress was also likely to call for stopping bilateral aid to India in the event of a test.³⁵¹

While the United States did not have extensive nuclear cooperation with India prior to and after the 1974 nuclear test, Washington did seek to leverage existing contacts to convince the Indians to forego further testing and to not produce nuclear weapons.

³⁴⁷ Victor Gilinsky, “U.S.-Indian Nuclear Relations,” Speech, 5 February 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01732.

³⁴⁸ Robert F. Goheen, “Tarapur Fuel,” Talking Points, 8 April, 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01762.

³⁴⁹ Goheen, “Tarapur Fuel,” no. NP01762.

³⁵⁰ J. Brian Atwood to Edmund S. Muskie, “The Congressional Agenda: Issues and Strategies,” Briefing Memorandum, 16 May 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01781.

³⁵¹ Archer K. Blood to Secstate, “Indian Press Reports Preparation for Nuclear Explosion and U.S. Attitudes Towards It,” Cable, 5 May 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01885. The reality is the direct U.S. bilateral aid to India during this time period was not significant. However, India was increasingly dependent on foreign assistance and US would be able to block loans and other credits through multilateral lending institutions.

Because India was highly dependent on external sources of support for its nuclear program, it was vulnerable to U.S. pressures in this area. In particular, the Tarapur fuel incident highlighted the transformation of U.S. non-proliferation policy and the subsequent effects on Indian nuclear policy.

The Tarapur nuclear reactor was of U.S. origin and subject to safeguards. Pursuant to the contract between Washington and New Delhi, the U.S. was obligated to provide enriched uranium fuel and spare parts to run the reactor. However, after the 1974 Indian test and the subsequent passage of the 1978 Nuclear Non-proliferation Act (NNPA), U.S. law now required that all of India's facilities be subject to full-scope safeguards or the U.S. could not cooperate in the nuclear area. This new obligation put the existing Tarapur agreement under scrutiny because it did only provided for safeguards on the Tarapur facility.

The U.S. Nuclear Regulatory Commission subsequently held up fuel shipments because India did not meet the requirements of the NNPA. India rejected U.S. demands to subject all of its nuclear facilities to IAEA inspections as a condition of the U.S. sending fuel for Tarapur. As a compromise solution, U.S. President Carter allowed fuel to be shipped to India in exchange for India promising to refrain from developing nuclear weapons, conducting any further nuclear explosions—even for peaceful purposes, and agreed to discuss non-proliferation.³⁵²

³⁵² Perkovich, India's Nuclear Bomb, 201-202; Robert B. Cullen "US May Still Ship Nuclear Fuel to India," Associated Press, 10 March 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; S.G. Roy, United Press International, 29 July 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

This alternative was offered in part because the Carter administration was concerned that if the U.S. entirely reneged on its contractual obligations that New Delhi would reciprocate and no longer subject the Tarapur facility to safeguards. President Carter further justified the administration's action in a message to Congress, arguing that "to deny a sale would hurt the prospects for getting India to accept stricter nuclear safeguards and other US nonproliferation goals."³⁵³ Further, Prime Minister Desai was willing to give a personal commitment to refrain from further detonating nuclear explosive devices, which the Carter administration accepted.³⁵⁴

However, Prime Minister Gandhi was not so forthcoming when she came to power and she would not rule out the possibility of conducting further "peaceful nuclear experiments" if it was in India's interests.³⁵⁵ Nonetheless, more fuel was approved because of concerns that the Soviet Union might "supplant the United States" if the latter refused to supply the fuel to India, and if the U.S. provided the fuel it would "encourage India in the long term to act in ways consistent with US interests."³⁵⁶

³⁵³ The New York Times, "Information Bank Abstracts," 28 April 1978, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

³⁵⁴ Cyrus R. Vance, "Reasons for Presidential Authorization to Export Fuel to India for Tarapur Power Station," Confidential Background Paper, 18 May 1978, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01592, 2.

³⁵⁵ Stan Benjamin "NRC Refuses to Approve Nuclear Shipments; Issue Goes to Carter," Associated Press, 16 May 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; "NRC Refuses to Approve Nuclear Shipments," Associated Press, 17 May 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; "Congressional Fight Seen If Carter Approves India Fuel Exports," Nucleonics Week 21, No. 21, 1-2.

³⁵⁶ Gene Kramer "India Says US Nuclear Fuel is for Peace," Associated Press, 20 June 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; "US to Export Nuclear Fuel to India," Xinhua General Overseas News Service, 20 June 1980, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

As the long-term fulfillment of the contract was untenable, both the U.S. and India sought to find a mutually agreeable solution to terminate the agreement. Both sides had incentives to part amicably, as the U.S. wanted India to retain safeguards on Tarapur and India had an incentive in maintaining good relations with the U.S. to further its other economic and technological interests. Ultimately, through a three party agreement, France took over the contract to provide enriched uranium and India maintained existing safeguards on the facility.

The dispute over Tarapur fuel and spare parts served as resetting the cooperation benchmark between the U.S. and India after the 1974 nuclear tests. In particular, there was a heightened priority on the part of the Americans that India refrain from further public demonstrations. Additionally, Canada, who was a major supplier of nuclear materials and technology for India's civilian nuclear program, withdrew cooperation after the 1974 test, creating additional pressure on the nuclear establishment to indigenously produce its own nuclear components and materials for the weapons program.³⁵⁷

The extent to which the United State and Canada refused further cooperation caught India off guard, as they had anticipated that the U.S. would at least honor prior agreements. That is, while the U.S. and Canada had sought to link their earlier cooperation with Indian restraint on testing, they had not actually specified the measures they would take if India violated this understanding,³⁵⁸ and the extent to which the U.S. was willing to withdraw cooperation surprised many in the Indian government. It also

³⁵⁷ Aabha Dixit, "Status Quo: Maintaining Nuclear Ambiguity," 61.

³⁵⁸ Perkovich, India's Nuclear Bomb, 174.

motivated the Indians to seek further self-reliance in the nuclear field so that it would not be dependent on outside resources to continue its development.³⁵⁹

As a result, these non-proliferation measures imposed on India became extremely costly for India's economic and scientific development. As Cohen notes,

The U.S.-led response to the 1974 Pokhran test revived the economic factor in Indian nuclear calculations. New Delhi was surprised at the intensity of the international reaction and shocked by the severity of the sanctions imposed upon the Indian civilian nuclear program. Subsequent U.S. legislation...and the establishment of various international regimes to deny dual-use technology to incipient nuclear weapons states reintroduce and transformed the idea of 'cost'.³⁶⁰

The practical result is that U.S. non-proliferation policy slowed the pace and quality of India's nuclear development, although it did not succeed in stopping it.³⁶¹

Rather, these non-proliferation efforts kept the program from public eye and increased Indian efforts to indigenously produce the necessary components for a nuclear weapons capability. Additionally, the increased economic aid in the amount of \$200 million dollars by the U.S. and several other Western countries served as an additional source of leverage on the Indian program.³⁶² These incentives also served, in conjunction with the threat of sanctions, to help keep Indian nuclear ambitious ambiguous later in the early 1980s when Gandhi considered testing again.

³⁵⁹ Blood, "Current Status of Indian Nuclear Facilities," no. NP01859, 1.

³⁶⁰ Cohen, "Why Did India 'Go Nuclear'?" 24.

³⁶¹ Raju G. C. Thomas and Amit Gupta, eds., India's Nuclear Security (Boulder: Lynne Rienner Publishers, 2000) 20.

³⁶² Perkovich, India's Nuclear Bomb, 184.

Nonetheless, the further result of the Tarapur incident is that the U.S. would provide minimal cooperation with India on nuclear matters.³⁶³ No longer having nuclear leverage, the U.S. sought to further link its economic and technical avenues of cooperation with continued Indian restraint. These dynamics are discussed below.

4. U.S. Economic and Technological Leverage

During the 1980s and 1990s, India's Prime Ministers began liberalizing the Indian economy. This led the Indians to seek increased economic and technical cooperation with the United States. This strategy had a twofold effect on Indian nuclear policy. On the one hand, increased cooperation with the United States was an important factor in maintaining nuclear ambiguity; Indian leaders did not want to jeopardize increasing access to markets and technology by triggering U.S. mandatory non-proliferation sanctions by testing. At the same time, India's economic growth, combined with better relations with the U.S., put the Indians in a better position to withstand the sanctions resulting from a test.

a) I. Gandhi Begins India's Economic Liberalization

When Indira Gandhi returned to power in 1980, she sought to further advance the Indian nuclear weapons progress that she had begun during her first tenure in office. Hidden from public purview, she authorized programs to fund research and development on five different nuclear missile delivery options and pursued an Indian lease of a Soviet

³⁶³ U.S. Department of State, "India's Nuclear Energy Program--1987 Update," Confidential Cable 24852, 10 October 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02526, 10.

nuclear submarine. In public, she maintained the ambiguous nuclear stance in which she neither denied Indian nuclear development, but did not suggest that India was ‘weaponizing’ its capability either. Consistent with this posture, from 1980 through 1982 she issued a number of public statements indicating that while India’s nuclear program was for peaceful purposes, if tests were necessary to further these scientific applications, India would do so. She indicated that it was “not our policy to make bombs”, but also “we should not be caught napping.”³⁶⁴

Behind the scenes, Gandhi seriously considered conducting more nuclear tests and in February 1981 she went so far as having the two testing shafts to be cleared and the instructed the bomb team to ‘have the devices ready’.³⁶⁵ It appears as if she was keeping the option open to test at least through 1982, when again there were reports of activity in the Pokhran Desert that suggested test preparations. In May of 1982, the U.S. Embassy in India cabled back an Indian news article reporting on increased activity at the test site.³⁶⁶ However, in order to squash these reports in public, Gandhi again publicly declared to the press later in the month that India would not test.³⁶⁷

³⁶⁴ Harry G. Barnes Jr. to Secstate, “Status of India’s Nuclear Program and Policy,” New Delhi, cable, 11 June 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01964.

³⁶⁵ Chengappa, Weapons of Peace, 247.

³⁶⁶ Rumors continued through 1982 about a pending test given activity at Pokhran, but consistently the embassy concluded that India would not test. Harry G. Barnes Jr., “Indian Magazine Speculates about Nuclear Blast at Pokhran Test Site,” New Delhi, cable, 12 May 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01950.

³⁶⁷ Harry G. Barnes Jr. to Secstate, “Status of India’s Nuclear Program and Policy,” no. NP01964.

When Gandhi was questioned by her top nuclear scientist for the reasons why she had decided not to go ahead with the test, she reportedly replied, “[d]o you want our skulls cracked?”³⁶⁸ This comment was believed to be in reference to her concerns over a U.S. reaction and the difficulties that would pose to the economic trouble she was facing.³⁶⁹ Prime Minister Gandhi further indicated that the primary task of her government was to restore the nation’s suffering economy and bring it back to the road of development.³⁷⁰

To illustrate the depth of Indian economic difficulties, from 1971 through 1979, India had averaged only 2.6% GDP growth and had –5% growth in 1979.³⁷¹ India was also heavily dependent on foreign assistance from the World Bank and the IMF during this time period,³⁷² resources that would be vulnerable to U.S. pressures to stop lending. Given this dismal state of affairs, economic growth and closer cooperation with the United States was attractive and Gandhi’s motivations to refrain from testing seemed to be largely linked to her efforts to balance economic growth in India with military security considerations.

Moreover, Prime Minister Gandhi had gotten on remarkably well with President Reagan during their first meeting in Mexico and a subsequent visit was scheduled for her

³⁶⁸ Chengappa, Weapons of Peace, 260.

³⁶⁹ Chengappa, Weapons of Peace, 260.

³⁷⁰ U.S. Foreign Broadcast Information Service, “Mrs. Gandhi on Nuclear Policy, Soviet Intervention,” Non-Classified Article, 17 January 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01718, 1.

³⁷¹ “World Development Indicators” Database, World Bank, 1997.

³⁷² Perkovich, India's Nuclear Bomb, 244.

to meet with the President at the White House. By 1982 two-way trade between the United States and India had reached \$3 billion a year and Indira Gandhi was planning another visit to Washington to “examine ways to expand trade more rapidly and to increase economic cooperation in general.”³⁷³ Her visit to the U.S. was a chance to increase economic cooperation with the U.S. after a period of tense relations, although India continued to rely on the Soviet Union and France for its supply of military arms.³⁷⁴

The potential for her visit and the general warming of relations with the West, which in turn might yield economic and technical cooperation, appeared to have affected Gandhi’s desire to avoid upsetting the U.S. with nuclear tests. Consistent with this approach, when Prime Minister Gandhi visited the United States, it was clear that economic priorities were on her mind during her visit from July 27th-August 2nd 1982.³⁷⁵ Prime Minister Gandhi’s message on economic issues was that India needed concessional credits to assist her policy of gradual economic liberalization.³⁷⁶

Her efforts to embrace economic and technical cooperation with the United States, at the expense of overtly going nuclear, paid dividends with the visit. There was

³⁷³ Henry Barnes to U.S. Department of State, “Official Informal No. 402,” Confidential Cable 11098, 9 June 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01963, 1.

³⁷⁴ U.S. Department of State, “Media Reaction Report No. 84,” Unclassified Cable 209208, 28 July 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01977.

³⁷⁵ The US Department of State indicated that “Economic issues were of major importance to Mrs. Gandhi during the visit.” U.S. Department of State, “Visit of Indian Prime Minister Indira Gandhi,” Washington D.C., cable, 2 August 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01981.

³⁷⁶ U.S. Department of State, “Visit of Indian Prime Minister Indira Gandhi,” Confidential Memorandum, 3 August 1982, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01982, 1.

agreement between New Delhi and Washington that increased consultations and enhanced Indo-U.S. trade could be helpful for her policies of economic liberalization.³⁷⁷ Further initiatives between the two states were announced, relating to expanded scientific, cultural and educational programs; promotion of commercial relations; and reinstatement of annual official level talks between the State Department and the Ministry of Foreign Affairs.³⁷⁸

Increased cooperation also led to the Reagan-Gandhi Science and Technology Initiative (STI) in 1982 and the 1984 Memorandum of Understanding (MOU). The MOU addressed sensitive military equipment, including radars, air navigation systems and other military hardware. It also provided for the sale of high technology products and technology transfers, including supercomputers for civilian use. Previously, the United States had blocked the sale of computers to India based on concerns that the technology would be used to support India's nuclear weapons program or would be transferred to the Soviet Union.³⁷⁹

This meant that the MOU, with its emphasis on advanced technology and military links, was particularly contingent on the Indian's ability to assure the United States that it was not utilizing these resources for its nuclear program nor sharing the technology with

³⁷⁷ U.S. Department of State, "Visit of Indian Prime Minister Indira Gandhi," no. NP01982, 1.

³⁷⁸ U.S. Department of State, "Visit of Indian Prime Minister Indira Gandhi," no. NP01982, 1.

³⁷⁹ John Elliott, "US Eases Curbs on High Technology Exports to India," *Financial Times* (London), 20 November 1984, in *Lexis-Nexis Academic Universe*, <http://web.lexis-nexis.com>, 14.

other states.³⁸⁰ Clearly, moves towards more overt nuclear development would sabotage these efforts and were ruled out.

Subsequently, during the rest of the 1980s, the United States became the primary source for Indian acquisitions of electronics, computers and telecommunications equipment. During this time period, Indira Gandhi put nuclear testing on the backburner and instead she authorized India's most ambitious efforts to date to gain delivery capabilities when she approved funding for the missile programs. She was politically able to continue with these measures for a nuclear delivery capability, as there were not yet any immediate external pressures by the United States against the Indian missile program.³⁸¹

The U.S., for its part, was clear that it expected forbearance on nuclear testing in exchange for continued cooperation. The U.S. had previously signaled its impatience with nuclear proliferation over the Tarapur fuel crisis. And the U.S. Congress had made it clear that it would stop providing aid to India if it detonated another nuclear device, regardless of whether it was labeled a peaceful nuclear explosion.³⁸² These signals from the U.S. were understood in India. For example, when Indian General Rao inquired again

³⁸⁰ Waheguru Pal Singh Sidhu, "Enhancing Indo-US Strategic Cooperation," Adelphi Paper 313 (New York: Oxford University Press, 1997) 43.

³⁸¹ Waheguru Pal Singh Sidhu, "India's Nuclear Use Doctrine," in Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott S. Sagan, and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000), 134.

³⁸² "US Threat on A-Bomb Derided in India," New York Times, 23 October 1981, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>, 5.

in 1983 as to whether Prime Minister Gandhi would conduct more tests, she was even clearer that there was an economic liability to testing nuclear weapons.³⁸³

Thus, while Gandhi considered testing in the early 1980s, addressing economic weakness was a higher priority and the Indian government took care not to provoke the renewed patronage of the United States. Subsequent Prime Ministers largely followed this pattern and Indian leaders would not seriously consider testing again until 1995.

b) India's Continued Economic Liberalization Under R. Gandhi

Rajiv Gandhi, Indira's son, came to power after her assassination in 1984, and similarly considered the importance of Indian economic and technological development at the expense of an overt nuclear option. Rajiv Gandhi began some market liberalization efforts during his tenure, primarily aimed at reducing Indian tariffs, which were some of the highest in the world at 40-250% and sought to slowly move India away from a 'self-sufficient' market.³⁸⁴ While seeking to slowly liberalize India's economy, the Prime Minister also made it a priority to gain access to American high technology. Consistent with this approach, India sought to maintain relations with the U.S. in order to further its access to technology, which would be hindered if India publicly acknowledged its nuclear progress.

³⁸³ Chengappa, *Weapons of Peace*, 287.

³⁸⁴ U.S. Department of State, "Fact Sheets on Selected Items Regarding U.S. Relations With Pakistan," Briefing Paper, 9 October 1987, *Nuclear Non-Proliferation* (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02525.

Rajiv Gandhi's first visit to the United States as Prime Minister was in 1985, and marked a further shift in better relations between the two states.³⁸⁵ This visit with Reagan encouraged more space cooperation, the implementation of the MOU on sharing advanced U.S. technology in the areas of telecommunications and electronics, but did not include arms sales.³⁸⁶ India was also sensitive to the fact that the U.S. had blocked international financial aid to India in the past. At the time, India was the largest borrower from the World Bank's "soft" and "hard" loans, of which the U.S. was the largest single donor.³⁸⁷ By 1985 the U.S. was also India's largest trading partner and source of joint ventures.³⁸⁸ During his visit, Prime Minister Gandhi assured the Reagan administration that India had not continued its nuclear explosive program after the 1974 test.³⁸⁹

The 1985 visit was followed by a trip in 1987, during which Prime Minister Gandhi noted the "tremendous achievement" in the relationship based on increased export licenses to India (which included a supercomputer), further cooperation in defense production, especially for Indian manufacture of light combat aircraft, and more trade and business collaboration.³⁹⁰ Further, the U.S. was willing to continue to assist in the launch

³⁸⁵ U.S. Information Agency, "P.M. Gandhi's U.S. Visit," no. NP02238, 1-4.

³⁸⁶ U.S. Department of State, "Indo-U.S. Joint Statement on Gandhi Visit," no. NP02233, 1.

³⁸⁷ U.S. Department of State, "NEA Guidance for Press Spokesman on India," Non-Classified Press Guidance, 5 June 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02228, 3.

³⁸⁸ U.S. Information Agency, "The Official Working Visit to Washington of Indian Prime Minister Rajiv Gandhi," Non-Classified Press Briefing, 11 June 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02231, 2.

³⁸⁹ Donnelly, "India and Nuclear Weapons," no. NP02483, 2.

³⁹⁰ U.S. Information Agency, "The Official Working Visit of Indian Prime Minister Rajiv Gandhi," no. NP02531, 2.

of Indian satellites and to renew the “Reagan-Indira Gandhi Science and Technology Initiative” for an additional three years beyond 1988.³⁹¹ At this time, the United States was India’s largest trading partner, with imports and exports volume reaching approximately 4 billion each year since 1984.³⁹²

However, the agreement to exchange the supercomputer again brought up the issue of India’s nuclear intentions. The United States understood that it had leverage over India because of New Delhi’s desire to cooperate with the West rather than the Soviet Union for advance technology.³⁹³ With concerns that India might use the computer for its nuclear program, the U.S. approved a less sophisticated model than requested by the Indian government,³⁹⁴ and linked the computer to Indian nuclear restraint by requiring that India to restrict their uses to “peaceful purposes only.”³⁹⁵ Prime Minister Gandhi again sought to reassure the United States during the visit that India preferred to not pay the costs of acquiring nuclear weapons. In a press conference, he revealed some of the constraints facing India, stating that, “[w]e feel that costs of

³⁹¹ U.S. Department of State, “Suggested Statement for the President’s Use,” Confidential Memorandum, 20 October 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02528, 1-2.

³⁹² U.S. Department of State, “Fact Sheets on Selected Items Regarding U.S. Relations With Pakistan,” no. NP02525.

³⁹³ Nicholas Platt to Robert C. McFarlane, “Fact Sheets for the President’s Use During Meetings with Rajiv Gandhi,” no. NP02225.

³⁹⁴ T.S.K. Lingam, “US Signs First Sale of Supercomputers to non-Western Nation,” United Press International, 9 October 1987, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>; Steve R. Weisman, “India and US Agree on Supercomputer Sale,” New York Times, 9 October 1987, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>, D1.

³⁹⁵ “Administration Eyes Sale of Supercomputer to India, Sources Say,” Associated Press, 8 April 1990, in Lexis-Nexis Academic Universe, <http://www.lexis-nexis.com>.

going nuclear, not just the money costs but all the other costs, are much too heavy and we would like to do anything to prevent ourselves going nuclear.”³⁹⁶

And as previously discussed, increased contacts between New Delhi and Washington afforded Indian leaders the opportunity to press the Reagan administration to more effectively deal with Pakistani nuclear proliferation. Indian restraint combined with the implicit threat that India would also test or build nuclear weapons if Pakistan did so was designed to signal to Washington that India was not the proliferation problem.

c) India’s Economic Growth in the 1990s

The decade leading up to the tests in 1998 resulted in significant changes for the relationship between the United States and India. Better relations with India continued to develop as economic and even military cooperation flourished. Nonetheless, Washington’s concerns with non-proliferation continued to be a source of friction between the two states. In particular, the U.S. under the Clinton administration sought to further the international non-proliferation regime through the permanent extension of the NPT and sought acceptance of the Comprehensive Test Ban Treaty (“CTBT”). Yet, notwithstanding these very public non-proliferation measures, there were also some subtle signals from Washington that it was willing to cooperate with a nuclear India. These signals, combined with Indian economic growth, positioned India to test after the major campaign for the NPT and CTBT were over. The following discusses India’s

³⁹⁶ At this same press conference, Rajiv Gandhi acknowledged that Pakistan probably already had a “workable device.” U.S. Department of State, “Transcript of Press Conference Held by PM,” no. NP02534.

primary focus on economic growth for the first part of the decade, and the gradual transformation of the U.S.-Indo relationship leading up to the test.

Early in 1990, when PV Narasimha Rao was elected Prime Minister, he was very much concerned with balancing economic growth with India's nuclear policy. During this timeframe, Rao's primary accomplishment was instituting major economic liberalization and correspondingly began to integrate India into the global economy. These economic reforms became largely responsible for the substantial 6.9% annual economic growth India saw for the rest of the decade.³⁹⁷ During his tenure in office, which lasted until 1996, Rao also had to face the additional challenges of resisting U.S. non-proliferation efforts in the post-Cold War world, which centered on a permanent extension of the NPT in 1995 and the CTBT in 1996. These dual concerns caused Rao's foreign policy to focus on "economic modernization and keeping a low international profile."³⁹⁸

Given Rao's efforts to open up India's traditionally closed economy, he specifically sought to engage the world's sole remaining super power and champion of economic liberalization, the United States. As part of these efforts, Rao was careful to accommodate U.S. requests to remain quiet about its nuclear development in order to maximize its economic opportunities. In one of the meetings Strobe Talbott, acting as Deputy Secretary of State, remarks that,

Rao would have had me believe he was predisposed to maintain Indira Gandhi's policy of nuclear ambiguity...[he] understood that security

³⁹⁷ World Bank Data cited in Paul and Nayar, India in the World Order, 43.

³⁹⁸ Lesson learned from China, Mohan, Crossing the Rubicon, 154.

depended on prosperity. Prosperity, in turn, depended on integration into world markets and close relations with the United States. That objective, he seemed to recognize, would be in jeopardy if India overplayed its nuclear card.³⁹⁹

To buy time while working towards economic reform, Rao engaged in prolonged dialogues with the United States regarding the NPT and Comprehensive Test Ban Treaty (CTBT). Essentially, Rao conducted a two-track policy, which was to accede to discussion with the United States in order to promote economic cooperation, while secretly furthering Indian nuclear weapons development.⁴⁰⁰ Rao also sought to have the United States put increased non-proliferation pressure on China and Pakistan to slow the apparent nuclear and missile collaboration.

Against this backdrop, Rao ensured the Indian nuclear option by providing funding and moving forward with ballistic missile tests against U.S. wishes.⁴⁰¹ It was during this period that India made significant strides towards more reliable delivery options with its ballistic missile program by successfully testing the Agni class missiles. Indeed, it was in 1994 that India had made its most significant advancements in becoming a nuclear weapons state, having achieved this qualitative increase in its missile program. Still, these developments were largely kept from the Indian public⁴⁰² and the

³⁹⁹ Strobe Talbott, Engaging India: Diplomacy, Democracy, and The Bomb (Washington D.C.: Brookings Institution Press, 2004), 31.

⁴⁰⁰ Mohan, Crossing the Rubicon, 5.

⁴⁰¹ Chengappa, Weapons of Peace, 369.

⁴⁰² Certainly there were news articles championing India's successful missile test launches, but these were couched in terms of missiles for the purposes of carrying conventional warheads. Moreover, Indian official policy refrained from declaring India a nuclear weapons capable state even though they had clearly crossed that threshold previously.

United States largely ignored these developments, turning instead its attention towards winning an indefinite extension of the NPT.⁴⁰³

For his part, Rao sought to keep the continued nuclear developments a carefully guarded secret, given that part of the bargain with the United State was that India would not publicly acknowledge its nuclear capabilities. The scientists and others ‘in the know’ were required to maintain strict secrecy regarding their progress with the bomb program and to this end, funds were even channeled through other departments outside the DRDO in order to avoid leaking the ongoing efforts of the weaponeers.⁴⁰⁴ Rao is quoted as instructing the scientists, “Do whatever is necessary to keep us in a constant state of readiness on the nuclear front. But do it quietly. Never mind if we are criticized for not pursuing it aggressively. I have my hands full with the economy and I don’t want to get diverted on any other issues.”⁴⁰⁵

Reportedly, Prime Minister Rao authorized Foreign Secretary J.N. Dixit to inform the U.S. government that India will most likely conduct nuclear tests no later than 1992-93. The Indian government demanded that in return for not springing surprises on the Clinton administration and communicating clarity of purpose, the United States avoid imposing economic sanctions on India. Tarnoff and Pickering inform Dixit that the Indian government should not inform Washington of its proposed actions beforehand as the U.S. government will be compelled to act to stop the tests. Pickering also assures

⁴⁰³ Perkovich, India's Nuclear Bomb, 40.

⁴⁰⁴ Chengappa, Weapons of Peace, 389.

⁴⁰⁵ Quoted in Chengappa, Weapons of Peace, 370.

Dixit that the United States will not use force in the event India conducts nuclear tests, but that it has other means to take action against India.⁴⁰⁶

By 1995, the efforts for economic reform had started to pay off, giving India more economic and political leverage with the rest of the world and the United States.⁴⁰⁷

Under these conditions, Rao reconsidered the nuclear option in light of India's economic growth and had the finance and external affairs ministries study the economic effects of testing India's nuclear weapons.⁴⁰⁸

Yet, when Rao consulted his advisors, they were concerned that the economic gains that had been made the last few years would be lost. Moreover, "Rao's advisers believed that there should be a clear sequence to such events. They believed that such tests needed at least two years of preparation to girdle up India to face the economic isolation that may result. The argument was to first build some economic muscle."⁴⁰⁹ Additionally, the U.S. put direct diplomatic pressure on India, and "Rao did, as Clinton hoped he would, pull the plug on the test, largely because he did not want to provoke sanctions that would do harm to the Indian economy."⁴¹⁰ Thus, while Rao considered the option of testing, he ultimately decided against it based on his advisor's concerns over the economy and its vulnerability vis-à-vis the likely imposition of U.S. sanctions.

⁴⁰⁶ Karnad, Nuclear Weapons & Indian Security, 369-370.

⁴⁰⁷ Mohan, Crossing the Rubicon, 5.

⁴⁰⁸ Mohan, Crossing the Rubicon, 7

⁴⁰⁹ Chengappa, Weapons of Peace, 393.

⁴¹⁰ Talbott, Engaging India, 38.

If the economy would have been strong enough, the evidence suggests that he would have conducted the tests; however, given the calculated costs of U.S. sanctions, Rao determined that it was not yet India's time to publicly declare its nuclear status. In short, Rao "...decided that a nuclear test was not in India's interest, primarily because he concluded that the economy was not yet strong enough to withstand the inflationary effects of international sanctions. He concluded that inflation was more important to the national interest and in electoral politics, than was nuclear weapon testing."⁴¹¹ Almost like clockwork, India waited several years and continued nuclear preparation in secrecy until Vajpayee and the BJP came to power in India.

D. International Non-proliferation Regime

India's stance toward the non-proliferation regime agreements remained consistent after its 1974 nuclear test. In particular, India rejected the NPT and later the CTBT as discriminatory because they entrenched existing nuclear weapons states. Nonetheless, India was still affected by the institutions and agreements among nuclear suppliers and the 1974 test triggered a backlash that among some Western states. This slowed down and damaged the Indian nuclear energy and weapons program. Therefore, the primary affect the international non-proliferation regime had on India's nuclear policy was material. While India often spoke of disarmament publicly, arms control or other agreements were not even a remote possibility in light of China's refusal to participate in the NPT. However, China and France's position changed during the 1990s. India still

⁴¹¹ Perkovich, India's Nuclear Bomb, 34.

rejected the permanent extension of the NPT and the initiation of the CTBT as discriminatory, but it became more isolated as a result.

1. International Reaction to the 1974 Test

India's 1974 nuclear test was viewed as a non-proliferation set back by the United States and other Western nuclear suppliers because it set a precedent for other states to cross the nuclear threshold by labeling tests PNEs.⁴¹² There was further concern that the Indian test would further contribute to proliferation by motivating Pakistan to seek nuclear weapons.⁴¹³

As such, the goal for willing supplier states was to make the test costly so that other threshold states would not follow suit. To this end, the U.S. sought to encourage other nuclear suppliers to abide by the NPT and to not export nuclear technology or materials to non-recognized nuclear weapons states such as India in the absence of full-scope safeguards.⁴¹⁴ For example, as previously discussed, the U.S. had begun to seek ways to extract itself from its contract commitments related to the Tarapur reactor. Canada imposed restrictions, but the Soviet Union and France were less willing to punish New Delhi for its nuclear explosion.

With the exception of Pakistan, Canada had the strongest reaction to India's 1974 nuclear test. Like the United States, Canada had sought to forestall testing by previously

⁴¹² Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, i and 10.

⁴¹³ Ingersoll, "U.S. Nuclear Non-proliferation Policy," no. PR01263, 5.

⁴¹⁴ U.S. Department of State, "U.S.-USSR Non-Proliferation Bilaterals--Regional Aspects of Non-Proliferation," no. NP02498, 4.

warning India that “an explosion did not constitute a peaceful use.”⁴¹⁵ When the test occurred, Canadian officials were particularly dismayed by the test because Canada had provided India with a substantial amount of nuclear assistance, and the explosive device likely had incorporated plutonium from the Canada supplied CIRUS reactor.⁴¹⁶

As a result of the test, Ottawa suspended all nuclear cooperation and assistance and reviewed all other forms of economic aid, except food and agricultural assistance.⁴¹⁷ The Canadian response almost immediately affected India’s nuclear energy program, as for example, India had uncompleted construction on a Canadian supplied reactor.⁴¹⁸ Additionally, because India was unwilling to provide the Canadian government with assurances that it would give up the option to further test and would not accept safeguards on all its nuclear facilities, Ottawa concluded that further nuclear cooperation with India was not possible under the terms of the NPT.⁴¹⁹ Because Canada had closely cooperated with the Indian nuclear program, the nuclear embargo crippled India’s program and required it to turn to other sources and indigenous measures to continued progress. In short, as Indian Prime Minister Desai acknowledged a few years later, the

⁴¹⁵ U.S. Arms Control and Disarmament Agency, “Ribicoff: U.S. Heavy Water and the Indian Cirus Reactor,” Non-Classified Memorandum, 17 June 1976, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01472, 2.

⁴¹⁶ Sober, “Press Coverage of India’s Developing Nuclear Capability,” no. PR01076, 14.

⁴¹⁷ Sober, “Press Coverage of India’s Developing Nuclear Capability,” no. PR01076, i and 14.

⁴¹⁸ U.S. Arms Control and Disarmament Agency, “Ribicoff: U.S. Heavy Water and the Indian Cirus Reactor,” no. NP01472, 5.

⁴¹⁹ Department of External Affairs, Canada, “Nuclear Relations with India,” Classified Statement, 18 May 1976, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01468, 2.

1974 nuclear test caused severe difficulties for India in maintaining its nuclear research and development program.⁴²⁰ However, Canada's response represented one end of the spectrum. The Soviet Union and France's reactions were considerably weaker.

The Soviet Union's position remained consistent with its approach prior to the 1974 test. In particular, while Moscow generally identified non-proliferation as being in its interests, it was unwilling to damage its relationship with India over the test.⁴²¹ After the 1974 test, the Soviets largely reported the event as a "peaceful explosion,"⁴²² and were unwilling to publicly "chastise the Indians."⁴²³ The lack of Soviet response was not particularly important in material terms because India had cooperated more extensively with the U.S. and Canada on nuclear matters.⁴²⁴ As such, the Soviet approach was to generally neither condemn nor condone the test.

Additionally, the Soviets were willing to provide some limited nuclear material assistance, which was useful for India in the wake of U.S. and Canadian response. There were some media reports during the 1980s that the Soviets had violated its international obligations by supplying heavy water to India, which was used in part in a reactor that was a source of plutonium for weapons.⁴²⁵ However, this was not a particularly extensive

⁴²⁰ Perkovich, India's Nuclear Bomb, 214.

⁴²¹ Sober, "Indian Nuclear Development," no. PR01076, i.

⁴²² Central Intelligence Agency, "Central Intelligence Bulletin—India," no. WM00167, 3.

⁴²³ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, v.

⁴²⁴ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 8. Soviet assistance included forty-five tons of heavy water, a large computer, and some lab equipment. *Ibid.*

⁴²⁵ West German Broadcasting, "Wanted...Bomb Business: Nuclear Aid for Pakistan and India," no. NP02283, 13.

supply relationship. As such, the USSR's general approach to Indian proliferation neither helped nor hindered it. For this reason, the Soviet Union was not a particularly important factor, as either a patron state or as related to its international non-proliferation obligations, in determining India's nuclear posture.

Similarly, France was not willing to take India to task for testing. Indeed, France was reluctant in general to participate in any non-proliferation measures until acceding to the NPT in 1995 and signing the CTBT in 1996. For example, the Chairman of the French Atomic Energy Commission publicly congratulated the Indians after the 1974 test.⁴²⁶ More telling, the French were willing to help India construct two unsafeguarded power reactors and a fast breeder reactor.⁴²⁷ Thus, while most other major nuclear suppliers cooperated, broadly speaking, in making India's nuclear program harder, France was a major exception.

France's conduct was a clear signal that the non-proliferation regime was at this time largely based on U.S. efforts.⁴²⁸ The U.S. further recognized that France was a weak link in the non-proliferation regime and that its cooperation was necessary in order to tighten export controls, and sought to have France shut off the spigot.⁴²⁹ However, India had little concern as related directly to France, and thus the latter was not a significant factor in Indian nuclear decision-making.

⁴²⁶ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 9.

⁴²⁷ Sober, "Press Coverage of India's Developing Nuclear Capability," no. PR01076, 9.

⁴²⁸ Sumit Ganguly, "Explaining the Indian Nuclear Tests of 1998," in India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. (Boulder: Lynne Rienner Publishers, 2000), 47.

⁴²⁹ Springsteen, "Indian Nuclear Developments: NSSM 156," no. PR011077, 5.

2. India Avoids International and Regional Non-Proliferation Restrictions

After the 1974 nuclear test, India maintained a consistent position of rejecting international and regional non-proliferation agreements and proposals that did not restrict China's nuclear weapons capabilities. This meant that India continued to stay largely outside of the direct obligations of the international non-proliferation regime. Rather, by avoiding nuclear safeguards and treaty commitments, India preserved its nuclear option that would enable it to develop weapons in the future to address its long-term security concerns vis-à-vis China.⁴³⁰

Prior to the test, New Delhi had signed and ratified the Partial Test Ban Treaty and subjected some of its facilities to IAEA safeguards, although not all of its facilities were covered, including its own indigenous plants and materials.⁴³¹ India was not a member of the Nuclear Suppliers Group. And of course, New Delhi refused to join the NPT, arguing that it was discriminatory because it did not require nuclear weapons states to disarm, and that India had the right to develop nuclear energy for peaceful purposes.⁴³² India also specifically criticized the NPT for not constraining China's nuclear forces. The further impact of India not signing the NPT is that Pakistan was likewise unwilling to give up its nuclear ambitions while India retained its option.

⁴³⁰ Central Intelligence Agency, "Indian Nuclear Policies in the 1980s," no. WM00251, 1.

⁴³¹ Donnelly, "India and Nuclear Weapons," no. NP02483, 4.

⁴³² U.S. Foreign Broadcast Information Service, "Mrs. Gandhi on Nuclear Policy, Soviet Intervention," no. NP01718, 1.

At the same time that India rejected international restrictions on its nuclear option, New Delhi also sought to portray its stance as consistent with non-proliferation. Its argument against the NPT was based on the discriminatory nature of the agreement, and India supported the overall goals of disarmament. Additionally, India would point to its own restraint as related to weapons proliferation and contrast its conduct with Pakistan's clandestine nuclear activities.⁴³³

In addition to rejecting international non-proliferation agreements that would limit India nuclear option, New Delhi also refused to seriously consider any Pakistani proposals. Over time Islamabad put forward a number of options to limit the development of nuclear weapons in South Asia, including: the establishment of a nuclear weapons free zone in South Asia (1974); joint declaration renouncing the acquisition or manufacture of nuclear weapons (1978); mutual inspection of nuclear facilities (1979); simultaneous adherence to the NPT by India and Pakistan; acceptance of IAEA safeguards (1979); and bilateral/regional nuclear test ban (1987).⁴³⁴ The main impediment remained the fact that any bilateral or regional agreements would not constrain the China's nuclear weapons capability. As such, the Pakistani proposals were

⁴³³ U.S. Department of State, "Transcript of PM's Press Conference," Press Conference, 20 October 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02533, 16.

⁴³⁴ Jamsheed K.A. Markter to John Glenn, "Pakistan's Policy on Nuclear Non-Proliferation," Letter, 20 January 1988, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02590, 2.

not a realistic option for India, and New Delhi rejected them because China was not included.⁴³⁵

In short, the non-proliferation regime mattered early on to the extent some of India's important suppliers began denying India access to previously available nuclear technology and materials. India was willing absorb these material costs in order to retain its nuclear option, especially because its two main adversaries—China and Pakistan—remained outside of the institutional frameworks.

At the same time, it wasn't the goals of the non-proliferation regime that India objected to, but rather its ineffectiveness at addressing the threats posed by China and Pakistan's nuclear weapons programs. As such, India viewed the nuclear option as a security requirement it could not afford to trade away by agreement. Additionally, emphasizing Indian support of disarmament goals and own restrained conduct allowed it to credibly argue that Pakistan was the proliferation threat. If India had continued testing, in addition risking further material disadvantages, it would have lost the diplomatic stance that other states should be seeking to restrain Pakistani nuclear activities.

3. The Permanent Extension of the NPT and CTBT

India again was under increased non-proliferation pressure during the 1990s as the permanent extension for the NPT became due in 1995 and the Clinton administration sought the passage of the CTBT. While India was unwilling to give up its nuclear option, it also sought to not directly undermine either agreement, likely because it did not want to increase existing friction with Washington over the issue. This time period was

⁴³⁵ Donnelly, "India and Nuclear Weapons," no. NP02483, 4.

complicated for India diplomatically as it sought to maintain economic and technical cooperation with the U.S. while at the same time deflecting pressure on its nuclear program.

The negotiations for the permanent extension of the NPT and CTBT occurred at the same time that India dusted off its nuclear testing sites. Some observers saw this move as a protest to the non-proliferation measures,⁴³⁶ but at the same time India chose to wait to test until after the agreements were signed. Given Indian interests in better relations with the U.S., it would have been inopportune to test while the U.S. was pushing the CTBT.⁴³⁷ In this way, India could avoid disapprobation for directly challenging the non-proliferation regime, but at the same time clearly signal that it remained outside of the framework.

However, India's position on the NPT and later the CTBT became increasingly isolated during the 1990s as two long-standing holdouts—China and France—acceded to the treaties. This put increasing pressure on India to sign the agreements, which it steadfastly resisted. But it also put India on the defensive to the extent that its long standing justification that it would not sign a treaty that China was not a party to was insufficient. India had to rely on the continued justification of the discriminatory nature of the agreements to implicitly remind other states that its real reason for not signing the treaties is because India would not be considered a nuclear weapons state like China.

⁴³⁶ Karnad, Nuclear Weapons & Indian Security, 373-374.

⁴³⁷ Chengappa, Weapons of Peace, 399.

E. Domestic Politics

There was general support for the Indian nuclear weapons program from a broad spectrum of sources that crossed party lines and included special interests and elite and mass public opinion. Public support for nuclear weapons was largely based on reports of Pakistani nuclear progress. Nonetheless, Indian Prime Ministers retained the nuclear portfolio, and while they authorized efforts to increase India's ability to produce and deliver nuclear weapons, these efforts were kept largely private. This meant that while public opinion was not in and of itself a determinative factor in India retaining an ambiguous posture; indeed, public support was a pressure for a more transparent nuclear policy. Additionally, with increases in the Indian nuclear weapons program, there is little evidence that moral reservation was a primary consideration for India's leaders.

1. Domestic Political Interests

Following the 1974 nuclear test, there remained strong public support for India to have a more robust nuclear posture, which included at a minimum continued testing. Support for India's nuclear option was spread across a wide range of interests groups, political parties, and the general population. This mean that India's Prime Ministers could have capitalized on popular support for nuclear weapons, but clearly this was not the case as only two different Prime Ministers have ever exercised the option.⁴³⁸ Instead, Indian leaders have generally sought to balance other priorities as the expense of

⁴³⁸ Additionally, the issue of 'weak governments' cannot be a causal factor given the fact many governments in India history are weak. Since Independence in 1947, India has had at least seven Prime Ministers that have held power for less than two years.

exercising the nuclear option. This is consistent with the other issues such as poverty alleviation and addressing government and business corruption that most Indians find more important. Moreover, while the test may have been authorized, in part, based on domestic political calculations, after the 1974 tests India had “learned” its lesson and as it sought to further economic and scientific progress with the U.S., policies that would garner more public support than a public display of India’s nuclear progress.

There was continued support for India’s nuclear program following the 1974 test, with the same general political lines drawn as before the explosion. In the immediate aftermath of the test, all of India’s major political parties “welcomed the explosion in the Rajasthan desert.”⁴³⁹ Additionally, popular sentiment generally favored a nuclear capability.⁴⁴⁰ A poll conducted in 15 cities in 1981 showed that 70% of urban residents believed that India should develop nuclear weapons.⁴⁴¹ This strong pro-bomb constituency continued in India, especially in light of Pakistan’s nuclear development. Additionally, there was no corresponding popular anti-nuclear movement in India.⁴⁴²

There also still existed a number of domestic political actors that called for India to revise its nuclear policy and adopt an open posture. These factions primarily consisted of military leaders, scientists who supported testing, and opposition political parties. For example, there were several high profile military leaders such as K. Subrahmanyam in the

⁴³⁹ U.S. Department of State, “India: Uncertainty over Nuclear Policy,” no. WM00169, 1.

⁴⁴⁰ Donnelly, “India and Nuclear Weapons,” no. NP02483, 5-6.

⁴⁴¹ Donnelly, “India and Nuclear Weapons,” no. NP02483, 6.

⁴⁴² U.S. Department of State, “India-Pakistan: Pressures for Nuclear Proliferation,” no. WM00283, 2-3.

Defence Ministry and Army Chief General K. Sundarji who were well known to support India having nuclear weapons to deter Pakistan.⁴⁴³

Moreover, calls for an Indian nuclear weapons capability increased with corresponding evidence of Pakistan's nuclear progress, creating more pressure on the government to respond. For example, after Prime Minister Rajiv Gandhi stated that Pakistan was close to manufacturing a nuclear weapon, the Bharatiya Janata Party (BJP) urged the government to build nuclear weapons in response.⁴⁴⁴ This pattern—reports of Pakistani nuclear weapons, followed by calls from the BJP to immediately build nuclear weapons—continued throughout the late 1970s until India tested in 1998.⁴⁴⁵ Similarly, members of India's parliament, cutting across party lines, appealed to Prime Minister Rajiv Gandhi to revise India's nuclear policy because of the reported increase in Pakistan nuclear capability.⁴⁴⁶ Those calling for an open nuclear posture included members of the Congress Party, which essentially controlled India for most of the 1980s. In short, calls for an overt nuclear stance came from both special interests, as well as cut across party lines.

However, Indian Prime Ministers steadfastly resisted pressures to resume testing or publicly declare India a nuclear weapon state. Instead the general government

⁴⁴³ John Gunther Dean to U.S. Department of State, "Article on the Pak Nuclear Program," Unclassified Cable 07381, March 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02444, 6.

⁴⁴⁴ "India Rightists want Bomb," The New York Times, 23 June 1985, 3.

⁴⁴⁵ See, e.g., Donnelly, "India and Nuclear Weapons," no. NP02483, 8.

⁴⁴⁶ "India MPs call for 'Deterrent' Against Pakistan's Nuclear Capability," Press Trust of India, 8 December 1986, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

response was to indicate that India was prepared to respond to the Pakistani threat if circumstances warranted it.⁴⁴⁷ In short, appeals for India across the domestic spectrum were not strong enough for the ruling government to choose a nuclear option, one that would have been quite popular at the time.

This is not to say that there was universal support for a nuclear weapons program. There was however a broad base consensus supporting continued testing and nuclear development.⁴⁴⁸ If India's nuclear posture was entirely dependent on elite and popular support, at a minimum it should have continued testing after 1974. Nonetheless, Indian Prime Ministers, who traditionally retained the nuclear portfolio,⁴⁴⁹ refused to bend to these calls beyond stating that India was keeping its option open. This is because the Indian Prime Minister had a set of complicating factors to balance and garnering public support through the nuclear program generally took less priority than cultivating economic programs and preventing a regional arms race.

For example, in 1982 Indian nuclear scientists and the Chief of Army Staff Rao reportedly approached Prime Minister Indira Gandhi and lobbied her to continue testing and create an overt deterrent.⁴⁵⁰ She took their arguments under advisement, and then later rejected the prospect of testing, citing economic constraints as the reason.⁴⁵¹ Rajiv

⁴⁴⁷ Donnelly, "India and Nuclear Weapons," no. NP02483, 8.

⁴⁴⁸ U.S. Department of State, "India: Uncertainty over Nuclear Policy," no. WM00169, 4.

⁴⁴⁹ Following the example of India's prime ministers, Rajiv Gandhi retained the portfolios of atomic energy, high technology, and related industry. See "Briefly: India," *Nucleonics Week*, 10 January 1985, 13.

⁴⁵⁰ Chengappa, *Weapons of Peace*, 253-255; Perkovich, *India's Nuclear Bomb*, 242.

⁴⁵¹ Chengappa, *Weapons of Peace*, 286-287.

Gandhi generally followed this approach during his tenure in office through 1989. When he did seek to garner public support for military security with the ill-fated Brasstacks Exercises, he still largely avoided the nuclear issue. Similarly, in 1995 when Prime Minister Rao considered testing, domestic political factors were not the primary concern for him. For example, when the scientists suggested that a test would boost his popularity, he reportedly snapped, “let me worry about that.”⁴⁵²

Even Prime Minister Vajpayee, who ultimately authorized the 1998 nuclear tests, was influenced by factors other than widespread support for testing, as demonstrated when he cancelled tests during his first tenure in office in 1996. Atal Behari Vajpayee and the BJP came to power briefly in 1996 for two weeks and during this short duration in power, Vajpayee ordered and then retracted the decision to conduct nuclear tests. The nationalist BJP party had campaigned on a platform of Hindutva, which entailed a number of policies that, if enacted, would move India further away from its secular identity and embrace a nationalist Hindu policy. Part of this platform called for India to ‘induct’ its nuclear weapons capability. Given the fact that the BJP needed public support given its rather tenuous hold on power, making a public statement by testing would show that the BJP would ‘do what it had said it would do’.⁴⁵³ These domestic political motivations were probably responsible for Vajpayee sending for India’s two top nuclear scientists, Kalam and Chidambaram to brief him on the status India’s nuclear

⁴⁵² Chengappa, Weapons of Peace.

⁴⁵³ See Chengappa, Weapons of Peace, 31.

program immediately after being sworn in as Prime Minister.⁴⁵⁴ Interestingly, Rao had sent Vajpayee a handwritten note the day he was sworn in, telling him to see Kalam about the “N issue”.⁴⁵⁵

In any event, the effort to conduct test during the two-week tenure in 1996 ultimately failed on a number of levels. First, Vajpayee had trouble locating Kalam for several days. Additionally, there was reportedly pressure by Indian advisors to Vajpayee to forgo the tests as the expected international fallout would be more difficult to weather if there was not a government in place, a likely possibility given the twenty-four party coalition that was barely holding.⁴⁵⁶ These fears were furthered when U.S. satellites picked up the activity in the Rajasthan Desert and mustered diplomatic pressure on the BJP to refrain from testing. Finally, after just thirteen days in office, the BJP lost the vote of confidence to form a government. The significance of this event suggests that while the tests were largely ordered to bolster the BJP’s domestic posture, the decision to retract the tests was due in large part to the direct pressure the U.S. was able to bring to bear on the vulnerable government. Had the U.S. not been a factor in Vajpayee’s calculations, he would have been more likely to follow through with the testing. However, he understood that leaving India susceptible to external pressures without a government in place would be more detrimental to Indian interests than the benefits of testing.

⁴⁵⁴ Chengappa, in reporting this meeting, recognizes the tenuousness of the government, given the shaky coalition that the BJP had cobbled together to form a government. Chengappa, Weapons of Peace, 29.

⁴⁵⁵ See Chengappa, Weapons of Peace, 31.

⁴⁵⁶ Chengappa, Weapons of Peace, 32.

After the BJP government fell, a new coalition was formed under the United Front Party, with Gowda as Prime Minister and “in public they adopted a more conciliatory stance toward India’s neighbors and sent signals to Washington suggesting that they would not go ahead with the test that Vajpayee had authorized.”⁴⁵⁷ This stance essentially remained through the successive administration of Gujral, also from the United Front Party, through November of 1997, followed by the BJP returning to power in 1998.

In short, there was a broad spectrum of interests that supported a more robust nuclear policy in India. Certainly within this category there remained differences as to the best way to provide for Indian security and whether this included an overt nuclear deterrence posture, as highlighted in the initial debate regarding China’s first nuclear tests. Nonetheless, Indian Prime Ministers did little to capitalize on this support and instead focused on balancing India’s regional threats with efforts to increase economic growth. This strategy was facilitated by an ambiguous posture.

2. Moral Constraints

There is little evidence that moral reservation was a determinative factor for India’s restrained nuclear posture between 1974 and 1998. In particular, during this time period there was only one prime minister that was morally opposed to nuclear weapons, Prime Minister Desai, and he also furthered the Indian nuclear weapons program. The fact that there was not further testing with Prime Ministers who did not share these reservations suggests that other factors were at play.

⁴⁵⁷ Talbott, *Engaging India*, 39.

Prime Minister Morarji Desai came to power in March 1977 when the Janata party won over the Congress Party and Indira Gandhi. Desai reportedly was very influenced by Gandhi's beliefs and "had always been vehemently opposed to India developing nuclear weapons."⁴⁵⁸ Further, Desai was concerned about India's economic position and concerned about entering into a nuclear arms race that "[e]conomically, it will hurt us greatly if we try to enter the nuclear race because of its fantastic cost."⁴⁵⁹ Still, in an effort to preserve India's nuclear option, Desai resisted pressures to sign the NPT, gave permission to refine the designs of the explosive device and allowed the purchase of the Jaguar aircraft that, if properly fitted, would be able to carry a nuclear payload.⁴⁶⁰

When Indira Gandhi returned to power in 1979, she "began where she left off" and appointed scientist Ramanna, a proponent of a nuclear capable India, as head of India's nuclear development to get things going.⁴⁶¹ This effort included clearing the test shafts, piloting a nuclear sub study and authorizing work on five different types of missiles to deliver India's nuclear warheads. Given the fact that Indira had little moral compunction about the role of nuclear capability for India, it is unclear from this perspective why she did not test again from 1980-1984. That is, if morality is the variable that has provided constraint on the nuclear weapons program, then we should see testing when a leader does not have this personal restraint, but this is not the case with

⁴⁵⁸ Chengappa, Weapons of Peace, 217.

⁴⁵⁹ Chengappa, Weapons of Peace, 218.

⁴⁶⁰ Chengappa, Weapons of Peace, 226-227.

⁴⁶¹ Chengappa, Weapons of Peace, 203.

either Gandhi in the 1980s or Vajpayee in 1996 when he retracted the decision to test. Other factors than morality clearly played a role in determining India's nuclear posture.

Indira Gandhi was assassinated in 1984 and her son Rajiv succeeded her. Rajiv Gandhi seemed to be influenced by the moral implications of nuclear weapons but, as his predecessors before him, implemented programs that significantly furthered India's trend towards weaponizing its nuclear capabilities. During Rajiv's tenure in office, he tested authorized testing of the Prithvi, Agni and Nag missiles, and reportedly also approved of weaponization for the first time in Indian history.⁴⁶²

These programs were all build on later by Rao, who was in office from 1991-1996, despite the fact that he was a well know opponent of nuclear weapons personally. During Rao's tenure, he had the tests shafts prepared for testing as well as allowing the further testing of the Prithvi and Agni missile tests, which are designed to carry nuclear warheads. It was also during Rao's tenure that India was officially a nuclear weapons state in terms of both nuclear and delivery capability via missiles.

For a short period to time following Rao's five-year term in office and before the BJP came to power again in 1998, the United Front Party had two Prime Ministers, Deve Gowda and Gujral. From 1996-1997, these governments deployed the Prithvi missiles, allowed the mating of warheads to missiles and allowed three additional test shafts to be dug. Additionally, Gujral awarded Kalam in 1997, one of India's top nuclear scientists the Bharat Ratna given to civilians for their service.

⁴⁶² "Indian Nuclear Weapons," Federation of Atomic Scientists, <http://www.fas.org/nuke/guide/india/nuke/index.html>Federation of atomic scientists, accessed August 2004.

By the time the BJP came into power in 1998 then, successive generations of Indian leaders had developed a nuclear capability for India despite moral reservations. So while moral considerations may have personally influenced Indian leaders, they clearly took substantial steps to further India's nuclear capabilities given the security and prestige motivations. Further, there is little evidence that the population at large is primarily opposed to nuclear weapons for moral reasons, with only eight percent objecting to nuclear weapons development based on this reason.⁴⁶³

In short, while much of India rhetoric has highlighted the moral ambiguities of nuclear weapons, it has consistently sought to develop this capability for a variety of motivations including security and domestic and international prestige. Still, while these considerations explain the motivations for Indian nuclear development, it does not address India's opaque nuclear posture. In order to fully understand why Indian development has largely occurred the way that it has, external constraints coupled with India's domestic weakness⁴⁶⁴ are important factors shaping its nuclear behavior. India has sought to develop a military capability with minimal outside influence while simultaneously maximizing its economic and political leverage. Further, while it may be true that Indian strategic culture reflects "a deep streak of ambivalence and historical

⁴⁶³ Cortright and Mattoo, India and the Bomb: Public Opinion and Nuclear Options, 17.

⁴⁶⁴ In addition to economic weakness, India's technological development has struggled to indigenously design a nuclear capability. Indeed, this factor is often overlooked, but important to consider in conjunction with India's economic goals. Sidhu attributes technological weakness as a larger factor than Indian morality in explaining Indian posture until the 1980s. See, Sidhu, "India's Nuclear Use Doctrine".

reticence against costly, risky, and irrevocable decisions...⁴⁶⁵ the basis for this 'costly and risky' strategy is also largely calculated on the likely responses of regional and international actors, in particular Pakistan, China, and the United States. These dictates are largely responsible for India's decades of nuclear restraint more so than the moral considerations that leaders have felt.

III. Explaining the 1998 Nuclear Tests

On May 11, 1998 and again on May 13th, India conducted a series of nuclear tests at the Pokhran site. In all, the Indian government reported five tests. One of the tests was possibly of a thermonuclear device. Shortly after the tests on May 11th, Vajpayee unambiguously declared India a nuclear weapons state. While signaling a shift in Indian nuclear posture after four decades, immediately after the tests, Vajpayee also sought to re-engage the international community, in particular the United States, and minimize the external ramifications of the tests. To this end, after the May 13th tests, Vajpayee cancelled further planned tests in the series and indicated that while India would not sign the CTBT, it would place a voluntary moratorium on any further testing.

The 1998 nuclear tests were the result of a number of factors. First, India was in a relatively propitious security environment when the tests were approved. That is, the tests were not the result of an immediate security threat. At the same time, both India and Pakistan had continued to make significant advancements in missile delivery systems, and shortly after the 1998 tests, India was able to reach significant targets in China.

⁴⁶⁵ Deepa M. Ollapally, "Mixed Motives In India's Search for Nuclear Status," *Asian Survey* 41, no. 6 (2001), 932.

Second, India had cultivated a stronger economic and trade relationship with the United States, starting in the 1980s. While there was some disagreement among the Indian leadership as to whether India's economic base was stable enough to withstand sanctions from the tests, India's general growth and U.S. interests in short-lived sanctions were in India's favor. An additional consideration is that there was a subtle shift in U.S. non-proliferation policy under the Clinton administration, which signaled that it would be able to live with a nuclear India.

Changes in the international non-proliferation regime likely also had some effect on India's posture. Consistent with its previous policy, India deflected U.S. pressures and steadfastly resisted signing the permanent extension to the NPT in 1995 and rejected the CTBT in 1996. What was a significant change however is that two longstanding holdouts to these agreements—France and China—had now agreed to formally join the treaty obligations. This left India more isolated in its posture as New Delhi had previously based its unwillingness to join the agreements, in part, on China's refusal to sign. Nonetheless, India would not accept an international order where it was considered a non-nuclear weapons state while China was accorded this status. Thus, there was some impetus for India to signal that it was a nuclear weapons state, notwithstanding the international order.

Domestic political factors, mainly the election of the nationalist BJP party, also played a role in the tests, particularly as to timing. The BJP party had included the induction of nuclear weapons into its party platform, and for years as the opposition party had called on the government to adopt nuclear weapons. Thus, it was not surprising

when it was under the BJP's leadership that India chose to test. However, this explanation should be viewed within the context of India's overall regional and international environment, as well as development history. It was not a foregone conclusion that the BJP would test, given these other factors, or that the BJP would have been the only party to choose testing on behalf of India. Finally, the moral stance of India's leaders does not appear to have been a factor in the tests. The following evaluates each of these factors.

A. Regional Security Environment

By the late 1990s, India had seen significant development in its economic and scientific arenas. As part of this development, India was seeing advancements in its nuclear delivery systems, such that it would be able to reach its long-term goal of being able to establish nuclear deterrence with China. At the same time, Pakistan was relatively weak during the 1990s vis-à-vis India, particularly in the economic and conventional military realms as the U.S. imposed sanctions for most of this period. The Pakistani nuclear program continued to march forward however, and there was little indication that Islamabad would stop or rollback its program. Thus, while not facing an immediate security threat, India was now in a position to credibly establish itself as a nuclear weapons state with China and Pakistan.

1. Developing India with Long-Term Security Challenges

While India was establishing closer economic and military linkages with the United States, Pakistan during the 1990s was subjected to increased U.S. non-

proliferation efforts in the form of diplomatic pressures and sanctions. By the time the 1990 crisis between India and Pakistan was over, the United States was exerting considerable diplomatic pressure on Pakistan to practice restraint, particularly since in every war game scenario the Pentagon ran, Pakistan emerged as the clear loser to India.⁴⁶⁶ Another important development for India during 1990 came when the United States refused to recertify Pakistan's nuclear program and imposed economic and military sanctions on Pakistan under the Pressler Amendment.

These non-proliferation efforts towards Pakistan ensured that its economic development was very slow compared to India. Indeed, while India was growing at an average of 6.9% per year during the 1990s, Pakistan's growth stagnated at 3 percent.⁴⁶⁷ Further, as the Indians correctly calculated, Pakistan would also be subject the Glenn Amendment sanctions by the United States if it followed India's nuclear tests with its own. Indeed, given that the sanctions after both states tested affected Pakistan more harshly⁴⁶⁸, and given Pakistan's already weakened position, there is some speculation that India 'sucker punched' Pakistan into testing when Pakistan could least afford to manage the international ramifications.⁴⁶⁹

Additionally, Pakistan was making gains with its Ghauri missile system, which would enable it to reach most of India with nuclear warheads. India already had the

⁴⁶⁶ Ganguly, "Explaining the Indian Nuclear Tests of 1998", 52. Under the "Gates Mission", the U.S. sent a high level contingent to South Asia during the 1990 crisis, fearful that under the umbrella of nuclear capabilities, the crisis would get out of hand. See Devin T. Hagerty, "Nuclear Deterrence in South Asia: The 1990 Indo-Pakistani Crisis," *International Security* 20, no. 3 (Winter 1995), 101.

⁴⁶⁷ Mohan, *Crossing the Rubicon*, 193.

⁴⁶⁸ Joeck, "Nuclear Developments in India and Pakistan," 31.

⁴⁶⁹ Talbott, *Engaging India*.

ability to reach most Pakistani targets, so Pakistan's missile system did not upset the balance of power in the area, although it did come closer to equalizing it for deterrence purposes. The fact that Pakistan would be able to reach Indian targets with nuclear missiles meant that there was no reason to demonstrate Indian restraint in an effort to slow down the Pakistani program—rather, Pakistan had reached or was ready to reach the goal it had been striving for since 1971. This remained a constant to some extent however, as Pakistan had previously had the capability to deliver nuclear devices via the F-16s the U.S. had provided Islamabad. What this meant is that refraining from competition with Pakistan was not a particularly compelling motivation to refrain from testing.

At the same time, India still had an eye to its longer-term security vis-à-vis China. This is not to say that India tested in reaction to an immediate Chinese threat. Rather, India has always viewed China as a competitor in Asia and New Delhi was coming closer to realizing its goals of having a credible nuclear force that would be able to reach distant Chinese targets. At the same time, China had increased its nuclear testing during the mid-1990s to enable it to sign the CTBT. This was not an option for Indian leaders as they refused to sign any agreement that would cement India as being a non-nuclear weapons state. Taken together, these factors meant that at some point India was in a position to assert its nuclear weapons capability with China, but the timing was relatively open ended once it reach the basic threshold. As such, India's regional environment explains Indian motivations for testing, but does not answer the question of timing, which requires recognition of the role of the U.S. and the BJP.

2. Short-term Insecurity Was Not A Significant Factor

Some scholars seeking to explain India's decision to test in 1998 argue that India did so to bolster its military security, which arguably had deteriorated throughout the 1990s for several reasons. First, it became increasingly apparent that China and Pakistan had colluded to provide Pakistan with advanced nuclear material, designs and ballistic missile delivery systems. Second, with the drawdown of the Soviet Union, India had lost an important military and political ally in providing for its security, especially in terms of conventional weaponry support. Third, the United States, in an effort to permanently extend the NPT and gain support for the CTBT, was putting enormous non-proliferation effort on India, to the extent that India had to test or risk losing this option in the future. These arguments are each considered in turn.

a) Pakistani and Chinese Threats

During the mid-1990s, evidence of Pakistani nuclear and missile collusion with China became increasingly apparent through a series of media reports. These missile capabilities, the short range M-11 missile deployed along the Indo-Pakistani border and longer range No Dong missile, renamed the Ghauri, are believed to have been transferred from China.⁴⁷⁰ The fruits of this cooperation resulted in a significant qualitative increase in Pakistan's ballistic missile technology, which would enable the delivery of nuclear warheads to India's interior, a capability that Pakistan had not previously developed. The

⁴⁷⁰ In the case of the No Dong, it is estimated that China transferred the technology to North Korea, which then transferred it to Pakistan. See Joseph Cirincione, Deadly Arsenals: Tracking Weapons of Mass Destruction (Washington D.C.: Carnegie Endowment for International Peace, 2002), 213-215, for a summary of Pakistan's ballistic missile development during this time period.

Ghauri, tested April 6, 1998, could reach targets deep within the Indian state. The argument then, is that these changing strategic realities forced India, out of concern for its own security, to respond by shifting its previous policy of ambiguity to clarify its own burgeoning nuclear capabilities.⁴⁷¹

However, the proliferation relationship between Pakistan and China was not new one and the security pressures this has created for India has been a constant feature of the region for decades. Indeed, even in the early 1980s India was protesting the nuclear assistance that Pakistan was receiving from China. Of central concern to India in 1983 were reports that began to surface suggesting China had provided Pakistan with a 'blueprint' for a bomb as well as enough weapons grade uranium for one or two weapons.⁴⁷² Spector suggests that these revelations, amid press reports that Indira Gandhi was considering preemptive strikes on Pakistan's Kahuta nuclear facility, significantly increased the nuclear tension between India and Pakistan.⁴⁷³ In the background of these events, debates within India were renewed over whether or not it

⁴⁷¹ Ashley J. Tellis, India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal (Santa Monica: RAND, 2001), 114. Malik also finds that Chinese assistance forced India out of the nuclear closet, Malik, "Nuclear Proliferation In Asia". Jaswant Singh, Vajpayee's Foreign Minister publicly justified India's decision to conduct the tests based on India's "deteriorating security environment", in which he also included US non-proliferation pressures discussed below.

⁴⁷² For a detailed chronology regarding China's assistance to Pakistan's nuclear and missile program, see "Resources on India and Pakistan," The Center for Nonproliferation Studies, at <http://cns.miis.edu/research/india>; accessed January, 2005.

⁴⁷³ Leonard S. Spector, The Undeclared Bomb (Cambridge: Ballinger Publishing Company, 1988),84. Reportedly Indira Gandhi did not approve of the attacks, fearing that it would lead to retaliation and full scale war. Sidhu, "India's Nuclear Use Doctrine".

was time to 'go public' with India's nuclear capability or to continue to rely on conventional deterrence, with the latter prevailing.⁴⁷⁴

The nuclear tensions between Pakistan and India continued through 1985 and prompted Rajiv Gandhi to publicly decry Pakistan's efforts towards weaponization and indicated that India would reconsider its own stance on nuclear arms.⁴⁷⁵ In 1987, in the wake of the Brasstacks crisis, it was clear that Pakistan had both the necessary material to construct a nuclear device and had derived significant benefits from Chinese assistance in supplying "weapons designs, components, and technology for fissile material production."⁴⁷⁶ In addition to this sustained nuclear cooperation, China has staunchly supported Pakistan from the early 1960's in terms of Kashmir as well as supplying conventional weaponry.⁴⁷⁷ In short, the relatively constant Chinese military assistance to Pakistan has been occurring for decades.⁴⁷⁸

Even during times of extreme crisis, such as in 1983, 1987 or 1990 when India and Pakistan were engaged in armed conflict over the Kashmir border disputes, India did not overtly demonstrate its nuclear capability. Indeed, India was much more insecure in the sense that there was active shooting during the 1987 and 1990 crisis that was absent in 1998, so immediate security concerns do not seem to have been a motivating factor in

⁴⁷⁴ Sidhu, "India's Nuclear Use Doctrine," 133.

⁴⁷⁵ Spector, The Undeclared Bomb, 85.

⁴⁷⁶ Perkovich, India's Nuclear Bomb, 37.

⁴⁷⁷ Mark W. Frazier, "China-India Relations Since Pokhran II: Assessing Sources of Conflict and Cooperation," Access Asia Review 3, no. 2 (July 2000), 16.

⁴⁷⁸ Kapur suggests that Chinese assistance to Pakistan is an indicator that China is reluctant to overtly threaten India with its nuclear capability and has thus contributed to an opaque nuclear stance in India. Kapur, "Nuclear Development of India and Pakistan".

the tests. Even in 1994 when Pakistan's former Prime Minister Sharif declared the Pakistan possessed an atomic bomb,⁴⁷⁹ India did not publicly reveal that fact that it had successfully mated warheads to missiles.⁴⁸⁰ Deterrence optimists further suggest that nuclear deterrence, albeit in existential form until 1998, has been successfully operating in South Asia since the 1987 Brasstacks Crisis and has been a plausible factor in dampening conventional crisis between India and Pakistan.⁴⁸¹

In terms of the Ghauri test in 1998, some suggest that this was a turning point for Indian decision makers as it had surprised the Indians that Pakistan was as advanced as it was in its missile development and could now reach targets deep within India.⁴⁸² However, for this single missile test to be an immediate cause of the tests in May 1998 ignores the years of missile testing Pakistan had already conducted, the ability to drop bombs from airplanes, nuclear threats tendered by Pakistan during the 1987 and 1990 crises, as well as the fact that the Indian test shafts had already been prepared for years. Indeed, there is also some inconclusive evidence that suggests that Vajpayee ordered the

⁴⁷⁹ Mitchell Reiss, Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities (Washington D.C.: Woodrow Wilson Center Special Studies, 1995), 192.

⁴⁸⁰ There is also the question of whether India really believed that Pakistan had a functional nuclear deterrent leading up to the tests. From 1987 until Pakistan's tests in 1998, some Indian leaders consistently downplayed whether or not Pakistan even had the nuclear capabilities that they suggested they did. Arnett, "Nuclear Tests by India and Pakistan," 380. Whether these statements were for public consumption or were truly believed is unknown.

⁴⁸¹ Devin T. Hagerty, "The Power of Suggestion: Opaque Proliferation, Existential Deterrence, and the South Asian Nuclear Arms Competition," in The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results, Zackary S. Davis and Benjamin Frankel, eds. (Portland: Frank Cass & Co., 1993); Reiss, Bridled Ambition, 184-185; and Saira Khan, Nuclear Proliferation Dynamics in Protracted Conflict Regions: A Comparative Study of South Asia and the Middle East (Burlington, VT: Ashgate, 2002).

⁴⁸² Cirincione, Deadly Arsenals.

tests prior to the Ghauri missile test,⁴⁸³ and seemed to actually be disappointed that the nuclear tests would be seen as a response to Pakistan's move.⁴⁸⁴ In short, while the missile tests remain an important component in Indian defense calculations, as has been the case historically, they do not seem to be so significant as to be the primary reason for the tests in May.

In conventional military terms, India continued to outstrip Pakistan significantly from 1989-1998, averaging 7.99 billion U.S. dollars per year compared to Pakistan's rate at 3.02 billion per year.⁴⁸⁵ These figures are even more telling when one considers that, on average, for the same time period, India could afford to spend 2.53% of its GDP for military expenditures and Pakistan, with its economy teetering on disaster, was spending 6.17% respectively.⁴⁸⁶ Moreover, most of U.S. conventional assistance to Pakistan was halted in 1990 when the U.S. no longer certified Pakistan's nuclear program under the Pressler Amendment. This led Pakistan to increasingly rely on Chinese conventional arms, which were lagging technologically to the advanced conventional weapons systems that India was able to acquire from virtually every major arms supplier worldwide.⁴⁸⁷ In short, India was quantitatively and qualitatively outstripping Pakistan in conventional

⁴⁸³ Perkovich, India's Nuclear Bomb.

⁴⁸⁴ Chengappa, Weapons of Peace.

⁴⁸⁵ Averages are calculated from the SIPRI Yearbook 1999 South Asia estimates on military expenditures. For India, during 1997 and 1998, military expenditures actually reached 9.1% and 9.8% respectively. Elisabeth Skons, Agnes Courades Allebeck, Evamaria Loose-Weintraub, and Petter Stalenheim, "Military Expenditure," in Armaments, Disarmament and International Security, Stockholm International Peace Research Institute, comp. (Oxford: Oxford University Press, 1999), 284.

⁴⁸⁶ Skons, et. al., "Military Expenditure," 284.

⁴⁸⁷ Arnett, "Nuclear Tests by India and Pakistan," 377.

terms while still being able to keep from ruining its economy. According to the logic of insecurity leading to nuclear testing, Pakistan, not India, should have conducted the tests first.

Similarly, the military threat from China was less in 1998 than in previous times. Since 1988, India and China have sought to stabilize regional relations through a series of military and security dialogues and the implementation of regional confidence building measures. These measures were initiated during Rajiv Gandhi's tenure as Prime Minister and part of a larger concern for normalized relations with India's northern neighbor.⁴⁸⁸ These efforts have included high level visits between Indian and Chinese leaders, including three Prime Minister meetings from 1987-1993 and again in 1996, as well as a series of confidence-building measures implemented in 1993 and more in 1996, in order to maintain bolster peace along the Lines of Control in the border dispute between China and India.⁴⁸⁹ Moreover, from a military standpoint, India has not acted as if China were a threat in any other way.⁴⁹⁰ The reality is that both China and India have actually reduced the number of forces on each side of the border disputes during the 1990s.⁴⁹¹

⁴⁸⁸ Mohan, Crossing the Rubicon, 143.

⁴⁸⁹ Mohan, Crossing the Rubicon, 144. India and China have also discussed 'resisting U.S. hegemony' as a reason for further cooperation, while the United States has considered India an important counter balance to China in Asia. Moreover, India's nuclear posture resembles that of China during the 1960s where it has sought to define its own role in the international system outside of the external constraints facing it. See Mohan, Crossing the Rubicon, 150-153, for lessons learned by India for China's strategy to manage as an up and coming power.

⁴⁹⁰ Eric Arnett, "What Threat?" The Bulletin of the Atomic Scientists 53, no. 2 (March 1997-April 1997), details the lack of threat both states pose to each other and the fact that their military postures reflect this reality.

⁴⁹¹ Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 16.

Additionally, during the 1990s, both sides sought to increase bilateral trade as well, resulting in \$1,094 billion U.S. dollars in combined imports and exports in 1995, to reach \$7,543 billion in 2003.⁴⁹² Compared to the total bilateral trade in 1990 at \$49 million, Sino-Indian trade has exploded in the last decade.⁴⁹³ Consistent with these efforts, Indian elite public opinion seemed also to view China as a lesser threat in 1998, with only 20 percent concerned about security threats from China.⁴⁹⁴

Gains in the relationship were somewhat disrupted when India listed China as the primary security factor in its decision to test in 1998, but in all reality the response of the Chinese government was both muted and it largely refrained from instituting economic sanctions.⁴⁹⁵ Following the tests, India and China have been able to solidify and strengthen the gains they made prior to the tests. In 1999, China refused to side with Pakistan during the Kargil crisis and by 2000, most of the previous dialogue efforts between the two countries had resumed.⁴⁹⁶ This is not to say that India and China do not eye each other with a certain amount of suspicion regarding each other's future regional aspirations or weapons modernization programs, and India has continued to feel that

⁴⁹² Figures compiled from the Asian Development Bank, "Key Indicators of Developing Asian and Pacific Countries," accessed March 2005, http://www.adb.org/Documents/Books/Key_Indicators/2004/pdf/IND.pdf.

⁴⁹³ Figures compiled from the Asian Development Bank, "Key Indicators of Developing Asian and Pacific Countries."

⁴⁹⁴ Cortright and Mattoo, *India and the Bomb*, 12. Fifty-seven percent did consider a nuclear Pakistan to be a security threat. Ibid.

⁴⁹⁵ Frazier, "China-India Relations Since Pokhran II," 16.

⁴⁹⁶ Frazier, "China-India Relations Since Pokhran II" 16.

Chinese treatment has bordered on contemptuous.⁴⁹⁷ However, these potential long-term threats are not immediate security concerns that would lead India to test in 1998.⁴⁹⁸

b) Loss of Soviet Support

The second cause for Indian security concerns was the uncertainty arising from the end of the Cold War and India losing an important military and political ally with the collapse of the Soviet Union. As Russia sought to warm relations with the West while grappling with economic and political collapse, the traditional relationship between India and Russia was in question. Most important from the Indian standpoint, its ongoing military relationship with Russia was in jeopardy. The Russian defense establishment was in such financial and political disarray that it was unable to provide spare parts and other materials to the Indian military. The result was that India lost a significant source of conventional weaponry, which had been provided in conjunction with generous purchasing terms since the 1960s.⁴⁹⁹

Yet, this was not the first time that the Indian's had been vulnerable to receiving its weapons in a timely manner from their primary supplier and they had previously opened up other defense channels prior to this crisis that they could rely on. Mainly, during the 1980s India sought to widen the range of states it purchased weapons from as

⁴⁹⁷ Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 16.

⁴⁹⁸ Dipankar Banerjee, "The New Strategic Environment," in India's Nuclear Deterrent: Pokhran II and Beyond, Amitabh Mattoo, ed. (New Delhi: Har-Anand Publications PVT LTD, 1999), 272-273, similarly notes that the Indian security environment was relatively benign in 1998. This does not eliminate the possibility that Indian leaders misperceived this balance, but the arguments centered on security point to a real threat, not misperception.

⁴⁹⁹ Both the former Soviet Union and India had minimal trade ties outside of defense related issues.

well as increasing indigenous efforts, given concerns about Soviet reliability as well as avoiding the pitfalls of being too dependent on their supplier.⁵⁰⁰ During the transition time, India simply relied on these other sources and its own indigenous capability to provide for its conventional needs. Further, despite the upheaval at the beginning of the 1990s, by the mid-1990s Russia and India had resumed their former arms relationship in which India was able to purchase a full range of advanced weapons system.⁵⁰¹ Indeed, given Russia's need for hard currency and to keep its defense industry going, Indian acquisitions outstripped what the Russian military itself was capable of purchasing given the post-Cold War environment.⁵⁰²

Arguably another potential way that the Indian-Russian relationship was threatened was based on U.S. non-proliferation efforts. Post-Cold War Russia, in an effort to make much needed economic reforms became extremely susceptible the U.S. influences. To this end, the United States pressured the Russian government in the early 1990s to stop the sale to India of space-based components, namely cryogenic engines, which would enable India to build intercontinental ballistic missiles. Initially, Russia under pressure, reneged on the deal with India. Ultimately, however India and Russia were able to forge a new strategic partnership in which Russia went ahead with the

⁵⁰⁰ Sidhu, Enhancing Indo-US Strategic Cooperation, 40.

⁵⁰¹ Mohan, Crossing the Rubicon, 128.

⁵⁰² Deepa Ollapally, "Indo-Russian Strategic Relations: New Choices and Constraints," in India As An Emerging Power, Sumit Ganguly, ed. (Portland: Frank Cass Publishers, 2003),143-144.

cryogenic engines sale against U.S. wishes and Indian and Russia maintained their strategic relationship in a similar vein as with the conventional weapons.⁵⁰³

Moreover, India and Russia have agreed to various technology transfers and have planned to work together in the future on joint development projects.⁵⁰⁴ So, in all actuality, not only was India was able to shore up its relationship with Russia by 1994, but the Indian's were also able to find further avenues of cooperative development that reassured India's longstanding partnership with Russia. For these reasons, it seems unlikely that post Cold War insecurity vis-à-vis India's relationship with Russia was a significant factor in Indian calculations for testing. Rather, ongoing Russian cooperation was stabilized, expected and politically helpful for India to weather the wrath of the United States post testing.

c) U.S. Non-Proliferation Pressures

The third security consideration, and the one often given the most weight by scholars, is related to the significant increase in United States non-proliferation pressures during the 1990s as it sought the permanent renewal of the NPT and support for the CTBT. The general argument is that non-proliferation efforts undertaken by the United States pressured India so much, that it actually backfired by compelling "India to come out of the closet and declare itself a nuclear weapon state."⁵⁰⁵ Similarly, Indian scholars and government officials have attributed significant weight to U.S. actions as forcing

⁵⁰³ Mohan, Crossing the Rubicon, 128.

⁵⁰⁴ Mohan, Crossing the Rubicon, 128.

⁵⁰⁵ Paul and Nayar, India in the World Order, 86.

India to forgo its nuclear option and pushing it into the open based on the tightening of non-proliferation regime.⁵⁰⁶

With the renewal of the NPT in 1995 and pressures to sign the CTBT, these factors together significantly fueled India's concerns that its window of opportunity to become a nuclear power was rapidly shutting. India was loath to sign these agreements as they would permanently categorize India as a "non-nuclear weapon" state and limit its ability to further develop its nuclear capability without going against the terms of the obligations. The pressure to join the NPT was heightened when two longstanding holdouts, France and China signed the NPT and it was extended indefinitely with little resistance in 1995.

Further, the momentum was building for the Comprehensive Test Ban Treaty in 1996, which would prohibit the option of further physical tests in the future. This treaty was particularly distressing to the Indians, whom had not continued testing up to and through the 1990s as the five 'declared' states had, and thus, did not have a database with which to conduct further test simulations. Moreover, some Indians were concerned with the language of a treaty, which, even if not signed by India, would be 'universalized' if enough countries ratified it and its terms would be applicable to all countries.⁵⁰⁷ As Talbott explained, the effects of 'universalizing' the treaty for India would make "the test ban applicable to all countries, whether they join the treaty or not – thereby foreclosing

⁵⁰⁶ Jasjit Singh, "Why Nuclear Weapons" in Singh, Defending India.

⁵⁰⁷ It is doubtful that this would be 'legal' in the sense of international law, but the precedent would be set that other countries would be bound to stop testing.

India's option of further testing and consigning India forever to a kind of purgatory in the eyes of the rest of the world for its refusal to sign the NPT and CTBT."⁵⁰⁸

It is true that during the 1990s India was under increased nuclear non-proliferation pressures. However, these pressures seem to be a weak explanatory factor leading up to the tests in 1998 for several reasons. First, India has been subject to U.S. non-proliferation efforts for most of its nuclear development and especially after 1974. It is unclear why these efforts during the 1990s were significantly more threatening to India in general and specifically why they were still threatening in 1998 when India actually tested. India had already 'ridden out' the 1995 permanent extension to the NPT and had publicly voted against signing the CTBT in 1996. What these events suggest is that India had faced more non-proliferation pressure 1994-1996 than it did when it actually tested. Additionally, at the height of U.S. efforts to get support for the CTBT, there was some belief in the Indian government early on that the CTBT would not receive universal support in the long run.⁵⁰⁹ This prediction was later proven accurate when the treaty stalled in the U.S. Senate Foreign Relations Committee in 1997.⁵¹⁰ If India was seeking to "break free" from the existing nuclear order, it seems that it should have done so when the pressure was the most intense and when it could have undermined the non-proliferation regime. However, this clearly was not the case.

⁵⁰⁸ Talbott, *Engaging India*, 36.

⁵⁰⁹ Sidhu, *Enhancing Indo-US Strategic Cooperation*, 30.

⁵¹⁰ Shannon Kile, "Nuclear Arms Control and Non-Proliferation," in *SIPRI 1999 Yearbook: Armaments, Disarmament and International Security* (Oxford: Oxford University Press, 1999), 528.

Further, not only has India been subject to U.S. non-proliferation pressures in the past, but there is no indication that the U.S. was particularly threatening as it sought to gain support for the treaties. Indeed, in India's case, the opposite claim can be made. As previously discussed, the U.S. had shifted from seeking to have India stop its nuclear development and 'rollback' progress to halting further development. In 1994, before the NPT came up for review in 1995, there were already signals on Washington's part that if India would 'cap' its current development, the U.S. could live with an opaque nuclear India.⁵¹¹ This stance was further entrenched in 1995 when U.S. Defense Secretary William Perry visited India acknowledged that they had a nuclear capability, but did not push the issue.⁵¹² Consistent with this policy, India and the U.S. actually seemed to have worked out a deal that India would not stand in the way of the CTBT if the U.S. let up on denuclearization pressure for India.⁵¹³ Further, against the backdrop of non-proliferation, the fact of the matter is that Indian and U.S. relations continued to significantly improve during this period and lead to some of the most significant economic and technologic cooperation that has occurred during the rocky relationship between the two largest democracies.⁵¹⁴

A more likely explanation is that the U.S. leadership knew that India would not sign either treaty and sought to keep India engaged. In exchange, India did not seek to

⁵¹¹ Perkovich, India's Nuclear Bomb, 345-346.

⁵¹² Perkovich, India's Nuclear Bomb, 355.

⁵¹³ Sidhu, Enhancing Indo-US Strategic Cooperation, 30.

⁵¹⁴ See Kux for elaboration on other points of contention, in addition to nuclear issues, during the Cold War.

unduly thwart the U.S. and undermine the established non-proliferation regime by testing while the negotiations were going on.⁵¹⁵ Instead, testing afterward both made India's nuclear point while not making it a 'nuclear pariah' because it conducted them at a time that the U.S. was willing to 'move forward'. Given these issues, it seems that Indian justifications for testing on basis of non-proliferation pressures were more rhetoric for public consumption at home where India could be seen as defying the U.S. than based on the reality of international politics.

In sum, the immediate security justifications provided by scholars and Indian leaders as reasons motivating the test in 1998 seem to be based more on rhetoric than facts 'on the ground' and other evidence of Indian behavior at the time. While India clearly has long-term security motivations for developing nuclear weapons this factor has remained constant through much of India history. What did change in the 1990s was India's ability to reach Chinese targets, China's signature on the NPT and CTBT, and the economic and technological advancements that coincided with a more stable relationship with the United States. These factors together created conditions conducive to India changing its nuclear posture that the BJP capitalized on when it came to power.

B. Patron States Incentives: U.S. Lives With a Nuclear India

Leading up to the actual decision to test, during the 1990s, India made important gains on the economic, technological and international politics stage, and in particular with the United States, that would enable it to withstand temporary international pressure

⁵¹⁵ If India is ever accepted as a nuclear weapons state, it would probably uphold the 'have' versus 'have not' divide as well and have an interest in preventing further proliferation worldwide.

while moving forward as a nuclear weapons state. This was the result of Indian strategy “enmesh” the U.S. and other Western states with India’s economy, such that they would be unwilling to impose punitive measures after India tested again.⁵¹⁶

For most of the decade, Rao’s relatively successful efforts at economic reform through liberalization had increased India’s ability to attract foreign investment, spur domestic growth, and enhance high technology and information systems capabilities. Bilateral trade between India and the United States also increased substantially during this period, increasing from \$5,329 U.S. billion dollars in 1990 to \$8,649 billion U.S. dollars by 1995.⁵¹⁷ These numbers reached \$11,252 billion dollars by 1999 and have continued to increase each year.⁵¹⁸ The United States, whose computer and information-based economy was growing rapidly, understandably remained India’s preferred source of advanced technology. Enhancing these areas of cooperation were Indian immigrants who were rising in economic and political influence in the United States.⁵¹⁹ Given this important voting demographic, many of these entrepreneurs were able to further encourage economic ties based on computer and technology advancements between the U.S. and India.⁵²⁰ The economic results of these measures led the World Bank

⁵¹⁶ Karnad, Nuclear Weapons & Indian Security, 371.

⁵¹⁷ As a point of comparison, bilateral trade in 1985 totaled 3,333. Figures compiled from the Asian Development Bank, “Key Indicators of Developing Asian and Pacific Countries.”

⁵¹⁸ Figures compiled from the Asian Development Bank, “Key Indicators of Developing Asian and Pacific Countries.”

⁵¹⁹ Mohan, Crossing the Rubicon, 86.

⁵²⁰ Mohan, Crossing the Rubicon, 86.

considered India one state quickly integrating with the world economy, and the United States to label India as one of ten Big Emerging Markets.⁵²¹

As India's relationship with the United States had warmed considerably since the end of the Cold War, this transition also heralded improved military and defense cooperation. As one American official indicated in 1995, "US-Indian defense ties are better now than at any time in the past 30 years."⁵²² To this end, India and the U.S. engaged in "modest arms sales and technology transfers, occasional military exercises, and a limited 'strategic dialogue'⁵²³, all of which signaled improved relations.

Even more significant for Indian nuclear development, the United States appeared to have made a quiet, but significant shift its stance towards the Indian nuclear weapons capability. Previously, India was pressured to stop and "rollback" its nuclear development. While Washington continued to push India to halt fissile material production, there were signals that the U.S. stance was softening. Of significance, the U.S. Joint Senate and House Committee decided not to extend the Pressler Amendment to India, and Senator Pressler remarked that India's nuclear concerns were well taken.⁵²⁴ Instead, Senator Pressler proposed a U.S. sponsored summit between India and Pakistan to resolve the nuclear issues. India agreed to hold talks with the U.S. regarding nuclear proliferation, notwithstanding criticisms from opposition parties charging that the Indian

⁵²¹ Sidhu, Enhancing Indo-US Strategic Cooperation, 12.

⁵²² Bruce O. Riedel in 1995 to Congressional House, Committee on International Relations. Quoted in Arnett, "Nuclear Tests by India and Pakistan," 376.

⁵²³ Tellis, India's Emerging Nuclear Posture, 82.

⁵²⁴ "India, Pakistan Summit to Resolve Nuclear Issue Suggested by US Senator," Xinhua General Overseas News Service, 11 January 1992, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

government had succumbed to U.S. pressure.⁵²⁵ The announcement of the talks was made at the same time as it was confirmed that the U.S. and India would conduct joint naval exercises in the Indian Ocean for the first time.⁵²⁶

Further, the Clinton administration desired to engage rather than isolate India, and even though it continued to press for non-proliferation in South Asia, it also seemed to recognize that India's nuclear progress would not be subject to a 'rolling back' of capabilities.⁵²⁷ That is, for the first time, the U.S. seemed to be willing to live with an opaque nuclear posture on India's part. For example, allegedly the Rao government told the U.S. that India would test by the end of 1993, but was told by U.S. officials that India should do what it wanted, but should not inform Washington beforehand because then the U.S. government would be compelled to try to stop the tests.⁵²⁸ In a much less direct manner, Talbott argues that in 1995 as the U.S. sought to engage India in strategic dialogue, "the United States was making a concession of its own: by proposing the discussions, our government was tacitly signaling a willingness to live with India's and Pakistan's undeclared, untested, but undisputed nuclear capabilities rather than insisting on their formal accession to the NPT."⁵²⁹ Further, by 1998, just before the tests, the U.S.

⁵²⁵ David Housego, "Indians Shift Stance on N-Weapons," Financial Times, 17 March 1992; Sanjoy Hazarika "India Moves to Improve Relations with US," International Herald Tribune, 16 March 1992.

⁵²⁶ Housego, "Indians Shift Stance on N-Weapons;" Hazarika "India Moves to Improve Relations with US."

⁵²⁷ C. Raja Mohan, "Fostering Strategic Stability and Promoting Regional Cooperation," in Engaging India: US Strategic Relations With the World's Largest Democracy, Gary K. Bertsch, Seema Gahluat, and Anupam Srivestava, eds. (New York: Routledge, 1999), 28.

⁵²⁸ Karnad, Nuclear Weapons & Indian Security, 370.

⁵²⁹ Talbott, Engaging India, 33.

assistant secretary of state for South Asian affairs, Karl Inderfurth, while still urging restraint, noted that India's weapons program was based on "very real national security concerns."⁵³⁰

While such statements clearly are not an endorsement of an overt Indian nuclear weapons posture, they were perceived by some India's as the United States finally understanding Indian reasons for proliferation, something that had previously been lacking from U.S. foreign policy rhetoric.⁵³¹ Cohen reports that some Indian leaders thought that the nuclear issue was "no longer a critical issue" and that if India tested sooner than later, it would be able to mend relations in time for Clinton to still visit India.⁵³² Even more significant for Indian calculations, prior to the tests in 1998, and shortly after Vajpayee came to power, Clinton did not bring up the nuclear issue directly, not wanting to 'lecture' Vajpayee on the issue.⁵³³

The lack of direct diplomatic pressure on Vajpayee could have reinforced the perception that the U.S. was prepared to live with a nuclear India. This is not to entirely

⁵³⁰ Quoted in Virginia I. Foran, "Indo-US Relations After the 1998 Tests: Sanctions Versus Incentives," in Engaging India: US Strategic Relations With the World's Largest Democracy, Gary K. Bertsch, Seema Gahlaut, and Anupam Srivestava, eds. (New York: Routledge, 1999), 54.

⁵³¹ How much the U.S. stance shifted is open for debate. Under Clinton, the U.S. was clearly interested in engaging India. However, some scholars have suggested that some Indian leaders engaged in 'wishful' thinking that the U.S. had changed its stance towards Indian nuclear development. Consistent with this, there were a number of high level officials that appeared surprised by U.S. reactions to the tests and the subsequent imposition of sanctions. Regardless, Vajpayee, who was ultimately responsible for the tests, seemed to have correctly understood that both the U.S. would impose sanctions, but really did not want to, which increased the propensity for India to ride out the sanctions and still be able to declare itself a nuclear power.

⁵³² Cohen, "Why Did India "Go Nuclear"?" 30. If one accepts the U.S. was putting less non-proliferation pressure on India, one potential reason for this is that India will be better able to balance China in the future, an idea that the U.S. toyed with in the early 1960s just prior to the first Chinese nuclear explosion.

⁵³³ Talbott, Engaging India.

discount that U.S. non-proliferation efforts to bring India as source of friction during the 1990s, or on that, the other hand, that some Indian leaders might have engaged in ‘wishful’ thinking that the an overt nuclear posture on India’s behalf would ignored by the U.S. However, as the above evidence indicates, India had gained several political advantages that would help it weather the storm of testing even if it could not entirely avert it.⁵³⁴

Despite a number of positive trends for India in the 1990s, Vajpayee was still concerned over how to best manage U.S. reactions to testing in order to minimize economic recriminations. Some members of the BJP wanted to take a hard line and ride out the sanctions without negotiating with the U.S., but Vajpayee decided to forgo further testing that had been planned⁵³⁵ in order to re-engage the United States. He argued that, “India had made its point – now it should set about mending relations as much as possible with a country that was key to India’s integration into the world economy.”⁵³⁶

Reportedly, Vajpayee projected that with some diplomatic efforts on India’s behalf, the worst would be over six months past the test and that the Indian economy would be able to withstand sanctions for up to a year.⁵³⁷ In order to do this, immediately after the test, India imposed a voluntary moratorium on future tests, saying that they

⁵³⁴ Another positive development for India is that it was able to stabilize political relations with China and Pakistan to some extent in the early 1990s. There was a significant crisis between India and Pakistan in 1990 as Pakistani militants continued to cross the line of control in Kashmir. This was the last “major crisis” until the 1999 Kargil Crisis, after the weapons were tested.

⁵³⁵ See Tellis, India's Emerging Nuclear Posture, footnote, 93.

⁵³⁶ Talbott, Engaging India, 74.

⁵³⁷ Chengappa, Weapons of Peace, 48.

would comply 'with the spirit' of the CTBT, as well as entertain negotiations on the (FMCT). Additionally, India sent Jaswant Singh, the Indian Foreign Minister, to engage in high-level talks with Strobe Talbott, the Deputy Secretary of State for the next year and a half. Singh indicated that the talks were based on efforts to "engage with the great powers much more purposefully and productively" than in the past.⁵³⁸ For its part, the United States justified the talks as a way to engage rather than isolate India after the tests.

To minimize the economic ramifications of the test, India sought to limit the effects and duration of sanctions by pushing through further economic liberalization measures, in particular to draw in foreign multinational investment. These efforts were designed in part to influence U.S. politics by suggesting to U.S. corporations that they would not be able to cash in these measures if the U.S. maintained sanctions.⁵³⁹ Further, by naming China as the main security reason to test, India also sought to capitalize on the powerful anti-China lobby in order to divide U.S. opinion and "soften the blow of sanctions."⁵⁴⁰ As it turns out, these calculations largely bore out, with some U.S. sanctions only lasting a few months and all of them were lifted after three and a half years.

The Clinton Administration, for its part, was required by Congressional statute to levy sanctions, but was clearly loath to do so. In particular, the administration argued that the U.S. had welcomed India's efforts to liberalize its economic policy and "sanctions were considered unhelpful at a time when Washington was calling on the

⁵³⁸ Singh quoted in Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 34.

⁵³⁹ "Who's Afraid of the BJP?," Economist 346, no. 8062 (April 1998).

⁵⁴⁰ Chengappa, Weapons of Peace, 49.

Indian Government to renew its commitment to reform.”⁵⁴¹ For these reasons, the Clinton administration sought from the beginning to modify portions of the Glenn Amendment and grant the president some flexibility in both implementing the sanctions and ability to remove them. This effort led to the 1999 the Brownback Amendment passed in the U.S. Congress, which restored monies for military training and firms doing business in India.⁵⁴² With the sanctions enduring for a relatively short time,⁵⁴³ given the general lack of U.S. and international support, the direct effects of the sanctions were rather limited.⁵⁴⁴ Indeed, not only did the sanctions have a marginal economic effect in the short term, but actually enabled the BJP to argue persuasively that further economic liberalization measures were needed and thus in the long run may have served a positive economic function within India.⁵⁴⁵ Ongoing relations have continued to strengthen between India and the United States since George W. Bush entered office. With President Bush’s clear reluctance to promote international institutions, he has also largely

⁵⁴¹ Ian Anthony and Elisabeth M. French, "Non-Cooperative Responses to Proliferation: Multilateral Dimensions," in SIPRI Yearbook 1999: Armaments, Disarmament and International Security (Oxford: Oxford University Press, 1999), 682.

⁵⁴² Prem Shankar Jha, "The Indian Economy After Pokhran II," in India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. (Boulder: Lynne Rienner Publishers, 2000), 223.

⁵⁴³ By September 2001 and U.S. concerns regarding the “War on Terror” all sanctions related to the 1998 nuclear tests were lifted on both India and Pakistan. Most had been lifted prior to this event for India.

⁵⁴⁴ Jha, "The Indian Economy After Pokhran II," 221. Certainly, India has economic issues to manage; however, the sanctions only exacerbated the situation, but were not the source of these difficulties, Jha finds.

⁵⁴⁵ Devesh Kapur, "The Domestic Consequences of India's Nuclear Tests," in Nuclear India in the Twenty-First Century, D. R. SarDesai and Raju G. C. Thomas, eds. (New York: Palgrave, 2002), 240. India was also not affected as much as the other Southeast Asian states by the 1997 economic crisis.

avoided the issue of India and the topic of non-proliferation.⁵⁴⁶ In short, Vajpayee and the BJP were correct when they calculated that the “West would get used to a nuclear India and learn to live with it.”⁵⁴⁷

C. Non-Proliferation Regime Lack of Response

India had already rejected the main non-proliferation agreements prior to testing. Moreover, given the relative lack of response by other states in the international community, the idea that India has restrained its nuclear ability based on material and normative pressures by the larger international non-proliferation regime seems weak. Prior to the test in May 1998, non-proliferation scholars suggested that, “although the international community has tolerated ‘nuclear ambiguity’ in India and Pakistan, it likely would react harshly if either country tested a weapon, openly declared that it possessed nuclear weapons or deployed nuclear arms.”⁵⁴⁸ Yet, clearly this prediction was false.

It is true that in addition to the United States implementing sanctions, Canada, Japan, the UK and Australia followed suit. However, as previously noted, the U.S. sought relatively early in the process to derail the harshest of its own domestic sanctions. Of the other states, Japan’s development aid at 1.2 billion dollars was the most significant loss to India, but even in this circumstance Japan did not restrict trade or other private

⁵⁴⁶ Robert M. Hathaway, "The US-India Courtship: From Clinton to Bush," in India As An Emerging Power, Sumit Ganguly, ed. (Portland: Frank Cass Publishers, 2003), 10-12.

⁵⁴⁷ Thomas and Gupta, India's Nuclear Security, 6.

⁵⁴⁸ Reiss, Bridled Ambition, 208.

investment with India.⁵⁴⁹ Similarly, the United Kingdom was less than enthusiastic about full sanctions and joined France in questioning the utility of applying punitive measures after the fact.⁵⁵⁰ Canada and Australia, while withdrawing some forms of support for development loans, largely signaled that they preferred engagement to sanctions as well.⁵⁵¹ In short, the efforts to impose sanctions were in all reality a symbolic protest over India's decision to 'go nuclear' but were not designed to force India to rollback or dismantle its capabilities.

Moreover, France and Russia were actually very quiet in their reproach of India. Together, they opposed sanctions from the outset and made it clear that they would continue already established defense ties.⁵⁵² In public, France was more 'understanding' of India's nuclear choices and sought to lessen the international reaction of other states that implemented sanctions.⁵⁵³ Further, within weeks of the 1998 tests, France and India sought to engage in strategic dialogue and have continued to cooperate on a range of military and security issues.⁵⁵⁴ For its part, Russia was offended, not because of the tests, but because India had not warned their traditional political and military ally in advance

⁵⁴⁹ Jha, "The Indian Economy After Pokhran II," 221. Kapur, "The Domestic Consequences of India's Nuclear Tests," 246.

⁵⁵⁰ Kile, "Nuclear Arms Control and Non-Proliferation," 522.

⁵⁵¹ Anthony and French, "Non-Cooperative Responses to Proliferation: Multilateral Dimensions," 684.

⁵⁵² Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 30.

⁵⁵³ For ongoing French and Indian cooperation, see Jean-Luc Racine, "The Indo-French Strategic Dialogue: Bilateralism and World Perceptions," in India As An Emerging World Power, Sumit Ganguly, ed. (Portland: Frank Cass Publishers, 2003).

⁵⁵⁴ Racine, "The Indo-French Strategic Dialogue: Bilateralism and World Perceptions".

that it would test. Still, the day after the first tests at Pokhran, Russia started voicing opposition to the idea of implementing sanctions.⁵⁵⁵ Moreover, the Indian tests did not hinder the cooperation between Russia and India regarding conventional weapons and in fact, following the tests, Russia sought a closer relationship with India in which they have begun exploring joint military and technical cooperation and development.⁵⁵⁶

Even more interesting, Chinese reactions were fairly mute initially and China indicated that it would not seek sanctions against India.⁵⁵⁷ The relatively low-key initial response by China changed to a sharp outcry after the Indian letter to President Clinton identified China as the primary security risk to India, rather than Pakistan, and thus a reason for the tests. However, when the Chinese rhetoric became more strident, India dispatched diplomatic missions immediately to salvage a decade of closer relations and in the end China chose to continue to oppose material recriminations for the tests.

In short, given the summary of the international community's response, India correctly calculated that the United States was the primary concern in responding to its test. In addition to wanting to keep India engaged, the international non-proliferation regime at large also has difficulty in justifying the use of sanctions against a state that has refused to agree to the standards it has sought to perpetuate. In this sense, it is unrealistic to expect the main tools of the non-proliferation regime, international treaties, to be a significant source of pressure on India as it has chosen to remain outside of most of these

⁵⁵⁵ Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 30.

⁵⁵⁶ Anthony and French, "Non-Cooperative Responses to Proliferation: Multilateral Dimensions," 688.

⁵⁵⁷ Anthony quotes Chinese officials indicating their disinterest in sanctions. Anthony and French, "Non-Cooperative Responses to Proliferation: Multilateral Dimensions," 681.

frameworks such as the NPT that would hinder its ability to ‘legally’ acquire nuclear weapons. Together, these points suggest that U.S. foreign policy, rather than the non-proliferation regime, has been a more significant constraint on Indian opaque nuclear development.

D. Domestic Politics: The BJP

The first explanation, consistent with explaining the 1974 nuclear test, is that Vajpayee came to power on a nationalist platform with the BJP party that included the induction of nuclear weapons. The second explanation emphasizes India’s general restraint in publicly acknowledging its capabilities throughout the course of its nuclear development and suggests that India’s leaders have traditionally held moral and ethical reservations against relying on nuclear weapons for state security. In order to explain the tests in 1998, this explanation argues that India’s gradually shifting political culture has increasingly embraced an overt nuclear posture, supporting a Prime Minister that did not have the same moral reservations as other leaders in Indian history.

This study finds that while domestic calculations do play a role in informing Indian nuclear motivations, they are less compelling as explanatory factors than the economic and regional factors in informing India’s largely opaque nuclear posture through 1998 and the subsequent decision to test. The domestic political impetus from Vajpayee and the BJP can explain the timing of the test, but it was neither a necessary nor sufficient factor as the history suggests. Rather, all Indian leaders made decisions that led India towards a nuclear weapons capability. And while Vajpayee was willing to bear the costs of going nuclear that the opposition party candidates may not have undertaken,

Indian leaders likely would have chosen to test in the future as well. This estimate is based on the increased willingness for Indian Prime Ministers to revisit the testing option and the development of India's long-range delivery capabilities during the 1990s. Both domestic level perspectives and associated critiques are addressed below, as well as the BJP's willingness to invoke the costs from testing.

1. Public Support for Testing, Vajpayee and the BJP in 1996 & 1998

The development of a nuclear capability in India, both as a security buffer against Pakistan and to demonstrate Indian scientific and technical development, generally receives widespread political support from the domestic population at large. Proponents of the domestic politics argument suggest that this factor played an important role in Indira Gandhi's decision to test in 1974, and again in 1998 when Vajpayee sought to implement the nuclear platform the BJP came to power on. Both governments were relatively weak and in the case of the BJP, its leaders had made campaign promises that it would 'induct' India's nuclear weapons capabilities. Nonetheless, the BJP did not test on first coming to power. This suggests that Vajpayee was not immune to the same constraints other Indian leaders considered.

While Indira Gandhi and the Congress Party were responsible for the first nuclear test, ongoing domestic problems largely removed the nuclear issue from public purview until the BJP brought it to the forefront again during the 1990s in their bid for electoral

votes.⁵⁵⁸ Then, in 1998 as Atal Behari Vajpayee and the BJP came to power on shaky coalitional politics and a decidedly nationalist platform, for the first time since 1974 India conducted a series of nuclear tests and Vajpayee formally declared India a nuclear weapons state. Given the fact that during the 1990s, three different governments considered testing, but only the BJP did so, has led some to argue that, “the political party in power appears to have been a critical variable.”⁵⁵⁹

As previously discussed, there was some precedent for the decision taken by Vajpayee as in 1996, when he came to power for a short two week stint for the first time, he appeared to have ordered the tests to be conducted then. This decision appears to have been largely politically motivated. Not only would it provide attention to the BJP, which had a tenuous hold on power, but also would show that the BJP did what it had said it would do when it came to power.⁵⁶⁰ While Vajpayee immediately ordered the tests after coming into office, as previously discussed, the logistical difficulties in conducting the tests as well as direct pressure from the United States caused him to call off the tests until a propitious time in 1998. Finally, after just thirteen days in office, the BJP lost the vote of confidence to form a government and the testing would not occur until 1998.

While similar in many ways to the 1996 attempted but failed nuclear policy shift, in 1998 the BJP was more successful in bringing India’s nuclear capabilities to the forefront by authorizing and ultimately carrying out a series of nuclear tests. When

⁵⁵⁸ Technically the nuclear issue became part of the BJP’s platform in 1985, but they had so little electoral success given their rather extreme brand of Hindu nationalism that it was not an issue. Chengappa, Weapons of Peace, 39.

⁵⁵⁹ Joeck, "Nuclear Developments in India and Pakistan," 12.

⁵⁶⁰ Chengappa, Weapons of Peace, 31.

Vajpayee came to power as Prime Minister in March 1998, he was again facing the challenges of fractional parliamentary politics. Arguably, Vajpayee was even more determined to carry out the nuclear tests this time around as this was likely the only policy of the BJP's nationalist campaign platform that it would be able to carry through. Given the political necessity of cooperating with the other parties and compromising other more extremist Hindutva policies, the BJP had already abandoned several other campaign promises.⁵⁶¹ The nuclear tests were thus necessary in order to assure the voters who had supported the BJP during the elections.⁵⁶² In short, as Hagerty argues, "no previous government had ever staked its political life on restoring the Indian people to national greatness, at least not to the extent that the BJP had in its campaign rhetoric... In India today, there are very few votes to be found in a posture of dovishness on the nuclear issue."⁵⁶³

To this end, immediately after being sworn into office, Vajpayee told the scientists to prepare for the tests. He was able to order the tests with relative autonomy from the other political parties given the highly closed nature of nuclear decision-making in India. That is, the Prime Minister in conjunction with a few advisors determines nuclear policy and on this particular issue, Vajpayee did not have to get permission from the other coalitions. Within this highly closed group, the scientists were clearly lobbying for testing, arguing that India's nuclear option would be permanently closed both by the

⁵⁶¹ Although, unlike during 1996, the BJP was likely to be in office for a year, making the issue of testing quickly a lesser imperative for gaining needed votes. Cohen, "Why Did India 'Go Nuclear'?" 29.

⁵⁶² Hilary Synnott, The Causes and Consequences of South Asia's Nuclear Tests, 19.

⁵⁶³ Hagerty, "South Asia's Big Bangs: Causes, Consequences, and Prospects," 21.

international non-proliferation regime and losing scientists to other programs. As a final push towards the tests, in the first week in April, Pakistan tested its Ghauri missile.

Arguably, the Pakistani missile test, which was capable of reaching deep within India with a nuclear warhead, ratcheted-up the domestic pressure on Vajpayee to respond by declaring India's nuclear weapons capability.

a) Lack of U.S. Pressure

Additionally, Vajpayee, either by design or because a decision had not been truly made yet regarding a nuclear test, was able to largely avoid direct international pressure. In particular, direct diplomatic pressure from the U.S. was not applied given Vajpayee's and the nuclear scientists' ability to keep the preparations secret. As previously discussed, the United States may have inadvertently sent false signals to India that the U.S. was willing to ignore India's proliferation in order to better engage India during the Clinton administration. When Vajpayee came back into power, Clinton did not want to 'lecture' him on nuclear weapons, so he did not bring it up, and Vajpayee, for his part, "seemed to be treading carefully. In his own public comments, he resorted to a variant of Indira Gandhi's mantra for two decades earlier about 'keeping all options open'."⁵⁶⁴

In this context, the scientists were instructed to undertake their preparations for the nuclear tests under extreme secrecy to avoid diplomatic pressure. These measures included that everyone working on the tests wore fatigues to make them look like military officials, did much of the work at night and under camouflage to avoid the prying eyes of

⁵⁶⁴ Talbott, *Engaging India*, 46.

U.S. satellites.⁵⁶⁵ In short, it is unclear what would have happened if the U.S. had detected the BJP's preparations, but regardless, the practical implication is that the U.S. did not employ aggressive diplomacy to stop it as it had in the past.

b) Weighing the Domestic Politics Explanation

While there were several factors affecting the BJP's domestic political calculations in favor of conducting nuclear tests, the evidence also illustrates that this decision was neither a foregone conclusion, nor the only political party likely to make the same decisions. Rather, the historical record suggests that internal and external factors coincided with the political stance of the BJP that led to testing.

First, there is not a clear correlation between considering, deciding to test, and the political party in office. The Congress Party was in power during the 1974 tests, and again under Indira Gandhi, considered testing in 1980-1984. Similarly, the Congress Party was again in power from 1991 through 1996 under the leadership of Narashima Rao, who strongly considered testing in 1995. During this time, the test sites were kept in a constant state of prepared and testing seemed imminent until the U.S. diplomatically intervened and strongly pressured India to refrain.⁵⁶⁶ For example, as Talbott recounts that in December of 1995, U.S. satellites detected activity at the Pokhran site and sent Frank Wisner to India to warn that the United States would sanction India under the Glenn amendment, and put additional pressure on by Clinton placing a followed up by a

⁵⁶⁵ Perkovich, India's Nuclear Bomb and Chengappa, Weapons of Peace both note the extreme secrecy measures.

⁵⁶⁶ Tellis, India's Emerging Nuclear Posture, 101.

phone call reiterating the United States stance.⁵⁶⁷ Similarly, the following two United Front governments under Gowda and Gujral, respectively, also considered testing from 1996-1997, but decided not to based on pressure, even though believing that testing must ultimately be carried out.⁵⁶⁸ In short, “[t]he evidence thus suggests that even the Congress and UF governments – regimes that were unquestionably moderate in their political inclinations – had contemplated the idea of altering India’s nuclear posture and would probably have done so in the absence of pressures emanating from the United States.”⁵⁶⁹

Moreover, the Congress Party and the United Front party were mainly responsible for the series of preparations over the years that allowed the BJP to test. What was different between previous Indian governments and the BJP was the willingness to draw attention to the Indian nuclear program while it was still in development. That is, leaders in both parties agreed with Indian nuclear weapons development generally, what they disagreed on was when to make this public.⁵⁷⁰ Opponents argued that “the Vajpayee government’s decision to test only compromised what the country had been secretly doing all along, and by opening the door to renewed external pressures, actually

⁵⁶⁷ Talbott, Engaging India, 37.

⁵⁶⁸ Tellis, India's Emerging Nuclear Posture, 101.

⁵⁶⁹ Tellis, India's Emerging Nuclear Posture, 101.

⁵⁷⁰ Within each of the parties themselves there are divides between bomb proponents and opponents. Cohen, "Why Did India "Go Nuclear"?" 18-19.

compromised India's ability to continue the covert development of its nuclear weaponry."⁵⁷¹

In terms of the BJP and Vajpayee, both can be traced through historical roots back to the Jana Sangh Party, which played a significant role in 1977 when the Janata Party first came to power and considered nuclear testing during its tenure. While it is unclear from the historical record whether India actually had enough enriched uranium at the time for further testing, it is recorded that Vajpayee himself, serving as Foreign Minister, had argued against nuclear weaponization in 1977, believing that India would suffer internationally for such a decision.⁵⁷² Vajpayee also reportedly did not agree to testing in the late 1970s because he did not want to offer any provocation to the Pakistanis.⁵⁷³ Subsequently, the Janata Party fractured with Indira Gandhi's return to power in early 1980, and a nationalist Hindutva lobby formed the BJP. These justifications suggest that he was aware of the ramifications of India changing its nuclear posture.

In coming to power in 1996, Vajpayee clearly had to weigh other factors in the decision to test—that is, he was not so intent on declaring India a nuclear weapons state that he did not carefully calculate the pros and cons of doing so. Indeed, in 1996, it appeared that the fragile government was likely to fall, and the lack of an installed government to handle international diplomacy following the tests weighed heavily on his mind when he decided to postpone the tests. Similarly in 1998, Vajpayee carefully

⁵⁷¹ Tellis, India's Emerging Nuclear Posture, 102.

⁵⁷² Chengappa, Weapons of Peace, 39.

⁵⁷³ Karnad, Nuclear Weapons & Indian Security, 341.

calculated both anticipated international fallout and how to deal with it best diplomatically to stave off the worst of likely sanctions. The BJP was in power for six years following the tests, but did really did not ‘push’ the nuclear issue during this time period, but instead sought the mend relations with the world and continue forward.⁵⁷⁴ Thus, throughout Indian nuclear development, the decisions between party lines were remarkably similar, given the fact that many of the same factors ultimately informed Indian decision-making, as summarized in Figure 3.

Figure 3 – Indian Nuclear Decisions by Political Party

Year	Prime Minister	Political Party	Testing
1974	I. Gandhi	Congress Party	Conducted
1980-1984	I. Gandhi	Congress Party	Considered
1995	N. Rao	Congress Party	Considered
1996	Vajpayee	BJP	Considered
1998	Vajpayee	BJP	Conducted

In terms of domestic politics in 1998, Vajpayee was able to conduct the tests with relatively few advisers and scientists “in the know” and largely out of the purview of his party, other coalition members and the opposition parties. Given this reality of Indian politics, and since Vajpayee did not have to gain political consensus from other members of the coalition, the tests actually caught the other political parties by surprise. This suggests that much of the leadership within India had not taken much of the BJP’s nuclear rhetoric seriously to realize that Vajpayee was going to test. Additionally, other

⁵⁷⁴ The BJP lost a significant number of seats in the fall before regaining them again.

India politicians had traditionally considered Vajpayee to personally be moderated by both his 'hard' and 'soft views'.⁵⁷⁵ And the ability for the BJP to have a more moderate stance than, for example, the RSS, strengthened its ability to form political alliances and garner some political success.⁵⁷⁶

Vajpayee was also reluctant to fully cash in on the domestic political effects of the test, for example, refraining from the suggestion by other party members to have sand brought in for ceremonies by citing concerns that it might be radioactive.⁵⁷⁷ He also did not immediately call for a general election despite the popularity of the test with many Indian voters.⁵⁷⁸ Moreover, the basis of the domestic political argument for testing nuclear weapons rests on public support for a nuclear India, and it is not clear that there was an increased priority for overtly going nuclear for the BJP to capitalize on. Historically, Indian public opinion has been tricky for Indian leaders to capitalize on given the fact that most Indian's generally support an Indian nuclear capability,⁵⁷⁹ but that this priority is far less important than domestic concerns for a poor country.

As early as 1968 Indian leaders were well aware that economic and social considerations outweighed many India considerations of nuclear weapons. During this

⁵⁷⁵ Chengappa, Weapons of Peace, 7.

⁵⁷⁶ Thomas Blom Hansen and Christophe Jaffrelot, eds., The BJP and the Compulsions of Politics In India, (Delhi: Oxford University Press, 1998).

⁵⁷⁷ "Whose Afraid of the BJP?"

⁵⁷⁸ "Whose Afraid of the BJP?"

⁵⁷⁹ Itty Abraham links the general support as being based on Indian identity as a postcolonial state seeking advanced nuclear technology as a mechanism to prove India as an independent nation state. See Abraham, The Making of the Indian Atomic Bomb.

time period, “Indian public opinion wanted to see the nuclear weapon as part of the country’s ‘prestige,’ but this attitude was tempered by a sense of realism over the potential economic costs of such a policy.”⁵⁸⁰ Indeed, while the public generally supported Gandhi’s tests in 1974, the political effects quickly faded away and within months she was back to facing the same political challenges as before the tests.

In a poll conducted by the Indian Institute of Public Opinion in 1980, 70 percent of the population supported Indian development of nuclear weapons.⁵⁸¹ In another poll published in 1996, there were similar findings in which the “nuclear issue ranked very low in salience” - seventh out of ten issues considered.⁵⁸² Problems such as communalism, poverty and economic stability topped the list as being more important concerns for the Indian public.⁵⁸³ Moreover, this same poll found that the majority of Indians polled, around 57 percent, actually favored a policy of continued ambiguity compared to 33 percent that supported weaponization and an overt nuclear posture.⁵⁸⁴ This suggests the relatively constant nature of Indian public opinion, in which it broadly supports a nuclear option, but not at the expense of other priorities. These polls would seem to indicate also that many voters that elected the BJP did so for reasons other than their nuclear platform. This is reinforced by the fact that within six months of the test,

⁵⁸⁰ Dixit, "Status Quo: Maintaining Nuclear Ambiguity," 60.

⁵⁸¹ Perkovich, India's Nuclear Bomb, 230.

⁵⁸² Cortright and Mattoo, India and the Bomb, 17. Most Indians also felt that there was very little information available regarding India’s nuclear capabilities or policies.

⁵⁸³ Cortright and Mattoo, India and the Bomb, 17.

⁵⁸⁴ Cortright and Mattoo, India and the Bomb, 11.

the BJP actually lost significantly in the state assembly elections in November 1998, reinforcing a need to scale back extreme Hindu rhetoric while focusing on economic priorities.⁵⁸⁵

Another oft cited domestic pressure is from the scientists who had spent their lives working on India's nuclear capabilities and very much wanted testing in order to verify the validity of their designs.⁵⁸⁶ In advancing their arguments, the scientists pointed to U.S. non-proliferation efforts in the form of the CTBT as potentially closing a window of opportunity for India to truly become a nuclear power. However, this pressure was largely in private and was not being waged on a public domestic level that Vajpayee would have to contend with. Moreover, this pressure has essentially been constant since the beginning of the nuclear weapons program and there is no indicated that it mounted a more substantial pressure or the Vajpayee was particularly vulnerable to it. Rather, it did exist as a reason to factor into the calculations, but was not in and of itself an overriding factor.

The constant presence of domestic level factors, and the similarities of calculations made by other parties suggest that decisions for conducting India's nuclear weapons was strongly affected by other factors than simply the party in power. Also, Vajpayee was sensitive to many of the external costs that had faced the other parties, but had the additional benefit of working from a stronger economic basis than most Indian Prime Ministers and the ability to avoid immediate U.S. diplomatic pressure through

⁵⁸⁵ Ollapally, "Mixed Motives In India's Search for Nuclear Status," 941.

⁵⁸⁶ The military has not been involved on any significant level with Indian nuclear development and in fact has largely been opposed to such efforts for fear of taking away conventional resources.

strict secrecy. These factors together enabled him to follow through on a previously contemplated course of action throughout Indian history.

2. Lack of Evidence for Moral Constraint Argument

Additionally, there is little evidence that Indian leaders chose a restrained nuclear posture in response to their own moral reservations. As illustrated below, even Indian leaders that opposed the development of nuclear weapons based on moral reservations were compelled to make decisions that furthered India's nuclear weapons programs. There simply is no correlation between leadership behavior and moral stance. For example, Shastri was a well-known opponent of nuclear weapons and he authorized the program that would lead to the first nuclear test in 1974. Similarly, during the mid-1990s, both Prime Ministers Gowda and Gujral appeared to have opposed nuclear weapons on moral grounds, but both authorized additional testing shafts to be constructed. In short, other factors were informing Indian decision making rather than personal views on the immorality of nuclear weapons. More likely some leaders considered opposed to nuclear weapons successfully made convincing arguments that morality played a role in what was really practical considerations in maintaining a nuclear option. In short, given the full weight of Indian nuclear development, there is little evidence supporting this hypothesis. Figure 4 lists the political and moral stances of the Indian leadership at critical time periods.

Figure 4 – Political and Moral Stance of Indian Leadership Regarding Nuclear Decisions

Date	Prime Minister	Political Party	Nuclear Development	Delivery Development	Moral Stance
8/15/1947 - 5/27/1964	Nehru	Congress Party	Prepare for PNE		Strongly Opposed
6/9/1964 - 1/11/1966	Shastri	Congress Party	Approves subterranean nuclear explosion project		Opposed
1/24/1966 - 3/24/1977	Indira Gandhi	Congress Party	1974 PNE	1970 Missile development started	Open option
3/24/1977 - 7/28/1979	Desai	Janata Party	Refine explosive device	Purchased Jaguars	Opposed
				1979 SLV-3 launched	
1/14/1980 - 10/31/1984	Indira Gandhi	Congress Party	1981 - Clears test shaft	1980 Nuclear sub study	Open option
				1983 approves development of 5 missiles classes	
10/31/1984 - 12/1/1989 ⁵⁸⁷	Rajiv Gandhi	Congress Party	1984/85 began work on thermonuclear weapons	Test flights ASLV	Opposed
			Manufacture bomb components (weaponization) - 1987	1988 Prithvi test fired	
				1989 Agni and Nag tested	
6/21/1991 - 5/10/1996	Rao	Congress Party	Test Shafts Prepared	Agni test flight	Opposed
			Rejected NPT	1992 Prithvi test flight	
5/16 - 6/1/1996	Vajpayee	BJP	Started test preparations		Open option
6/1/1996 - 4/21/1997	Gowda	United Front	Voted against CTBT	Deployed Prithvi	Opposed
			Authorized construction of 2 additional test shafts		
4/21/1997 - 11/28/1997	Gujral	United Front	Authorized construction of 6th test shaft		Opposed
			Awarded Kalam Bharat Ratna Award		
3/19/1998 - 5/22/2004	Vajpayee	BJP	1998 tests	Trishul missile tested	Open option

⁵⁸⁷ From 1989 to 1991, India had four prime ministers. During this political turmoil, little was done to change or affect India's nuclear posture.

IV. Conclusion

Opaque nuclear proliferation has defined the nuclear postures of second-generation nuclear states, including India, Israel, and Pakistan. In the case of India, as with Pakistan and Israel, the regional security environment was a compelling reason to acquire a nuclear weapons option. After the Chinese nuclear test in 1964, followed by continued rapid development, Indian security planners were under pressure to respond. By 1974 India had the capability to test and did so. However, the characterization of the test as a “peaceful nuclear explosion” in part reflected India’s competing priorities: to respond to China, although indirectly as India did not have the necessary long-range delivery capabilities to establish a secure second strike capability.

After conducting the test in 1974, India would be forced to recognize Pakistani security concerns and how India’s test accelerated Pakistan’s nuclear development with China’s help. Seeking to keep its own development within an affordable cost range during the long-term transition to having a credible deterrent vis-à-vis China was therefore an important incentive for maintaining an ambiguous posture until the late 1990s. By the 1998 nuclear test, Pakistan had developed its own deliverable capability against India and the latter was moving into range of Chinese targets. In short, there were few regional incentives to maintaining an ambiguous posture when development had India on the threshold of having a credible nuclear capability.

Additionally, the research in this chapter suggests that patron state pressures from U.S. non-proliferation measures—in the form of economic and technology inducements combined with the threat of sanctions—significantly affected the calculations of Indian

leaders to remain ambiguous regarding their nuclear capabilities and intentions after India's 1974 'peaceful nuclear explosion' through 1998. Prior to the 1974 nuclear test, the U.S. had limited cooperation with which to pressure the Indians and was not successful in preventing New Delhi from testing. After the 1974 test, India, sought to establish economic and technology links with the United States, as well as stabilize relations with its regional neighbors. In order to pursue these priorities, India continued to develop its nuclear capability, but it did so largely out of the public purview.

Indian vulnerability to external pressures began to change during the 1990s as India made significant economic, political and technological gains. These factors, combined with the lack of direct U.S. pressure in 1998, led to Vajpayee and the BJP to openly declare India as a nuclear weapons capable state. These conditions enabled India to incur the costs of openly testing, having provided New Delhi with leverage to minimize the extent and length repercussions of the tests. And Vajpayee's interest in testing, as part of the BJP's nationalist platform, further helps explain the timing of the test.

Notably, most of the external pressure on India came directly from the U.S., suggesting that the international non-proliferation regime was not a significant factor in Indian decision-making. That said, Canada also joined the U.S. in seeking to prohibit peaceful nuclear explosions prior to the 1974 test, a position that India rejected. Still, India's characterization of the explosion as peaceful was likely an attempt by New Delhi to remain within the parameters of existing nuclear contracts with Canada and the U.S.

Nonetheless, after the test, Canada and the U.S. were no longer willing to cooperate in the area of nuclear technology. This in turn hindered both India's civilian and military nuclear program, forcing India to rely on other states and its own indigenous efforts. India similarly calculated the material ramifications of its 1998 nuclear test. New Delhi concluded that while some states would impose sanctions, they likely would be neither extraordinarily harsh nor long lasting and therefore India could weather the punitive measures. In short, the evidence supports the conclusion that the non-proliferation regime mattered to the extent that it factored into India's material costs, but given New Delhi's reluctance to join treaties, its ongoing criticisms of the discriminatory nature of the regime, and its willingness to test suggest that it did not adopt or internalize to any significant extent any of the non-proliferation norms.

In terms of domestic politics, there is some evidentiary support for the position that domestic pressures contributed to Prime Minister Gandhi's decision to test in 1974, and the BJP's rise to power can explain the timing of the 1998 test. As to 1974, China's nuclear weapons advancements created a flurry of cross-party calls, including from the ruling Congress Party, for India to adopt a more robust nuclear posture. These calls continued to increase and Gandhi authorized the tests as soon as the technology was available. This explanation does, however, militate against the long-standing proposition that the timing of the test was based on Gandhi's desire to capitalize on popular support from the public for testing.

As to the 1998 nuclear tests, the BJP had a longstanding party platform to make India a nuclear weapons state on coming to power. Prime Minister Vajpayee's actions

were at this time consistent with this approach. However, the overall history of India's nuclear weapons program suggests that the BJP was neither a necessary nor sufficient condition. A different political party, the Congress Party, ruled during the 1974 test and several Prime Minister's considered and prepared for testing during the 1990s.

Additionally, Vajpayee in both 1977 and later as Prime Minister in 1996 counseled against testing. This evidence suggests that India was already on the verge of testing in the 1990s, as well as the fact that circumstance had to be propitious for Vajpayee to authorize the tests.

The research findings further suggest that a common attribution of India's nuclear posture to moral reservations regarding nuclear weapons is flawed. Rather, India's leaders steadily marched towards a weapons option notwithstanding their personal beliefs, while at the same time balancing domestic priorities, regional security constraints, and international pressures.

Figure 5 – Summary of the Presence of Explanatory Factors in the Indian Case

Hypothesis	Predictions	1974 Test	1974-1998	1998 Test
Reg. Sec. Env.	Deterrence Signals	Medium-High	High	Very High
	Conservative Nuclear Strategy	Medium	High	Medium
	Limited Cooperation	Low	Medium	Low-Medium
Patron State	Issue Linkages	Low	High	Medium
	Conforming Dependent States	Low-Medium (labeled PNE)	High	Low-Medium
	Nuclear Priority for Patron	Medium	High	Medium-High
Int'l Non-Prolif. Regime	Material Costs	Low	Medium (higher vulnerability)	Low
	Norm Recognition	Low-Medium	Low-Medium	Low
	Internalized Norms	Low	Low	Low
Domestic Politics	Bargaining and Compromise	Low	Low	Low
	Posture is in interest of centralized decision-maker	Low-Medium	Low	Medium
Moral/Cultural Constraints	Expressions of Nuclear Doubt	Medium	Medium	Low
	Nuclear Weapons Not an Option	Low-Medium	Low-Medium	Low
	Lack of questioning existing policy	Low	Low	Non-existent

CHAPTER V

PAKISTAN

Despite almost insurmountable obstacles, Pakistan has persistently pursued and eventually acquired a nuclear weapons capability. Pakistan's determined efforts to acquire a nuclear option are largely attributable to its severe security dilemma vis-à-vis India, its historic adversary. Nonetheless, Pakistan chose not to publicly test or officially declare itself a nuclear weapons state until after India did so in 1998. Why did Pakistan not test when it first had the capability to do so in 1985?¹ What factors did it take into account when it finally tested in response to India in 1998?

This study finds that Pakistan pursued a policy of ambiguity as a way to balance a set of complicated, countervailing demands. The primary determinant of Pakistan's nuclear policy was its regional security environment vis-à-vis India. Pakistani insecurity, caused by both its conventional and nuclear inferiority to its neighbor, was both the cause of Islamabad deciding on a nuclear option, as well as the decision to keep its nuclear development intentionally ambiguous.

On the one hand, an ambiguous posture allowed Pakistan some measure of deterrence through uncertainty with India. At the same time, an ambiguous posture

¹ Pakistan appeared technically ready to "cold test" its nuclear design in 1983-1984 and was prepared for a "hard test" by 1985. Samina Yasmeen, "Pakistan's Nuclear Tests: Domestic Debate and International Determinants," *Australian Journal of International Affairs* 53, no. 1 (1999), 44. See also, U.S. Department of State, "The Pakistani Nuclear Program," Secret Paper, 23 June 1983, *Weapons of Mass Destruction* (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00275, 5.

allowed Pakistan to minimize provoking India into an overt arms race and potential direct conflict. When Pakistan did test in 1998, it was in direct response to India's tests conducted a few weeks prior. Pakistani leaders felt it necessary for their security to respond to India by demonstrating that it had a credible nuclear deterrent, notwithstanding the economic crisis this would create from sanctions.

Pressure from one of Pakistan's patrons, the United States, also played a role in creating incentives to keep the nuclear weapons program hidden from public purview. By not declaring its nuclear intentions, Pakistan was able to leverage conventional military and economic assistance from the United States when the Americans were engaged in South Asia. Pakistan's other long-time patron state, China, actually assisted the Pakistani nuclear program and likely was not a relevant source of constraint on Islamabad's posture. Secrecy assisted Pakistan and China in deflecting some non-proliferation pressure from other states, but this was a tertiary concern to the latter.

The international non-proliferation regime had a relatively little direct effect on Pakistan's nuclear posture. Pakistan has remained largely outside of the international framework, and the main effect on Pakistani policy was by supplier states restricting technology and materials that made it more difficult for Pakistan to develop its nuclear program. At the same time, denials that Pakistan sought a weapons capability, combined with public declarations that it was willing to follow international non-proliferation guidelines if India did so, allowed Pakistan the ability deflect external pressures while it created its nuclear option. But the institutions and regimes themselves did little to shape Pakistan's posture.

Similarly, there is little evidence that domestic politics were responsible either for Pakistan's ambiguous posture or its 1998 nuclear tests. The Pakistani military has dominated nuclear decision-making for most of Pakistan's history. The military, while supporting a nuclear option, has also placed a high priority on maintaining its conventional forces. Various Pakistani politicians have had to balance these preferences, or risk losing the support of the military and therefore governing power. Additionally, while the Pakistani population supports the nuclear weapons program, and enthusiastically responded to the 1998 tests, there is little evidence to suggest that the nuclear nationalism Pakistani leaders had previously created was a direct cause of the decision to test. Rather, it was a permissive condition.

The following explanation for Pakistan's nuclear posture begins with a description of Pakistani nuclear ambiguity, the dependent variable in this study. This is followed by a historical analysis of the relative effect of each hypothesized relationship between the independent variables and Pakistan's retained posture of nuclear ambiguity until the 1998 nuclear tests.

I. Explaining Pakistani Ambiguity, 1972-1998

A. Pakistani Nuclear Ambiguity

Since choosing to pursue a nuclear weapons option, Pakistan has adopted a posture of nuclear ambiguity through 1998, when it publicly declared itself a nuclear weapons state and conducted underground tests.² Nuclear ambiguity in this case

² Ambiguity was adopted after Pakistan's President Zulfikar Bhutto decided to acquire a nuclear weapons capability in early 1972. Prior to this point Bhutto had made the public claim that if India obtained nuclear

primarily consisted of Pakistani leaders officially denying the Pakistan was pursuing a nuclear weapons option and claiming that its program was for peaceful purposes only.

While Pakistani leaders denied that the nuclear program was weapons oriented, they retained the right to conduct peaceful nuclear explosions (PNEs). Further, Pakistani leaders would sometimes also indicate that Pakistan had the technical ability to produce nuclear weapons if the circumstances with India warranted it. The addition of the qualification that Pakistan could respond to an Indian nuclear threat occurred primarily in the late 1980s through the 1990s, although Pakistan's ability to produce nuclear weapons was claimed by Zia in the early 1980s.

I now turn to each theoretical explanation for Pakistan's ambiguous posture for most of its nuclear history. This is followed by a discussion of the effect of India's nuclear tests in 1998 on Pakistani security and its tests in response.

B. Regional Security Environment: Avoiding Indian Provocation

A nuclear option and even weapons capability make sense from the Pakistan perspective where the target is India. But India is a sleeping giant and one should not unnecessarily twist its tail.³

India, as Pakistan's historic regional adversary, is the primary the source of motivation for Pakistan to develop nuclear weapons. As a weaker state, nuclear weapons were seen by some as an attractive way for Pakistan to provide for its security by deterring a much stronger regional rival. At the same time, Pakistan's weakness vis-à-vis

weapons, Pakistan would as well even if it required Pakistanis to "eat grass or leaves." Before he became President, Bhutto often made the public case for Pakistan acquiring nuclear weapons, contrary to the then existing policy of the government.

³ Ashok Kapur, Pakistan's Nuclear Development (New York: Croom Helm, 1987), 218.

India is a significant factor in causing Pakistani leadership to choose a policy of nuclear ambiguity.

In particular, Pakistan's nascent nuclear program was vulnerable to attack early on in its development, and Pakistani provocations might have encouraged Indian attacks on its nuclear facilities before it had the chance to create a retaliatory capability.

Additionally, India could outstrip Pakistan in an overt arms race and further exacerbate Pakistani security concerns. As such, Pakistan has sought throughout most of its nuclear history to avoid provoking a regional arms race by maintaining an opaque posture.

Finally, Pakistan sought to portray its program as peaceful, and at most, a defensive hedge in response to Indian proliferation, in order to redirect international attention on the India program as leverage to slow it down. In short, nuclear ambiguity served to protect the program by avoiding a posture that would overtly provoke a response from India.

Each of these constraints, and the affect on Pakistani nuclear strategy, are discussed below.

1. Pakistani Regional Insecurity and Nuclear Ambitions

Pakistan's insecurity vis-à-vis India is the primary driver behind its determined efforts to develop a nuclear weapons capability.⁴ Given its security environment, Pakistan's fear for survival motivated it to invest in a nuclear option despite being a poor country that lacked a technological base to indigenously research and manufacture nuclear weapons.

⁴ An additional motivation, perhaps, was an "Islamic Bomb," where Pakistan may have desired an enhanced status in the Arab world. There are a number of reports of Arab financing of Pakistan's nuclear program, as a possible counter to Israel's program. Warren H. Donnelly, "Pakistan and Nuclear Weapons," Congressional Research Service, Issue Brief 2512 (5 August 1987), 7.

In comparison to India, Pakistan has always been the weaker state, lacking economic, demographic and technological resources to sustain an equivalent conventional military force. There are a number of factors that have contributed to Pakistan's military weakness. Geography initially meant that Pakistan was split between East and West on either side of India, providing an impractical barrier to governing both territories. With the loss of East Pakistan, the remaining territory in the West is smaller and narrower, lacking the comparative depth that India enjoys. India has also always had a stronger economy with a larger geographic and demographic base.⁵ Further, India has a greater defense capability because of a strong industrial base and technological superiority.⁶ Pakistan's unenviable geographic position, combined with its inherent economic and technical weakness has resulted in a severe security dilemma vis-à-vis India.

Moreover, since independence, Pakistan has lost three major wars with India. Pakistan's insecurity began with independence in 1947 and the partition of the former British colony. The division between Pakistan and India was particularly acrimonious given the disputed territory of Kashmir between the two countries, leading to the first war in 1947. In 1965, Pakistan lost the Second Kashmir War. Further, Pakistan suffered a devastating defeat in 1971 and lost its territory in East Pakistan, resulting in the independent nation of Bangladesh. In 1987 the Brasstacks crisis, and again in the 1990 Kashmir crisis, full-scale war threatened to breakout in the shadow of both states having

⁵ Zafar Iqbal Cheema, "Pakistan's Nuclear Policy Under Z.A. Bhutto and Zia-Ul-Haq: An Assessment," *Strategic Studies* 14, no. 4 (Summer 1992), 8.

⁶ Cheema, "Pakistan's Nuclear Policy," 8.

achieved a nuclear capability. In addition to the major conflicts, border skirmishes continue between the two states, primarily in the disputed region of Kashmir.⁷ There have been some efforts to reduce tensions between the states at various times since independence; nonetheless, very real security concerns still exist between the two states.

Because of its conventional military deficiencies, Pakistan has historically relied on external allies, including the United States. However, this dependency has often left Pakistan insecure as well when its allies prove unreliable in a conflict. For example, during both the 1965 and 1971 wars, the United States stopped providing military assistance to both Pakistan and India. While the US would not ship arms to either country, Pakistan clearly suffered the effects of the embargo more deeply, given its relative weakness to India.

Based on these constraints, Pakistan clearly is unable to compete on a conventional level with India. Further, by 1971 it was becoming increasingly clear that India was pursuing a nuclear program. Thus, Pakistan's conventional capabilities would continue to be an insufficient answer to Pakistan's military problems, particularly in the face of increasing evidence of Indian nuclear development.

Given this regional security environment, coupled with Pakistan's chronically inferior indigenous capabilities, and a dearth of reliable allies during times of crisis, Pakistan has sought to compensate through the development of a nuclear weapons capability. In other words, Pakistan's nuclear policy has been India reactive, a trend that continued throughout its development and ultimately through the 1998 nuclear tests. The

⁷ Donnelly, "Pakistan and Nuclear Weapons," 6.

following discusses the background leading to nuclear weapons decision and the slide into ambiguity once the decision was made.

2. The Nuclear Answer and Origins of Ambiguity

While India was, and remains, the driving force behind Pakistani security policy, early nuclear discussion did not reflect a consensus among Pakistani leaders about how best to provide for its security. Ultimately, they decided to pursue a nuclear answer to Pakistan's chronic security problems with India in 1972. It was shortly after this decision that the most publicly vocal proponent of weapons program, Zulfikar Ali Bhutto, adopted an ambiguous posture that would remain the hallmark of the Pakistani program until 1998.

Prior to 1972, Pakistan joined the Atoms for Peace Program for civilian nuclear power purposes and initially had its nuclear reactors under international safeguards through the IAEA. President Ayub Khan was reluctant to pursue a nuclear program, given the severe domestic constraints already facing the country. For example, he is recounted as saying to Bhutto, Foreign Minister at the time and a strong proponent of a nuclear weapons program, “[w]hat do we need a bomb for? Pakistan is a poor country. We can't afford it...we should put our money into schools, maybe hospitals, and industry.”⁸ In addition to domestic constraints, many members of the military were resistant to developing nuclear weapons. Rather, early on in the Cold War, they were

⁸ Steve Weissman and Herbert Krosney, The Islamic Bomb: The Nuclear Threat to Israel and the Middle East (New York: Times Books, 1981), 49.

recipients of large-scale Western military and economic assistance, which enabled them to expand the military establishment and consolidate their political standing.⁹

However, after the 1965 defeat, some of Pakistani leadership began to rethink its previous reluctance to pursue a nuclear weapons program. Not only had Pakistan suffered a resounding defeat, but the U.S. had also begun to distance itself in terms of military support. This led the Pakistani military to change its stance towards nuclear weapons as well,¹⁰ particularly since efforts to modernize Pakistan's conventional forces was viewed as largely insufficient to deter Indian aggression.¹¹ Moreover, it was becoming increasingly apparent that India was pursuing its own nuclear weapons program.

One of the most vocal proponents of a nuclear program at this time was then Foreign Minister Bhutto, who would eventually become President of Pakistan in 1971. Bhutto ultimately became the architect of Pakistan's nuclear weapons program and early on he waged a public battle to convince Pakistan to go nuclear. He firmly believed that India would successfully pursue a nuclear program, in the wake of Chinese developments, and that Pakistan needed to follow suit for its own security.¹² Even though his sentiments were not unanimously shared by top Pakistani leaders, as early as 1965 Bhutto infamously stated that "even if Pakistanis have to eat grass, we will make

⁹ Samina Ahmed and David Cortright, eds., Pakistan and the Bomb: Public Opinion and Nuclear Options (Notre Dame: University of Notre Dame Press, 1998), 9.

¹⁰ Ahmed and Cortright, Pakistan and the Bomb, 9.

¹¹ P. R. Chari, Indo-Pak Nuclear Standoff: The Role of the United States (New Delhi: Manohar, 1995), 22.

¹² Cheema, "Pakistan's Nuclear Policy," 6.

the bomb.”¹³ In 1967, he left the government, but was even more outspoken about the need for Pakistan to go nuclear.¹⁴

By 1971, Bhutto returned to power in the wake of the regional pressures that had caught up with Pakistan. Pakistan’s third devastating defeat heightened insecurity about the viability of the state. It was also becoming increasingly clear that India would soon become a nuclear weapons power.¹⁵ Further exacerbating Pakistan’s security was the closer cooperation between India and the USSR, which might continue shift the regional balance of power in favor of India. India’s continued dominance in the region, combined with the loss of U.S. conventional support during the conflict,¹⁶ strongly favored Pakistan pursuing a nuclear weapons option to compensate for its vulnerability.

Bhutto ascended to power in December 1971 and by January he held the secret meeting that decided the Pakistani nuclear weapons program.¹⁷ For Pakistan, this was a major decision for a country that at the time did not have a metallurgical industry and reportedly “there was not a single steel mill in the country.”¹⁸ These deficiencies, as well

¹³ Bhutto quoted in Samina Ahmed, “Pakistan’s Nuclear Weapons Program: Turning Points and Nuclear Choices,” *International Security* 23, no. 4 (1999), 183.

¹⁴ Cheema, “Pakistan’s Nuclear Policy,” 6.

¹⁵ Ahmed and Cortright, *Pakistan and the Bomb*, 9.

¹⁶ While the U.S. was distancing itself from Pakistan, relations with China began to bear fruit in the form of increased conventional support. Still, even with Chinese support, there was a clear qualitative and quantitative difference between Pakistan and India’s conventional capabilities and these deficiencies continued to inform Pakistani decisions to acquire a nuclear capability. Ahmed, “Pakistan’s Nuclear Weapons Program,” 182.

¹⁷ Weissman, *The Islamic Bomb*, 42.

¹⁸ Weissman, *The Islamic Bomb*, 46-47.

as economic difficulties, would largely contribute Pakistan's clandestine approach in 'begging, buying and stealing' its way to a nuclear capability in subsequent decades.

For the political elite, they viewed the "nuclear option as the instrument of national salvation, by providing a reliable strategic deterrent against superior Indian conventional capability. National prestige was less weighty a factor in Pakistani thinking than in Indian. For Pakistan, the nuclear weapons option was more an act of desperation, to build a weapon of 'last resort'."¹⁹ Thus, for many Pakistani leaders, a nuclear capability provides part of the answer seeing the weapons as a way to garner credible deterrence. By creating uncertainty among the Indian leadership, Pakistan desired the ability to "preserves a broad equilibrium with India" and neutralize any Indian "nuclear threat or blackmail."²⁰ India itself was reaching the nuclear threshold and would by 1974 conduct its first "smiling Buddha test." Under Bhutto's leadership, Pakistan responded by accelerating its nuclear program.²¹

In addition to the security threat posed by India, Pakistani insecurity was further heightened with the 1979 Soviet invasion of Afghanistan. Having an additional threat front made it increasing difficult for Pakistani leaders to prepare an adequate conventional force plan. This meant that there was increased interest in nuclear weapons

¹⁹ Shirin R. Tahir-Kheli, India, Pakistan and the United States: Breaking with the Past (New York: Council on Foreign Relations, 1997), 71-72.

²⁰ Hasan-Askari Rizvi, "Pakistan's Nuclear Testing," in South Asia's Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. (Armonk: M.E. Sharpe, Inc., 2005), 99.

²¹ Tahir-Kheli, India, Pakistan and the United States, 7. Pakistan also considered responding to this threat by making major changes to its conventional forces and/or obtaining nuclear security guarantees from other nuclear powers. Ultimately, the conventional alternatives were unsatisfactory and in the case of security guarantees, not forthcoming.

for deterrence, although the military would not trade away conventional strength for a nuclear option.²²

This meant that nuclear weapons were only a partial answer to Pakistan's security problems. As Bhutto was aware early on, the nascent program was susceptible to attack by India.²³ Further, the U.S. was becoming increasingly concerned with horizontal proliferation. Bhutto recognized that his efforts to pursue a nuclear weapons capability could severely compromise his relations with the United States.²⁴ Additionally, Pakistan's military was not willing to trade away efforts to bolster conventional forces for a nuclear option. For a state dependent on external assistance, this meant that Pakistan had to cooperate with its external suppliers, including the United States. These factors combined meant that the nuclear weapons development was better conducted in secrecy.

Coinciding with the decision to undertake a weapons program, Pakistani leadership, primarily through the voice of Bhutto, now more quietly went about building a weapons capability. Once a vocal proponent of Pakistan pursuing the weapons option, Bhutto was now much more circumscribed in publicly commenting on Pakistan's intentions. It was during this time Pakistan's ambiguous nuclear stance was adopted. Pakistan's nuclear program was described as "peaceful" and Bhutto's declaratory policy on Pakistani intentions was deliberately ambiguous. In short, once the program was

²² Walter J. Stoessel, Jr., U.S. Department of State to U.S. Embassy, "Pakistan: Security Planning and the Nuclear Option," Limited Official Use, Cable 056987, 6 March 1981, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00245.

²³ Tahir-Kheli, India, Pakistan and the United States, 7.

²⁴ Tahir-Kheli, India, Pakistan and the United States, 7.

initiated, Bhutto changed his public posture to accommodate the countervailing pressures on the program.

From its inception then, Pakistani leaders have sought to shield the nuclear weapons program through secrecy and to protect it from outside interference. This ambiguity was also derived in part from necessity, given the fact that Pakistan had few resources to indigenously build a bomb and had to rely on outside assistance and its own efforts to acquire the needed scientists, technology, and material. This ambiguity would deepen over time as the Pakistani program continued to face external pressure from the United States, and Pakistan sought to keep the arms race with India dampened. At the same time, the posture of ambiguity was an attempt to garner the benefits of deterrence vis-à-vis India. Thus, ambiguity was a way to achieve military parity with India, while deflecting external pressures from India and the United States.

3. Risk of Attack On Pakistani Nuclear Facilities, 1981-1984

Newly developed nuclear states, prior to having a second-strike capability, are particularly susceptible to preventive attack by their adversaries.²⁵ The incentive is to strike before a secure second-strike capability is achieved, that is, before nuclear deterrence is established. At a minimum, a successful attack on an adversary's nuclear facilities sets the program back decades, as the case with Israel destroying Iraq's Osiraq reactor in 1981. Nonetheless, there are a number of factors militating against a preventive strike, including the likelihood of destroying the facility, prospect for the

²⁵ See Scott D. Sagan and Kenneth N. Waltz, The Spread of Nuclear Weapons (New York: W.W. Norton & Company, 2003).

renewal of the program, the ability of the target state to retaliate, and international condemnation.²⁶ In Pakistan's case, the threat of a preventive strike against its nuclear facilities was very real from India, and the evidence also suggests, potentially Israel.

India had a strong incentive to eliminate Pakistan's nascent nuclear ability before it acquired an effective deterrent. According to U.S. estimates, this threat mainly existed in the early 1980s, when Indian Prime Minister Indira Gandhi considered, but ultimately decided against, destroying Pakistan's Kahuta nuclear reactor.²⁷ As later reported, "[i]f American intelligence reports are correct, Mrs. Gandhi seriously contemplated a pre-emptive strike against Pakistani nuclear targets last year [1982]."²⁸ During this time period, India likely considered a military strike on Pakistani nuclear facilities as the window was rapidly closing based on when Pakistan would be ready to test a nuclear device.²⁹ U.S. intelligence reported that at this time that there were signs that both India and Pakistan were preparing for underground tests.³⁰ Publicly, there were also rumors circulating that Pakistan was preparing a site to test a nuclear device and that "all the

²⁶ Sagan and Waltz, The Spread of Nuclear Weapons, 19.

²⁷ There is evidence that some Indian military leaders also hoped to strike Pakistani nuclear facilities during the 1987 Brasstacks crisis. Sagan and Waltz, The Spread of Nuclear Weapons, 94.

²⁸ John J. Louis, Jr. to U.S. Department of State, "Observer Article on Indo-Pak Nuclear Issue," Limited Official Use, Cable 00067, 4 January 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02005. India continued to consider a preventive attack through 1984, and there were further rumors in 1987.

²⁹ By 1982 information was also publicly available that China was providing Pakistan with significant technical and material support for its nuclear program, including enriched uranium. For India, the Sino-Pak nuclear collaboration was particularly threatening given the border conflicts India shared with both countries.

³⁰ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," Confidential Report 169-AR, 25 June 1981, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00247, 1.

signs pointed to an imminent {sic} Pakistani nuclear test.”³¹ If India was going to take out Pakistani nuclear facilities, it was running out of time.

Moreover, circumstantial evidence suggests that India was not the only threat to the Pakistani program at this time. Israel was also closely monitoring Pakistan’s nuclear progress.³² Israel, for its part, was concerned that “Arab enemies will use the lever of Islam to buy nuclear secrets from Pakistan.”³³ Additionally, there is some evidence of discussions between India and Israel over Pakistan’s nuclear progress and whether or not to launch a preventive strike on its nuclear facilities.³⁴ High-level Indian parliamentarian, Subramanian Swamy visited Jerusalem, and reportedly asked whether Israel would consider a strike against Pakistani nuclear facilities, similar to those carried out against Iraq’s Osiraq reactor.³⁵ The alleged reply was ‘yes’, contingent on India providing refueling facilities south of the Pakistani border.³⁶ Therefore, “if Pakistan demonstrated or announced a nuclear weapons capability, this could evoke a preemptive strike by Israel against Pakistan’s nuclear facilities similar to the 1981 Israeli air strike against an Iraqi nuclear reactor.”³⁷

³¹ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005. These preparations were a contrast to Zia’s studied public stance that Pakistan was not interested in testing.

³² Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

³³ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

³⁴ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

³⁵ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

³⁶ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

³⁷ Donnelly, “Pakistan and Nuclear Weapons,” 7.

Predictably, reports that India might strike Pakistan's nuclear facilities fueled concerns that India would destroy its nascent nuclear weapons program.³⁸ Indeed, some evidence suggests that the Pakistani leaders were extremely worried about the threat to the nuclear program. For example, in a remarkable event at an international conference, Pakistan's Munir Ahmad Khan, as chairman of the AEC, discussed these fears with India's Raja Ramanna, India's new chairman of the AEC and a noted nuclear hawk. Allegedly, Khan went to Ramanna's hotel room very early in the morning and requested that he "[p]lease tell Mrs. Gandhi that all we want is peace."³⁹ Decades later, Khan reported to Perkovich that he emphasized to Ramanna the potential for a radiation disaster and "it would be better that India and Pakistan should not attack each other's facilities."⁴⁰

Pakistan was aware of the danger facing its program, recognizing that it was at risk of losing its hard won nuclear facilities. If attacked, this would threaten the very survival of the nascent Pakistani nuclear program, and at a minimum, would set the program back for decades if successful.⁴¹ Even rebuilding would be extremely expensive, particularly since Pakistan was not able to indigenously build its program but was reliant on external assistance and pilfering efforts. For these reasons, Pakistan had

³⁸ Cheema, "Pakistan's Nuclear Policy," 15.

³⁹ Louis, "Observer Article on Indo-Pak Nuclear Issue," no. NP02005. Ramanna, similar to Khan, urged India to develop a nuclear weapons capability.

⁴⁰ George Perkovich, India's Nuclear Bomb: The Impact on Global Proliferation (Berkeley: University of California Press, 1999), 241.

⁴¹ Indeed, it is not even clear today that Pakistan has a survivable force, nonetheless during most of the history of the program.

strong incentives to downplay its nuclear ambitions and not provoke India by testing or publicly declaring its intentions. This is particularly the case as India had previously threatened Islamabad that it would respond to Pakistan going nuclear. Thus, “[a]t least as important a disincentive for Pakistan going nuclear has been the fear of what India might do in return...Mrs. Indira Gandhi, the Indian Prime Minister, told Parliament that India would ‘respond’ in an appropriate way’ if Pakistan went nuclear.”⁴² She further indicated that a Pakistani nuclear test would have “grave and irreversible” consequences for regional relations.⁴³

While India contemplated its options, Pakistan also had to consider the reactions of other countries in deciding whether to conduct public tests, particularly in the context of the Cold War. Because there was an ongoing strategic relationship between the USSR and India, Pakistan was concerned that any provocation in its part would also invoke a hostile response from the Soviets, and potentially Iran.⁴⁴ In short, an “overt nuclear posture could unite India, Iran, and the Soviet Union against Pakistan.”⁴⁵ Moreover, as previously discussed, Israel carefully monitored the Pakistani nuclear program, fearing that nuclear technology would be shared among Islamic states.

Ultimately, India decided against attacking Pakistan’s nuclear facilities. Even if its nuclear facilities were destroyed, Pakistan could still use its conventional forces to

⁴² Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

⁴³ U.S. Department of State, “Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions,” no. WM00247, 5.

⁴⁴ Kapur, *Pakistan’s Nuclear Development*, 21. Additionally, Pakistan was already covertly assisting the Afghan resistance at the time and did not need an additional front opened with the USSR.

⁴⁵ Donnelly, “Pakistan and Nuclear Weapons,” 7.

attack Indian nuclear reactors. And Pakistani leadership threatened that they could take out India's Bombay facilities in a retaliatory strike.⁴⁶ This threat of retaliation was apparently enough for India to reconsider the wisdom of a preventive attack. Reportedly, Prime Minister Gandhi chose not to strike Pakistan's nuclear targets, "out of fear that Pakistan would retaliate and inflict equal damage on Indian nuclear centers."⁴⁷

Further, these flashpoints could foreseeably escalate into a wider and more destructive war. When an Indian former director of operations was interviewed by Perkovich, he indicated that Israel's model of attacking Osiraq would not work for India. Rather, "Pakistan would go to war. The international community would condemn us for doing something in peacetime, which the Israelis could get away with but India would not be able to get away with. In the end it will result in a war."⁴⁸ Predictably, India has always formally denied contemplating an attack on Pakistan's nuclear facilities.⁴⁹ And by 1988, India and Pakistan formally agreed to not attack each other's nuclear installations.

In the end, Pakistan did not test and India did not preemptively strike Pakistan's nuclear facilities. As demonstrated by the complex relationship between India and Pakistan in the early 1980s, ambiguity on Pakistan's part was an important strategy to

⁴⁶ Wheguru Pal Singh Sidhu, "India's Nuclear Use Doctrine," in Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott D. Sagan and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000), 133. Another consideration would be radioactive contamination. India also has nuclear installations close to large populations, threatening a larger catastrophe.

⁴⁷ Louis, "Observer Article on Indo-Pak Nuclear Issue," no. NP02005.

⁴⁸ Perkovich, India's Nuclear Bomb, 240.

⁴⁹ See, e.g., Louis, "Observer Article on Indo-Pak Nuclear Issue," no. NP02005.

decrease the likelihood of provoking a preventive strike on Pakistan's nuclear facilities. By Pakistan showing restraint, any Indian aggression to preventively strike its facilities would potentially swing international opinion in Pakistan's favor. Moreover, as long as Pakistan was not publicly signaling its nuclear progress, India could more effectively downplay any threat and refrain from taking any actions to address it. On the other hand, India was certainly likely to respond to any Pakistani moves to test, at a minimum with a round of testing itself. In short, India was more willing to live with nuclear Pakistan, as long as it did not publicly force India's hand to respond.

Deterrence was also already operating to the extent that India feared losing its own nuclear installations from conventional retaliation, and the bearing the associated costs of plutonium fallout near its population centers. Nonetheless, absent Pakistan testing, India had less of an incentive to attack Pakistan's nuclear facilities. Thus, by Pakistan choosing a low profile for its nuclear program, it helped swing another factor in favor of Indian restraint in preventively attacking.

For these reasons, ambiguity helped Pakistan protect its program during the time that India most seriously contemplated destroying Pakistan's nascent nuclear program. Fears of an Indian attack on Pakistani facilities would return again, however. Reminiscent of the concerns in the early 1980s, it was the rumors of a preventive strike on Pakistani facilities that would further push Pakistan's leaders to choose testing in 1998, in the wake of renewed Indian testing.

4. Minimize Risk of Open Arms Race with India

The regional rivalry with India has contributed significantly to Pakistan's desire to acquire a nuclear option. Through ambiguity Pakistan has also sought to avoid provoking India into an overt nuclear arms race, characterized by testing and possibly spiraling into a conflict. Given Pakistani weakness vis-à-vis India, Pakistan could ill-afford a direct and public arms race that it was sure to lose. Further, a more public nuclear stance would do little to enhance Pakistani security, and would provide India with the justification to continue its nuclear development in the open. By practicing restraint, Pakistan was able to dampen the competition and continue with its efforts to keep the international spotlight on the Indian program. This strategy worked, in part, because India also had incentives to keep its program ambiguous, and the two adversaries mutually reinforced each other's opaque nuclear postures. These dynamics are discussed below.

a) India's Advanced Nuclear Program Vis-à-vis Pakistan

First, because Pakistan was so weak in comparison to India, it had little incentive to provoke an intense arms race that it would surely lose and could not afford. In terms of nuclear development, India's indigenous research and delivery capabilities have always been much more advanced. Additionally, India has always had the power and capability to produce a greater number of nuclear weapons.⁵⁰

⁵⁰ Pervez Hoodbhoy, "Nuclear Myths and Realities," in Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. (Lahore: Gautam Publishers, 1995), 34.

In contrast, Pakistan's development has primarily relied on acquiring nuclear technology and materials from external sources, as it lacked the indigenous capability to develop nuclear weapons. For example, Pakistan was already struggling by the early 1980s to build a nuclear weapons program. As such, it likely only had a limited amount of nuclear material on hand and would have preferred to not use it in a test.⁵¹ Further, with the Chinese provision a nuclear bomb blueprint, "there would have been less need for Islamabad to conduct a test to have confidence that her weapons design would function properly."⁵²

India would also have a public justification for continued nuclear development if Pakistan overtly demonstrated its posture. For example, in the early 1980s, Indian officials warned Pakistan that if it tested, then India would resume with its own nuclear tests.⁵³ India was already speeding up its nuclear development amid reports that China had provided Pakistan with a bomb design and technical assistance for uranium enrichment.⁵⁴ As such, any public move by Pakistan would likely prompt further Indian testing.

Early on, Pakistan also had a small stockpile of fissionable material and it would have been dangerous to test without having more to build bomb with. Moreover, if Pakistan exploded a nuclear device before it had the capability to weaponize—

⁵¹ Mitchell Reiss, "The Illusion of Influence: The United States and Pakistan's Nuclear Programme," *RUSI Journal* (1991), 49.

⁵² Reiss, "The Illusion of Influence," 49.

⁵³ Donnelly, "Pakistan and Nuclear Weapons," 6.

⁵⁴ Cheema, "Pakistan's Nuclear Policy," 15.

particularly in light of India already having both tested and the ability to develop nuclear weapons—this would tilt the balance of military power even more strongly in favor of India.⁵⁵ This meant that Pakistan had strong incentives to not test, or it might provoke India into demonstrating its strategic superiority and prompt weaponization sooner rather than later. Further, if India began building nuclear weapons, it could outstrip Pakistani abilities to construct their own.⁵⁶ With Pakistan lagging behind, this would further contribute to Pakistani insecurities.

Because Pakistan would then be caught in the public competition that it would most certainly lose, there was little incentive to publicly provoke India. As summarized by U.S. analysts,

The incentive for Pakistan to halt the spiral toward nuclear weapons seems marginally greater than that for India. Pakistan has little hope of developing a nuclear capability that India would not quickly overmatch. Thus, if by building its own atomic bombs Pakistan drives India toward developing nuclear weapons, Pakistan could face suicide. For if Pakistan uses nuclear weapons against India, India very likely will retaliate by destroying Pakistan.⁵⁷

Indeed, there is some speculation that the Pakistani strategy of a low nuclear profile at the time worked, with Indira Gandhi taking into account Pakistani restraint in deciding not to conduct its own tests at this time.⁵⁸ Later, as Indian nuclear development

⁵⁵ Central Intelligence Agency, "Pakistan's Nuclear Program," Top Secret Intelligence Report, 26 April 1978, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00212, 3.

⁵⁶ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," no. WM00247, 3.

⁵⁷ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," no. WM00247, ii.

⁵⁸ Perkovich, India's Nuclear Bomb, 243-244.

continued, it gained the capability to test thermonuclear devices, compared to the more rudimentary systems developed by the Pakistanis. The result of testing then would be India asserting primacy in the nuclear field over Pakistan, giving the latter little incentive to provoke this public revelation.⁵⁹ In short, Pakistani testing would result in a response from India, which could publicly justify a response while at the same time demonstrate its superior nuclear development. Pakistan wanted to avoid both.

b) Risk of Provoking War With India

Also a significant factor, Pakistan did not want to provoke India into war. By testing, Pakistan would have risked escalating tensions with India and the chance that an overt arms race would spiral into direct military conflict. Pakistan was already defeated in three conflicts with India, and there was little subsequent change in the balance of power that would favor Pakistan. Rather, U.S. estimates have consistently suggested that Pakistan will always come out a loser in any direct confrontation with India, given the dearth of Pakistani resources.⁶⁰ Pakistani security concerns were high during the early 1980s, as nuclear activity might have also provoked India's ally, the Soviet Union, to take a more aggressive stance against Pakistan, while simultaneously risking its supply of conventional weapons from the U.S.⁶¹

⁵⁹ Reiss, "The Illusion of Influence," 49.

⁶⁰ U.S. Ambassador Deane R. Hinton to U.S. Department of State, "U.S. Policy on Non-Proliferation: 'Amoral but Practical,'" Unclassified Cable 03689, 21 February 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02193.

⁶¹ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," no. WM00247, 4.

Moreover, there have been persistent concerns that nuclear deterrence between India and Pakistan would not be stable as that between the U.S. and Soviets. For example, in 1985, Richard Cronin, a specialist in South Asian affairs for the Congressional Research Services, went to Pakistan. There, he explained to Pakistani officials from the Ministry of Defence, Institute of Strategic Studies, other professors and the media, these differences. He emphasized that “[t]he Indo-Pak situation is much more unstable because of questions of the border, the fact that there have already been three wars between India and Pakistan, allegations of destabilizing efforts in Punjab, internal political difficulties, etc. The acquisition of nuclear arms by both sides would add to this instability.”⁶² Additionally, Pakistan suffers a geographic disadvantage compared to India, which has a greater capability to survive and sustain a nuclear attack.⁶³

There are some indications however the Pakistan privately relied on its nuclear capability to deter India during the 1987 Brasstacks Crisis. Reportedly, Pakistani Foreign Minister Noorani advised Indian Ambassador Singh that if India took any action that threatened the sovereignty and territorial integrity of Pakistan, Islamabad would inflict “unacceptable damage on India.”⁶⁴ Additionally, Pakistan’s Dr. Khan publicly suggested in an interview with an Indian journalist that Pakistan had a nuclear weapons capability. The interview was released after the Brasstacks Crisis, and Dr. Khan quickly “clarified” the interview after negative international reaction, that Pakistan had the capability to

⁶² Hinton, “U.S. Policy on Non-Proliferation: ‘Amoral but Practical,’” no. NP02193.

⁶³ Hoodbhoy, Nuclear Myths and Realities, 34. For more on difference between the cases, see the Waltz/Sagan debate in The Spread of Nuclear Weapons.

⁶⁴ “The Nuclear Backdrop,” From Surprise to Reckoning: The Kargil Review Committee Report (New Delhi: Sage Publications, 15 December 1999), 191.

produce nuclear weapons, but had no intention of doing so. These incidents are significant to the extent that Pakistan, during a time of crisis, appears to have been relying on its nuclear capability to deter India. However, the alleged official threat was private, and the Pakistani government did not support Dr. Khan's eventually retracted statements.

Thus, Pakistan has gone to considerable lengths to avoid publicly disclosing its actual nuclear capability, even in times of crisis when it has sought to rely on deterrence to some extent. Rather, Pakistan had a strong incentive to not test and avoid provoking India unnecessarily. While Pakistan's security was generally enhanced by its nuclear development, an overt arms race would have threatened its security by forcing it to respond and simultaneously highlighting its weakness vis-à-vis India. At worst case, the arms race could have spiraled into open conflict, leaving Pakistan the likely loser in any direct war, particularly if deterrence between the two states was as unstable as analysis has suggested.

c) Economic Costs of an Arms Race

Not only would Pakistan lose at the military level, but it also could ill-afford to pay for accelerated nuclear development, and its already precarious economic condition would be threatened by an overt arms race. As with India, Pakistan faced severe financial constraints in developing a nuclear weapons capability, complete with reliable delivery systems, that could provide credible deterrence. While Islamabad could afford, relatively, to develop and test a nuclear device, it initially had no indigenous capability to

product aircraft or missiles.⁶⁵ Correcting these deficiencies would cost Pakistan a significant investment of time, technical resources, and money.⁶⁶

There is further evidence that Pakistan, while always moving towards achieving an independent nuclear capability, did not undertake a “crash program” when it could avoid excess expenditures. For example, relations between India and Pakistan began to normalize in the late 1970s, as result, in part, of Indian Prime Minister Desai’s reassurances that India would not further test or develop nuclear weapons. The bettering of Indo-Pak relations combined with continued Pakistani financial problems led to a reduced the “sense of urgency” with its nuclear program.⁶⁷

Further, Pakistan’s economy would suffer significantly more than India in an overt and extended arms race because of its reliance on economic aid and the inability to withstand sanctions as long. Indeed, these constraints have plagued Pakistan throughout the entirety of its nuclear program. For example, in the mid-1990s, analysts suggested that the same military and economic weakness provided Pakistan with a strong incentive to maintain its ambiguity. If Pakistan tested, the result would be “the West, led by the US, turning hostile toward Pakistan, most sources for foreign aid to Pakistan would dry up as soon as Pakistan takes the final plunge. On the other hand, the penalty for

⁶⁵ Central Intelligence Agency, “Pakistan’s Nuclear Program,” no. WM00212, 6. Pakistan did have the “highly vulnerable” and “obsolete” B-57 that it could use to drop rudimentary bombs.

⁶⁶ Central Intelligence Agency, “Pakistan’s Nuclear Program,” no. WM00212, 6.

⁶⁷ Central Intelligence Agency, “Pakistan’s Nuclear Program,” no. WM00212, 7.

escalating the arms race to India would not be as severe and debilitating. It can sustain the race without any external assistance longer than Pakistan.”⁶⁸

Indeed, this forecast is precisely what happened in 1998 when India tested, forcing Pakistan’s hand to respond. Both states tested, but for Pakistan, the real threat was the immediate weakness of the economy from sanctions. This weakness threatened a complete economic meltdown in Pakistan, analogous to the Soviet collapse, whereas India was able to ride the international fallout more comfortably.

In short, because Pakistan was more vulnerable to external pressures, combined with its inherent weakness vis-à-vis India, it had far more to lose in an overt arms race. For these reasons, it was “in Pakistan’s interest to go out of its way to prevent such a race from occurring.”⁶⁹ Rather, maintaining an ambiguous posture permitted Pakistan to continue with its program at a slower pace and with much less economic cost than an overt arms race would have incurred.⁷⁰ Further, Pakistan was still able to benefit from some nuclear deterrence, but by practicing public restraint, did not have to pay the higher costs associated with an open arms race with India.

At the same time, Pakistan’s posture was linked to India’s ambiguous status; it could only maintain ambiguity as long as India did not resume testing. As previously discussed, India, also had reasons to maintain an opaque nuclear posture. The result was mutually reinforcing ambiguity between the two nuclear adversaries. As long as one side

⁶⁸ D.R. Inayatullah, “The Nuclear Arms Race and Fall of the Soviet Union,” in Pakistan’s Atomic Bomb and the Search for Security, Zia Mian, ed. (Lahore: Gautam Publishers, 1995), 93.

⁶⁹ Hoodbhoy, Nuclear Myths and Realities, 27.

⁷⁰ Reiss, “The Illusion of Influence,” 49. Reiss suggests that this was one of the most important factors behind Pakistan’s ambiguous posture.

remained ambiguous with its nuclear intentions, at least publicly, then the other side also had the ability to practice restraint in the public eye.

5. Redirect Non-proliferation Pressures on India

Pakistan also had a strong incentive to maintain an ambiguous posture vis-à-vis India in an effort to portray its nuclear option as a defensive response to Indian aggression. That is, Pakistan did not want to appear to the world as being responsible for provoking a nuclear arms race in South Asia. Instead, Pakistan has sought to deflect external pressure on its own program, while highlighting India's nuclear progress as a way to increase outside pressure on India and slow its program. However, if Pakistan were to overtly demonstrate its capabilities before India, it would lose this important source of leverage on the Indian program.

Pakistan portrayed its own military activities, both nuclear and conventional as defensive. For example, following the Soviet invasion of Afghanistan, Pakistan once again became a recipient of American military largesse. After the Carter administration announced its proposed package, which Zia referred to a "peanuts," Zia nonetheless sought to publicly reassure India that the conventional weapons were not a threat. He told reporters that, "Pakistan does not want any weapons which could create a scare in our neighbors, particularly India, that Pakistan is arming itself for aggressive designs against any one of her neighbors, no. All we want is a good defensive capability."⁷¹

⁷¹ Barrington King to U.S. Department of State, "Zia's Remarks to U.S. Newsmen on U.S. Air Offer, Bilateral Agreement, Nuclear Issue," Confidential Cable 00449, 18 January 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01720, 2.

Certainly, public rhetoric is cheap, with little costly signaling, but nonetheless was part of Pakistan's strategy to minimize threats and risk of escalation.

In addition to couching its activities as defensive, Pakistan has also sought to point the international non-proliferation spotlight on India. Given Pakistan's overall weakness compared to its neighbor, its justification that it cannot unilaterally give away the right to develop a nuclear weapons capability, if needed, is compelling. As such, Pakistani leaders have used the rivalry to justify its decisions, including explicitly linking Islamabad's willingness to join the nuclear non-proliferation regime to India. By hinging its willingness to join international non-proliferation treaties and inspection to India's unlikely decision to participate in the same, Pakistan has sought to leverage international pressure on India. Also, by linking the programs, Pakistan may have been seeking to force India to negotiate. However, if Pakistan tested or publicly declared its nuclear status before India, it would be seen as the nuclear aggressor and subjected itself to the same pressures it hoped the international community would focus on India.

Bhutto was the first leader to link Pakistan's non-proliferation stance to India. Once he made the decision to pursue a nuclear weapons program, he also sought to mask the decision with public rhetoric that Pakistan was willing to participate in the NPT if India did so. Indeed, "the bomb decision was a turning point because it led Bhutto, under the advice of his diplomatic advisers, to give Pakistan's NPT diplomacy an anti-India focus and to launch a peace offensive to mask the bomb decision."⁷²

⁷² Kapur, Pakistan's Nuclear Development, 155.

So, in 1972, and a couple of months after he decided to develop a weapons option, Bhutto suggested the idea of a nuclear free zone in South Asia.⁷³ Predictably, India rejected these overtures. In 1974, Pakistan again proposed a nuclear free zone in South Asia, and “here again India has rejected the proposal, arguing that China should be included.”⁷⁴ Pakistan followed up again in 1987, with its foreign minister calling for a regional non-proliferation treaty.⁷⁵ In 1991, Pakistan’s increasingly public rhetoric about its nuclear intentions was also seen by some as a move that, in part, was seen as an effort to force India back to nuclear negotiations.⁷⁶ In addition to suggesting regional non-proliferation measures, Pakistan has also explicitly linked its NPT stance to that of India. Essentially, the Pakistani position was that it would sign the NPT if India did so.⁷⁷

Similarly, Pakistan linked its willingness to allow nuclear facility inspection on whether India would also agree to open up its nuclear installations. For example, when Zia was asked if he would open up Pakistani nuclear facilities to American inspection, he predictably replied,

“No, not on a unilateral basis. But we have offered inspection on non-discriminatory nature. But if other countries can be treated like this and I won’t go further, I will just say take next-door India. If the US can get an agreement of inspection of nuclear facilities of India I would go out of my way not only to have those nuclear facilities inspected by the US or by an international agency, but before anybody else...The US and myself we are

⁷³ Kapur, Pakistan’s Nuclear Development, 138.

⁷⁴ Donnelly, “Pakistan and Nuclear Weapons.”

⁷⁵ Donnelly, “Pakistan and Nuclear Weapons.”

⁷⁶ T.V. Paul, “Influence Through Arms Transfers: Lessons from the U.S.-Pakistani Relationship,” Asian Survey 32, no. 12 (December 1992), 1090.

⁷⁷ Donnelly, “Pakistan and Nuclear Weapons.”

in an argument on technical grounds because the US government is following a policy of non-proliferation of weapons to which we fully, wholeheartedly support.”⁷⁸

India, of course, rejected such suggestions, arguing that the inspections would not be sufficient to verify whether Pakistan was making nuclear weapons or not.⁷⁹

For Pakistan, linking its non-proliferation stance to India was safe because it was clear that India would not give up its weapons option. India had made its position clear, that it would not sign the NPT or other treaties unless other nuclear weapons states disarmed.⁸⁰ For India, this was nonnegotiable, given its security concerns vis-à-vis China. For Pakistan, this also diffused international censure because it was not the only state refusing to become a member of the NPT and indeed, signaled that it was willing to do so if only India was not so recalcitrant. Additionally, Pakistan’s seeming support of non-proliferation measures was perhaps also an effort to force India to negotiate with it. That is, it forced India to consider its nuclear policy in relationship to Pakistan and perhaps made it more amenable to agreements limiting the danger of the arms race.

In short, Pakistan has proposed a number of non-proliferation measures, while clearly linking its willingness to cooperate based on India. In this way, Pakistan could focus international attention on India’s nuclear stance, while at the same time portraying its own position as negotiable. An opaque nuclear posture facilitated this strategy, whereas a more open posture would have made the Pakistanis a more visible target than India.

⁷⁸ King, “Zia’s Remarks to U.S. Newsmen,” no. NP01720, 2.

⁷⁹ Donnelly, “Pakistan and Nuclear Weapons.”

⁸⁰ Donnelly, “Pakistan and Nuclear Weapons.”

In sum, Pakistan's regional security environment fundamentally shaped both Islamabad's motivations to acquire a nuclear capability, while also creating incentives for ambiguity. In particular, as the weaker state lagging behind Indian conventional and nuclear development, Pakistan could ill-afford an overt arms race with its more powerful neighbor. A more direct competition could have resulted in attacks on Pakistan's nuclear facilities, a public justification for India's own further development, and a requirement of scarce funds to pay for a crash program. Additionally, as discussed below, Pakistan's reliance on conventional assistance provided a further incentive to maintain an ambiguous posture, lest it lose the patronage of the United States.

At the same time, it is important to understand that Pakistan was also relying on the nuclear uncertainty its program had created for deterrence vis-à-vis India. A sure response to attacks on Pakistani nuclear facilities appears to have dissuaded Prime Minister Gandhi from seeking to destroy Pakistan's nascent nuclear capability in the early 1980s. Additionally, veiled Pakistani comments suggesting it had nuclear weapons during the late 1980s and early 1990s are credited with deterring a more direct conflict with India, notwithstanding any public retractions that followed.

C. Patron State Constraints – U.S. Direct Non-Proliferation Pressures

For most of Pakistan's post-independence history, it has relied on U.S. patronage for military and economic assistance. Pakistan's dependence on U.S. assistance for the majority of its conventional armaments and substantial economic aid made Islamabad vulnerable to U.S. non-proliferation pressures. The United States exerted non-proliferation pressure on Pakistan in two ways: 1) directly through incentives or

sanctions; and 2) indirectly by encouraging other states to not assist Pakistan in developing a nuclear capability and to impose sanctions. The following section addresses United States direct pressure on Pakistan, which has varied significantly between sanctions and aid depending on U.S. security interests in the region.

Pakistan—in response to U.S. diplomacy, aid, and sanctions—has sought to keep its nuclear profile opaque in an effort to further its nuclear program while at the same time leveraging conventional assistance. The U.S. was well aware of Islamabad's efforts to acquire a nuclear option, so the success of Pakistan's strategy was highly contingent on the U.S. willingly ignoring its ally's continued progress. This complex relationship is discussed below.

After the Indian test in 1974, the United States pushed harder for the advancement of the non-proliferation regime and Islamabad was subject to these pressures even though it has not tested in response to India's test. However, by the early 1980s, following the Soviet invasion of Afghanistan, President Reagan was willing to overlook Pakistani efforts to develop a nuclear capability, although he had a somewhat reluctant U.S. Congress to contend with in this regard. Non-proliferation pressures mounted again in the early 1990s as the Cold War waned and with it U.S. interests in the region. Indeed, by the time Pakistan tested publicly for the first time in 1998, the U.S. had less leverage to persuade Islamabad to refrain from testing as it already had imposed significant sanctions in the early 1990s.

As this historical pattern suggests, when the United States was concerned with its security interests in the region, as affected by its rivalry the Soviet Union, it was willing

to overlook Pakistan's nuclear development. In contrast, when the U.S. had fewer security concerns in South Asia, it was much more willingly imposed punitive measures to slow proliferation. When the U.S. sought to stop the Pakistani nuclear program, it was only able to slow progress and further discourage Pakistan's leadership from publicly declaring Pakistan a nuclear weapons state. The U.S. was never really in a position to convince the Pakistanis from developing a nuclear option.

In terms of Pakistani decision-making, it faced more complicated external and internal variables affecting its decision on whether to publicize its nuclear capabilities, as compared to India. Given Pakistan's relatively weak position, it has heavily relied on external allies to buttress its economic and military position. Pakistan has sought to cultivate strategic relationships with the United States, China and France in order to acquire military equipment and balance a much stronger India. As discussed below, while China and France have been much more willing to provide the Pakistanis with nuclear technology, the United States has explicitly linked its economic and military aid to Pakistani restraint, particularly in terms of possessing or testing a nuclear explosive device.

From the Pakistani point of view, it has recognized that the U.S. is often an unreliable ally, with American favor shifting with its security interests in South Asia. Additionally, Pakistan has had to rely on external sources for its nuclear development. This has also encouraged Pakistan to adopt a posture of ambiguity, in part, as a way to protect its acquisition of nuclear knowledge and materials that it was incapable of producing indigenously. These factors combined have made Pakistan both particularly

susceptible to U.S. non-proliferation pressures while simultaneously increasing its incentives to acquire a nuclear deterrent capability, albeit under the guise of an ambiguous nuclear posture.

As such, Pakistan has sought to use its nuclear opacity to curry favor with the United States while at the same time using it as a source of leverage to promote its security. During times of cooperation with the United States, this strategy ensured a steady flow of economic and military assistance. When relations were poor, Pakistan sought to maintain the ability to achieve nuclear materials and technology from abroad despite U.S. sanctions, while at the same time seeking to regain favor with the U.S. in order to renew the former economic and military aid supply. The strategies employed to do so have varied between seeking to downplay Pakistani nuclear developments to using the program as a bargaining chip, in particular to gain better conventional support. Thus, Pakistan was a contentious client for the United States. In short, this case demonstrates both the impact and limits of external pressures on Pakistan's nuclear posture, given the complicated set of countervailing constraints facing Pakistani decision makers.

1. The U.S. Increases Non-Proliferation Pressures After the 1974 Indian Nuclear Test

The Indian test changed the strategic environment surrounding the Pakistani nuclear program in significant ways. It strongly motivated Pakistan to speed up its pursuit of a nuclear option. Simultaneously, the United States increased its efforts to stop

horizontal proliferation.⁸¹ These countervailing pressures, in part, contributed to deepening Pakistani opacity. Additionally, because the U.S. was so interested in preventing the spread of nuclear weapons, Pakistan sought to use its program as leverage to gain military and economic concessions from the U.S., although ultimately these efforts failed until the Soviet invasion of Afghanistan.

First, the Indian nuclear test provided the incentive for Pakistan to speed up the conversion its civilian nuclear capacity into a dual program that included a weapons option. In much the same way that China's 1964 nuclear explosion entrenched the Indian nuclear program, India's 1974 nuclear test similarly heightened Pakistani resolve to provide for its security through nuclear weapons. The United States, monitoring the Pakistani program, noted that "[f]ollowing the Indian nuclear explosion, the Pakistan Government embarked on an ambitious program to accelerate development of indigenous capabilities regarding nuclear energy."⁸²

However, Bhutto's public response to the Indian test was predictably coy. Once an outspoken proponent of Pakistan acquiring a nuclear capability, Bhutto now was much more circumscribed about Pakistani intentions in public. For example, during a 1976 visit to Iran, he was asked if Pakistan would respond to India's tests, labeled the "smiling Buddha." Bhutto responded that "[b]ack home, we have the statute of a starving

⁸¹ Technically, the U.S. started nuclear non-proliferation measures earlier, as did Pakistan's pursuit of a nuclear option. However, after the test, both states increased their respective measures.

⁸² Adolph Dubs to George S. Vest, "Nuclear Problems with Pakistan," Secret Memorandum, 18 April 1975, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01411.

Buddha.”⁸³ Bhutto could have publicly argued that given the Indian tests, Pakistan was fully pursuing its own nuclear weapons program in order to provide for security against its neighbor. However, he did not do so. Rather, this deception served to protect the no longer “peaceful” program from external interference.

Bhutto’s public volte-face was in part based on Pakistan’s scientific and technical weakness. Pakistan necessarily relied on outside resources acquired through trading, borrowing and stealing nuclear technology. Because of U.S. and other states non-proliferation efforts, as well as Pakistan’s desire to keep the arms race with India minimized, it required that Pakistan proliferate surreptitiously.

Indeed, the “Pakistani nuclear weapons effort relied on a massive smuggling program, which began with the clandestine acquisitions of key technology.”⁸⁴ From the mid-1970s, Pakistan sought to acquire enrichment and reprocessing plants from other states. From this, the Kahuta enrichment plant “was built using technology, equipment, and materials obtained secretly from a number of European countries,” with the plans stolen by the infamous A.Q. Khan, working in the Netherlands.⁸⁵ Once built, the unsafeguarded Kahuta facility would serve as Pakistan’s primary indigenous source of enriched uranium. Additionally, the same year that India tested, the Khan took over as head of the Pakistani nuclear weapons program. It was further reported that in 1975

⁸³ Cheema, “Pakistan’s Nuclear Policy,” 8.

⁸⁴ Mark McDonough and Rodney W. Jones, Tracking Nuclear Proliferation: A Guide In Maps and Charts (Washington D.C.: Carnegie Endowment, 1998), 139, note 10.

⁸⁵ Donnelly, “Pakistan and Nuclear Weapons.”

Bhutto ordered Munir Khan to be ready to conduct a peaceful nuclear explosion within four years.⁸⁶

Pakistani motivation notwithstanding, Islamabad clearly faced substantial obstacles in developing a viable nuclear weapons program. At a minimum, these barriers served to slow down progress and U.S. estimates at the time suggested that the earliest the Pakistani's might be able to test would be in 1980.⁸⁷ Over time, U.S. non-proliferation efforts would also continue to seriously slow Pakistan's ability to gain external resources, but would not eliminate Pakistan's desire for a nuclear deterrent.⁸⁸

Second, U.S. non-proliferation pressures dramatically increased in the immediate wake of the Indian test in 1974, as U.S. leaders were fearful that it was the precursor to horizontal proliferation. Immediately after the Indian test, the U.S. was aware that Pakistan was seeking to bolster its weapons program in reaction to the Indian tests.⁸⁹ As a result, the U.S. sought to directly pressure Pakistan into stopping its development of a nuclear option, or at least to throw up enough barriers that the program would be slowed.

⁸⁶ Gordon M. Jones, U.S. Department of State, to Clay G. Nettles, "Discussion of Pakistan's Nuclear Program," Confidential Letter, 1 April 1975, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01401, 1.

⁸⁷ R. Gallucci, "Draft: Pakistan and the Non-Proliferation Issue," Secret, 22 January 1975, (Washington D.C.: The National Security Archive) 3, available at http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB6/ipn20_1.htm.

⁸⁸ An interesting tension was embedded in U.S. non-proliferation policy early on. If the U.S. withheld conventional armaments, it would be a significant sanction to Pakistan that may discourage proliferation. Yet, providing conventional weapons was also seen as a way to obviate Pakistan's need for nuclear weapons; but if Washington was too generous, it would threaten Indian security and New Delhi then would likely turn to nuclear weapons. As such, the problem was seen as "one of degree" as the U.S. sought to balance its interests in reducing conflict between India and Pakistan, while promoting non-proliferation. U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," Limited Official Use, Report 778-AR, 10 February 1984, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00283, ii.

⁸⁹ Dubs, "Nuclear Problems with Pakistan," no. NP01411.

Because of the Indian Explosion, the Pakistanis have a solid incentive to produce a bomb and they can also do so with less world condemnation than might otherwise be expected. If an explosion is perceived as a source of political cohesion, current disintegrative tendencies within Pakistan may be seen as more reason to acquire the status of a nuclear weapons state. In sum the Pakistanies [sic] appear quite prepared to proceed to a weapons capability, but they may encounter difficulties if political barriers are sustained.⁹⁰

Towards this end, the U.S. Congress sought to deter Pakistan by passing a series of legislative amendments directly targeting Pakistani nuclear activities. Through the 1976 Symington and 1977 Glenn Amendments, penalties were increased on Pakistan for proliferation activities. For example, the Symington Amendment required that “no funds can be appropriated under the Foreign Assistance Act or the Arms Export Control Act to countries receiving nuclear enrichment equipment, material or technology from any other country after August 4, 1978.”⁹¹ In addition to engaging in enrichment or reprocessing trade with other states, nuclear detonations were also added to the list of specifically prohibited activities.⁹² The Symington Act also explicitly barred U.S. military and economic assistance to states with unsafeguarded nuclear installations, which had implications for Pakistan’s Kahuta facility. Thus, if Pakistan continued with these proliferation activities, it would be subject to a range of foreign assistance penalties that would affect aid, financing, government contracts and military sales.⁹³

⁹⁰ Gallucci, “Draft: Pakistan and the Non-Proliferation Issue,” 3.

⁹¹ U.S. Department of State, “Current Foreign Relations [Bhutto Execution and U.S. Aid Cutoff to Pakistan],” Confidential Cable, 11 April 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01630, 2.

⁹² Sharon A. Squassoni, “Weapons of Mass Destruction: Trade between North Korea and Pakistan,” Congressional Research Service (October 11, 2006), 1.

⁹³ Squassoni, “Weapons of Mass Destruction,” 1.

In addition to Congressional concerns, the Carter Administration was similarly concerned about nuclear proliferation. Indeed, one of the major issues President Carter had campaigned on was the threat posed by nuclear proliferation.⁹⁴ Further, because there were diminished American interests in South Asia, the Carter Administration was willing to hold Pakistan accountable for its nuclear activities.

As such, the Carter Administration twice cut off military and economic aid to Pakistan. The first time, President Carter stopped aid because of concerns over Pakistan's Chasma plant. The plutonium separation facility was being built with French assistance and the U.S. was putting pressure on both states over how the reprocessed fuel would be disposed. While the French began to drag their feet on the deal, at U.S. insistence, the Pakistani's continued to pressure the French to follow through with the contract. The U.S. was increasingly dissatisfied with the arrangement and "decided that Islamabad was going too far."⁹⁵ So, in September 1977, the administration cut off military and economic aid, without invoking the Symington Amendment, in the hopes of stopping completion of the Chasma facility. The French, for their part, began to drastically slow down work on the facility and in 1978 Carter restored aid to Pakistan.⁹⁶

However, this was not the end of the story, as Pakistan began to search for alternate avenues to acquire nuclear fuel. Concerns over Pakistani nuclear activities

⁹⁴ William Burr, ed., "China, Pakistan, and the Bomb: The Declassified File on U.S. Policy, 1977-1997," National Security Archive Electronic Briefing Book No. 114 (March 5, 2004).

⁹⁵ Burr, "China, Pakistan, and the Bomb."

⁹⁶ Burr, "China, Pakistan, and the Bomb."

again prompted the U.S. to withhold economic and military aid again in 1979. This time the administration invoked the Glenn-Symington Amendment, arguing that Pakistan was in violation of the law because it “imported equipment for its secret uranium-enrichment plant at Kahuta,” which remained outside of IAEA safeguards.⁹⁷

Nonetheless, convincing Pakistan to refrain from its nuclear activities proved to be a losing proposition. The most U.S. leadership was able to accomplish was keeping the program below the public eye and slowing it down; however, the Pakistanis were determined to have a nuclear option and would continue on this course regardless of external pressure. Still, U.S. non-proliferation efforts in this period did slow down the program and provided an additional incentive to for Pakistan to keep its posture opaque. After all, when a state has to beg, borrow and steal a nuclear capability, openness does little to further these efforts, especially when one of the aid benefactors is intent on stopping the spread of nuclear weapons. Thus, Pakistan also had an incentive to not provoke either the Carter Administration or the U.S. Congress into withholding economic and military aid. On the other hand, because the U.S. was so committed to stopping Pakistani proliferation, Bhutto, and later Zia, sought to use the program as a source of leverage for access to greater conventional assistance from the United States. This dynamic is discussed below.

⁹⁷ McDonough and Jones, Tracking Nuclear Proliferation, 131.

2. Pakistani Attempts to Leverage Conventional Weapons

Pakistan was determined to build a nuclear weapons program, particularly after India's 1974 nuclear test.⁹⁸ Given U.S. interests in non-proliferation, the two states were set on a collision course. Yet, Pakistan was not entirely without bargaining leverage because the U.S. was determined to stop the spread of nuclear weapons. For this reason, Bhutto reportedly saw the program as "diplomatic leverage against friends and foes alike."⁹⁹

As Washington predicted, the Indian nuclear test brought the Pakistani's back to the Americans (and China as well) in search of political support, promises to protect Pakistan from Indian "nuclear blackmail", possibly a nuclear umbrella, and conventional weapons.¹⁰⁰ After the Indian test, a contingent of Pakistani leaders met with U.S. Secretary of State, Henry Kissinger, to make their case that the administration should resume its military aid to Pakistan. Kissinger was responded sympathetically, that he also did not believe that India's explosion was 'peaceful', but also that he was "strongly

⁹⁸ It is possible that Pakistan would have been willing to trade the program away under certain circumstances. For example, a nuclear security guarantee from either China or the United States might have sufficed. However, given the gap between what Pakistan required for its security to forgo nuclear weapons and what other powers were willing to provide, it was, essentially, a non-feasible option. Alternatively, India could have disarmed its nuclear capacity, but this was also just as unlikely, given its concerns over China.

⁹⁹ Cheema, "Pakistan's Nuclear Policy," 8.

¹⁰⁰ Theodore L. Eliot, Jr., U.S. Department of State, to Henry A. Kissinger, "NSSM 156 on Indian Nuclear Developments," Secret Cover Memorandum, NSSM 156 Related, 11 September 1972, Presidential Directives, Part II (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. PR01075, 11-12 and 45.

allergic to placing the full weight of American prestige against an accomplished fact.”¹⁰¹ Kissinger promised that the Administration would make a public statement “supporting Pakistan’s independence and territorial integrity” and that he would approach Congress regarding military aid.¹⁰² The United States resumed financial and military assistance in 1975.

An ambiguous posture facilitated Pakistan’s position, as it had not publicly committed yet to whether or not it would continue with its weapons program. Rather, for the right trade, Pakistan implied that it might be willing to give up its nuclear ambitions. For example, this strategy was apparent early on, as Bhutto hoped to exchange Pakistani nuclear restraint for U.S. conventional arms supply.¹⁰³ Benazir Bhutto also claimed that her father’s immediate objective “was a trade-off for seeking conventional weapons.”¹⁰⁴ Mainly, he sought to use the nuclear program as a bargaining chip to have the arms embargo lifted.¹⁰⁵ Bhutto also proposed that he would slow down Pakistan’s reprocessing program in exchange for sophisticated conventional arms from the U.S.¹⁰⁶ On the other hand, there was also the threat that “Pakistan’s nuclear option would

¹⁰¹ U.S. Department of State, “Military Supply for Pakistan,” Secret Memorandum of Conversation, 3 June 1974, Kissinger Transcripts (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. KT01215, 7.

¹⁰² U.S. Department of State, “Military Supply for Pakistan,” no. KT01215, 7.

¹⁰³ Kapur, Pakistan’s Nuclear Development, 179.

¹⁰⁴ Cheema, “Pakistan’s Nuclear Policy,” 9.

¹⁰⁵ Cheema, “Pakistan’s Nuclear Policy,” 8.

¹⁰⁶ Kapur, Pakistan’s Nuclear Development, 151.

become inevitable if Pakistan saw itself in a back to the wall situation.”¹⁰⁷ In short, the U.S. was told that conventional assistance would ameliorate Pakistan’s security concerns and reduce the need to acquire a nuclear capacity.

In this way, while ambiguity served to shield the program from external pressures, it also served as a bargaining chip with the United States. If Pakistan simply publicly declared that it was pursuing a nuclear weapons program, despite the costs, it would have little to ostensibly trade for conventional assistance. Instead, by maintaining ambiguity, Bhutto was able to use the threat of developing a program as a bargaining chip that it was willing to trade away for other concessions from allies. This gave the nuclear weapons program a purpose beyond just balancing India; rather, as a Bhutto confidante reportedly claimed, it was a “trump card” in Bhutto’s foreign policy.¹⁰⁸

The United States clearly understood that Pakistan was seeking to leverage its program into conventional assistance, noting behind the scenes that, “Bhutto may again suggest that Pakistan’s decision of whether or not to acquire nuclear weapons is related to U.S. willingness to supply them with the necessary conventional weapons for their security.”¹⁰⁹ It was proposed that the U.S. resist linking Pakistani nuclear restraint to conventional weapons and instead threaten to increase U.S. non-proliferation pressures:

“[w]e should probably resist the connection of the two issues as suggested by Bhutto, indicting that U.S. policy on the supply of conventional weapons is dependent on a quite different set of well established criteria. We might also take the opportunity to turn the leverage about and say that

¹⁰⁷ Kapur, *Pakistan’s Nuclear Development*, 162.

¹⁰⁸ Kapur, *Pakistan’s Nuclear Development*, 157.

¹⁰⁹ Gallucci, “Draft: Pakistan and the Non-Proliferation Issue,” 5.

although the issues are not specifically linked we would expect that if Pakistan behaves as though it is seeking a nuclear weapons capability, U.S. policy is likely to be sensitive to such an important and unfortunate turn of events.”¹¹⁰

Initially, the U.S. was unwilling to reward Bhutto’s proposal to exchange nuclear restraint for lifting the arms embargo and providing modern conventional weapons. This decision was likely made, in part, because of the extreme distrust of the Bhutto government. Even though Bhutto allegedly was willing to forgo some immediate nuclear advancements in exchange for U.S. supplied conventional weapons, the Americans simply did not trust that he would do so.¹¹¹ This assessment was probably correct, as there is little evidence that Bhutto would really have traded away a nuclear option with the U.S. Bhutto himself harbored animosity towards the U.S. and expressed distrust that it would follow through with any agreements.¹¹² Because of this, he was unlikely to stake Pakistan’s security on an agreement with the Americans.

More telling was that even when offered incentives by the U.S., Bhutto was still unwilling to take any actions that would hinder the nuclear weapons program. The conflict over the French supplied reprocessing plant illustrates this dynamic. With relations slightly improving, the U.S. eventually lifted the arms embargo, which opened up the option for Pakistan to buy aircraft and missiles on a cash basis.¹¹³ At the same time, Pakistan had contracted with France for a nuclear reprocessing plant. Predictably,

¹¹⁰ Gallucci, “Draft: Pakistan and the Non-Proliferation Issue,” 5.

¹¹¹ Kapur, Pakistan’s Nuclear Development, 151.

¹¹² Kapur, Pakistan’s Nuclear Development, 151.

¹¹³ Cheema, “Pakistan’s Nuclear Policy,” 9.

the U.S. sought to have the deal cancelled unless an appropriate monitoring and inspection regime was implemented.

In order to kill the deal, the U.S. sought to impress on the Pakistanis via its diplomatic channels that it was taking seriously Islamabad's nuclear efforts. For example, Kissinger went to Pakistan in August 1976 to negotiate Pakistan canceling the reprocessing deal in exchange for 110 advanced A-7 aircraft. Kissinger failed to convince Bhutto to take the deal. No one, not even the military with rapidly deteriorating conventional arms, was willing to give up the reprocessing plant for the possible future supply of U.S. aircraft.¹¹⁴ Pakistan refused to budge and the Carter Administration cut off military and economic aid in 1977.¹¹⁵ These conflicts over the Pakistani nuclear program served to again exacerbate relations between the two states. The conflict over the French reprocessing facility continued, and the new Zia regime shortly inherited the nuclear sticking point between the two states.

3. Pakistani Ambiguity Deepens As Zia Responds to U.S. Non-Proliferation Pressures

Muhammad Zia ul-Haq came to power in 1977 through a military coup and inherited both Pakistan's nuclear posture from his predecessor and the U.S. imposed sanctions.¹¹⁶ He continued many of Bhutto's former policies, including the development

¹¹⁴ Tahir-Kheli, *India, Pakistan and the United States*, 72-73.

¹¹⁵ Cheema, "Pakistan's Nuclear Policy," 9.

¹¹⁶ When Zia came to power, it was also a turning point as the nuclear program was brought under the control of the military. Kapur, *Pakistan's Nuclear Development*, 151.

of an independent nuclear option.¹¹⁷ The U.S., for its part, estimated that Pakistan would continue with its nuclear development under Zia's leadership, albeit in an opaque fashion, and that these activities would lead to confrontation between the states.¹¹⁸ Yet, while Zia sought to further the weapons program, he also felt that Bhutto was too outspoken with his nuclear intentions and this had caused Pakistan to suffer military and economic costs. For this reason, Zia sought over time to deepen Pakistan's ambiguous posture to deflect external pressures while resolutely pursuing Pakistan's nuclear option.

The first nuclear proliferation crisis Zia inherited from the Bhutto regime was the dispute with United States over the French reprocessing plant that Pakistan had contracted to purchase. The Carter Administration had already imposed sanctions on Pakistan by the time Zia came to power, over Pakistan's refusal to either cancel the contract or safeguard the facility. Once France decided to kill the deal under U.S. pressure, some military and economic aid was resumed in 1978.

However, the renewed assistance was very short-lived. Pakistan's continued nuclear progress created rumors that the government was considering testing. The United States suspected that Pakistan was pursuing a nuclear explosive capability, although there were conflicting reports on when it would be able to conduct a test.¹¹⁹ In order to buy time for development, U.S. analysts reported that Pakistan "appears to be attempting to

¹¹⁷ Barrington King to U.S. Department of State, "Pakistan and Zia ul-Haq at the Two Year Mark," Secret Cable 07789, 11 July 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01645, 96.

¹¹⁸ U.S. Department of State, "Pakistan's Short Term Prospects," Secret Report, 24 August 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01657, 54.

¹¹⁹ U.S. Department of State, "Pakistan's Short Term Prospects," 54.

mask its effort with the label of ‘research and development.’ The Pakistanis seem bent on stringing out negotiations with the US and other Western countries in order to gain time for their scientists.”¹²⁰ Similarly, other estimates suggested that “there have been repeated rumors that, for political purposes since the Zia government faces reelection in November - - if they go through with having their elections - - that, politically {sic}, it would be handy for them to have a show of strength at that time. So we are concerned that they may, in fact, try to pull off an explosion there.”¹²¹

If Pakistan did test a device, the United States predicted that they would follow the Indian example and claim that it was a peaceful nuclear explosion, rather than for military purposes.¹²² Seeking to preempt the Pakistani position, the U.S. sought to undermine the credibility of this reasoning with other states.¹²³ Additionally, the United States sought to deter Pakistan from testing an explosive device. For example, U.S. Ambassador to Pakistan, Arthur Hummel, reported that he had “embarked on step by step scenario designed gradually to expose to GOP our knowledge of Pak activities/intentions in nuclear field, and to impress on Paks the dangers and penalties of proceeding down that road.”¹²⁴ Further, by April 1979, fears of an imminent Pakistani nuclear test

¹²⁰ U.S. Department of State, “Pakistan’s Short Term Prospects,” 54.

¹²¹ U.S. Department of State, “General Advisory Committee on Arms Control and Disarmament,” Secret, 14 September 1979, (Washington D.C.: The National Security Archive) 312-313, available at <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB114/chipak-6.pdf>.

¹²² U.S. Department of State, “General Advisory Committee on Arms Control and Disarmament,” 314.

¹²³ U.S. Department of State, “General Advisory Committee on Arms Control and Disarmament,” 314.

¹²⁴ Arthur W. Hummel, Jr., “PK [Pakistan] Nuclear Intentions,” Confidential Cable 10329, 23 October 1978, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01613, 39.

prompted the United States to impose sanctions on Pakistan under the Glenn and Symington Amendments. The immediate goal was to apply domestic laws to forestall Pakistan from testing, and even possibly compel it to abandon its weapons program.¹²⁵ However, even though the sanctions required cutting off military and economic aid, the assistance was not very extensive and did not provide the U.S. with significant leverage.¹²⁶

Even though the U.S. provided minimal aid, the Pakistani leadership strongly protested the sanctions. Pakistan's foreign affairs advisor publicly stated that the sanctions were unwarranted as its nuclear program was entirely for peaceful purposes, and further argued that the move was discriminatory and anti-Muslim.¹²⁷ The Pakistanis strongly resented the sanctions, and relations between the states were further strained. U.S. analysts reported that the result of the sanctions is that "[i]t certainly has caused so[intelligible] very bad blood with Pakistan, and it may be counter-productive in our efforts to work out a solution, but we didn't have any choice because, literally, the terms of the law were triggered."¹²⁸

As this report suggests, there were concerns that imposing sanctions would ultimately be counter-productive to U.S. non-proliferation efforts because of the damaged relationship between the U.S. and Pakistan. There was, however, a belief that this was

¹²⁵ Bhumitra Chakma, "Road to Chagai: Pakistan's Nuclear Programme, Its Sources and Motivations," *Modern Asian Studies* 36, no. 4 (2002), 893.

¹²⁶ U.S. Department of State, "General Advisory Committee on Arms Control and Disarmament," 313.

¹²⁷ U.S. Department of State, "Current Foreign Relations," no. NP01630, 2.

¹²⁸ U.S. Department of State, "General Advisory Committee on Arms Control and Disarmament," 313.

unavoidable given the requirements of U.S. law. Under the terms of the law, the only way that the provisions could be waived was if the President received reliable assurances that Pakistan was not pursuing a nuclear weapons option. However, as noted in the report, this was extraordinarily unlikely to happen as the law was interpreted at that time. Mainly, “[t]he emphasis there is on “reliable,” because while they [the Pakistanis] have asserted that they are not pursuing nuclear weapons, their actions are totally inconsistent with that.”¹²⁹ This restrictive interpretation of U.S. law would shortly change when Reagan became President, and what constituted “reliable” enough information to waive the legal requirements was viewed more broadly.

In the meantime, there was a crisis “underway in Pakistan’s relationship with its oldest patron, the United States, over the nuclea {sic} issue; it shows no sign of resolution or abatement as the irresistible force of Pakistan’s proliferation policy meets head-on the immovable objective of American non-proliferation policy.”¹³⁰ This confrontation with the United States left Pakistan with the feeling that it was alone facing a host of security threats that it was ill-equipped to meet. Rather,

“because our single-minded pursuit of non-proliferation and theri {sic} equally single-minded pursuit of a nuclear option which they feel somehow will ease their chronic sense of insecurity, this sense of ‘aloneness’ is compounded by the inability to obtain modern arms, the unreliability of Arab friends, the uncompromising pressure of the Soviet Union, and the limited scope for additional assistance and assurance form {sic} the Chinese...”¹³¹

¹²⁹ U.S. Department of State, “General Advisory Committee on Arms Control and Disarmament,” 314.

¹³⁰ King, “Pakistan and Zia ul-Haq at the Two Year Mark,” no. NP01645, 104.

¹³¹ King, “Pakistan and Zia ul-Haq at the Two Year Mark,” no. NP01645, 104.

The practical result of Pakistan's nuclear policies is that they resulted in tensions with the West and further affected Pakistan's technical ability to fulfill its nuclear goals. Zia inherited these problems stemming from Bhutto's policies. Zia himself reportedly thought that Bhutto had too openly talked of developing nuclear weapons, which was "irresponsible" and the reason for Pakistan's increasing international isolation.¹³² While Zia was not able to immediately change the consequences, he learned that directly confronting the West was counterproductive and sought greater ambiguity by neither confirming nor denying that Pakistan was pursuing a nuclear weapons program.

For example, in contrast to Bhutto's initial stance, Zia did not publicly discuss the rationale for Pakistan to develop a nuclear deterrent.¹³³ Additionally, rather than choosing to formally declare Pakistan's intentions, or to demonstrate or test a device, Zia continued Pakistan's program in secrecy. When pushed to further clarify Pakistan's nuclear position, he would claim that Pakistan's nuclear program was for peaceful purposes only. Even the enrichment program was labeled as necessary for "peaceful purposes," despite the fact that other states viewed it as having no relevance whatsoever to Pakistan's civilian program.¹³⁴ And, like his predecessor, Zia also proposed a number of regional nuclear non-proliferation measures that India was unlikely to accept. This move was seen as an effort to buttress the claim that Pakistan's program was for peaceful

¹³² Zafar Iqbal Cheema, "Pakistan's Nuclear Use Doctrine and Command and Control," in Planning the Unthinkable, Peter R. Lavoy, Scott D. Sagan and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000), 162.

¹³³ Cheema, "Pakistan's Nuclear Use Doctrine," 162.

¹³⁴ U.S. Department of State, "General Advisory Committee on Arms Control and Disarmament," 311.

purposes and to relieve U.S. non-proliferation pressures.¹³⁵ In this way, Zia would neither admit nor deny that Pakistan was pursuing a military component of the program.

Regardless of these efforts, United States did not believe that Pakistan's nuclear program was for civilian purposes only. Rather, Zia's posture was seen as a "Pakistani public relations campaign on the nuclear issue."¹³⁶ Hummel reported that the "drumbeat" to "set the record" straight where Pakistan denied having a nuclear weapons program would continue.¹³⁷ This effort, he noted, was a "deliberate GOP smokescreen."¹³⁸ As the United States did not buy Zia's ambiguous posture, and was still intent on promoting non-proliferation, the relationship between the two states did not improve until the Soviet invasion of Afghanistan. At this point, the Reagan Administration would choose to ignore Pakistan's nuclear development, while some in the U.S. Congress would continue to push for stricter application of U.S. domestic non-proliferation laws.

4. Security Environment Shifts in South Asia—Soviet Invasion of Afghanistan

When the Soviets invaded Afghanistan, the United States had renewed interest in supporting its South Asian ally. The Reagan Administration effectively formed an agreement with Pakistan, where it justified providing conventional assistance in return for public Pakistani nuclear restraint. In effect, the U.S. was now willing to ignore

¹³⁵ Ahmed, "Pakistan's Nuclear Weapons Program," 186.

¹³⁶ Ambassador Hummel labeled his cable in this fashion. Arthur W. Hummel, Jr. to U.S. Department of State, "Pakistani Public Relations Campaign on Nuclear Issue," Secret Cable 08088, 19 July 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01647.

¹³⁷ Hummel, "Pakistani Public Relations Campaign on Nuclear Issue," no. NP01647.

¹³⁸ Hummel, "Pakistani Public Relations Campaign on Nuclear Issue," no. NP01647.

Pakistan's nuclear progress as long as it did not draw public attention to it. Nonetheless, some members of the U.S. Congress remained concerned about Pakistan's nuclear activities and U.S. domestic law continued to impose constraints. This necessarily entailed Pakistan reassuring President Reagan that it was not developing nuclear weapons and relying on the Administration to keep Congress from imposing sanctions. At the same time, President Reagan kept pressure on the Pakistanis, realizing that it would not be able to keep Congress in check if Pakistan publicly demonstrated its nuclear intentions. Predictably, when the Soviets finally withdrew from Afghanistan and the Cold War began to wind down, so too did U.S. interests in supporting Pakistan.

Pakistan was suffering financially and militarily, and was diplomatically isolated from the United States at the time of the Soviet invasion of Afghanistan. According to U.S. estimates, Pakistan was on the verge of bankruptcy, much of its armed forces were relying on outdated and poorly maintained equipment and it had "recklessly pursued an independent nuclear weapons option at the cost of his relationship with what is still Pakistan's most important patron, the United States..."¹³⁹

The Carter Administration, while still seeking to further nuclear non-proliferation, now had to also worry about the Soviet's intentions in South Asia. This concern was substantial enough that constraining Pakistan's nuclear program was no longer the highest priority.¹⁴⁰ Towards this end, the Carter Administration offered the Pakistanis \$400 million dollars assistance package in February of 1980. Zia promptly rejected the

¹³⁹ King, "Pakistan and Zia ul-Haq at the Two Year Mark," no. NP01645, 97.

¹⁴⁰ Chakma, "Road to Chagai," 894.

aid package. In a well-known incident, Zia publicly scorned the offer, saying that it was “peanuts.” Instead, Zia proclaimed that for Pakistani security, it must rely on its indigenous efforts, with support from the Islamic world, other non-aligned nations, and its “time-tested friendship with China.”¹⁴¹

While Zia publicly rejected the offer from the United States, he was likely hoping to leverage the denial into a more attractive offer from the Reagan Administration, which would shortly take office. Indeed, he sought additional economic and military aid, and actually would have preferred a defense treaty with the United States.¹⁴² In short, the \$400 million dollar offer was too little to pay for substantial security cooperation.¹⁴³ Moreover, Zia was suspicious that “acceptance of the aid package could affect the pursuit of our nuclear research and development programme as long as the aid relationship continued.”¹⁴⁴

While Zia was reluctant to link the acceptance of aid to Pakistani nuclear restraint, he nonetheless sought to deprioritize the issue compared to the Soviet invasion. In the same press conference where he referred to the American offer as peanuts, he reiterated his stance on Pakistan’s nuclear weapons program,

“I tell you know with all the emphasis at my command that Pakistan is not making a bomb. Where lies the question of the nuclear facility, yes we are enriching uranium. I’ve said so on top of my voice. But it is a very

¹⁴¹ Barrington King to U.S. Department of State, “Shahi Publicly Rejects Proposed U.S. Assistance Package,” Unclassified Cable 02110, 6 March 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01749, 2.

¹⁴² King, reporting the press conference where the ‘peanuts’ comments was made. King, “Zia’s Remarks to U.S. Newsmen,” no. NP01720, 2.

¹⁴³ Paul, “Influence Through Arms Transfers,” 1083.

¹⁴⁴ King, “Shahi Publicly Rejects Proposed U.S. Assistance Package,” no. NP01749, 4.

humble, modest experiment...and for the...last three weeks, this question has not appeared in our talks and our considerations and I hoped that with the situation that we are faced today [unclear word, likely we] can keep this problem aside for the time being until we have resolved greater issues. And then you can come across on the nuclear issue.”¹⁴⁵

For its part, the Carter Administration was reluctant to waive the sanctions imposed on Pakistan because of the uranium enrichment program. The Administration was concerned that it could not certify that it had received “reliable assurances” from Pakistan that it was not constructing nuclear weapons, based on the information it had about the program.¹⁴⁶ The Administration was also worried that if it waived the sanctions and Pakistan subsequently exploded a device, President Carter would be extremely embarrassed.¹⁴⁷

5. The Reagan Administration Shifts Course

The Reagan Administration did not have the same non-proliferation reservations that plagued the Carter Presidency. In addition to offering the Pakistanis a \$3.2 billion dollar aid package for 1981, Reagan was also willing to suspend the sanctions imposed under the Glenn-Symington Amendment.¹⁴⁸ Pakistan would shortly become a recipient of multi-year programs entailing significant amounts of economic and military assistance to buoy resistance to the Soviets via the mujahideen in Afghanistan. From 1981 through

¹⁴⁵ King, “Zia’s Remarks to U.S. Newsmen,” no. NP01720, 2.

¹⁴⁶ Harold Saunders to Cyrus Vance, “NSC Discussion of Support for Pakistan,” Secret Memorandum, 1 January 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01707, 2.

¹⁴⁷ Saunders, “NSC Discussion of Support for Pakistan,” no. NP01707, 2.

¹⁴⁸ Chakma, “Road to Chagai,” 894.

1986, Pakistan ranked third among states receiving U.S. military aid, falling only behind Israel and Egypt.¹⁴⁹ On the approval of the aid package in 1986 for the years 1987-1993, the amount rose to \$4.02 billion dollars and placed Pakistan as the second largest recipient of American aid, following Israel.¹⁵⁰ Additionally, aid was not contingent on Pakistan entirely forgoing its nuclear program, but rather would be based on it demonstrating public restraint that justified Reagan waiving further sanctions.¹⁵¹

a) The Reagan Administration Justifies Aid for Non-Proliferation

The Reagan Administration justified the volte-face in American non-proliferation policy by highlighting the changed security environment in South Asia and suggesting that Pakistan would be less likely to go nuclear if it felt secure in its conventional capability. With the Soviet invasion of Afghanistan, Pakistan now emerged as a strategically important state that justified economic and military support to thwart the Soviets, regardless of its nuclear ambitions.¹⁵² The Reagan Administration further justified renewed security cooperation with Pakistan as a way to influence its decision against choosing to develop nuclear weapons. The Administration argued that if Pakistan had a sufficient conventional force, then it would be less inclined to invest in a nuclear weapons capability. One report argued that “[o]ur assistance program for Pakistan is our most effective weapon in dissuading that nation from continuing its nuclear explosives

¹⁴⁹ Reiss, “The Illusion of Influence,” 49.

¹⁵⁰ Paul, “Influence Through Arms Transfers,” 1084.

¹⁵¹ Kapur, Pakistan’s Nuclear Development, 183.

¹⁵² Paul, “Influence Through Arms Transfers,” 1084.

program. Our program is designed to help Pakistan address its legitimate security needs thereby removing Pakistan's principle incentive for acquiring nuclear weapons."¹⁵³

In this way, the policy focus shifted from undertaking punitive measures to induce the Pakistanis to give up their program. Rather, the new approach was that the United States could most effectively shape Pakistan's nuclear policy by cooperating with them on security matters, rather than isolating them. Ironically, this argument did little to address Pakistan's security concerns vis-à-vis India, its historic adversary and the principle motivation behind its developing a weapons capability. Conceivably, a conventional force would also mitigate the security problems with India; however, prior to the Soviet invasion of Afghanistan, U.S. policymakers did not seriously consider conventional support as a viable option to "buy-out" Pakistan's nuclear weapons program.

Because the United States wanted to provide aid to Pakistan, and at the same time retain some measure of non-proliferation pressure, it now sought to link the two as a way to induce Pakistani restraint and quell U.S. domestic concerns that it was abandoning nuclear non-proliferation. For example, it was suggested that the Administration still recognize the "serious problem posed by Pakistan's nuclear explosive program" and use the "new security relationship to influence Pakistani nuclear decision-making."¹⁵⁴ This

¹⁵³ U.S. Department of State, "Report to Congress Pursuant to Section 735 of the International Security and Development Cooperation Act of 1981: Pakistan's Nuclear Program," Secret Report, 14 March 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02022, 6.

¹⁵⁴ Nicholas A. Veliotis to William P. Clark, "SIG Meeting on Pakistan," Secret Action Memorandum, 7 March 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01870, 2.

was particularly the case as the U.S. Congress expected that the Pakistanis would be made aware of the non-proliferation concerns despite providing economic and military assistance.¹⁵⁵

The reality, however, is that many within the Reagan Administration were skeptical that the United States would be able to convince Pakistan to forego a nuclear option altogether. Because the Pakistanis were so committed to developing an independent nuclear option, the Administration determined that they would not be able to come up with enough money to change Zia's mind about the program.¹⁵⁶ As such, they largely treated the proliferation as inevitable.¹⁵⁷

Instead of forcefully seeking to have the program stopped, which was seen as futile, the Administration sought to have it slowed down and buried well below public purview. The Reagan Administration had its own interests in Pakistan keeping its nuclear progress secret; otherwise, the Administration would be embarrassed that it waived sanctions and would be forced to cut off assistance as mandated by U.S. domestic law. At the same time, the threat of cutting off aid if Pakistan dropped its ambiguous posture was hoped to serve as a deterrent that would compel Pakistan to delay publicly testing an explosive device.¹⁵⁸

¹⁵⁵ Veliotis, "SIG Meeting on Pakistan," no. NP01870, 2.

¹⁵⁶ Weissman, The Islamic Bomb, 320.

¹⁵⁷ Weissman, The Islamic Bomb, 315-316.

¹⁵⁸ Paul, "Influence Through Arms Transfers," 1088.

Not only did the Administration change its policy of assisting Pakistan despite its nuclear activities, it also moved the baseline of what constituted acceptable nuclear activities. Prior to the Reagan Administration, sanctions were imposed on Pakistan for enriching uranium. Now the rhetoric shifted from the previously disallowed pursuit of a nuclear option, to drawing the bright line at forbidding Pakistan to build a weapons capability.¹⁵⁹ The emphasis was no longer on whether Pakistan was developing the ability to build nuclear weapons, but shifted to whether Pakistan was actually building a nuclear explosive device.

The Reagan Administration also sought a change in Congressional policy and pushed for amendments to U.S. domestic non-proliferation laws to accommodate the new strategy. The primary focus was on discrepancies in the preexisting statutory amendments governing non-proliferation. The main difference was between the Symington and Glenn amendments to the Foreign Assistance Act, where the Administration argued that section 669 conflicted with section 670.¹⁶⁰ Under the Symington amendment, the President could waive the requirements if termination of assistance “would have serious adverse effect on vital United States interests” and “he has received reliable assurances that the country in question will not acquire or develop nuclear weapons.”¹⁶¹ In contrast, the Glenn Amendment permitted waiver “if the

¹⁵⁹ Weissman, The Islamic Bomb, 317.

¹⁶⁰ Jane A. Coon, “Testimony Before the Subcommittees on Asian and Pacific Affairs,” Unclassified, 27 April 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP01879, 2.

¹⁶¹ U.S. Department of State, “Talking Points on Pakistan,” Secret Talking Points, 1 March 1981, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP01867, 3.

President determines and certifies that termination of assistance ‘would be seriously prejudicial to the achievement of United State non-proliferation objectives or otherwise jeopardize the common defense and security.’”¹⁶²

The Administration argued that the latter formulation was preferable because it allowed the President “appropriate flexibility to respond to US national security and non-proliferation interests.”¹⁶³ While Congress was willing to underwrite these changes because of the changed security environment in South Asia, it nonetheless expected the Administration to have “thought through the nuclear problem in the context of our new relationship and will expect [the Administration] to discuss our concerns with the Pakistanis.”¹⁶⁴ Thus, even though the President could now certify that Pakistan did not have nuclear weapons and continue aid, the government of Pakistan was given subsequent warnings that they should take Congressional concerns seriously when “framing future policies.”¹⁶⁵

These changes requiring only Presidential certification would later be utilized to justify waivers even as the Reagan Administration was increasingly confronted with evidence of Pakistan’s continued nuclear development. For example, by 1987 President

¹⁶² U.S. Department of State, “Talking Points on Pakistan,” no. NP01867, 2.

¹⁶³ U.S. Department of State, “Talking Points on Pakistan,” no. NP01867, 2.

¹⁶⁴ Veliotos, “SIG Meeting on Pakistan,” no. NP01870, 2.

¹⁶⁵ Deane R. Hinton, “SFRC Amendments to Foreign Assistance Legislation,” Unclassified Cable 07602, 11 April 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02126, 1.

Reagan was required to seek waiver under both the Symington and Solarz Amendments.

When the Administration justified its waiver, it argued that:

“[this] action was based on the recognition that disrupting one of the pillars of the U.S. relationship with Pakistan would be counterproductive for the strategic interests of the United States, destabilizing for South Asia, and unlikely to achieve the nonproliferation objectives sought by the sponsors. The Government of Pakistan is aware of our continuing concern over certain aspects of its nuclear program. Despite these problem areas, there are crucial non-proliferation criteria which Pakistan continues to honor. The United State will insist on the maintenance of these restraints...”¹⁶⁶

The Administration further reiterated its policy that U.S. assistance strengthened American influence on Pakistan’s nuclear decision-making and that threatening Pakistan would be counterproductive by increasing the likelihood that it would choose a nuclear option. For example,

“[d]evelopment of a close and reliable security partnership with Pakistan gives Pakistan an alternative to nuclear weapons to meet its legitimate security needs, and strengthens our influence on Pakistan’s nuclear decision making. Shifting to a policy of threats and public ultimatums would in our view decrease, not increase, the likelihood that we would achieve our non-proliferation goals. Undermining the credibility of the security relationship with the U.S. would itself create incentives for Pakistan to ignore our concerns and push forward in the direction of nuclear weapons acquisition.”¹⁶⁷

In this way, the Reagan Administration justified waiving sanctions on Pakistan and was further willing to overlook its nuclear developments as long as it had an interest in South Asia and Pakistan did not publicly embarrass the United States by declaring or

¹⁶⁶ White House, Office of the Press Secretary, “Presidential Waivers of Symington and Solarz Amendments,” 15 January 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02410, 1.

¹⁶⁷ “Pakistan Nuclear Issue,” Press Guidance, 9 March 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02434, 1.

testing a device. U.S. pressures to ensure that Pakistan would not choose to demonstrate its nuclear ambitions are discussed below.

b) U.S. Efforts to Directly Pressure the Pakistanis

In an effort to make sure that Pakistan would retain an ambiguous posture, the United States sought reassurances about its nuclear intentions. Washington also sought to “educate” the Pakistani leadership as to the fallout of an open nuclear posture and threatened that Congressional disapproval could cut off aid. There is some evidence that these efforts were influential, in conjunction with the aid relationship, and factored into the Pakistani calculations against testing when they had the technical capability to do so.

The United States sought reassurance from the Pakistani leadership that they would not declare Pakistan a nuclear state or test a nuclear explosive device. The reasons for these reassurances were twofold. First, before Congress approved amendments to the Foreign Assistance Act, the President had to have reliable assurances that Pakistan was not acquiring nuclear weapons. In 1981, these “assurances provided the basis for seeking and obtaining legislation from Congress authorizing a waiver of the Symington amendment for the duration of the five-year assistance program, without which the president would have had to certify the Pakistan had ceased all efforts to acquire a nuclear weapon.”¹⁶⁸ For his part, “Zia understood that the condition that American law

¹⁶⁸ Tahir-Kheli, India, Pakistan and the United States, 75.

precluded aid without a specific presidential request for a waiver in the interest of U.S. national security.”¹⁶⁹

While Zia did finally provide assurances that Pakistan did not intend to develop nuclear weapons, his language was nonetheless carefully crafted and did not include assurances that it would stop seeking the ability to make weapons or conduct a ‘peaceful nuclear explosion.’¹⁷⁰ Zia’s assurance was duly noted by then Under-Secretary of State James Buckley when he urged the House Foreign Affairs Committee to remove the ban on aid.¹⁷¹ However, Buckley also acknowledged that he believed that Pakistan intended to move forward with their nuclear development program, and refused to clearly state that the U.S. would cut off aid if Pakistan exploded a nuclear device.¹⁷² A couple of days later, Zia reiterated that Pakistan would not produce or acquire a nuclear bomb, while also affirming that Pakistan would not give up the right to possess nuclear technology.¹⁷³

Second, the Administration wanted to ensure that it would not be publicly embarrassed by Pakistan, since it was claiming that it had a justified reason to waive the non-proliferation measures. And President Reagan received further assurances from Zia that he would not embarrass the United States in the nuclear area. Some analysts

¹⁶⁹ Tahir-Kheli, India, Pakistan and the United States, 75.

¹⁷⁰ Judith Miller, “US Cites Pakistani Pledge Not to Make Atom Arms,” Foreign Desk, The New York Times, 25 June 1981, A6.

¹⁷¹ Bernard Gwertzman, “Pakistan Blast Could End Aid,” Foreign Desk, The New York Times, 17 September 1981, A1.

¹⁷² Gwertzman, “Pakistan Blast Could End Aid.”

¹⁷³ “American Arms to Pakistan: ‘A Test of Credibility,’” US News and World Report, 21 September 1981, 45.

attributed Zia's willingness to now provide assurances as predicated on the renewed economic and military assistance. They noted that,

“Prior to the renewal of our security assistance program the government of Pakistan refused to renounce the development of ‘peaceful nuclear explosives.’ During our discussion about renewing security assistance U.S. government officials were assured by the Pakistani government that it ‘would not embarrass us’, presumably by a nuclear device. Recently, as our economic and security assistance has begun to flow, we have been assured by President Zia that Pakistan has no intention of testing a nuclear device of any kind.”¹⁷⁴

Another factor that Zia likely took into consideration was that Pakistan was already struggling to gain access to enough fissile material to build a device.¹⁷⁵ Not only would testing deplete its already small supply of materials, but also it would ensure that economic and military aid would again be cutoff. Thus, Zia likely calculated that Pakistan could wait to test a device. It was further in his interest to reassure the U.S. of this intention, which Zia did with public and private announcements that he had no intention of detonating a nuclear explosive device.¹⁷⁶

However, the Reagan Administration also wanted to make sure that there was no confusion on Pakistan's part over the new limits imposed on the nuclear program. Towards this end, the U.S. sought to influence Pakistani decision-making by clearly informing the leadership of the legal and political constraints associated with the aid package.

¹⁷⁴ Joseph DeThomas, “Report to Congress: Pakistan's Nuclear Program,” Secret Report, 14 March 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02022, 6.

¹⁷⁵ DeThomas, “Report to Congress: Pakistan's Nuclear Program,” no. NP02022, 5.

¹⁷⁶ DeThomas, “Report to Congress: Pakistan's Nuclear Program,” no. NP02022, 5.

President Reagan himself made it a priority to discuss with Zia on his visit to Washington D.C. that “nuclear weapons development is inconsistent with the continuation of the U.S. security and economic assistance program.”¹⁷⁷ The Reagan Administration further reassured the U.S. domestic audience that it was carefully monitoring the nuclear program and continued to send representatives to Pakistan to underscore American concerns in this regard.¹⁷⁸

Of course, this did not mean that Pakistan gave up on its nuclear program. To the contrary, it continued development the best it could under secrecy. So, for example, when Vice-President Bush traveled to Pakistan in 1984, he again reiterated that the relationship between the two states could be threatened by Pakistan’s nuclear program. Zia reportedly assured Bush that the program was peaceful.¹⁷⁹ Nonetheless, by then Pakistan had already conducted a cold test of an atomic device.¹⁸⁰ Reagan also sent a letter to Zia in 1984, “expressing his ‘deep concern’ that Pakistan’s pursuit of these weapons could undermine relations between the two countries.”¹⁸¹ This was seen as a

¹⁷⁷ DeThomas, “Report to Congress: Pakistan’s Nuclear Program,” no. NP02022, 6.

¹⁷⁸ DeThomas, “Report to Congress: Pakistan’s Nuclear Program,” no. NP02022, 7.

¹⁷⁹ Kamal Matinuddin, The Nuclearization of South Asia (Oxford: Oxford University Press, 2002), 92; see also George P. Shultz, U.S. Department of State, to U.S. Embassy Pakistan, “Pakistan: Cranston Nuclear Speech,” Unclassified Cable 184740, 22 June 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02139, 1.

¹⁸⁰ Matinuddin, The Nuclearization of South Asia, 92.

¹⁸¹ George P. Shultz, “Washington Post Editorial on Pak Nuke Program,” Unclassified Cable 321861, 30 October 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02158, 2.

“useful declaration” because the White House had not visibly paid attention to the dangers of proliferation during the previous four years.¹⁸²

The U.S. continued to send officials and scientists to Pakistan and inform the Pakistanis on the rationale limiting American policy as related to the nuclear program. In 1985, Specialist in South Asian Affairs Richard Cronin went to Pakistan to highlight the differences in the strategic environment between India and Pakistan as compared to the U.S. and U.S.S.R. He further underscored the difficulties in accepting Zia’s blatant assurances without outside inspectors being able to verify the accuracy of these statements.

In 1986, the U.S. took the opportunity to further inform new Prime Minister Junejo on U.S. perspectives of Pakistan’s nuclear policy. In anticipation of negotiating the new aid package with Junejo as the head of the new civilian government, the Administration wanted to make sure that they had the opportunity to “educate him on US political process, and expose him first-hand to the issues in US-Pak relations.”¹⁸³ The Administration was concerned that as a new player in Pakistani politics, Junejo might not realize how serious of a threat Pakistan’s continued nuclear activities was to the aid package.¹⁸⁴

¹⁸² Shultz, “Washington Post Editorial on Pak Nuke Program,” no. NP02158, 2.

¹⁸³ George P. Shultz, “Official Visit of Pakistan Prime Minister Junejo,” Secret Briefing Memorandum, 1 July 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02308, 2. Other briefing memorandums reiterate these positions, see, e.g., nos. NP02327, NP02306, NP02328.

¹⁸⁴ Richard W. Murphy, “Briefing the President,” Secret Briefing Memorandum, 1 July 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02309, 4.

The Administration wanted the Junejo to be reminded of Zia's previous assurances, in 1982 and 1984, promising restraint of the nuclear program. The threat was that if "Pak actions to restrain the program are not forthcoming, our entire relationship and the basis for our aid could be undermined... We must have positive Pak actions to help convince the Congress to grant another waiver of Symington amendment, the sine qua non for a follow-on program."¹⁸⁵ They further hoped that part of the outcome of the dialogue would be to gain Junejo's support in "genuine[ly] restrain[ing]" Pakistan's nuclear program in order to maintain the assistance program.¹⁸⁶ Thus, in addition to soliciting reassurances from Zia and outlining U.S. perspectives on Pakistan's proliferation policy, the Reagan Administration also sought to remind the Pakistanis of Congressionally imposed constraints on continuing aid.

Moreover, the Reagan Administration had to simultaneously ease the non-proliferation concerns of an increasingly skeptical Congress that threatened to cut off assistance and had passed further legislation that specifically targeted Pakistan. By 1985 the U.S. Congress was at odds with the Reagan administration's apparent willingness to overlook Pakistani nuclear progress and its refusal to stop development. Congress responded by passing two pieces of legislation aimed at countering Pakistan's continued nuclear progress.

First, Congress passed the Solarz Amendment to the Foreign Assistance Act. In relevant part, the Amendment prohibited military and economic assistance to any non-

¹⁸⁵ Murphy, "Briefing the President," no. NP02309, 4-5.

¹⁸⁶ Shultz, "Official Visit of Pakistan Prime Minister Junejo," no. NP02308, 2.

nuclear state that illegally exported items from the United States that would significantly contribute to that country's ability to make a nuclear explosive device. During the same time, Congress also passed the Pressler Amendment. Under the Pressler Amendment, the President was now required the President to certify annually that Pakistan did not possess a nuclear explosive device. Continued military assistance was now contingent on this certification.¹⁸⁷

The nuclear issue continued to pose major problems for U.S.-Pakistani relations.¹⁸⁸ Despite Reagan's initial willingness to ignore Pakistani nuclear progress, the U.S. Congress had placed legal and political constraints on the extent to which the President could ignore the program. These constraints came to a head again as the first five-year aid package to Pakistan was set to expire in 1987. In order to renew military and economic assistance to Pakistan, the Administration, the Pakistani government, and the U.S. Congress had to address continued evidence of Pakistani nuclear progress, despite official denials to the contrary.

The first prerequisite for Pakistan to receive aid was another waiver of the Symington Amendment. In 1981, Congress had passed a six-year waiver that was set to shortly expire. Renewed assistance was contingent again on Congressional waiver of the

¹⁸⁷ Technically, the Amendment also required that the President justify that the assistance would reduce the risk that Pakistan would acquire a nuclear device. However, the Reagan Administration ignored this and Congress did not challenge the Administration. See for example, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP0009.

¹⁸⁸ Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP0009.

Symington Amendment.¹⁸⁹ Additionally, under the Pressler Amendment, the President was also required to provide an annual certification “that Pakistan does not possess nuclear device and that our aid program significantly reduces risk of this.”¹⁹⁰ Continued concerns over Pakistan’s nuclear activities posed a major problem in fulfilling both of these requirements in order to provide security assistance.¹⁹¹

The Presidential Administration recognized that without Pakistani restraint, “Pak activities in this area make annual certification—and even Congressional waiver—very problematic.”¹⁹² Turning to Islamabad, the Administration impressed on Prime Minister Junejo that “Pak unsafeguarded uranium enrichment, other activities, pose added difficulties for USG in justifying new aid to Pakistan and in certifying annually that Pakistan does not possess nuclear device...Pak nuclear restraint absolutely critical to continued US aid relationship.”¹⁹³ Notwithstanding the Reagan Administration’s desire to provide Pakistani assistance, public evidence of nuclear progress continued to pose a problem.

In addition to having to annually certify that Pakistan did not possess a nuclear device, the Reagan Administration also had to convince Congress to yet again waive the

¹⁸⁹ Shultz, “Official Visit of Pakistan Prime Minister Junejo,” NP02308, 2.

¹⁹⁰ Shultz, “Official Visit of Pakistan Prime Minister Junejo,” NP02308, 2.

¹⁹¹ Nuclear Non-Proliferation, (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP0009. The same document indicates that the U.S. knows Pakistan is pursuing nuclear weapons but do not have a device yet.

¹⁹² Shultz, “Official Visit of Pakistan Prime Minister Junejo,” no. NP02308, 2.

¹⁹³ Memorandum to Henry Kissinger, “Official Visit of Pakistan Prime Minister,” Secret Memorandum, 18 July 1986, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02328, 2.

Symington Amendment for aid beyond 1987. By the time the next five-year aid package was considered in Congress in 1986, it had grown increasingly impatient with the obvious evidence that Pakistan was unwilling to abandon its nuclear program. This included clear indications that China had helped Pakistan's nuclear weapons program in significant ways. There were also a number of highly publicized incidents where individuals were caught attempting to smuggle nuclear materials and information back to Pakistan. These events generated opposition in Congress against sending more aid without receiving assurances from the President that the Administration was committed to stopping Pakistani proliferation.

Pakistan, for its part, issued a series of denials that it was developing nuclear weapons and made another round of proposals for a nuclear free zone in South Asia. In particular, in 1986, the infamous Dr. A.Q. Khan declared that Pakistan's nuclear program was peaceful, given that Zia had committed to not enriching uranium past 5%.¹⁹⁴ A month later, Prime Minister Junejo testified before the U.S. Senate Foreign Relations Committee. He reiterated that Pakistan had no intentions to build a nuclear bomb and was following Reagan's guidelines that uranium was only enriched at 5% at the Kahuta facility.¹⁹⁵ The Reagan Administration itself expressed concern over Pakistan's unsafeguarded facilities but indicated that it did not have evidence that "Islamabad had

¹⁹⁴ "Pakistani Efforts For Indigenous Reactor, Fuel Cycle Confirmed," Nucleonics Weekly, 26 June 1986, 1-3.

¹⁹⁵ "An Assertion That Pakistan Is Not Building Nuclear Weapons," Nuclear News, 16 July 1986, 29.

exploded a bomb.”¹⁹⁶ Shortly thereafter the U.S. reportedly warned Pakistan that it would cut off aid if Islamabad continued with a program to make a nuclear bomb.¹⁹⁷

Islamabad, for its part, issued further denials that its program was weapons oriented. Rather, a spokesman indicated that Pakistan’s nuclear program “is of a peaceful nature, which has been proved during the last six or seven years. Pakistan has no intention of carrying out a nuclear explosion and is ready to accept the control and safeguards of the International Atomic Energy Agency (IAEA).”¹⁹⁸ Even with the assurances, the Reagan Administration had “U.S. Ambassador Hinton in Islamabad warned Pakistan about nuclear activities inconsistent with a purely peaceful program and cautioned that ‘it is open to question whether the President could so certify were he to conclude that Pakistan had in hand, but not assembled, all the needed components for a nuclear explosive device.’”¹⁹⁹

Nonetheless, the Reagan Administration went to Congress, seeking “a renewed expression of support from the Congress to the long-term security and economic well-being of Pakistan.”²⁰⁰ Specifically, the Administration sought additional economic and military assistance and the necessary waiver of the Symington Amendment. In order to

¹⁹⁶ “Reagan Administration Concerned Despite No Evidence of Pakistani Bomb,” The Associated Press, 4 November 1986.

¹⁹⁷ “U.S. Dangles Aid to Halt Pak N-Efforts,” The Times of India, 7 November 1986.

¹⁹⁸ “Spokesman Affirms Peaceful Nuclear Program,” Karachi Domestic Service, 11 February 1987, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.

¹⁹⁹ Donnelly, “Pakistan and Nuclear Weapons,” 3.

²⁰⁰ Robert A. Peck, “Statement of Robert A. Peck to Subcommittee,” Testimony, 5 March 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02432, 1.

ease Congressional concerns, the Administration pointed to both its previous efforts to influence the Pakistani leadership to practice restraint and evidence that Pakistan had done so. For example, in 1987 Peck emphasized that the U.S. had worked hard to prevent nuclear proliferation in South Asia and have “raised our concerns about Pakistani nuclear activities with that country’s leaders at every opportunity. We have made it very clear to them that provision of US security assistance requires Pakistani restraint in its nuclear development program.”²⁰¹

Peck further noted that the Administration’s line in the sand had not yet been crossed. He acknowledged that while “Pakistan appears to have acquired much of what it needs to build nuclear weapons, our assessment remains—as the President certified in October 1986—that it ‘does not possess a nuclear explosive device’... We believe this situation reflects Pakistani awareness that acquisition of nuclear weapons would mean the end of the US assistance program.”²⁰² Peck also reminded Congress that in 1982, the U.S. was very concerned that Pakistan would proceed to test a nuclear device or transfer nuclear technology to another country. He argued, “[n]one of these fears have materialized. We should not underestimate the importance of this evidence of restraint... Pakistan itself has publicly disclaimed any interest in building nuclear weapons.”²⁰³ Additionally, Peck stressed Pakistan’s willingness to engage India with the 1985 informal agreement to not attack each other’s nuclear facilities, and that Pakistan

²⁰¹ Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 11.

²⁰² Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 12.

²⁰³ Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 12-13. As hindsight, and likely known at the time, Pakistan actually violated both of these understandings.

had recommend a number of non-proliferation measures, conditioned on Indian acceptance.²⁰⁴

Still, Peck subtly acknowledged that Pakistan was furthering its nuclear capability. He sought to emphasize that both India and Pakistan were creating a weapons option, but that did not mean they would inevitably proceed to build weapons.²⁰⁵

Nonetheless, he suggested that a cut-off in aid would be detrimental to U.S. security concerns in South Asia and would reduce the ability of Washington to influence the Pakistani nuclear program. He argued,

“[i]n our view, continuation of all US aid programs to Pakistan is an essential to accomplishment of our non-proliferation goals as it is to pursuit of our regional security strategy. Whatever influence we have over the thrust and direction of Pakistan’s nuclear activities derives from our strong security links. We have been down the cut-off road before and know that any action which would cut off, curtail, or cast doubt on the continuation of our assistance would be counter-productive, because it would grievously undercut our influence over Pakistan’s nuclear decision-making. We therefore urge the Congress to act favorably on our request to extend for the duration of our follow-on aid package the authorization provided in section 620E of the Foreign Assistance Act to waive the Symington Amendment sanctions that would otherwise apply to Pakistan.”²⁰⁶

Despite concerns over Pakistan’s obvious continuation of a nuclear program, Washington approved a continuation of military and economic aid. As part of the deal however, Congress also wanted verifiable assurances from Pakistan that it would not

²⁰⁴ Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 14.

²⁰⁵ Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 14-15.

²⁰⁶ Peck, “Statement of Robert A. Peck to Subcommittee,” no. NP02432, 13.

produce weapons grade uranium.²⁰⁷ In fall of 1987, Islamabad again publicly proclaimed that it was not enriching uranium above 5% levels, with 90% levels required for nuclear weapons.²⁰⁸ Congress sought to hold the Pakistani government to their public posture and passed an amendment to the aid package that required a cut off in assistance if Pakistan enriched uranium over the 5% level. However, the amendment did not require inspections to maintain aid, a condition that Pakistan most certainly would have rejected as it had previously done. As such, there was no practicable way to verify that Pakistan was following the conditions of the Amendment, other than its public statements. As this event suggests, the U.S. Congress essentially set the law at the level that the Pakistani's publicly acknowledged, and hoped that would at least slow the program down.

As a necessary component of the funding, Congress also ultimately waived the Symington Amendment for another thirty months. In announcing the deal, the White House emphasized that the Government of Pakistan was aware of Washington's concerns and had adhered to crucial non-proliferation criteria.²⁰⁹ The Administration promised to continue to persuade the Pakistanis to forgo a nuclear option and was still required to certify annually that Pakistan did not possess a nuclear option.²¹⁰

²⁰⁷ Donnelly, "Pakistan and Nuclear Weapons," 1.

²⁰⁸ Michael R. Gordon, "Congress Delays New Pakistan Aid Amid Nuclear Rift," The New York Times, 30 September 1987, A1.

²⁰⁹ George P. Shultz, "President Signs Symington, Solarz Waivers," Unclassified Cable 013951, 16 January 1988, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02589, 1.

²¹⁰ Shultz, "President Signs Symington, Solarz Waivers," no. NP02589, 1.

c) Effects of U.S. Non-Proliferation Policy on Pakistani Ambiguity

American non-proliferation policy towards Pakistan did not stop it from developing a nuclear weapons option. It slowed down Pakistan's progress primarily through denying it materials and technology through international export controls. However, by explicitly linking aid to Pakistani nuclear restraint, U.S. non-proliferation policy did operate as another incentive for Pakistan to maintain an ambiguous nuclear posture. In particular, as an aid recipient during the 1980s, after the Soviet invasion of Afghanistan, Pakistan did not publicly declare its status or test a nuclear explosive device. It mainly denied that it was seeking nuclear weapons, and framed its nuclear program as peaceful, while not giving up the right to nuclear development.

First, Pakistan did not test a nuclear explosive device while receiving U.S. aid. Rather, publicly testing a nuclear explosive device would have created a direct confrontation with the United States. As dictated by its domestic non-proliferation laws, it would have required that the U.S. immediately cut-off military and economic assistance to Pakistan. It would have further required that the United States directly evaluate the threat of the Soviets in South Asia as compared to its credibility in pushing for international non-proliferation. However, by waiting to test, Pakistan was able to maintain the flow of aid, while also not triggering other effects, such as an Indian response. For these reasons, Pakistan's forbearance in conducting a nuclear test during the 1980s was likely in part the result of U.S. aid.

For example, in December 1981, the CIA prepared a report that "Pakistan is partly deterred from conducting a nuclear test by President Reagan's military and

economic packages which will be withdrawn once Pakistan tests a nuclear device.”²¹¹

Even though an imminent Pakistani test was not expected, the analysis further predicted that Pakistan would not stop developing and stockpiling fissile materials for a nuclear device.²¹²

Similarly, in January 1983 an article appeared entitled “Zia forced to put off nuclear test.”²¹³ The article credited, in part, American pressure as responsible for delaying “an imminent Pakistani nuclear test.”²¹⁴ Even though Western intelligence experts had noticed preparations for a potential underground test in the Chagmai Hills, the article noted that Zia has “cultivated a studied lack of interest in nuclear testing.”²¹⁵ It further noted that this stance, “first noticed earlier last year and strenuously displayed last month in Washington, is explicable for the most part in terms of keeping Washington happy. At stake is more than dollars 3 billion in direct military aid as well as the delivery of 40 F-16 Fighters, the first of which began arriving in Pakistan later this year. Non-military aid from Washington, the World Bank and the IMF is also in the pipeline.”²¹⁶ Another report surfaced in 1985 suggesting the same dynamics. The report indicated that while Pakistan had not given up its nuclear program, it predicted that Zia would not

²¹¹ Judith Miller, “US Says Pakistan’s Nuclear Potential Is Growing,” Foreign Desk, The New York Times, 24 January 1982, Section 1, part 1, 6.

²¹² Judith Miller, “US Says Pakistan’s Nuclear Potential Is Growing.”

²¹³ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

²¹⁴ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

²¹⁵ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

²¹⁶ Louis, “Observer Article on Indo-Pak Nuclear Issue,” no. NP02005.

explode a bomb in the near future as such a move would disrupt the relationship between the United States and Pakistan.²¹⁷

While Pakistan chose not to publicly test a device,²¹⁸ it nonetheless explicitly did not give up the right to do so. For example, Pakistan's Foreign Minister Agha Shahi indicated that Pakistan had not ruled out the possibility of a detonation if it was necessary for its program.²¹⁹ In the same statement he acknowledged that U.S. law required a cut-off in aid, but expressed some doubt as to whether the Reagan Administration would really do so given the strategic reality in South Asia.²²⁰ He also hedged the statement by indicating that, "we make a distinction between an explosion and weapons."²²¹ Later Zia clearly reiterated that Pakistan did not have the intention to explode a nuclear device.²²²

Second, while Pakistan chose not to publicly test, its rhetoric was more ambiguous during this time period. The Pakistani government would indicate that it had the ability to build nuclear weapons, but had no intention of doing so. Likely this approach to the public rhetoric served four purposes: 1) it was ambiguous enough that the

²¹⁷ Foreign Broadcast Information Service, "Bomb Program Reportedly Slowed," Non-Classified Article, 30 April 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02217, 1.

²¹⁸ There were rumors in that Pakistan had conducted a test in conjunction with China. These reports were publicly denied by both states. If it had done so, this would have reduced the technological need to conduct tests in Pakistan. Also, by denying the tests, it enabled Pakistan to avoid confrontation with the United States, something that it could not have done if it had publicly tested and declared in Pakistan.

²¹⁹ Alain Cass, "Pakistan Denies Giving Pledge on N-Testing," Overseas News, Financial Times, 15 January 1982, Section 1, 3.

²²⁰ Cass, "Pakistan Denies Giving Pledge on N-Testing."

²²¹ Cass, "Pakistan Denies Giving Pledge on N-Testing."

²²² "Pakistani Denies He Will Hold Talks in Paris on Atom Plant," Foreign Desk, The New York Times, 20 January 1982, A2.

U.S. did not cutoff aid; 2) it helped bolster deterrence through uncertainty with India; 3) it maintained a hedge that Pakistan might develop weapons in the future; and 4) some of the statements were for domestic purposes.²²³ The primary pattern that developed is that someone within the Pakistani leadership would claim that Pakistan had the technical ability to make nuclear weapons, followed by a disclaimer that it had no intention to make them.

For example, Prime Minister Zia claimed in a 1981 interview that, “we are proud to say that Pakistan can make the bomb.”²²⁴ The next day, Islamabad released an official statement that Zia’s response to the question was misinterpreted. The statement clarified Pakistan’s position that it had the right to acquire nuclear technology, which was different than intending to produce an atomic bomb.²²⁵ Still, Zia also maintained that Pakistan had the right to acquire nuclear technology, even if “we have to beg, borrow or steal.”²²⁶ In another interview in 1982, Zia stated that Pakistan’s uranium enrichment effort was a “modest, humble program” for using the technology for its nuclear power reactors.²²⁷ He

²²³ The United States also had to be careful in how much it publicly pressured Pakistan to restrain its nuclear program. Washington recognized that Pakistan faced “domestic political sensitivities” and wished to “avoid public confrontation or challenge to Pak sovereignty” Murphy, “Briefing the President,” no. NP02309, 4.

²²⁴ “Other Reports on Korea; Turkish Leaders’ Visit to Pakistan,” BBC Summary of World Broadcasts, 26 November 1981, part 3, cited in http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²²⁵ “Turkish Leader’s Visit to Pakistan; Pakistan Denies It Intends to Make Bomb,” BBC Summary of World Broadcasts, 27 November 1981, part 3, cited in http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²²⁶ Pearl Marshall, “Pakistan Hope LWR Fuel Supply Capability,” Nuclear Fuel, 16 August 1982, no. 17, 7, summary available at http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²²⁷ Mary Anne Weaver, “Zia: Pakistan’s Military Ruler, and ‘The Bomb’,” Monitor Interview, Christian Science Monitor, 30 November 1982, 12.

also rejected allegations that Pakistan is developing a nuclear weapons capability, against the backdrop of being accused of importing yellowcake from Niger.²²⁸ Similarly, following the Brasstacks crisis in 1987, Dr. A.Q. Khan suggested that Pakistan had produced nuclear weapon. Khan later denied that he even gave the interview, in the face of diplomatic backlash and because American aid could be cut off under the Pressler Amendment.²²⁹

6. Diplomatic Leverage with the United States

Under Zia, nuclear ambiguity also served as a source of leverage for Pakistan to modernize its conventional forces with U.S. assistance. More specifically, by maintaining ambiguity regarding Pakistan's nuclear intentions and not publicly demonstrating its nuclear capability, Zia was able to trade ambiguity for conventional assistance. Still, the threat of the nuclear program was always a factor in the relationship and provided Zia with a bargaining chip and ready justification for garnering continued support. In this manner, Zia accomplished what Bhutto was not able to because the U.S. was once again engaged in the region because of the Soviet invasion of Afghanistan. As one scholar phrased it, Zia "synchronized Pakistan's pursuit of nuclear weapons with the U.S. effort to modernize Pakistan's conventional forces during the Afghan conflict."²³⁰

The first reason Zia was able to leverage that United States is that the Reagan Administration cared more about thwarting the Soviets in Afghanistan than preventing

²²⁸ Weaver, "Zia: Pakistan's Military Ruler, and 'The Bomb'," 2.

²²⁹ Chakma, "Road to Chagai," 900.

²³⁰ Cheema, "Pakistan's Nuclear Use Doctrine," 162.

Pakistani proliferation. That is, the United States was so intent on countering the Soviet threat in South Asia that it was willing to trade away its previously more restrictive stance on non-proliferation. Certainly, measures were taken to intercept materials and technology from reaching Pakistan, as well as to exert non-proliferation pressure on Pakistan. Yet, the Administration was well aware that Pakistan continued its proliferation activities. It simply sought to keep them below the public eye to ensure that Congress continued to fund aid rather than invoking U.S. non-proliferation laws. As Islamabad correctly perceived, U.S. non-proliferation pressures could be managed through shrewd Pakistani diplomacy.²³¹

Second, Zia never expressly promised to forego a nuclear option. Rather, he stressed that Pakistan had no intention of developing nuclear weapons. This left open the threat that Pakistan could go nuclear in the future. The further implication from Pakistan was that it was particularly likely to pursue the nuclear weapons route if its security needs were not met, that is, if it no longer received conventional U.S. assistance. Thus, the threat was that without receiving U.S. conventional assistance, Pakistan would more readily convert its peaceful nuclear program into a weapons option.

The Reagan Administration also took this tact with the U.S. Congress as well, arguing that it could best influence the Pakistan's nuclear program by staying engaged in the region and directly contributing to Pakistani security. For example, when the U.S. Congress considered its supply of aircraft to Pakistan, it was advised that any significant changes in number or nature of the planes would lead Pakistan to review its relationship

²³¹ Kapur, Pakistan's Nuclear Development, 183.

with the U.S. and move the country closer to a nuclear explosion.²³² In this way, Pakistan was relatively successful in securing U.S. arms and economic assistance through leveraging its nuclear program.²³³ And part of this bargain was that Pakistan had to keep its declarations ambiguous enough to not provoke the U.S. Congress and refrain from testing nuclear device.

In short, by capitalizing on its strategic significance, Pakistan was able to both modernize its military while continuing progress on its nuclear program, as long as Islamabad maintained ambiguity regarding its nuclear intentions.²³⁴ Ambiguity therefore served as both a sword and a shield for Pakistan. Additionally, the foregoing suggests that ambiguity was an arrangement that enabled both the United States and Pakistan to further their own security goals. The United States kept its part of the arrangement by providing weapons and encouraging Pakistan to keep its program out of the public eye. Pakistan, for its part, maintained ambiguity and did not force the United States to directly confront whether it would support an overt demonstration of Pakistan's nuclear ambitions. Nonetheless, these dynamics changed yet again when the Soviets withdrew from Afghanistan and the United States no longer had a strong of a security interest in South Asia. Predictably U.S. non-proliferation efforts again rose to the forefront, to Pakistan's military and economic detriment.

²³² Paul, "Influence Through Arms Transfers," 1086.

²³³ Paul, "Influence Through Arms Transfers," 1087. Kapur has characterized it as "nuclear blackmail." Kapur, Pakistan's Nuclear Development, 229.

²³⁴ Kapur, Pakistan's Nuclear Development, 185.

7. The End of Looking the Other Way—Soviet Withdrawal from Afghanistan

Tough times followed for Pakistan with the Soviet withdrawal from Afghanistan. Pakistan continued to develop its nuclear weapons capability but the United States was no longer willing to look the other way. With the drawdown of the Cold War, the US increased its non-proliferation pressure and warned Pakistan to cease nuclear weapons development and ‘rollback’ its current capabilities.

The United States was now more willing to back up its non-proliferation demands and began to impose punitive measures on Pakistan. For example, Prime Minister Benazir Bhutto assured the U.S. Congress in 1989 that Pakistan did not possess a nuclear device, and did not have any intent to make one.²³⁵ However, such reassures did not carry much credibility as they echoed the late President Zia’s similar claims that were at odds with Pakistan’s continued nuclear development. In response, President Bush informed Bhutto that he would cut off aid if he found that Pakistan possessed a nuclear weapon.²³⁶ President Bush did, however, agree to extend certification for one last year, after Pakistan promised that it would cap its military nuclear program at current levels.²³⁷

Unwilling to jeopardize U.S. economic and military assistance, Pakistan ostensibly gave in to U.S. pressure and stopped nuclear development for two years.²³⁸ At the same time, even some of the strongest proponents of Pakistan’s nuclear program were

²³⁵ “Bhutto Denies Pakistan Has Weapons,” The Christian Science Monitor, 9 June 1989, 7-8.

²³⁶ “Bhutto Denies Pakistan Has Weapons,” 7-8.

²³⁷ Chari, Indo-Pak Nuclear Standoff, 75.

²³⁸ Ahmed, “Pakistan’s Nuclear Weapons Program,” 189.

concerned that the time was not yet ripe to declare Pakistan a nuclear weapons state. For example, Chief of Army Staff General Beg argued that based on “the global scenario, the regional security, and the pressing needs of economic aid, it was decided that only in the first phase...Pakistan should temporarily put a ‘restraint’ on its efforts, or so to say, a policy of restraint was adopted.”²³⁹

However, the next year, the United State imposed sanctions. In 1990, President Bush was no longer willing to provide certification that Pakistan did not possess a nuclear bomb and did not contend that U.S. aid was dissuading Islamabad from building nuclear weapons.²⁴⁰ So the U.S. Congress cut off aid, which amounted to approximately \$500 million per year, because of suspicions that Pakistan was developing nuclear weapons.²⁴¹ By invoking the Pressler Amendment, the delivery of the previously paid for F-16 fighter aircraft were also put on hold. In short, Pakistan no longer had the patronization from the Americans and was now suffering under punitive sanctions.²⁴² Washington further signaled its impatience in 1991 and threatened that it would list Pakistan as a terrorist state if it did not abandon its nuclear program and stop backing Kashmiri militants.²⁴³

²³⁹ Cheema, “Pakistan’s Nuclear Use Doctrine,” 163.

²⁴⁰ “Pakistan Chief Asks US Talks On Atom Issue,” *The New York Times*, 30 November 1990, A8. Ironically, some scholars note that this actually bolstered Pakistani deterrence by enhancing the credibility of Pakistan’s nuclear program. Reiss, “The Illusion of Influence.” See also, Chari, Indo-Pak Nuclear Standoff, noting that U.S. sanctions lent a greater legitimacy and credibility to Pakistan’s nuclear program.

²⁴¹ “Pakistan Chief Asks US Talks On Atom Issue,” A8.

²⁴² Chakma, “Road to Chagai,” 901.

²⁴³ Chakma, “Road to Chagai,” 902.

The message was clear to Pakistan that if it wanted to receive aid, it would have to stop its proliferation efforts. For example, in June 1991, the U.S. proposed to supply Pakistan with conventional weapons if it promised that it will not attempt to buy or develop nuclear weapons.²⁴⁴ The same message was given to a group of Pakistani Senators who later visited Washington D.C.; they were informed that suspension of economic and military aid would continue until Pakistan proved that it did not have nuclear weapons and was not building them.²⁴⁵

For its part, Pakistan very much wanted the sanctions under the Pressler Amendment removed and the resumption of military and economic aid. Islamabad claimed that its program was peaceful, but also used regional security justifications as a reason that it needed the nuclear option. Islamabad argued that Pakistan had legitimate security concerns vis-à-vis India that required nuclear weapons and US negative sanctions only served to diminish Washington's ability to influence its policies.²⁴⁶ To further promote the idea that Pakistan opposed proliferation, Islamabad again proposed creating a nuclear free zone in South Asia.²⁴⁷ India promptly rejected the suggestion as a ploy by Pakistan for renewed military aid.²⁴⁸

²⁴⁴ "Pakistan May Get Weapons in Gulf," The Washington Times, 11 June 1991, A8.

²⁴⁵ "Pakistan May Get Weapons in Gulf," A8.

²⁴⁶ Ahmed, "Pakistan's Nuclear Weapons Program," 191.

²⁴⁷ "Editorial on Pakistan, India 'Nuclear Luxury'" Nuclear Developments, 24 July 1991, in NTI Nuclear and Missile Database, <http://nti.org/db/nuclear>, 13.

²⁴⁸ "Editorial on Pakistan, India 'Nuclear Luxury'" 13.

As a result of pressure from the U.S., Pakistan allegedly froze its uranium enrichment levels.²⁴⁹ However, Pakistan would not give in on key issues of its nuclear program. Pakistan refused to reverse or abandon its program as it likely correctly calculated that it still would not receive the largesse the Cold War afforded.²⁵⁰ Pakistan also refused to sign the NPT, unless India did so first.²⁵¹ However, Pakistan's delegation also reported to the United Nations that Pakistan was committed to nuclear non-proliferation and peaceful nuclear energy.²⁵² The same year, 1990, Prime Minister Nawaz Sharif came to power and reiterated that Pakistan did not have a nuclear bomb and would be happy to sign the NPT if India did so.²⁵³ Statements of this nature continued, as well as overtures by Islamabad that it would negotiate, as Pakistani officials lobbied for the resumption of aid.

At the same time, the official leadership did generally acknowledge that Pakistan had the capability to produce nuclear weapons, even if it did not intend on doing so. Likely this was to bolster deterrence vis-à-vis India and encourage negotiations with Pakistan, while still seeking to reengage the U.S.

²⁴⁹ Matinuddin, The Nuclearization of South Asia, 96. Predictably, General Beg denied that it was US pressure but rather that Pakistan had achieved the desired level of enriched uranium. Ibid.

²⁵⁰ Ahmed and Cortright, Pakistan and the Bomb, 12.

²⁵¹ "Minister Refutes Bhutto's Allegation," Islamabad Domestic Service, 20 October 1990, in NIT Nuclear and Missile Database, <http://nti.org/db/nuclear>.

²⁵² "UN Delegate Reaffirms Peaceful Use," Islamabad Domestic Service, 26 October 1990, in NIT Nuclear and Missile Database, <http://nti.org/db/nuclear>.

²⁵³ "Pakistan: Nuclear Program Can Be Independent, Khan Says," Nucleonics Week, 15 November 1990, 13-14.

It wasn't until the Clinton Administration that Washington sought to more fully reengage with Pakistan. In seeking a renewal of assistance, Pakistani Prime Minister Qureshi indicated that Pakistan had suspended its nuclear program and that he wanted the U.S. to review its embargo on economic and military aid to Pakistan.²⁵⁴ He further reiterated that Pakistan was not working on making any nuclear weapons.²⁵⁵ While Pakistan's public stance remained the same, President Clinton was willing to be more flexible towards Pakistan. In 1993 the Clinton Administration offered a one-time waiver under the Pressler Amendment in order to deliver the 28 F-16s that were ordered prior to the sanctions, as well as other forms of military hardware reportedly worth \$368 million U.S. dollars.²⁵⁶ The aid was contingent on Pakistan capping its weapons-grade material at current levels. This move by Washington effectively signaled to some Pakistani policymakers that the U.S. had accepted Pakistan as a de facto nuclear state by no longer insisting that Pakistan roll back its progress.²⁵⁷

For her part, now Prime Minister Bhutto argued that Pakistan had shown tremendous restraint by not testing a nuclear weapon, despite the fact that India had previously conducted a nuclear test and now more recently was test-firing the Prithvi missile system.²⁵⁸ She indicated that Pakistan should receive recognition for refraining

²⁵⁴ "Pakistani Premier Says Nuclear Programme On Hold," Reuters (Islamabad), 24 September 1993, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.

²⁵⁵ "Pakistani Premier Says Nuclear Programme On Hold."

²⁵⁶ Ahmed, "Pakistan's Nuclear Weapons Program," 192.

²⁵⁷ Syed Talat Hussain, "A Regional Nuclear Issue With A Regional Solution," in Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. (Lahore: Gautam Publishers, 1995), 27.

²⁵⁸ "Bhutto In Missile Warning," Financial Times, 1 July 1994.

from detonating a nuclear device even though the U.S. had cut off assistance in 1994.²⁵⁹ At the same time, the Prime Minister acknowledged that Pakistan had the materials and knowledge to construct a nuclear weapon,²⁶⁰ and suggested that Washington was strengthening the position of nuclear hardliners by not delivery the previously paid for F-16 jets.²⁶¹

After the initial waiver, the Clinton Administration followed up and sought modification of the Pressler Amendment.²⁶² Senator Brown supported the change, arguing that the Pressler Amendment had a negative effect on a major U.S.-Pakistan conventional arms deal.²⁶³ So in 1995, a further \$368 million dollar package of weapons and military equipment was approved for Pakistan.²⁶⁴ Congress further approved restoration of military training assistance for the Pakistani armed forces in 1997, and justified that by doing so, it would strengthen U.S. influence with the Pakistani armed forces.²⁶⁵

In sum, the United States attempted to leverage its role as Pakistan's patron state to prevent Pakistan from obtaining nuclear weapons and, failing that, to maintain an

²⁵⁹ "Bhutto Says U.S. Moves Promote Nuclear Spread," Reuters, 26 November 1994, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.

²⁶⁰ "Pakistan's Bhutto Seeks Regional Nuclear Arms Ban," Reuters, 15 September 1994, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.

²⁶¹ "Bhutto Says U.S. Moves Promote Nuclear Spread."

²⁶² "Clinton Backs Review of Pakistan Policy," Reuters, 4 April 1995.

²⁶³ "Clinton Backs Review of Pakistan Policy."

²⁶⁴ Ahmed and Cortright, Pakistan and the Bomb, 12.

²⁶⁵ Ahmed and Cortright, Pakistan and the Bomb, 13.

ambiguous posture. The latter was a consolation prize. During the 1980s, Pakistani ambiguity meant that the Reagan administration could send funds to Pakistan in an effort to hinder the Soviets in Afghanistan and also to maintain the American stance against proliferation in public. In return for U.S. largesse in the form of economic and conventional military assistance, Pakistani leaders were required to reassure a skeptical U.S. Congress that Islamabad had no intentions to conduct nuclear tests or produce nuclear weapons.

Notwithstanding these declarations that were contrary to continued reports of Pakistani nuclear progress, the U.S. imposed sanctions again once its strategic interests waned in South Asia with the withdrawal of the Soviet Union from Afghanistan. At this point, U.S. non-proliferation pressures again demanded more than the Pakistanis were willing to give—stopping or rolling back the nuclear program. Despite Pakistani protestations that their nuclear program was for peaceful purposes (which was effective during the 1980s), the U.S. imposed sanctions.

D. Lack of Patron State Constraints – Chinese Cooperation

While the U.S. is considered an unreliable ally in Islamabad, China is viewed as a long-term patron supporter of Pakistan, having provided decades of conventional and nuclear assistance. Based on this close relationship between China and Pakistan, the United States has also sought to pressure China to restrict exporting nuclear materials and technology that would further Pakistan's weapons program. However, the U.S. has

generally had little success to show for these efforts and China has served as a very important nuclear supplier for Pakistan throughout the course of several decades.²⁶⁶

In the mid-1960s, Pakistan turned to China for conventional arms after United States embargoed weapons shipments during the Indo-Pak war. The relationship between China and Pakistan would blossom into a nuclear one by the 1970s. For its part, Pakistan sought to strengthen its relationship with China as way to create more options for its security vis-à-vis India.²⁶⁷ China's motivations were, in part, to balance India militarily and politically.²⁶⁸ In terms of conventional assistance, China has supplied military equipment including: tanks, naval vessels, aircraft, missiles, and weapons technology.²⁶⁹ It is also likely that China also eventually supply Pakistan with nuclear materials, designs for a rudimentary bomb, and missile delivery capabilities. While the extent of Chinese assistance is not precisely known, U.S. intelligence sources have contended that Pakistan would not have been able to complete their bomb project without Chinese support.²⁷⁰

²⁶⁶ There is considerable suspicion within the U.S. government that Pakistan and North Korea engaged in *quid pro quo* exchange of uranium enrichment technology for long-range missile development. See "Weapons of Mass Destruction." It was also widely reported that Libya, Saudi Arabia, and Iran provided funding for the Pakistani nuclear program.

²⁶⁷ Tahir-Kheli, India, Pakistan and the United States, 7.

²⁶⁸ T.V. Paul, "The Causes and Consequences of China-Pakistani Nuclear/Missile Collaboration," in South Asia's Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. (Armonk: M.E. Sharpe, Inc., 2005), 180.

²⁶⁹ Chari, Indo-Pak Nuclear Standoff, 27.

²⁷⁰ Paul, "The Causes and Consequences," 181.

By 1979, there was speculation that China had provided Pakistan with sufficient weapons-grade uranium to conduct a nuclear test.²⁷¹ Pakistan necessarily would have had to rely on outside sources at this point because it did not have either a reprocessing plant or uranium enrichment plant operating at full capacity.²⁷² There was public information in 1980 that Chinese experts were assisting Pakistan in its efforts to enrich uranium.²⁷³ This was quickly followed by reports that China and Pakistan had come to agreement that China would permit Pakistan to test nuclear devices on Chinese territory and supervised by Chinese and Pakistani scientists.²⁷⁴

By 1983 there were also reports that China had provided Pakistan with the design of a nuclear weapon,²⁷⁵ and that China sold enriched uranium to Pakistan.²⁷⁶ Some nuclear experts also believed that China conducted a test for Pakistan in the Sinkiang desert.²⁷⁷ Further, much of Pakistan's missile development has also been dependent on China, including the Ghauri missile tested in 1998, which is designed to carry nuclear

²⁷¹ "Pakistan: A Clue to the Bomb Mystery," *World Politics and Current Affairs, International*, Economist, 14 July 1979, 60.

²⁷² "Pakistan: A Clue to the Bomb Mystery," 60.

²⁷³ "Pakistan: Increasing Involvement in Alliance with USA and China," BBC Summary of World Broadcasts, 14 February 1980, part 1, cited in http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²⁷⁴ "Chinese-Pakistani Military Cooperation: Hegemonism and Expansionism," BBC Summary of World Broadcasts, 22 May 1980, part 1, cited in http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²⁷⁵ Donnelly, "Pakistan and Nuclear Weapons," 5. See also U.S. Department of State, "The Pakistani Nuclear Program," no. WM00275, 6.

²⁷⁶ Louis, "Observer Article on Indo-Pak Nuclear Issue," no. NP02005, 1.

²⁷⁷ "U.S. Dangles Aid to Halt Pak N-Efforts."

warheads.²⁷⁸ In short, a close military supply relationship existed between Pakistan and China, one which has spanned decades and included the provision of important and sensitive nuclear weapons related technology and materials.

Both Pakistan and China have consistently denied reports of nuclear links between the two countries. For example, speaking at a press conference in Beijing, Zia stated that China was not involved in Pakistan's peaceful nuclear energy program, which was completely indigenous.²⁷⁹ Similarly, Chinese Premier Zhao Ziyang insisted that China would not help other countries develop nuclear weapons. He assured the U.S. that "we do not advocate or encourage nuclear proliferation, nor will we ourselves practice nuclear proliferation or help other countries to develop nuclear arms."²⁸⁰ When later accused of nuclear cooperation, China would reiterate that it only assisted programs that were for "peaceful purposes."²⁸¹ China further endorsed the proposal for the creation of a nuclear free zone in South Asia.²⁸² Later, Beijing indicated that it would request that nuclear recipient states accept safeguards in accordance with IAEA requirements.²⁸³ In

²⁷⁸ Milind Thakar, "Coping with Insecurity: The Pakistani Variable in Indo-US Relations," in Engaging India: U.S. Strategic Relations with the World's Largest Democracy, Gary K. Bertsch, Seema Gahlaut and Anupam Srivastava, eds. (New York: Routledge, 1999), 232.

²⁷⁹ "Pakistan President's Peking Press Conference," BBC Summary of World Broadcasts, 21 October 1982, part 3, cited in http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

²⁸⁰ Michael Ross, United Press International, 10 January 1984, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

²⁸¹ "China Affirms Nuclear Links with Pakistan," The Associated Press, 24 October 1985.

²⁸² "Lahore Civic Reception," Xinhua General Overseas News Service, 7 March 1984, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

²⁸³ "China Opposes Spread of Nuclear Arms," United Press International, 25 September 1984, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

addition to these general pronouncements, China has specifically denied that it assisted Pakistan in developing nuclear weapons.²⁸⁴

1. U.S. Efforts to Pressure the Chinese

Given this relationship between China and Pakistan, the United States has sought to pressure China to practice restraint in supplying nuclear knowledge, technology, and materials. For example, by 1982, one of the factors obstructing a bilateral nuclear agreement between the U.S. and China were the reports that China was supplying Pakistan with items other than fuel related materials.²⁸⁵ Shortly thereafter, the U.S. put on hold bilateral nuclear cooperation talks with China because of intelligence reports that it helped Pakistan produce weapons grade plutonium.²⁸⁶

The nuclear relationship between Pakistan and China continued to hinder the latter's efforts to forge ties with Washington because of U.S. Congressional concerns. By 1984, Reagan had visited China and received a pledge that it would not assist other countries in developing nuclear weapons, in order to gain nuclear cooperation with the U.S.²⁸⁷ Yet, with reports that Pakistan had tested a nuclear device on Chinese territory, Congress sought additional reassurances before passing the agreement, which China was

²⁸⁴ Donnelly, "Pakistan and Nuclear Weapons," 5. See also U.S. Embassy China to U.S. Department of State, "Ranking MFA Official on PRC Nuclear Matters: No Proliferation or Subs for Pakistan," Secret Cable 014868, 30 May 1989, Weapons of Mass Destruction (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00339, 2.

²⁸⁵ Rob Laufer, "Interview with Malone: Defense Policy and Assessment of 'Hot Spots,'" Nucleonics Week 23, no. 33 (19 August 1982), 1.

²⁸⁶ Judith Miller, "US Is Holding Up Peking Atom Talks," Foreign Desk, The New York Times, 18 September 1982, Section 1, Part 1, 11.

²⁸⁷ Bernard Gwertzman, "China's Signing of Atom Pact Seen as a Major Policy Change," Foreign Desk, The New York Times, 3 May 1984, A8.

unwilling to give.²⁸⁸ There were also the reports to contend with that the Reagan Administration suspected that in 1983 China had given Pakistan a bomb design.²⁸⁹

Given Congressional concerns, the Administration waited to submit the agreement to Congress. Reportedly, the “Administration has never offered an explanation for this long delay, but the reasons evidently involve the accusations that the Chinese have been helping Pakistan develop nuclear weapons. Since the Chinese vigorously deny it, Mr. Reagan’s handling of the nuclear agreement has become a central issue between the two governments.”²⁹⁰

China’s continued supply relationship with Pakistan again disrupted ties with the United States in the early 1990s. Washington became increasingly concerned over reports that China was providing Pakistan with M-11 missiles that violated MTCR guidelines. The result of these suspected activities was the US refusing to continue extending Most Favored Nation status to China. Beijing responded with assurances that it was in compliance, leading to a restored status.²⁹¹ The U.S. initiated another round of sanctions in 1993 based on concerns that the transfers continued. This led to renewed sanctions against China, which were waived shortly after imposition.²⁹²

²⁸⁸ Don Oberdorfer, “Arms Sales Snags Pact with China,” First Section, Washington Post, 15 June 1984, A1.

²⁸⁹ Leslie H. Gelb, “Pakistan Tie Imperils US-China Nuclear Pact,” Foreign Desk, The New York Times, 22 June 1984, A1.

²⁹⁰ George P. Schultz, “Washington Post Editorial on Pak Nuke Program,” no. NP02158, 2-3.

²⁹¹ Chari, Indo-Pak Nuclear Standoff, 29.

²⁹² Chari, Indo-Pak Nuclear Standoff, 28.

More recently, China has increasingly sought to play a greater role in international affairs. Consistent with this approach, during the 1990s China's non-proliferation policies changed considerably as it signed the previously shunned NPT, the Chemical Weapons Convention, and the Comprehensive Test Ban Treaty.²⁹³ China has also started to "adopt a legally based export control system covering a variety of sensitive materials, equipment and technologies."²⁹⁴ It remains to be seen whether China will fulfill its commitments under these agreements. If not, the incentives remain to keep nuclear and missile exchanges with proliferators private.

2. Incentives for Secrecy

Based on this supplier relationship, and external pressures from the United States, both China and Pakistan have incentives to keep a low profile surrounding their exchanges. For China, undetected cooperation would insulate it from U.S. sanctions and other measures designed to encourage Chinese participation in the non-proliferation regime. Additionally, China has even less incentive to be linked to Pakistan's nuclear program if it is seeking to enhance its international image.²⁹⁵

Likely an additional consideration for China is that it does not want to be drawn into the conflict between India and Pakistan. For example, India previously threatened to destroy China's rocket and nuclear weapons facilities at Lop Nor if Beijing did not stay

²⁹³ Bates Gill and Evan S. Medeiros, "Foreign and Domestic Influences on China's Arms Control and Nonproliferation Policies," *The China Quarterly* 161 (March 2000), 66. China has signed, but not ratified, the CTBT.

²⁹⁴ Gill and Medeiros, "Foreign and Domestic Influences on China's Arms Control," 66.

²⁹⁵ Kapur, *Pakistan's Nuclear Development*, 247.

out of the 1971 Indo-Pak war.²⁹⁶ More recently, India and China have seen a reduction in tensions and growing relationship between the two countries. This has to the observation that “Pakistan’s long-time ally China has given conflicting and confusing signals about its support for development of nuclear weapons by Pakistan. With the emerging détente between China and India, there will be additional reasons for China not to encourage Pakistan to join or continue the arms race with India.”²⁹⁷

That said, there is little direct evidence of China’s stance in its diplomatic relations with Pakistan and whether it has linked the supply of nuclear technology to Pakistani ambiguity. Given the importance of the relationship to Pakistan, it is likely that Chinese policy has considerable influence over Pakistan’s posture. Still, even though China may not want to be publicly held as a nuclear supplier does not automatically extend to preferring that Pakistan itself remain ambiguous.

In sum, the international non-proliferation regime, led by the U.S., has created some incentives for both proliferating and supplier states to conduct exchanges well below the public eye. For the supplier states, they are susceptible, to varying degrees, of U.S. pressures to forgo providing nuclear assistance to Pakistan. At the same time, because Pakistan was so heavily reliant on external sources of support for its nuclear program, it also had very strong motivations to keep hidden any information that it was receiving assistance with its nuclear program.

²⁹⁶ Weissman, The Islamic Bomb, 51.

²⁹⁷ Inayatullah, The Nuclear Arms Race, 94.

E. International and Regional Non-Proliferation Pressures

Pakistan has avoided membership in the major international non-proliferation agreements. While this has limited Pakistani obligations, Islamabad has still been subject to the proliferation policies of some member states that refuse to supply technology and materials to states such as Pakistan that do not provide safeguards on all of their nuclear facilities. The primary effect of this was to slow down Pakistani proliferation, particularly as it had to acquire its technology from other sources. Still, other states such as France were more willing to continue cooperating with the Pakistanis, unless the United States interfered. The French reprocessing deal with Pakistan demonstrates these dynamics.

Pakistan has also proposed a number of regional non-proliferation measures over time, although most of them were not given serious consideration by India. As such, regional measures have not played a role in Pakistan's nuclear posture. The regional measures are also further discussed below.

1. Lack of Membership in International Non-Proliferation Regimes

Pakistan has refused to sign the major international non-proliferation agreements, including the NPT and the CTBT. Pakistan indicated that it would sign the NPT and open all of its nuclear facilities to international inspection if India also agreed to the same commitments. However, India refuses to sign any agreements that would restrict its nuclear program, particularly agreements that China has refused to participate in.

Pakistan therefore refused to sign the NPT because India was not a party. For the same reasons Pakistan has not signed the CTBT.

Pakistan did sign the PTBT and has some of its facilities under IAEA inspections. However, its major nuclear facilities used for enriched uranium are not subject to safeguards. Thus, because Pakistan remains largely outside of the nuclear non-proliferation institutions, it is not subject to the obligations imposed by the agreements. So the effects of the regime have had limited direct effect on Pakistan's nuclear program.

States that comply with international agreements to limit the diffusion of nuclear technology and materials have, however, affected the Pakistani nuclear program. This is primarily because Pakistan has for most of its history been reliant on external assistance for its nuclear energy program. This means that the more concerns the Pakistani nuclear program generated within the international community, the more difficult it was for it to garner technical assistance it needed for both nuclear power and its weapons program.

For example, the reduction of nuclear assistance, particularly from Western supplier countries has had a significant effect on Pakistan's nuclear program.²⁹⁸ For example, Pakistan was dependent on Canada for fuel, spare parts, and heavy water for its KANUPP reactor. Canada subsequently suspended cooperation in 1976 after Pakistan refused to accept either full-scope safeguards or sign the NPT. While other states did not have such a rigid non-proliferation stance, if Pakistan chose to publicly acknowledge its nuclear intentions, it would further risk losing the remaining assistance it both had and hoped to get from Western sources. However, the threat of Western cut off in aid was

²⁹⁸ Central Intelligence Agency, "Pakistan's Nuclear Program," no. WM00212, 3.

not a foolproof non-proliferation plan, as Pakistan turned to developing indigenous sources of fuel and to its ally China for nuclear assistance.

2. U.S. Indirect Pressure: The French Reprocessing Facility

“Oh ye of little faith, I would appreciate some day (at your leisure) an account of what mysterious signs in the entrails led you all to conclude at the last minute that the French would not do it. I realize that a high-minded Frenchman with idealist concerns for humanity is not everybody’s image of M. Dupont. But is our intelligence solely based on images!”
Hartman²⁹⁹

When the U.S. is made non-proliferation a priority, the U.S. indirectly affected Pakistani nuclear policy by pressuring other states to refrain from cooperation. Washington did so by pressuring other states to forgo cooperation that would assist Pakistan in its nuclear program and to shore up safeguards and other denial mechanisms. This source of bilateral pressure was particularly important in the Pakistani case because was largely impervious to direct institutional pressures such as the NPT, having refused to join the treaty. Still, not all states shared the U.S. non-proliferation goals to the same extent. The following reviews an example of successful U.S. pressures on France to forego the sale of the reprocessing plant to Pakistan. This stands in contrast to the largely unsuccessfully efforts to convince China to stop the spread of nuclear proliferation.

France contractually agreed to provide Pakistan with a nuclear reprocessing facility in 1974. The United States was becoming increasingly apprehensive that Pakistan was seeking to develop a weapons option under the guise of its civilian nuclear

²⁹⁹ Arthur A. Hartman to U.S. Department of State, “Department of Higher Intelligence – Pakistan Reprocessing Division,” Secret Cable 22584, 18 July 1978, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP01600.

program.³⁰⁰ As such, Washington objected to this agreement and exerted pressure on both Pakistan and France to kill the deal. The U.S. was ultimately successful in doing so. This episode provides a vignette of how Washington sought to stop Pakistani proliferation by pressuring other states to not export materials or technology that could be used for dual purposes.³⁰¹

Almost immediately on making the decision to pursue nuclear weapons in 1972, Pakistan began its efforts to acquire a nuclear fuel reprocessing facility in order to produce weapons grade plutonium. Towards this end, Pakistan began negotiations with Belgian and French companies to purchase a facility.³⁰² In April 1974, Pakistan signed a contract with a French firm, with terms stipulating that it would supply Pakistan a nuclear fuel reprocessing plant to be constructed at Chasma.³⁰³

For their part, the French had publicly declared that they would follow the 1968 NPT agreement, even though they were not yet signatories. Nonetheless, they were willing to sell the reprocessing plant to Pakistan, even though confidential French documents suggest that the French government had knowledge that Pakistan intended to

³⁰⁰ "Apprehensions Regarding Pakistan's Nuclear Intentions," Confidential Memorandum of Conversation, 3 September 1975, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP01433.

³⁰¹ Of course, the U.S. sought to use its influence to persuade other countries to also exert non-proliferation pressure on Pakistan in other ways. For example, in 1979 a secret briefing paper suggested making the point that the U.S. hoped that other states would also make it clear that a nuclear test would have a negative effect on bilateral relations. "Nuclear Non-Proliferation: Pakistan and Argentina," Secret Briefing Paper, 19 November 1979, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP01693.

³⁰² Shahid-ur-Rehman, "Long Road to Chagai," cited in NTI chronology.

³⁰³ Economist, 14 April 1979.

pursue nuclear weapons.³⁰⁴ Viewing nuclear proliferation as inevitable, France sought to further its political and commercial interests, rather than non-proliferation.³⁰⁵

However, the agreement between France and Pakistan for the reprocessing plant caused significant concern with the U.S. because the facility was not subject to stringent enough safeguards. As the U.S. suspected, Pakistan intended to use the facility to produce nuclear weapons by processing spent plutonium.³⁰⁶ Both states came under intense pressure from the United States to stop the deal.³⁰⁷

First, the United States sought to persuade Pakistan to abandon the contract through both incentives and threats.³⁰⁸ In terms of incentives, the U.S. offered to sell Pakistan 110 Vought A-7 aircraft if Pakistan agreed to not purchase the nuclear reactor from France.³⁰⁹ By this time, the U.S. also had domestic non-proliferation laws on the books that it could invoke if Pakistan did not give up the contract. The U.S. further sought to discourage Pakistan through diplomacy.

³⁰⁴ Kapur, Pakistan's Nuclear Development, 143.

³⁰⁵ Kapur, Pakistan's Nuclear Development, 143.

³⁰⁶ "Information Bank Abstracts," The New York Times, 24 February 1976.

³⁰⁷ Joseph P. Sisco to Henry A. Kissinger, "Problems in Regard to a Nuclear Fuel Reprocessing Plant," Confidential Memorandum, 11 February 1976, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01449.

³⁰⁸ Canada also sought to pressure Pakistan to accept safeguards in order to ensure the new facility is not used for weapons proliferation. In refusing, Bhutto contended that Pakistan was not interested in nuclear explosives and that the IAEA had approved the deal between France and Pakistan. "Information Bank Abstracts," The New York Times, 26 February 1976.

³⁰⁹ Aviation Week & Space Technology, 30 August 1976, Industry Observer, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>, 11.

According to U.S. documents, Secretary of State Henry Kissinger met with Bhutto in New York where he expressed U.S. concerns about Pakistan acquiring sensitive nuclear technology and requested that Bhutto reconsider such purchases.³¹⁰ Bhutto later alleged that Kissinger told him that he would make a “horrible example” out of him if he did not give up his nuclear ambitions.³¹¹ In any event, Bhutto refused to cancel the agreement and indicated that Pakistan would proceed with the purchase of the plant despite objections from the U.S.³¹² Pakistan further publicly reiterated its commitment to a ‘peaceful’ nuclear program and sought to draw attention to India’s continued nuclear development in order to retain French assistance.³¹³

At the same time that the U.S. pressured Pakistan to cancel the contract for the reprocessing plant, Washington also sought to persuade France to forego the deal. Because Pakistan’s nuclear intentions were already clear, and the French reprocessing plant did not provide safeguards against the diversion of materials, the U.S. sought to have safeguards imposed on all of Pakistan’s existing research and power facilities.³¹⁴ Kissinger also had contact with the French government, sending a letter specifically

³¹⁰ Shahid-ur-Rehman, “Long Road to Chagai,” cited in NTI chronology (April 1976), 1461.

³¹¹ Ahmed, “Pakistan’s Nuclear Weapons Program,” 273, quoting Stanley Wolpert, Zulfi Bhutto of Pakistan: His Life and Times (Oxford: Oxford University Press, 1991). It is not possible to verify that Kissinger actually made this statement.

³¹² “Information Bank Abstracts,” The New York Times, 11 August 1976.

³¹³ Ahmed, “Pakistan’s Nuclear Weapons Program,” 185.

³¹⁴ Tahir-Kheli, India, Pakistan and the United States, 72.

asking them to not proceed with the sale of the reprocessing plant.³¹⁵ The French however, were not pleased to be subjected to U.S. non-proliferation pressures over the fuel reprocessing deal, and initially refused to cancel the sale.³¹⁶ France further stated that the plant was in compliance with all international agreements, including the IAEA, to ensure that facility was used for peaceful nuclear purposes only.³¹⁷ Prime Minister Chirac also rejected proposals by U.S. Secretary of State Kissinger for three way talks over the sale of the facility, indicating that only France and Pakistan were involved in the issue.³¹⁸ France continued to assert that it would continue with the deal.

Part of the reason for French resistant to cancel the deal, in addition to not wanting to publicly bend to U.S. pressure, was that Paris interpreted its international non-proliferation obligations differently. While the U.S. sought to stop any exchanges until all of Pakistan's nuclear facilities were under full-scope safeguards, other states such as France, West Germany and Italy just sought to have safeguards apply to the facility that they were selling.³¹⁹ Indeed, the French argued that if it did not sell safeguarded nuclear facilities to Pakistan, other states such as Brazil or South Korea would and that this would

³¹⁵ Shahid-ur-Rehman, "Long Road to Chagai," 1461. Kissinger also noted that France responded that it would proceed with the deal, although it might not have adverse reactions if Pakistan reconsidered the facility.

³¹⁶ "Information Bank Abstracts," The New York Times, 9 August 1976.

³¹⁷ "Information Bank Abstracts," The New York Times, 9 August 1976.

³¹⁸ "Information Bank Abstracts," The New York Times, 12 August 1976.

³¹⁹ Judith Miller, "Pakistan Seeking 2D Atom Reactor," Foreign Desk, The New York Times, 3 December 1982, A6.

be the “worst thing.”³²⁰ And of course, as the French later noted, it was ironic that the U.S. was denying Pakistan peaceful nuclear technology while at the same time supplying it with advanced F-16 fighter planes.³²¹

However, in a later volte face, Paris indicated that it was unlikely to proceed with the deal. Arguing that France sought to prevent the proliferation of weapons, French officials signaled that France would be happy, and was hopeful, that Pakistan would cancel the deal.³²² Still, France did not rescind its part of the bargain because of domestic political pressure.³²³ Pakistan refused to unilaterally withdraw from the agreement.

With Pakistan refusing to cancel the contract, France began to seek ways to modify the existing contract in order to limit Pakistan’s ability to produce weapons grade plutonium.³²⁴ Pakistan promptly rejected any proposals by the French to modify the contract.³²⁵ Shortly thereafter, French President Valery d’Estaing officially canceled the deal in a letter to Zia, citing proliferation concerns.³²⁶ Allegedly these heightened concerns were based on fresh evidence provided by the U.S. that Pakistan may use the plant for nuclear weapons.³²⁷ Thus, even though the deal was once supported, France had

³²⁰ “Framatome Can Bid,” Nucleonic Week 23, no. 51-52 (23 December 1982), 9.

³²¹ “Framatome Can Bid,” 9.

³²² “Information Bank Abstracts,” The New York Times, 17 December 1976.

³²³ “Information Bank Abstracts,” The New York Times, 17 December 1976.

³²⁴ Associated Press, 6 January 1978, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

³²⁵ Associated Press, 9 January 1978, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

³²⁶ Milton R. Benjamin, “Pakistan Says France Killing Controversial Nuclear Deal,” The Washington Post, 24 August 1978, Section 1, A1.

³²⁷ Cheema, “Pakistan’s Nuclear Policy,” 10.

now shifted to a more clear non-proliferation stance.³²⁸ Nonetheless, France likely had already provided Pakistan with complete blueprints for the plant and French workers were reported at the plant's construction site for some time after the cancellation.³²⁹

Ultimately, and over the course of several years, the U.S. finally exerted enough pressure on France to cancel the deal. France was not willing to provide nuclear assistance and technology at the expense of a relationship with the U.S. Because the U.S. was interfering with Pakistan's nuclear suppliers, that is, ones that were willing to trade, it created an incentive in Pakistan to maintain an ambiguous posture to minimize external pressure. Pakistan had to maintain as much secrecy as possible in its efforts to acquire nuclear technology as even previously willing suppliers were subject to change their minds, particularly given U.S. efforts to encourage non-proliferation.

Further, since some of the willing supplier states publicly insisted that they would follow the nuclear non-proliferation regime, it was necessary that Pakistan not jeopardize this relationship at the expense of declaring its ambitions. As it was, America's efforts to discourage proliferation through the tightening of export restrictions was seriously hampering Pakistan's ability to acquire the technology and materials to develop a weapons option. And as the regime developed, other states would start linking their aid to Pakistan as contingent on it signing the NPT.³³⁰ Still, while the U.S. could claim some success in slowing down Pakistan's ability to complete projects needed for its weapons

³²⁸ Benjamin, "Pakistan Says France Killing Controversial Nuclear Deal," Section 1, A1.

³²⁹ "Ban This Bomb-To-Be," World Politics and Current Affairs, International, *Economist*, 14 April 1979, 56.

³³⁰ Farhatullah Babar, "Time for a Third Nuclear Debate," in *Pakistan's Atomic Bomb and the Search for Security*, Zia Mian, ed. (Lahore: Gautam Publishers, 1995), 131.

program,³³¹ as well as keeping the program undeclared, it did not succeed in convincing Pakistan to abandon its nuclear ambitions.

3. Regional Non-Proliferation Proposals

Pakistan has on number of occasions proposed various regional non-proliferation measures, including a nuclear weapons free zone in South Asia, joint declarations to renounce the acquisition of nuclear weapons, simultaneous adherence to the NPT, and a bilateral nuclear test ban. All of these measures were aimed at India, with Pakistani compliance contingent on Indian acceptance. However, because India had previously rejected any measures that did not necessarily include China, there was little chance that it would agree to any of the Pakistani proposals. As such, most observers saw the proposals not as genuine attempts by Islamabad to arrest nuclear proliferation in South Asia, but rather as attempts to cast India as the antagonistic proliferators.

For example, shortly following the Indian nuclear test, Pakistan proposed a number of regional plans for a nuclear free zone in South Asia. Islamabad introduced a proposal in 1974 to the UN General Assembly for a South Asian Nuclear Weapons Free Zone. As recognized by Washington, the “major purpose of the plan was to embarrass India.”³³² Interestingly, the proposed plan also acknowledged that Pakistan had the right to conduct peaceful nuclear explosions, which Islamabad apparently wanted to preserve so that it could at least gain parity to India.

³³¹ U.S. Department of State, “General Advisory Committee on Arms Control and Disarmament,” 311.

³³² Central Intelligence Agency, “Pakistan’s Nuclear Program,” no. WM00212, 10.

On another occasion, a senior Pakistani official stated that Pakistan was willing to sign a bilateral agreement with India to renounce nuclear weapons.³³³ This pronouncement was made shortly after India's accusations that Pakistan was making progress in its nuclear weapons program, which Pakistan denied that it intended to produce nuclear weapons. This trend continued with Pakistan's nuclear development and its delegation reported to the United Nations that Pakistan was committed to nuclear non-proliferation and peaceful nuclear energy.³³⁴ The same year, 1990, Prime Minister Nawaz Sharif came to power and reiterated that Pakistan did not have a nuclear bomb and would be happy to sign the NPT if India did so.³³⁵

A cold reading of the historical record suggests that Pakistan proposed a number of non-proliferation measures and might have been willing to abide by the international non-proliferation regime. While this may have been true in other circumstances, it was cheap talk to the extent that Islamabad knew that India would not give up its nuclear option while China was considered a nuclear power. And Pakistan certainly was in no position to unilateral give up its nuclear option, given its military inferiority. This meant that there was little chance of stopping proliferation in South Asia based on agreement. The most meaningful agreement that India and Pakistan were willing to negotiate was that neither state would attack each other's nuclear facilities.

³³³ James A. McGinley, U.S. Embassy India, to U.S. Information Agency, "Special Media Reaction Report No. 45--Pakistan's Testing of Nuclear Triggers," Unclassified Cable 17173, 16 July 1985, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02241, 2.

³³⁴ "UN Delegate Reaffirms Peaceful Use."

³³⁵ "Pakistan: Nuclear Program Can Be Independent, Khan Says," 13-14.

Because India was always unlikely to respond favorably to the Pakistani plans, they were more likely proposed by Islamabad as a way of bolstering its non-proliferation credentials in the face of criticism over its nuclear program. As such, none of these measures were ever given serious consideration, with the exception of establishing a nuclear hotline and the agreement to not attack each other's nuclear facilities. And while the two nuclear agreements were helpful in reducing tensions between the two adversaries, they did not contain provisions that affected either state's nuclear posture. Therefore, there was a dearth of regional non-proliferation measures to constrain Pakistan's nuclear posture.

In sum, international and regional non-proliferation institutions and agreements have had little effect on Pakistan's nuclear posture. The international non-proliferation regime has mattered to the extent that some supplier states were unwilling to provide Pakistan with nuclear material or technologies in the absence of Islamabad safeguarding all of its facilities. The United States also put pressure on other, less willing states such as France in order to constrain Pakistani proliferation. The effect of these efforts was to slow down Pakistan's nuclear progress while it recalibrated its efforts towards indigenous production and more heavy reliance on Chinese assistance. Regional measures did not come to fruition, and thus had no effect on Pakistan's program.

While Pakistan had some incentive to keep its program secret so that it could avoid provoking states that did not have stringent non-proliferation standards, this was a lesser concern because it still faced the same difficulties regardless of its stance. That is, the fact that Pakistan was proliferating was driving U.S. and other state behavior, not

Islamabad's nuclear posture. Further, to the extent that Pakistan's concerns related to the international non-proliferation regime, it was based on material constraints imposed by members of the regime. There is no evidence that Pakistani leaders embraced or internalized the norms of the regime, or sought to further it in any meaningful way.

F. Domestic Politics/Bureaucratic Interests

What role has domestic politics or bureaucratic interests played in Pakistan maintaining a posture of ambiguity through the 1998 nuclear tests? There are two ways that domestic politics are hypothesized to have influenced Pakistani nuclear ambiguity. First, there has been some lack of domestic consensus among the various interests as to when Pakistan should publicly declare its nuclear progress and intentions. Second, other analysts point to the increase in "nuclear nationalism" in the 1990s by politicians seeking to gain or maintain power and argue that this forced the Pakistani decision-makers to test in 1998. While there is evidence of both of these dynamics, these domestic political factors were not themselves sufficiently strong to alter Islamabad's stance through 1998. These arguments are discussed below.

1. Military Preference for Ambiguity

Pakistani leadership, similar to other states, was internally divided as to the extent it should publicize its nuclear ambitions, as well as the timing. Early on, there was little consensus among the political leadership, military and nuclear scientists over the appropriateness of even pursuing a weapons option. The pro-bomb advocates, such as Bhutto, believed that Pakistani security necessitated nuclear weapons. However, others

were concerned that Pakistan could not afford the investment and that nuclear weapons would do little to solve Pakistan's chronic insecurity.

Once the decision was made by Bhutto to pursue a nuclear option, the question of openness nonetheless remained unresolved. As previously discussed, Bhutto and then his successor Zia, primarily followed a path of ambiguity. The other major actor during this time period was the military. After losing the 1965 and 1971 wars with India, Pakistan's military began to view nuclear weapons as essential to Pakistani security because of its conventional inferiority. Most of Pakistan's military leaders view a small nuclear program as important for providing Pakistan a deterrent against New Delhi in the face of a conventional military imbalance and unreliable allies that may not come to Islamabad's aid.³³⁶

For its part, the military has dominated nuclear policy decisions in Pakistan for most of its history.³³⁷ There is generally "little or no input on nuclear policy making from senior political leaders and no involvement from the wider public."³³⁸ Instead, the politicians have generally deferred to military on nuclear matters, in the hope of garnering military support as a precondition for staying in power.³³⁹ Thus, the military was certainly influential enough in Pakistan's political structures that it could have pushed for a more transparent Pakistani nuclear policy if there was a widespread

³³⁶ Stephen P. Cohen, U.S. State Department, "Pakistan: Security Planning and the Nuclear Option," Limited Official Use, Intelligence Report 83-AR, 6 March 1981, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00244, 8.

³³⁷ Ahmed and Cortright, Pakistan and the Bomb, 7.

³³⁸ Ahmed and Cortright, Pakistan and the Bomb, 7.

³³⁹ Ahmed and Cortright, Pakistan and the Bomb, 7.

consensus about its utility.³⁴⁰ However, the Pakistani military has historically resisted the idea of relying on a nuclear deterrent at the expense of conventional forces. This meant that ambiguity was a necessity in order to preserve relationship with sources of external assistance, including the U.S., even as Pakistan continued to develop its nuclear capability.

There have also been other divisions as to the timing and extent of public disclosure of the nuclear program. Some generals, retired generals, and religious leaders in Pakistan had lobbied for nuclear tests as a way to cut off international pressure and also make sure that the “no elected government is able to bend under economic pressure and accept safeguards, thus destroying the programme.”³⁴¹ Nonetheless, these voices were unsuccessfully in altering Pakistan’s policy.

In short, the Pakistani military primarily controlled nuclear policy, and preferred a policy of relying on conventional force planning while developing nuclear weapons. Based on these requirements, ambiguity was the policy of choice as it allowed Pakistan to pursue external sources of conventional weaponry while also seeking to gain a credible deterrent in the face of Indian superiority. There was some domestic dissent with this position, but the reality is that the decision for Pakistan to go nuclear was not made until India forced the issue in 1998, when the military was concerned with the security implications from New Delhi’s new stance.

³⁴⁰ For the overt and covert involvement of the civil-military bureaucracy in Pakistani politics, see Yunas Samad, “The Military and Democracy in Pakistan,” *Contemporary South Asia* 3, no. 3 (1994).

³⁴¹ Khaled Ahmed, “The Nuclear Non-proliferation Treaty and Pakistan,” in *Pakistan’s Atomic Bomb and the Search for Security*, Zia Mian, ed. (Lahore: Gautam Publishers, 1995), 12.

2. Nuclear Nationalism

Another domestic political factor that some scholars point to as causing the 1998 tests was nuclear nationalism, but there is not a clear theory for how it would have operated prior to then. According to this perspective, Pakistani politicians began tying the patriotism of a regime to its willingness to pursue a nuclear option. If a political leader appeared too weak on the nuclear issue, or potentially to cave to external pressure on the program, opponents would attack their patriotism. This pattern gained more prominence during the 1990s, as a number of different leaders came to power and had difficulty staying in office. However, while this certainly has been a dynamic in Pakistan's domestic political arena, it doesn't explain why Pakistan maintained a policy of nuclear ambiguity for most of its history.

Pakistan's general population supports a nuclear weapons capability.³⁴² Its leaders were also often unpopular, and for example, it would have been in President Zia's interests to conduct tests in the early 1980s to gain domestic popularity.³⁴³ However, with other factors militating against a test, opposition leaders started capitalize on popular support by using the nuclear issue to criticize their political opponents.

Starting approximately in 1988, politicians seeking to gain power through Pakistani electoral process began questioning their opponent's nuclear stance. If there was any suggestion that the other side might compromise on the nuclear issue, they were

³⁴² Central Intelligence Agency, "Pakistan's Nuclear Program," no. WM00212, 1.

³⁴³ U.S. Department of State, "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," no. WM00247, 2.

denigrated by their political opponent.³⁴⁴ Indeed, “the nuclear issue has been used as a stick by both the incumbent governments and the opposition to beat each other with. Each has sought to establish its patriotic credentials by accusing the other of trying to damage Pakistan’s security shield by seeking accommodation on the nuclear issue.”³⁴⁵

For example, during the 1988 and 1990 elections, Nawaz Sharif accused the PPP (Benazir Bhutto’s party) of being soft on bomb issue.³⁴⁶ Moreover he vowed that he would explode a nuclear weapon when he came to power.³⁴⁷ Yet, when Sharif came to power in 1990, he indicated that Pakistan did not have a nuclear bomb and that Pakistan would sign the NPT if India also did so.³⁴⁸ Sharif later claimed that Pakistan had the ability to assemble at least one nuclear device, although it had not done so.³⁴⁹ This move largely attributed to politics as he sought to further his patriotism at home while diverting attention from Pakistan’s mounting social and economic problems.³⁵⁰ At the same time, he underscored that Pakistan’s nuclear program was for peaceful purposes, and continued Zia’s policy of ambiguity in an effort to engage the U.S. and shore up Pakistan’s failing

³⁴⁴ Chari, Indo-Pak Nuclear Standoff, 22. An opponent’s anti-India stance had long been used as a yardstick of patriotism in politics.

³⁴⁵ Hoodbhoy, Nuclear Myths and Realities, 26.

³⁴⁶ Ahmed, “The Nuclear Non-proliferation Treaty and Pakistan,” 131.

³⁴⁷ Ahmed, “The Nuclear Non-proliferation Treaty and Pakistan,” 131.

³⁴⁸ “Pakistan: Nuclear Program Can Be Independent,” 13-14.

³⁴⁹ Chakma, “Road to Chagai,” 907.

³⁵⁰ Ahmed and Cortright, Pakistan and the Bomb, 40-41.

economy.³⁵¹ For her part, former Prime Minister Bhutto acknowledged in 1992 that Pakistan had a nuclear weapons program, which resulted in the delay of Japanese aid.³⁵²

When Benazir Bhutto again returned to power and succeeded Sharif in 1993, he stated that Pakistan possessed an atomic bomb.³⁵³ Sharif later revealed that he made this statement in order to prevent Bhutto from rolling back the nuclear program under U.S. pressure.³⁵⁴ Others also speculated that his motives were to embarrass the Bhutto government and ingratiate himself with the Pakistani Army.³⁵⁵ The Bhutto government subsequently “rejected Washington’s non-proliferation initiatives and agreed in December 1993 not to roll back the nuclear programme and to continue with Pakistan’s existing nuclear policy line.”³⁵⁶ She also reaffirmed that “[a]s long as there is no threat to our security, the programme will remain peaceful.”³⁵⁷

Yet, once a politician was in power, they would have a more moderated position on nuclear weapons, given the constraints imposed by the military and external factors. Indeed, when they were in office, “both Benazir Bhutto and Nawaz Sharif tended to

³⁵¹ Matinuddin, The Nuclearization of South Asia, 99.

³⁵² “Japan Aid Release Called Tilt to Pakistan Nonproliferation View,” Nucleonics Week, 19 August 1993, 13.

³⁵³ Quoted in Chakma, “Road to Chagai,” 907.

³⁵⁴ Chakma, “Road to Chagai,” 907.

³⁵⁵ Chari, Indo-Pak Nuclear Standoff, 38.

³⁵⁶ Chakma, “Road to Chagai,” 907.

³⁵⁷ “Bhutto Affirms Commitment to Nuclear Programme,” Reuters, 7 December 1993.

subscribe to the idea of a cautious nuclear policy. Once in the opposition, they would adopt a tougher line and argue for a more independent nuclear stand.”³⁵⁸

As the foregoing suggests, during the 1990s cracks began to appear in Pakistan’s policy of ambiguity in the form of increased nuclear rhetoric and declarations from opposition parties. Nonetheless, the official government policy was to maintain that Pakistan’s program was peaceful and there were no indications that this was about to change until India tested. As discussed later, the Indian test brought numerous calls from the opposition leadership for Pakistan to test in response. However, this was a permissive condition that the Pakistani leadership factored into choosing to test, but was not the primary consideration.

II. Explaining the 1998 Pakistani Tests

On May 28, 1998, Prime Minister Nawaz Sharif stated that Pakistan had conducted five nuclear tests, which “settled the score with India.”³⁵⁹ His justification was that “Pakistan was left with no choice but to detonate its own nuclear devices.”³⁶⁰ In response to the tests, Pakistanis cheered in the streets while “India’s parliament erupted into shouting as opposition leaders blamed the government for starting a nuclear arms race.”³⁶¹ On May 30th, Pakistan conducted its final test.³⁶²

³⁵⁸ Yasmeen, “Pakistan’s Nuclear Tests,” 45.

³⁵⁹ “Pakistan Conducts Five Nuclear Tests,” *The New York Times*, 28 May 1998.

³⁶⁰ “Pakistan Conducts Five Nuclear Tests,” *The New York Times*, 28 May 1998.

³⁶¹ “Pakistan Conducts Five Nuclear Tests,” *The New York Times*, 28 May 1998.

³⁶² IDSA Database, “Chronology of Responses to Pokhran II,” *Strategic Digest* 7 (1998), 1096.

Pakistan's decision to test was based on India publicly "going nuclear" earlier in May by testing. As previously discussed, Pakistan's nuclear policy is largely India reactive, and its response in this case was also based on New Delhi's decision to conduct test and declare itself a nuclear weapons state. Nonetheless, a set of complicated strategic calculations faced the Pakistani leadership as it sought to grapple with countervailing security considerations. In particular, Prime Minister Sharif understood that testing would lead to further international sanctions against an already economically weak Pakistan. At the same time, India's posture was seen as very provocative and led to security concerns within the military as to whether India had fundamentally shifted its approach to Kashmir. As it became clear to Pakistani leaders that the international community's response to the India test was rather muted, combined with the lack of a significant breakthrough in the relationship with the Americans, the costs did not appear to outweigh the security benefits.

In the background, there was also an increasing chorus of political opposition voices called for the government to respond with its own tests. This latter factor further supported the government's decision to test, but was not itself determinative of the decision. These dynamics are discussed below.

A. Regional Security Environment

Security was one of the primary issues facing Pakistani decision makers. Given the historical conflict with India, the nuclear tests were perceived as a significant threat to Pakistani security. Still, the best way to ensure security was not clear. The Indian tests

forced the Pakistani leadership to evaluate whether responding in kind would bolster Pakistani security.

Prior to the Indian tests, Pakistan preferred to maintain a policy of ambiguity in South Asia. The leadership felt that they had successfully establish nuclear deterrence with India, and that this compensated for Pakistani conventional weakness and enabled it neutralize any attempted Indian nuclear blackmail.³⁶³ Consistent with this stance, during the mid-1990s when public reports surfaced that India was considering testing, Pakistani leadership acknowledged their nuclear capability, while also seeking to maintain the status quo in South Asia.

For example, Pakistani Prime Minister Benazir Bhutto warned India that if it tested nuclear weapons, Pakistan would be forced to “follow suit.”³⁶⁴ Bhutto further hoped that “the day will never arise when we have to use our knowledge to make and detonate a device and export our technology.”³⁶⁵ She further warned that Indian testing would trigger a South Asian “proliferation race.”³⁶⁶ Former Pakistani Army Chief Beg also urged restraint, saying that while Pakistan should continue to develop nuclear weapons, it “should not become a party to such madness.”³⁶⁷

³⁶³ Rizvi, *India, Pakistan and the United States*, 99.

³⁶⁴ “Bhutto Warns India Against Testing Nuclear Device” *Daily Telegraph* (London), 6 January 1996, in *NTI Nuclear and Missile Developments*, http://nti.org/e_research/profiles/Pakistan/nuclear, 12.

³⁶⁵ “Bhutto Warns India Against Testing Nuclear Device.”

³⁶⁶ “Bhutto Warns India Against Testing Nuclear Device.”

³⁶⁷ “Bhutto Warns India Against Testing Nuclear Device.”

The next year, then Pakistani Prime Minister Nawaz Sharif also acknowledged Pakistan's nuclear capability, stating "the issue of nuclear capability is an established fact. Hence the debate on this issue should come to an end."³⁶⁸ Western diplomats, for their part, sought to maintain ambiguity in South Asia, arguing that nuclear testing would ruin "the delicate ambiguity that each country maintains about its nuclear programme."³⁶⁹

And while Pakistan did not necessarily want testing, or at least to not initiate it, Islamabad took precautions to prepare for testing in the event India did so. For example, in February 1996 reports surfaced that Pakistan was preparing a test site in the Chagai Hills and was considering a nuclear test in response to a planned test by India.³⁷⁰ Pakistan denied these allegations.³⁷¹

The importance of these preparations is that they signaled that Pakistan had linked its nuclear posture to India's stance, and was technologically prepared to respond.³⁷² Because Pakistan's posture was dependent on India's, and it had already indicated that it would also publicly go nuclear when India did, the tests in 1998 essentially followed Islamabad's predetermined routine. Nonetheless, Pakistani leadership and Prime

³⁶⁸ Shahid Ahmed Khan, "Sharif Acknowledges Pakistan's Nuclear Capability," The Times of India, 8 September 1997.

³⁶⁹ "Bhutto Warns India Against Testing Nuclear Device."

³⁷⁰ "Pakistan: Article Views Case for Further Nuclear Tests," Muslim (Islamabad), 25 February 1996, in NTI Nuclear and Missile Developments, http://nti.org/e_research/profiles/Pakistan/nuclear, 1 and 4.

³⁷¹ "Pakistan: Article Views Case for Further Nuclear Tests."

³⁷² Benazir Bhutto reportedly claimed that Pakistan's test preparations in 1996 were designed to deter India from testing, while also warning the U.S. to put pressure on India. Ahmed, "Pakistan's Nuclear Weapons Program," 194.

Minister Sharif had a number of countervailing pressures to accommodate, including whether the tests would contribute to Pakistani security.

After the Indian tests in 1998, some of the leadership was initially divided between those who wanted to garner economic and military benefits from restraint, and others supported an immediate test to show that Pakistan had a nuclear capability. Opponents of testing feared that Pakistan would be left more insecure in the future by testing because economic sanctions were sure to follow and would further exacerbate Pakistan's existing economic weakness in comparison to India. Proponents of testing focused on bolstering Pakistan's nuclear credibility and deterrence in the face of India's now open nuclear weapons posture. The Indian tests thus led to a "tussle between supporters of overt weaponization and proponents of the official policy of nuclear ambiguity."³⁷³ Still, it is important to note that this debate occurred while the test preparations were already underway.³⁷⁴ This meant that to stop the tests, there would have had to been a significant change to warrant Pakistan not following through on its default reaction to India testing.

1. Economic Arguments in Opposition to Testing

For policymakers opposed to testing in response to India, which notably included Prime Minister Sharif and Finance Minister Sartaj Aziz, they were generally concerned about the economic impact on Pakistan. If Pakistan tested, it was economically

³⁷³ Ahmed, "Pakistan's Nuclear Weapons Program," 194.

³⁷⁴ Pakistani test preparations appeared to have been underway prior to May 16th. Generally, reports to the U.S. lagged by about two days; this would put the beginning of test preparations around May 14th. U.S. Department of State, "Secretary's Morning Summary for 5/16/98," Top Secret Cable 000354, 16 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00500, 2.

vulnerable from an overt arms race with India and renewed sanctions from other states. Moreover, for opponents of a test, a nuclear test would do little to add deterrent credibility.³⁷⁵ Rather, the concern was that testing would make Pakistan more insecure by threatening its economic viability.

Pakistan was extraordinarily weak at the time of Indian test. In some ways, Indian testing could not have come at a much worse time for Pakistan. India had recently benefited from economic growth and better relations with the U.S. and China. In contrast, Pakistan was vulnerable since the draw down of the Cold War, having lost American military and economic support from sanctions, which in turn further exacerbated its already weak economy. In 1996 Pakistan was regarded as one of the most corrupt countries in the world and was near economic collapse.³⁷⁶

Thus, Pakistan was in a precarious financial state when India tested in 1998. In near bankruptcy, the government could ill-afford to engage in an arms race with the much stronger India. For example, India's 1996 GDP was estimated at \$371 billion, in comparison to Pakistan's \$64 billion.³⁷⁷ As some Pakistani analysts understood prior to 1998, India was in a position to accelerate the arms race that could "pauperise Pakistan, and thus achieve its presumed goal of disintegrating Pakistan without firing a shot, as the US did with the USSR."³⁷⁸ They also recognized that provocative statements by Indian

³⁷⁵ Yasmeen, "Pakistan's Nuclear Tests," 50.

³⁷⁶ Tahir-Kheli, *India, Pakistan and the United States*, 26.

³⁷⁷ T.V. Paul, "India, the International System, and Nuclear Weapons," in *Nuclear India in the Twenty-first Century*, D.R. SarDesai and Raju G.C. Thomas, eds. (New York: Palgrave, 2002).

³⁷⁸ Inayatullah, *The Nuclear Arms Race*, 94.

hawks were possibly an attempt to “lure” Pakistan into testing and the likely ensuing arms race.³⁷⁹

Additionally, Pakistan was in a poor economic position to endure the sanctions that were sure to follow testing. Sanctions would stop foreign aid, deter investors, and propel the economy towards collapse with \$32 billion dollars in foreign debt.³⁸⁰ Moreover, opponents argued, that this would limit the amount of money for defense and would further weaken Pakistan’s capabilities in the face of the Indian threat.³⁸¹ For his part, Prime Minister Sharif was “aware of Pakistan’s vulnerability to economic sanctions” and for this reason, did not want to undertake a retaliatory test.³⁸² There was also some support within the Pakistani media for the position that Pakistan was much more vulnerable to sanctions than India. It was counseled that the government should at least assess the global measures against India, lest a premature Pakistani test would lead to sanctions against Islamabad and shift the international focus from India.³⁸³

Further, if Pakistan refrained from testing, it would be in a better position benefit from the proffered economic and military assistance from states hoping to dissuade it.³⁸⁴

³⁷⁹ Inayatullah, The Nuclear Arms Race, 94.

³⁸⁰ Yasmeen, “Pakistan’s Nuclear Tests,” 50.

³⁸¹ Yasmeen, “Pakistan’s Nuclear Tests,” 50.

³⁸² Ahmed, “Pakistan’s Nuclear Weapons Program,” 194.

³⁸³ U.S. Department of State, “Secretary’s Morning Summary for 5/15/98,” Top Secret Cable, 15 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00499, 3-4.

³⁸⁴ Rizvi, India, Pakistan and the United States, 105.

In particular, Pakistan would be in a better position to leverage external economic and military aid from its once close ally, the United States. By currying U.S. non-proliferation favor, Pakistan might have been able to gain more security over the long run through not testing,³⁸⁵ especially if significant conventional assistance was forthcoming.

In short, some Pakistani leaders did not see responding to the Indian with one of their own as enhancing Pakistan's security. Rather, since Pakistan had already established a nuclear deterrent, they preferred to avoid economic insecurity by drawing sanctions from testing. Additionally, they hoped that their restraint would be rewarded by the international community with increased economic and military assistance. However, when significant assistance was not forthcoming, this position steadily eroded in favor of other security arguments that emphasized the importance of Pakistan demonstrating that it had a credible deterrent. Instead, as tensions increased over Kashmir following the Indian tests, the security environment became even more precarious. And because the military was essentially in control of Pakistan's nuclear weapons program, their preferences tilted the scale even more towards testing.

2. Conventional Disparity and India's Posture Support Arguments Favoring Testing

Proponents of Pakistani testing, notably the Chiefs of Staff of the Army, Navy and Air Force, were mainly concerned that Pakistan's security necessarily relied on a demonstration that it possessed a credible nuclear deterrent vis-à-vis India. The military

³⁸⁵ Yasmeen, "Pakistan's Nuclear Tests," 51.

security arguments focused on Pakistan's conventional inferiority and in the days following the Indian test, India's hawkish rhetoric on Kashmir.

Pakistan was heavily dependent on a nuclear deterrent given its relative weakness compared to India. As a much weaker state, Pakistan became increasingly reliant on its nuclear capability to equalize India's relatively substantial economic and military power. Further exacerbating Pakistan's security was a "growing disparity between Indian and Pakistani conventional military capabilities" leading up to the tests.³⁸⁶

Moreover, in the wake of the Indian test, Pakistani leaders viewed the actions of the Indian nationalist BJP party with increasing apprehension. Not only did the BJP choose to publicly declare India a nuclear weapons state, but some Pakistanis believed that that India would use its nuclear status to pressure Pakistan to accept India's perspectives on regional issues and especially on India-Pakistan disputes [Kashmir].³⁸⁷ India did little to dispel these fears; on the contrary, India's BJP party issued a number of nationalist statements directed at Pakistan, which further heightened the security concerns.³⁸⁸

On May 18th, India's Home Minister, L.K. Advani added to Pakistan's concerns related to Kashmir. Advani issued "new warnings on Kashmir," indicating that India's new status as a nuclear weapons state had produced a "qualitative" change between India and Pakistan, and that a new task force on Kashmir was being established to deal more

³⁸⁶ Cheema, "Pakistan's Nuclear Use Doctrine," 169.

³⁸⁷ Rizvi, *India, Pakistan and the United States*, 101.

³⁸⁸ Rizvi, *India, Pakistan and the United States*, 101.

effectively with Pakistan's "proxy war."³⁸⁹ Prime Minister Sharif responded that Advani's statement was "[a] naked assertion of hostile Indian intentions toward Pakistan."³⁹⁰

These statements were followed by reports of "unusually heavy shelling" along the LOC in Kashmir.³⁹¹ Sharif, of course, was kept briefed about the troops and positions along the line of control in Kashmir.³⁹² In response to the situation, Pakistani Army Chief Karamat told senior officials that the apparent change in Indian tactics could have "serious implications" and might require that Pakistan "change its stance."³⁹³

Adding to this tension were intelligence reports of two unidentified F-16 aircraft flying on the edge of Pakistan's airspace and fueled fears that Pakistan's nuclear facilities would be subject to attack.³⁹⁴ A further report suggested that Israeli aircraft had landed on Indian airfields and also heightened fear of a strike.³⁹⁵ These reports allegedly

³⁸⁹ U.S. Department of State, "India, New Warnings on Kashmir; India, Scant Effect of U.S. Sanctions," Top Secret Cable 000389, 20 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00504, 1; Central Intelligence Agency, "India: BJP Flexing Muscles, But How Far Will It Go?," Secret Intelligence Report, NESAF IR 98-40137, 29 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00511, 4.

³⁹⁰ U.S. Department of State, "Secretary's Morning Summary for 5/21/98," Top Secret Cable 000398, 21 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00505, 2.

³⁹¹ U.S. Department of State, "Secretary's Morning Summary for 5/22/98," Top Secret Cable 000407, 22 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00507, 2.

³⁹² Rizvi, India, Pakistan and the United States, 108.

³⁹³ U.S. Department of State, "Secretary's Morning Summary for 5/26/98," Top Secret Cable, 26 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00509, 1.

³⁹⁴ Rizvi, India, Pakistan and the United States, 108.

³⁹⁵ Matinuddin, The Nuclearization of South Asia, 135. On the 27th, Israel did have cargo aircraft that had transported Nethanyahu's cars to Uzbekistan for his visit there.

“caused much panic among Pakistan’s policymakers” and on May 27th, the Ghauri missiles were deployed.³⁹⁶ The cumulative effect of these developments, “created a strong impression in Pakistan that having declared itself a nuclear power, India now intended to adopt a more forceful approach toward Kashmir, and might even be tempted to take military action across the LOC.”³⁹⁷

For some Pakistani policymakers, nuclear weapons were the only way counter stronger Indian conventional forces and preserve some balance where Pakistan would not be subject to nuclear threats or blackmail.³⁹⁸ They argued that the credibility of Pakistan’s nuclear deterrence required testing, rather than just the knowledge that Pakistan could carry out tests.³⁹⁹ Otherwise, Islamabad feared that failing to test in the face of “New Delhi’s provocation will undermine the credibility of Pakistan’s claim to a nuclear weapons capability.”⁴⁰⁰ Retaining nuclear parity in this context was paramount for proponents advocating that Pakistan test its own nuclear devices, even though the West promised aid and threatened sanctions.⁴⁰¹

³⁹⁶ Rizvi, *India, Pakistan and the United States*, 108. There were doubts of the credibility of the government reports as potentially creating another justification for Pakistan to test. *Ibid.*

³⁹⁷ Rizvi, *India, Pakistan and the United States*, 101. As Rizvi notes, some of the harsh rhetoric from India may have been part of a larger effort to induce Pakistan into testing and thus also carry much of the international burden for publicly demonstrating its nuclear capabilities.

³⁹⁸ Cheema, “Pakistan’s Nuclear Use Doctrine,” 169.

³⁹⁹ Yasmeen, “Pakistan’s Nuclear Tests,” 49.

⁴⁰⁰ U.S. Department of State, “Secretary’s Morning Summary for 5/16/98,” no. WM00500, 2.

⁴⁰¹ Paul, “India, the International System, and Nuclear Weapons,” 98, footnote 7.

The position that Pakistan needed to establish that it actually had a nuclear capability was not without support. Historically, Pakistan had predicated its nuclear response on India, as well as sending the mixed message that it was not pursuing nuclear weapons. If Pakistan did not respond in kind to the new nuclear reality in South Asia, there would be questions as to whether Islamabad had been bluffing all along about the extent to which it had acquired a nuclear weapons capability. The lack of response would further feed Indian skeptics who claimed that Pakistan did not have a workable nuclear capability. In this context, the Pakistani test was to make sure that it was clear to India that it had a workable nuclear weapons capability. In short, immediate, regional security concerns forced Islamabad to respond to the tests in kind, even though there were questions of how well Pakistan would weather the increased regional tensions and long-term economic effects from its decision.⁴⁰²

B. Patron State Pressures – The United States and China

The United States sought to persuade Pakistan to refrain from testing in response to India. However, because Washington had previously imposed economic and military sanctions and the Clinton administration offered minimal incentives beyond the promise to seek removal of the sanctions, U.S. no-proliferation pressures were ineffective.

China's reaction, as a long-time patron of Pakistan, was also important to Pakistani decision-making. While there is little direct evidence of China's position, Beijing probably did not favor the tests but was also unwilling to exert significant

⁴⁰² Reportedly, some leadership failed to make a "dispassionate" assessment of the economic sanctions and their likely result, instead choosing to believe that they would have little impact. Rizvi, India, Pakistan and the United States, 108.

pressure on Pakistan to refrain from testing. Thus, patron state pressures were relatively ineffective or unapplied, and were not sufficient to prevent the Pakistani nuclear tests in a regional security environment that had drastically change from India's earlier tests.

1. U.S. Efforts to Dissuade Testing

In the wake of the Indian tests, the United States under President Clinton sought to dissuade Pakistan from testing in response. Through diplomacy, the U.S. combined carrots and sticks in an effort to shift the Pakistani calculation towards exercising restraint. Clearly these efforts ultimately failed.

On May 11th, the United States requested that Pakistan refrain from responding to India with a nuclear test of its own.⁴⁰³ President Clinton himself called Sharif four times between May 12th and the 27th, urging Pakistani restraint in response to the Indian tests.⁴⁰⁴ Clinton also sent several high-ranked administration officials to Pakistan, with offers of U.S. economic and military assistance if Pakistan would forgo testing.⁴⁰⁵ Through diplomacy, the U.S. encouraged Pakistan to "occupy the moral high ground" by not testing.⁴⁰⁶ U.S. officials underscored that Pakistan would exacerbate the current situation in South Asia by testing and encourage a competitive arms race that it could not afford.⁴⁰⁷

⁴⁰³ IDSA Database, "Chronology of Responses to Pokhran II," 1091.

⁴⁰⁴ Rizvi, India, Pakistan and the United States, 103.

⁴⁰⁵ Rizvi, India, Pakistan and the United States, 103.

⁴⁰⁶ IDSA Database, "Chronology of Responses to Pokhran II," 1092.

⁴⁰⁷ IDSA Database, "Chronology of Responses to Pokhran II," 1092.

In terms of economic and military assistance, the Clinton Administration was willing to seek repeal to the Pressler Amendment, under which Pakistan was already subject to imposed sanctions. This would open the door to releasing the 28 F-16 aircraft that Pakistan had previously paid for but the U.S. had not delivered.⁴⁰⁸ The U.S. also offered \$5 billion in development funds through the World Bank and IMF over the next five years.⁴⁰⁹

However, the U.S. offer fell far short of Pakistan's expectations. The Pakistani leadership hoped for "at least 200 updated F-16 aircraft, advanced radar, high-altitude anti-aircraft missiles, anti-ship missiles, air-to-air refueling tankers, tanks, ships and submarines."⁴¹⁰ In terms of economic assistance, they hoped for \$15 billion for the public sector and for Pakistan's foreign debt to be forgiven.⁴¹¹ Moreover, Clinton was clear that the U.S. would not extend security commitments in the event of an Indian attack.

In terms of sticks, the U.S. was required under domestic law to impose additional sanctions if Pakistan conducted a nuclear test. The U.S. had already imposed sanctions under the Pressler Amendment, which reduced the level of economic and military assistance the U.S. could give Pakistan. These sanctions were modified in 1995 under the Brown Amendment, which provided for a one-time modification of the Pressler

⁴⁰⁸ Yameen, "Pakistan's Nuclear Tests," 53.

⁴⁰⁹ Yasmeen, "Pakistan's Nuclear Tests," 53.

⁴¹⁰ Yasmeen, "Pakistan's Nuclear Tests," 51.

⁴¹¹ Yasmeen, "Pakistan's Nuclear Tests," 51. Another source indicates the Pakistan was seeking an additional \$5 billion to the originally proffered \$5 billion. Rizvi, India, Pakistan and the United States, 103.

Amendment to release \$370 million dollars worth of embargoed military equipment and removed non-military aid from under the ambit of Pressler. The U.S. also resumed training of Pakistani Army officers. Still, the U.S. retained the 28 F-16s Pakistan had already paid for.

So in 1998, the primary stick available to the U.S. was the Glenn Amendment, legislation originally designed to deter nuclear testing by non-nuclear states as defined under the NPT.⁴¹² The Glenn Amendment called for the U.S. refrain from providing bilateral aid and to oppose development loans from the IMF, ADB, and the World Bank.⁴¹³ At stake was approximately \$100-200 million dollars of funds from the IMF and \$1-1.5 billion from other international financial institutions that Pakistan received annually in the mid-1990s.⁴¹⁴

In short, the Pakistanis were not impressed with the overall lack of economic and military assistance. Rather, the U.S. offer did little to bolster Pakistan's near-term security, which provided little leverage for opponents of testing. Sanctions were a considered factor but in the end were not enough leverage to prevent Pakistan from testing, particularly since Pakistan was already weathering previously imposed U.S. sanctions for its nuclear activities.

⁴¹² Dinshaw Mistry, "Diplomacy, Sanctions, and the U.S. Nonproliferation Dialogue with India and Pakistan," *Asian Survey* 39, no. 5 (September-October 1999), 754-755.

⁴¹³ Mistry, "U.S. Nonproliferation Dialogue with India and Pakistan," 754-755.

⁴¹⁴ Mistry, "U.S. Nonproliferation Dialogue with India and Pakistan," 757, citing IMF, Worldbank and USAID data.

2. Possible Chinese Opposition to Testing

It is unclear whether China encouraged Pakistan to respond to India's test with its own, or whether it urged Pakistani restraint. There is evidence that a Pakistani delegation visited China after the Indian tests, but the result of this meeting is not certain. One analyst suggests that China likely supported Pakistan conducting its own tests, based on China's unwavering nuclear support of Pakistan.⁴¹⁵ China also had interests in curbing the growth of Indian power and influence in South Asia.⁴¹⁶

Still, there is other evidence that China preferred Pakistani restraint to the extent that China's own proliferation supply record would come under scrutiny as a result of the tests. Some U.S. analysis suggests that China was preoccupied with domestic reform and "seeking to project a responsible image in the run-up to President Clinton's visit."⁴¹⁷ In accordance with these interests, "China had adjusted its strong pro-Pakistani tilt of the 1960s-1980s with the intention of sustaining a more even-handed posture on the subcontinent, despite recent Indian provocations."⁴¹⁸ Notwithstanding China's attempts at polishing its image, its policies would likely be under international scrutiny from Pakistani test, as China had supported Islamabad's nuclear and missile programs.⁴¹⁹

Consistent with the interest in distancing itself, on June 3rd after both India and Pakistan

⁴¹⁵ Paul, "The Causes and Consequences," 182-183.

⁴¹⁶ U.S. Department of State, "Secretary's Morning Summary for 5/27/98," Top Secret Cable, 27 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00510, 3.

⁴¹⁷ U.S. Department of State, "Secretary's Morning Summary for 5/27/98," no. WM00510, 3.

⁴¹⁸ U.S. Department of State, "Secretary's Morning Summary for 5/29/98," Top Secret Cable 000484, 29 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00512, 3.

⁴¹⁹ U.S. Department of State, "Secretary's Morning Summary for 5/27/98," no. WM00510, 3.

had tested, Chinese President Jiang Zemin felt compelled to deny that China had helped Pakistan make the bomb.⁴²⁰ China also preferred the avoidance of substantial escalation of tensions in South Asia, and “Beijing has no desire to be drawn deeper into the subcontinent flare-up.”⁴²¹

While China had interests in curbing New Delhi’s position in South Asia, as well as avoiding the spotlight for assisting Pakistani proliferation, it is unlikely that Beijing took a strong stance with Pakistan either for or against testing. As reported within the U.S. government at the time, China “neither forcefully imposed its will on Pakistan to defer testing in response nor gave its old friend an unambiguous green light to proceed. Beijing instead maintained slim hopes that adverse global reaction fanned by China [towards] India’s test would somehow purchase a Western security guarantee for Islamabad and compel New Delhi to tone down its aggressive stance.”⁴²² In other words, China as a patron state to Pakistan was not a significant factor in either stopping or encouraging a Pakistani response to India’s tests.

China initially voiced relatively muted criticism of India testing in public, although it sought to identify India as the regional antagonist. However, when India suggested that China was a primary security threat leading to the tests, China responded that India’s tests constituted an “outrageous contempt of the common will of the

⁴²⁰ IDSA Database, “Chronology of Responses to Pokhran II,” 1097.

⁴²¹ U.S. Department of State, “Secretary’s Morning Summary for 5/29/98,” no. WM00512, 3.

⁴²² Strobe Talbott, U.S. Department of State, “TNR Assessment: China/South Asia, Gearing up for Geneva,” Confidential Cable, 099524, 3 June 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00518, 2.

international community.”⁴²³ The Chinese government further contended India’s actions “not only threatened China, but other neighbours as well,”⁴²⁴ a probable reference to Pakistan.

After Pakistan responded with its own tests, China expressed disappointment and regret over the tests but blamed India as the instigator of the nuclear crisis in South Asia.⁴²⁵ Beijing further requested that both nations practice restraint to keep the situation from further deteriorating.⁴²⁶ And despite the traditionally close relationship between the states, some commentary also suggested that China was not particularly helpful to Pakistan in helping the latter from its diplomatic isolation.⁴²⁷

In short, there is little evidence to suggest whether China privately encouraged or discouraged Pakistan to test in response to India. Publicly, China has predictably drawn attention to India instigating the testing, but also has not strongly supported the Pakistani position. Given Chinese interest in portraying itself as a responsible great power, it likely did not welcome the tests. However, it was probably unwilling to damage its relationship with Pakistan over the issue, given its historic relationship and the fact that China wishes to minimize Indian power in South Asia.

⁴²³ IDSA Database, “Chronology of Responses to Pokhran II,” 1097.

⁴²⁴ IDSA Database, “Chronology of Responses to Pokhran II,” 1097.

⁴²⁵ Jing-dong Yuan, “Foe or Friend? The Chinese Assessment of a Rising India After Pokhran II,” in South Asia’s Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. (Armonk: M.E. Sharpe, Inc., 2005), 152.

⁴²⁶ IDSA Database, “Chronology of Responses to Pokhran II,” 1097.

⁴²⁷ Yuan, “Foe or Friend,” 152.

C. International Non-Proliferation Regime

Pakistan carefully watched the international response to the Indian tests. It hoped for a harsh response to pressure the Indian government towards non-proliferation. Additionally, the response towards India served to suggest the extent to which Pakistan would be punished for following up with a test of its own. Indeed, Pakistani Prime Minister Sharif, for his part, “from the start, linked the Pakistani government’s response to the international community’s response to the Indian nuclear test.”⁴²⁸

However, a strong international response to the Indian test was not forthcoming, which further shifted the Pakistani calculation towards testing. After India tested, the international community was divided in how to best respond to the tests, which diminished the overall disapprobation. The G-8, for example, failed to condemn the tests.⁴²⁹ Russia, for its part, condemned the tests, as it would do so with Pakistan, but was opposed to sanctions for both countries.⁴³⁰

As Washington predicted, the “muted reactions from France, Russia, and other states to India’s actions...further deepen[ed] Pakistani skepticism at the willingness of the world community to punish New Delhi and to take a stand against a new threat against Pakistan.”⁴³¹ The result was that Pakistani leadership was believed that the international response to its tests would be similar - “symbolic at best and short-lived at

⁴²⁸ Yasmeen, “Pakistan’s Nuclear Tests,” 52.

⁴²⁹ IDSA Database, “Chronology of Responses to Pokhran II,” 1095.

⁴³⁰ IDSA Database, “Chronology of Responses to Pokhran II,” 1099.

⁴³¹ U.S. Department of State, “Secretary’s Morning Summary for 5/16/98,” no. WM00500, 2.

worst.”⁴³² This gave the Pakistani pro-test supporters additional leverage over those calling for restraint.⁴³³

D. Domestic Politics and Bureaucratic Interests

In addition to security calculations, there were strong domestic voices calling for Islamabad to immediately respond to India’s tests. Given the fact that Pakistan’s politicians had linked support of the nuclear program as an index of patriotism, it was difficult to publicly deny these calls. However, the opinions for testing were not unanimous, and some Pakistani had concerns about the impact of economic sanctions. Additionally, the military’s stance on Pakistan’s current leader has historically been much more important for retaining power than the preference of the general population. As such, domestic pressures certainly existed to respond, but likely would not have prevailed in circumstances where the security calculations came out with a different outcome than testing.

There were a number of groups that called for Pakistan to immediately test in response to India. Several political parties, including Benazir Bhutto’s opposition Pakistan’s People’s Party and the Muslim League, argued that security requirements dictated that Pakistan must respond, or otherwise there would be doubts about Pakistan’s ability to explode nuclear devices.⁴³⁴ Similarly, retired military and government officials,

⁴³² Samina Ahmed, “Security Dilemmas of Nuclear-Armed Pakistan,” *Third World Quarterly* 21, no. 5 (2000), 783.

⁴³³ Ahmed, “Pakistan’s Nuclear Weapons Program,” 195.

⁴³⁴ Rizvi, *India, Pakistan and the United States*, 105.

religious leaders and members of the press publicly and vocally pushed for Pakistani tests.

General Pakistani public opinion also supported testing. For example, a poll conducted on May 25th found that 64% of the urban Pakistani population favored a response to the Indian tests, compared to 30% favoring restraint and 6% opposed to any testing.⁴³⁵ In short, a cross-section of Pakistan supported a response to India. As time went on without a response, the right wing parties began to threaten to bring down the Sharif government if he did not “listen to the voice of the people.”⁴³⁶ Further, by appealing to the masses that were previously “educated in the value of a nuclear capability, these groups threatened to rise against the government if it failed to perform its duty.”⁴³⁷

In some sense, these calls for Pakistan to conduct nuclear tests was no different that in the late 1980s and early 1990s, where mainly opposition parties argued that the current government was not adequately responding to India. Indeed, in 1987 and 1990 Pakistan was on the verge of a full conflict with India—Islamabad could have easily responded to domestic criticisms and inducted its nuclear weapons program then if domestic politics was the primary factor.

Similarly, public support has historically been very high for Pakistan’s nuclear weapons program. This means that public opinion did not change over night, but that the Indian tests brought renewed calls for the government to change its position. This is not

⁴³⁵ Matinuddin, *The Nuclearization of South Asia*, 134.

⁴³⁶ Matinuddin, *The Nuclearization of South Asia*, 134.

⁴³⁷ Yasmeen, “Pakistan’s Nuclear Tests,” 54.

to say that the Sharif government would not have faced a difficult road in the face of public opinion had he chosen to defer Pakistani testing. However, what was more significant for Sharif's calculation was the stance of the military.

Much of the "nuclear nationalism" earlier in the decade was attributed to opposition leaders currying favor with a military that was fearful that the civilians would give up the nuclear option in the face of American pressure. That is, the primary audience was not the general population (which was nonetheless exposed to the discussion) but a particular power faction within Pakistani leadership. What changed with the 1998 tests was that the military now favored testing. This meant that Sharif's calculations had to accommodate these interests, and in doing so he also responded to opposition party calls.

But if the military had preferred to retain an ambiguous stance, combined with Sharif's own preferences to avoid further economic problems, the opposition party calls likely could have been fended off. This would have been supported by those with business interests in Pakistan and were reluctant to test because they feared the repercussions of a state on verge of bankruptcy.

E. The Decision to Test As Tensions Over Kashmir Escalate

While Pakistani leadership began preparing the tests sites immediately after India explosions, the decision was initially withheld while Pakistan's options were evaluated. Or at least Prime Minister Sharif continued to suggest to the United States that Pakistan

had not yet made a decision to test.⁴³⁸ For example, on May 19th, Sharif indicated that factors influencing decision-making included domestic public opinion, the advice of the program scientists, international reaction towards India, and the scope of new U.S. military and economic aid to Pakistan.⁴³⁹ Additionally, “Pakistani deliberations have been complicated further by concern over India’s intentions in Kashmir.”⁴⁴⁰ Based on these cited factors, Washington accurately predicted that Pakistan would test.

It was increased tensions with India finally tipped the balance in favor of testing, if the decision was not already previous set in stone. By May 18th, Indian and Pakistani leaders had begun exchanging threats over Kashmir. Indian saber rattling over the Kashmir issue was extremely provocative to Pakistani decision makers. A further problem for Pakistani leaders is that it was difficult to tell whether India’s provocative statements were an attempt to goad Pakistan into testing, or whether the comments genuinely portended an Indian assault on Pakistani Kashmir.⁴⁴¹

On May 28th, Pakistan conducted the first tests, followed by another one on May 30th, and publicly declared itself a nuclear power. The official reasons for the test were several: the threat from India, the weak response by the international community to

⁴³⁸ Test preparations were already underway and reportedly it would take ten days for Pakistan to be ready to test. Sharif may have just been hopeful that something would change in the meantime to counsel against testing and signaled that he had not yet decided. U.S. Department of State, “Secretary’s Morning Summary for 5/18/98,” Top Secret Cable, 18 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00502, 2.

⁴³⁹ U.S. Department of State, “Secretary’s Morning Summary for 5/19/98,” Top Secret Cable 000375, 19 May 1998, Weapons of Mass Destruction (Washington D.C.: The National Security Archive, 1992), no. WM00503, 2.

⁴⁴⁰ U.S. Department of State, “Secretary’s Morning Summary for 5/19/98,” no. WM00503, 2.

⁴⁴¹ U.S. Department of State, “Secretary’s Morning Summary for 5/21/98,” no. WM00505, 2.

India's tests, the lack of security assistance from major powers, and the need to underscore Pakistani nuclear credibility to deter and respond to India.⁴⁴² The shorthand explanation, however, is that Pakistani nuclear policy has always been India reactive and, in the absence of significant incentives otherwise, a decision to test by Islamabad was a foregone conclusion when India tested earlier in May.

IV. Conclusion

In the end, Pakistan finally tested its nuclear capability in response to India, after almost twenty-five years of developing a weapons option. Pakistan's decision to finally shed its posture of nuclear ambiguity was in direct response to its historic adversary first conducting nuclear tests. Even though some Pakistani leaders rightfully feared the economic costs associated with the tests from international sanctions, the Indian nuclear tests signified a fundamental shift in South Asian security calculations and planning. Added to the immediate security side of the equation was a perceived insufficient American response, relatively muted international reaction to India's tests, and general public support for testing with domestic political opposition calls for a response.

Yet, as the circumstances surrounding the decision to finally declare itself a nuclear power demonstrates, Pakistan was clearly not in a race with India to be the first state to go nuclear. Rather, the dynamics between the two states is more accurately characterized as the "race to go second." For Pakistan's part, it had a number of significant incentives to retain its nuclear ambiguity throughout most of its history.

⁴⁴² Matinuddin, The Nuclearization of South Asia, 138.

Mainly, Pakistan's regional security environment provided it with as much of an incentive to retain an ambiguous posture as it did encouraging it to acquire a nuclear weapons capability. Pakistan has always been a much weaker state than India and it could ill-afford to stoke any direct military competition. Rather, its security was better served, at least until the Indian tests, by deterrence through ambiguity. In this way, Pakistan could garner the benefits of nuclear deterrence without encouraging India to destroy its capability, or completely outstrip it in technology or delivery mechanisms.

At the same time, an ambiguous posture afforded the program some level of protection early on from external pressures. The United States, serving as a patron state to Pakistan, sought to dissuade nuclear proliferation, and failing that to keep the Pakistani program below public purview. Thus, while the incentives and sanctions were not enough to kill the program, U.S. efforts did lead to Pakistani denials that it was seeking a weapons capability in an effort to garner favor with its longtime ally. Yet, these non-proliferation pressures were not enough to prevent Pakistan from testing in 1998. This suggests that while U.S. pressures were a significant factor in Pakistan's overall strategic calculations, the regional rivalry with India was the trump card that ultimately determined Pakistan's nuclear posture.

As to the international non-proliferation regime, Pakistan studiously avoided undertaking any significant obligations that would have limited its nuclear weapons capability. Member states, to varying degrees, imposed some costs on Pakistan by denying nuclear technology and materials, which slowed the program to some extent, and an open posture, which would have increased the number of states unwilling to cooperate.

But as Pakistan gained self-sufficiency and found other avenues of reliable nuclear cooperation, these options further lessened supplier state concerns. Additionally, there is little evidence that Pakistan adopted or internalized the norms of the regime itself and that it was self-regulating its behavior in accordance with international standards of conduct.

Finally, Pakistan's domestic political atmosphere was conducive to testing, but was not likely a determinative factor. Opposition leaders had regularly used the government's commitment to the nuclear weapons program as a yardstick of patriotism. Additionally, the general Pakistani population had long supported Pakistan acquiring an independent nuclear force. That is, these factors substantially existed prior to India testing in 1998, but had not resulted in a change in Pakistan's nuclear posture. While the Indian test brought these renewed calls that Pakistani leaders assumed would come, the more significant factor appeared to be security calculations and the military's perspective on how to best respond to the shift in New Delhi's posture.

In short, and as seen in Figure 6, the Indian nuclear weapons program is both the source of the Pakistani nuclear program and a primary contributor to Islamabad's ambiguous posture for most of its history. Other variables further entrenched and deepened Pakistan's posture of ambiguity, in particular when Islamabad was the recipient of U.S. conventional weapons and financial assistance. But in the end, Pakistan's nuclear program was created to respond to threats from its more powerful neighbor, and it was used to this end in 1998.

Figure 6 – Summary of the Presence of Explanatory Factors in the Pakistan Case.

Hypothesis	Predictions	1971-1998	1998 Test
Reg. Sec. Env.	Deterrence Signals	High	Very High
	Conservative Nuclear Strategy	Medium	Medium
	Limited Cooperation	Medium	Low-Medium
Patron State	Issue Linkages	High	High
	Conforming Dependent States	High	Low-Medium
	Nuclear Priority for Patron	High	High
Int'l Non-Prolif. Regime	Material Costs	Medium (high vulnerability)	Medium (high vulnerability)
	Norm Recognition	Low	Low
	Internalized Norms	Low-non-existent	Low-non-existent
	Domestic Politics	Bargaining and Compromise	Low-non-existent
	Posture is in interest of centralized decision-maker	Low	Low
Moral/Cultural Constraints	Expressions of Nuclear Doubt	Non-existent	Non-Existent
	Nuclear Weapons Not an Option	Non-existent	Non-existent
	Lack of questioning existing policy	Non-existent	Non-existent

CHAPTER VI

COMPARISON BETWEEN CASES AND FACTORS

In Chapter Two, I reviewed the existing literature on deterrence and nuclear ambiguity, framed hypotheses, and outlined process tracing and the congruence procedure. In Chapters Three through Five, I outlined the empirical evidence related to each hypothesis in each case. This chapter examines the five hypotheses across the three cases of Israel, India, and Pakistan.

There are several conclusions reached from this analysis. First, regional security environments were an important factor informing India and Pakistan's nuclear postures. The security competition between the two states operated as both an incentive for deterrence, as well as a muted competition, especially as India sought to balance the security demands from both China and Pakistan. Israel too reflected the importance of its regional environment, although in a different fashion. Initially Israel was primarily concerned with deterring its neighbors; over time as Israel retained its nuclear monopoly, ambiguity was further entrenched as one way to minimize incentives for other states in the Middle East to gain a nuclear capability.

The importance of patron state incentives, particularly based on U.S. non-proliferation pressures was a more important consideration to Israeli leaders initially. At the same time, the U.S. had subjected Pakistan to non-proliferation pressures for decades,

and the Pakistanis with their relative weakness vis-à-vis India, have been particularly vulnerable to this pressure. U.S. patron state pressures were also an important factor in the Indian case, but it varied over time and was primarily related to economic and technical cooperation, and lacked the conventional weapons assistance that the U.S. provided Israel and Pakistan.

In short, both regional security environments and patron state incentives matter significantly across all three cases, but to varying degrees of intensity at different time periods. There is some evidence that the international non-proliferation regime mattered to a lesser extent, and mainly by creating material costs. There is also some evidence suggesting that domestic politics favored the Indian tests to a limited extent in 1974, and the rise of the BJP in 1998 helps explain the timing of that test. However, when the domestic political explanations, including the moral restraint hypothesis, are examined throughout the history of the three cases, domestic compulsions explain less than external security factors. The following outlines the basis for each of these conclusions.

I. Regional Security Environment

What do the cases tell us about the regional security environment and the impact on each state's nuclear posture? The historical record suggests that threatening regional security environments are an important determinant for the nuclear posture of second-generation nuclear states. As is commonly accepted wisdom, second generation nuclear states are motivated by the threats from neighboring states to acquire a nuclear capability. A less commonly understood effect of the regional security environment is that it also functions as a constraint on nuclear postures under some conditions. In particular, the

following discusses the ways in which the regional security environments have affected second-generation nuclear states' postures where there is a disparity among adversaries in terms of nuclear development.

A. Deterrence Signaling: Emphasis on Capability

If the hypothesis that regional security environments influence second-generation nuclear states' postures is correct, then there is the expectation that regional adversaries will seek to gain some benefits of deterrence by signaling that they can respond to nuclear threats. There is substantial evidence in the historical record of the cases studied here to support this proposition. In particular, regional states generally emphasized that they had capability, as compared to intent, to produce nuclear weapons. By having the ability to produce weapons, this meant that policy changes could be rather quickly effectuated to change from a restrained posture if the circumstances warranted it.

In the Israeli case, signaling was accomplished initially by the refusal of Israel's leaders to disavow a nuclear weapons capability. In particular, Israeli leaders were reluctant to accede to U.S. preferences to explicitly reassure Egypt's Nasser that Israel was not producing nuclear weapons. As Shimon Peres argued, it was in "Israel's highest interest to leave Nasser in a state of uncertainty regarding the level of development and objectives of the Dimona Project."¹

By not providing public reassurances of the peaceful nature of the Israeli nuclear program, this effectively signaled that Israel was considering a nuclear option. Further,

¹ Zaki Shalom, Israel's Nuclear Option: Behind the Scenes Diplomacy Between Dimona and Washington (Portland: Sussex Academic Press and Jaffee Center for Strategic Studies, 2005), 24.

the lack of transparency about the program created uncertainty as to the status of Israeli nuclear development. This meant that there was the risk of grave miscalculation on behalf of a challenger. Even as Israeli leaders settled on the formula that Israel would not be the first state to introduce nuclear weapons to the Middle East, this statement left open the possibility of having created a nuclear capability. And later statements that “nor would Israel be second” further bolstered the idea that Israel had the capability to produce nuclear weapons, just that it doesn’t intent to introduce them absent some uncertain circumstances.

Indian and Pakistani signals of having acquired a nuclear weapons capability have been even more direct. Starting with Nehru, Indian Prime Ministers have suggested that India has the capability to make nuclear bombs, while simultaneously discounting that they would choose to do so. Prior to the first Chinese nuclear test, Nehru stated that “[w]e have the technical know-how for manufacturing the atom bomb. We can do it in three or four years if we divert sufficient resources in that direction. But, we have given the world an assurance that we shall never do so. We shall never use our knowledge of nuclear science for purposes of war.”² In this instance, Nehru was actually exaggerating Indian nuclear technology as being more advanced than it actually was. In another example, in the mid-1980s Rajiv Gandhi indicated that if India decided to become a nuclear weapons state, “it would take a few weeks or a few months.”³ At the same time,

² Cited in G.G. Mirchandani, India's Nuclear Dilemma (New Delhi: Popular Book Services, 1968), 231.

³ Warren H. Donnelly, “India and Nuclear Weapons,” Unclassified Report, 10 July 1987, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02483, 4.

he also indicated that while India had the ability to make nuclear weapons “for almost eleven years now, and we have not transformed that capability into weapons.”⁴

Similarly, Pakistani leaders have suggested that Pakistan had the technical ability to produce nuclear explosions or bombs, but did not intend to do so. For example, Zia stated simultaneously that Pakistan was not making a bomb, but was indeed enriching uranium in what was a “humble, modest experiment.”⁵ Further, when Zia would reassure the U.S. that Pakistan did not intend to develop nuclear weapons, he would carefully craft his statements and would not include assurances that Islamabad would stop seeking the ability to make weapons or conduct a “peaceful nuclear explosion.”⁶

Based on these illustrative examples, second-generation nuclear states preserved the idea that they had the technical ability to produce nuclear weapons. By suggesting that a state has a nuclear weapons capability, this provided some measure of a deterrence posture, at least through uncertainty. Additionally, if a state has a nuclear weapons capability, and intentions can change quickly, this suggests that it is ready to respond quickly to changing security circumstances. In this way, regional states seek to bolster deterrence by having a weapons capability, and restraint is based on intentions rather than the inability to respond.

⁴ Donnelly, “India and Nuclear Weapons,” no. NP02483, 4.

⁵ Barrington King to U.S. Department of State, “Zia’s Remarks to U.S. Newsmen on U.S. Air Offer, Bilateral Agreement, Nuclear Issue,” Confidential Cable 00449, 18 January 1980, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP01720, 2.

⁶ Judith Miller, “US Cites Pakistani Pledge Not to Make Atom Arms,” Foreign Desk, The New York Times, 25 June 1981, A6.

B. Conservative Nuclear Strategies & Paced Development

If ambiguous nuclear postures are the result of regional states seeking to both deter and reassure their adversaries, then there should also be observable evidence of states adopting conservative strategies designed to reduce the risk of competitive nuclear policies. The research in this study strongly supports the proposition that regional security environments also operate as a constraint on second-generation nuclear states' postures. Across all three cases there is evidence of paced nuclear development based on nuclear development disparities among adversaries, as well as a primacy of conventional military capabilities and associated resource allocation concerns.

1. Disparity in Nuclear Development

The regional balance of nuclear power has affected second-generation nuclear states' choices. There are two main lessons derived from this analysis. First, Israel—as a much more advanced nuclear state with a monopoly strategy—was motivated to not provoke other states to obtain an equivalent capability. On the other end of the spectrum, power imbalances motivated relatively weaker states to retain ambiguity in order to avoid provoking a competitive response from its stronger nuclear adversary. In Asia, India lagged behind Chinese nuclear development, while Pakistan was less developed than India. Second, in addition to the balance of relative nuclear power, the threat of intervention from stronger, external states operated as a threat to change a favorable balance of power. As a result, both Israel and India vis-à-vis Pakistan had additional incentives to refrain from a public nuclear posture, lest they provoked external assistance to their adversaries.

Israel's nuclear monopoly in the Middle East has set its regional security environment apart from that of India and Pakistan. However, when Israel first began work on its nuclear program at Dimona, it was not apparent that this would be the outcome. At the time, it appeared that other states within the Middle East were interested in nuclear programs and Israeli leaders seemed to believe that it was inevitable that other states would acquire nuclear weapons.⁷ This belief appeared to have informed Israeli reluctance at providing other states with reassurances that Israel was not producing nuclear weapons. However, after adopting the posture that Israel would not be the first to introduce nuclear weapons—at American insistence—over time it became apparent that Israel would be able to retain its nuclear monopoly with a combination of nuclear ambiguity and force.

With nuclear ambiguity, Israel was able to not provoke Egypt in particular into starting its own program, which lagged substantially behind Israel's capability. As important, Israel provided a reduced incentive for Soviet involvement in bolstering Egypt's nuclear capability to respond. By not issuing public nuclear threats, Israel thus was able to encourage states already predisposed to forego a nuclear weapons program to stay that way, while also minimizing external interference. In other cases such as with Iraq, force was used against the Osiraq reactor to retain the Israeli nuclear monopoly.

In contrast, India and Pakistan operated in a regional security environment that was characterized by relative differences in nuclear power between actors. India's nuclear weapons and delivery mechanism program lagged significantly behind China's

⁷ Shalom, *Israel's Nuclear Option*, 24.

much more advanced capability. As such, India sought for most of its nuclear history to refrain from directly identifying China as the target of India nuclear development, notwithstanding the fact that most states recognized this reality. Both prior and after the 1974 nuclear test, India proclaimed that its nuclear program was for peaceful purposes only. It was only in 1998, after India was close to having long-range missiles and planes to deliver nuclear warheads to most of China, that India justified its test on the threat from China, in part.⁸

On the other hand, if India had just had Pakistan to contend with and the absence of other external factors, New Delhi could have considered a more robust nuclear policy early on as most of Pakistan was within deliverable range. However, the reality in South Asia was that while Pakistan lagged behind India's nuclear development, Islamabad had a nuclear and conventional benefactor in China. By the late 1970s there were rumors of Chinese assistance at Pakistan's nuclear facilities, and by the early 1980s there were further reports of China testing a nuclear device for Pakistan and that Beijing had provided the blueprints for a nuclear bomb.⁹ The reports of collusion, combined with previous Indian concerns of Chinese assistance to Pakistan during the 1965 and 1971 wars, were threatening to India. If India had adopted a more open nuclear stance and quickened the development of its nuclear capability, it risked prompting China to

⁸ China was directly named in a letter to the U.S. government. Public pronouncements were more circumscribed, noting that India was in a nuclear neighborhood.

⁹ See, e.g., U.S. Department of State, "The Pakistani Nuclear Program," Secret Briefing Paper, 23 June 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02057, 6.; U.S. Embassy Pakistan, "Pakistan's Nuclear Program: Press Reports of Chinese Involvement," Confidential Cable 06864, 6 August 1984, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02144, 1.

increase its support of Pakistan as a way to balance Indian strength in South Asia. Thus, as in the Israeli case, the conduct of external states influenced the regional balance of power calculations in South Asia as well.

As for Pakistan, the technical hurdles it had to overcome to build a credible nuclear arsenal were substantial and it had little incentive to provoke India into either seeking to destroy its nuclear facilities or outstrip its nascent nuclear program. In particular, from 1981-1984 there were recurring reports that India was considering striking Pakistan's Kahuta facility.¹⁰ While India chose not to exercise this option, the evidence suggests that Pakistan sought to reassure New Delhi of its peaceful intentions and that its program was not a threat. Pakistan also had further reasons to not test, as it had a small stockpile of fissionable material and could conduct limited explosions and build weapons. Additionally, if Pakistan tested it would then give India the public justification to continue testing and weaponize its capabilities—which India claimed it was not doing through the 1998 nuclear tests. These realities meant that Pakistani regional incentives were to not provoke India so that Islamabad's nuclear program could be kept within range of India's capability.

As the above cases illustrate, the level of nuclear development within the region can affect incentives for retaining an ambiguous nuclear posture. This is both the result of nuclear development disparities between states, and the susceptibility of stronger powers to insert themselves into the region to promote their own interests. Thus, for

¹⁰ John J. Louis, Jr. to U.S. Department of State, "Observer Article on Indo-Pak Nuclear Issue," Limited Official Use, Cable 00067, 4 January 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02005.

second-generation nuclear states, leaders have to calculate whether an overt nuclear posture will promote security vis-à-vis other regional powers as well as whether external involvement will affect a favorable balance of power.

2. Primacy of Conventional Military Capabilities & Cost Concerns

In addition to regional disparities in nuclear development, second-generation nuclear states have placed a primacy on the conventional military balance in the region. The priority of devoting sufficient resources for conventional capabilities has further served to reduce incentives to adopt an open nuclear posture. This dynamic has operated in different ways. The first way is related to leaders seeking to fund a nuclear program without diverting resources for conventional weapons or domestic economic programs. This meant that having paced nuclear development, rather than crash programs, more readily facilitated balancing both priorities over a longer term. Related, U.S. patron state incentives, as discussed below, explicitly linked the provision of conventional arms on continued nuclear restraint. As such, Israel and Pakistan in particular were vulnerable to U.S. pressures to retain an ambiguous stance.

All of the states in this study placed a primacy on being able to respond conventionally to threats within their security environment. However, the source of this constraint has differed among the states. In particular, Israel initially obtained the bulk of its sophisticated conventional weapons from other states. The main concern this created for Israeli leaders was to make sure the economy could handle both its conventional purchases and nuclear development program, while also not running afoul of the U.S. non-proliferation stance. Additionally, while there was not another state in Middle East

during the early 1960s that could directly challenge Israel's nuclear development, the state faced a hostile environment and was motivated to construct its deterrent force. To this end, Israel worked out cooperative arrangements, primarily with France, to acquire the technology and materials it would need for its nuclear weapons capability. This enabled Israel to create a nuclear option relatively quickly.

Pakistan was similarly motivated as Israel to construct a nuclear force as quickly as possible, although Islamabad's concern was its conventional weakness with India. To this end, Pakistan also sought external assistance to speed up its program. At the same time however, the Pakistani military clearly had a preference for maintaining sufficient forces to deal with the conventional threat from India. This was because Pakistan could not give up its conventional force in lieu of a nuclear capability; otherwise it would not have the flexibility to respond to an incursion without massive retaliation, or alternately, do nothing at all.¹¹ Further, if Pakistan just relied on a nuclear capability, India would quickly have a secure second-strike capability. This meant that Pakistan's nuclear capability would quickly be countered. And with the U.S. as a significant supplier of conventional forces, particularly during the 1980s, this also meant that Pakistan was not ready to rely on nuclear deterrence to solve its security problems.

India was the most reluctant to overly spend on a nuclear capability. India has preferred not to enter into a costly arms race, or to invest large sums of money in defense expenditures when, as a developing state, it had pressing domestic priorities. India could

¹¹ U.S. Department of State, "India-Pakistan: Pressures for Nuclear Proliferation," Limited Official Use, Report 778-AR, 10 February 1984, *Weapons of Mass Destruction* (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. WM00283, 5.

deal with the short-term Pakistani threat—the longer-term problem was China, as India was weaker than its northern neighbor. Indian development, both economic and nuclear, has lagged far behind Chinese capabilities and, in an overt arms race, India would struggle, at best, to keep up with Chinese developments. Additionally, it would be decades before New Delhi was within range of having a credible deterrent with China, and at the same time, India could manage its problems with Pakistan with conventional forces.

Indian leaders translated these security requirements into a long-term development plan. India marched forward with its nuclear program and delivery system development, but at a pace relative to Pakistan, rather than seeking to outstrip Islamabad. Because India had other priorities, such as economic development, it mainly sought to rely on its conventional forces while continuing to manage its nuclear program.

Further, given these strategic realities, India has sought to minimize the propensity for costly and dangerous regional arms race with Pakistan and China that could prove counterproductive.¹² For example, these regional dynamics were on Indira Gandhi's mind, in particular given the fragility of the Indian economy during her tenure in office, and the potential to diminish Indian security further.¹³ Similarly, Rajiv Gandhi was concerned about minimizing regional tensions, although ultimately they were significantly exacerbated by the unfortunate Brasstacks crisis. In the wake of this low

¹² Joeck, Neil, "Maintaining Nuclear Stability in South Asia," *Adelphi Paper 312* (New York: Oxford University Press for IISS, 1997).

¹³ Raj Chengappa, *Weapons of Peace: The Secret Story of India's Quest to Be a Nuclear Power* (New Delhi: Harper Collins Publishers India, 2000), 114.

point in relations with Pakistan, in November 1989 when VP Singh came to power as Prime Minister of India, he decided against a nuclear test not only because of India's economic woes but also because of deteriorating relations with India's neighbors.¹⁴

Based on this analysis, the main similarity across all three cases is that the second-generation nuclear state placed a priority on being able to respond to threats with conventional forces. In the cases of Israel and Pakistan, this necessarily included cooperating with U.S. non-proliferation preferences to some extent. However, given the relatively severe security environment both states found themselves in, they were more motivated than India to develop a nuclear weapons capability sooner than later, as long as doing so did not diminish the conventional forces. India, however, was not as concerned about its conventional capability—the Soviet Union was willing to provide New Delhi with weapons and it retained an advantage over Pakistan. India was more concerned about the necessary costs that would be required to develop an advanced and sophisticated system capable of deterring China—this was expensive. As such, India sought to keep a paced development that consisted of keeping up with Pakistan from the late 1970s, but not seeking to compete with China until the late 1990s. This policy also enabled India to more closely engage the U.S. on economic and technical terms, as discussed in more detail below.

C. Tacit and Formal Measures to Reduce Transition Risks

Another way to reduce the risk of conflict and costs stemming from the development of nuclear weapons is to introduce tacit and formal measures to reduce

¹⁴ Chengappa, *Weapons of Peace*, 354.

transition risks. The historical evidence shows that there was some minimal, tacit cooperation between Israel and some Arab states. The Indian and Pakistani cases exhibited more instances of tacit and formal attempts to normalize their competitive security environment, although these could not be characterized as extensive by any measure.

The primary tacit agreement that Israel and Egypt, in particular, came to was that Israel would not issue nuclear threats in exchange for non-proliferation. As demonstrated recently, the idea that Israel should retain its opaque posture has some currency within a number of states in the Middle East. For example, the Arab league has recently stated that its member states will withdraw from the NPT if Israel admits that it has a nuclear weapons capability.¹⁵

In some ways, this suggests that the Arab states are seeking to neutralize the Israeli nuclear capability by restricting the ability for Tel Aviv to issue nuclear threats; if this breaks down, then the threat is that other states will proliferate within the Middle East. At the same time, there are clearly no agreements for Israel to refrain from attacking other nuclear installations, as demonstrated by Osiraq, and more recently the attack on the Syrian reactor in 2007. Israel has also rejected Arab calls for a nuclear weapons free zone in the Middle East, or other measures that would restrict the Israeli nuclear force. As Israel is currently the only state in the Middle East with a nuclear capability, it is seeking to retain its monopoly, not facilitate a peaceful transition to nuclear deterrence. As such, there are few measures designed to reduce the risk of

¹⁵ Associated Press, "Arab League will call for leaving nuclear treaty if Israel admits to atomic weapons," International Herald Tribune, 5 March 2008.

nuclear programs. However, one should not overlook the general consensus in the Middle East to keep the Israeli nuclear program a “non-issue” by all relevant parties in dealing with other more pressing, regional security problems.

India and Pakistan have had more success with some small tacit and formal confidence building measures to reduce the risk of both states transitioning to nuclear weapons status. For example, during the early 1980s, India first refrained from attacking Pakistan’s nuclear weapons facilities. This led to discussions between Prime Minister Rajiv Gandhi and President Zia to first agree to not attack each other’s facilities, followed by a formalized agreement, and an eventual exchange of lists of facilities. After the 1987 Brasstacks Crisis, a hotline was established, as well as measures for troop movement notifications. While the latter two provisions did not related directly to each other’s nuclear capabilities, these measures were part of a broader effort to normalize relations, although the overall relationship continued to break down at various intervals.

In short, there is some evidence that is consistent with this prediction. The key is that the expectation was that any cooperation would be limited, considering the existing security dynamics that are characterized by hostility and distrust. To this extent, the fact that India and Pakistan were able to agree to any minimal measures supports the proposition that the regional security environment can create incentives for restraint. In the case of Israel, which has a nuclear monopoly, this means Tel Aviv had little incentive to agree, tacitly or otherwise, to restrict its capability or facilitate other states’ peaceful transition. What this does mean, however, is that by refraining from directly issuing

nuclear threats, other regional states have tacitly agreed to some extent to live with an Israeli nuclear capability.

Figure 7 – Summary of Evidentiary Support for Regional Security Environment Hypothesis and Predictions.

	India			Pakistan		Israel
	1974 Test	1974-1998	1998 Test	1971-1998	1998 Test	1957-1975
Deterrence Signals	Strong Support	Strong Support	Strongest Support	Strong Support	Strongest Support	Strong Support
Conservative Nuclear Strategy	Moderate Support	Strong Support	Limited Support	Moderate Support	Limited to Moderate Support	Moderate Support
Limited Cooperation	Limited Support	Moderate Support	Limited Support	Moderate Support	Limited Support	Limited Support

II. Patron State Incentives

As outlined in Chapter Two, if patron state threats and inducements are responsible for second-generation nuclear states' postures, several types of state conduct that should be readily observable. First, the patron state must in some form link the issues of economic and conventional military assistance with the ambiguous posture of their client state. Moreover, highly dependent client states should exhibit more conforming behavior than more independent states. Non-proliferation pressures from the patron state should also be more effective when it is a high priority for the patron state and proliferation is a lower priority for the client state.

Here, there is substantial evidence linking patron state pressures to the studied cases of ambiguity. However, this statement requires an important qualifier. This conclusion is primarily limited to the United States, although it also extends somewhat to

Western nuclear suppliers after the 1974 Indian nuclear test. This is mainly because other patron states—especially France, China, and the Soviet Union—rarely explicitly linked assistance to their client states based on non-proliferation interests. To the contrary, France and China readily assisted a number of states with both nuclear and conventional military programs. As such, “patron state pressures” effectively means “U.S. non-proliferation pressures.”

There are two additional caveats. First, while the U.S. successfully influenced the nuclear stance of the second-generation nuclear states researched here, Washington was overall unsuccessful in convincing any of them to forego a nuclear option. Regional security requirements clearly trumped U.S. efforts. Second, while the U.S. was able to influence Indian nuclear policy, particularly the time period between the 1974 and 1998, Washington generally had less leverage on New Delhi, relative to Islamabad or Tel Aviv. This is mainly because the Soviet Union was the primary supplier of conventional assistance to India, while the U.S. had economic and trade channels as avenues of influence.

A. Issue Linkages, Client State Dependency, and Nuclear Priorities

The United States clearly linked its economic, technical, nuclear, and conventional military assistance to its preference for non-proliferation. As mentioned above, client state dependency varied, with Israel and Pakistan having much more reliance on U.S. aid than India. Additionally, there is some evidence that waning U.S. non-proliferation pressures on India in the late 1990s had an effect on India’s calculations.

Israel was first subject to these pressures in the early 1960s, as the U.S. sought inspection rights to the Dimona nuclear reactor.¹⁶ Israeli leaders were subject to a great deal of pressure over the issue as Israel was heavily dependent on U.S. aid, which would continue to grow during the 1970s. Yet, at the same time, Washington was unwilling to fully breach its relationship with Israel over the nuclear non-proliferation issue. That is, while it preferred a non-nuclear Israel, it could live with opacity if this was the best the U.S. could get. Israel was simply too important of a state in the Middle East for the U.S. to cutoff assistance.

For its part, Israel could live with opacity as long as it did not give up its nuclear weapons option. Opacity itself was actually a compromise for Tel Aviv, resulting from ongoing U.S. diplomatic pressure for Israel to declare its nuclear intentions. If Israel had been left to its own devices, its leaders likely would have continued to simply claim that their nuclear program was for peaceful purposes only. As it were, both sides could live with this formulation and the U.S. would continue to repeat the Israeli statement of its nuclear weapons program.

Pakistan was similarly dependent on U.S. largesse. At the same time, the relationship between Islamabad and the U.S. was subject to extreme fluctuations, from aid to sanctions. This variability in U.S. policy towards Pakistan was based on mainly on whether U.S. interests in South Asia were engaged. For example, in the late 1970s, the Carter administration imposed sanctions on Pakistan for its nuclear activities. However, the Reagan administration reversed this policy with the Soviet invasion of Afghanistan.

¹⁶ See, e.g., Dean Rusk to U.S. Embassies, "Israel's Dimona Reactor," 31 October 1962, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Proquest, 2008), no. NP00922.

The Reagan administration justified this volte face in policy, arguing that if Pakistan had enough conventional weapons to be secure, it would be less likely to acquire nuclear weapons.¹⁷ At the same time, U.S. government officials took great pains to remind the Pakistanis that U.S. domestic laws required mandatory sanctions if Pakistan tested a nuclear weapons device. These efforts resulted in President Zia providing reassurances that Pakistan did not have a nuclear explosive device.¹⁸

However, after the Soviet withdrawal from Afghanistan and the drawdown of the Cold War, the U.S. was no longer willing to look the other way on Pakistan's continued nuclear progress. In 1990, the U.S. imposed sanctions again, with a one-time waiver several years later. The result is that Pakistan was already subject to U.S. punitive measures in 1998, with little promise of an extensive aid package if Islamabad refrained from testing. Further, the evidence suggests that while Sharif personally wanted to forego testing in order to resume receiving aid from the U.S., security concerns related to India's previous tests a few weeks prior took precedence.

Taken together, this evidence demonstrates that the U.S. consistently sought to link aid and sanctions to Pakistan's nuclear ambitions. Pakistan, for its part, was highly dependent on U.S. assistance and largely publicly conformed to these requirements when receiving aid. When Pakistan was under sanctions, its leaders would seek ways to renew U.S. assistance. However, in the face of a direct Indian challenge with tests in 1998,

¹⁷ U.S. Department of State, "Report to Congress Pursuant to Section 735 of the International Security and Development Cooperation Act of 1981: Pakistan's Nuclear Program," Secret Report, 14 March 1983, Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02022, 6.

¹⁸ U.S. Department of State, "Report to Congress: Pakistan's Nuclear Program," no. NP02022, 6.

Pakistan was required to respond with its own tests, lest it lose credibility that it had this capability. Thus, regional pressures in the end mattered more than dependency on its patron state.

U.S. patron state pressures were more complicated as related to India and varied over time. Prior to the 1974 test, Indo-U.S. relations were at a low point. The U.S. had some influence, to the extent that it provided fuel and spare parts for India's Tarapur nuclear reactor. To this end, the U.S. sought to pressure India into refraining from testing by indicating that from Washington's perspective, there was no difference between peaceful nuclear explosions and testing for military purposes. India rejected this interpretation from both the U.S. and Canada, who also sought to counsel the Indians against testing. The evidence suggests however, that Indian leaders did not expect the U.S. and Canada to cutoff nuclear assistance if it framed its test as a peaceful nuclear explosion. The result is that India's civil and military nuclear power development suffered in the aftermath of the test.

During the 1980s, the Indo-U.S. relationship was back on track as India sought access to advanced U.S. technology and markets. This relationship continued to grow in the 1990s and had two important implications for India's 1998 nuclear test. First, India's economic growth enabled it to both withstand U.S. sanctions that would inevitably follow, as well as ensured that the punitive measures would be relatively short-lived as the U.S. had an interest in resuming trade. Second, the U.S. appeared increasingly willing to live with a nuclear India under the Clinton administration. This meant that the tests would also not have a long-lasting impact on India's relationship with the U.S.

Finally, it is important to note that the client states also had some forms of reverse leverage on the U.S. In particular for Israel and Pakistan, conventional weapons assistance was seen as an important way to prevent both states from feeling the security need to obtain nuclear weapons. This meant that leaders from both states sought to encourage the U.S. to keep a steady supply of assistance as a way to reduce the need for nuclear weapons. Of course, since India did not received conventional weapons from the U.S., this form of leverage was absent from the relationship. What India did seek to do, as did Pakistan, was to draw U.S. attention to the proliferation efforts of each other, while both sides sought to simultaneously highlight their nuclear restraint. Interestingly, some Arab states have employed the same tactic; they highlighted their nuclear restraint and suggested that the U.S. should do more to restrain its ally, Israel. Figure 8 summarizes the effects of patron state pressure.

Figure 8 – Summary of Evidentiary Support for Patron State Hypothesis and Predictions.

	India			Pakistan		Israel
	1974 Test	1974-1998	1998 Test	1971-1998	1998 Test	1957-1975
Issue Linkages	Moderate Support	Strong Support	Moderate Support	Strong Support	Limited Support	Strong Support
Conforming Dependent States	Moderate Support	Strong Support	Limited-Moderate Support	Strong Support	Limited to Moderate Support	Strong Support
Nuclear Priority for Patron	Limited Support	Strong Support	Moderate Support	Strong Support	Limited Support	Strong Support

III. International Non-Proliferation Regime

If the non-proliferation regime were a significant factor in the nuclear stance of second-generation states, then at a minimum there should be evidence that the proliferating states were sensitive to costs that would be imposed by the regime. In addition to these material concerns, there would be an expectation that the proliferating states recognized that there was a norm against testing and openly acknowledging the development of nuclear weapons. Additionally, the strongest support for this hypothesis would be if there was evidence that second-generation nuclear states had internalized the validity of the international non-proliferation regime and the dangers of proliferation.

There is limited evidence that the non-proliferation regime affected the nuclear postures of the states studied here. To the extent that the non-proliferation regime mattered, it did so by enforcing agreements among nuclear supplier states to refrain from assisting non-nuclear states. This in turn limited some availability of access to nuclear technology and materials, which slowed down the Indian and Pakistani nuclear programs. In short, there were some material costs associated with members of the regime. However, there is little evidence that any of the three states expected significant costs from the regime at large, or that they internalized the non-proliferation norms to any extent.

All three states have largely avoided the international commitments of the international non-proliferation framework. Israel, India, and Pakistan are all members of the Partial Test Ban Treaty, but refuse to sign the NPT or Comprehensive Test Ban

Treaty. As such, they are not constrained by the terms of the agreements that most effectively restrain nuclear proliferation.

As for Israel, it had developed its nuclear capability just as the NPT was coming into existence in 1968. Prior to this, Israel and France cooperated on a number of nuclear fronts that enabled both states to more quickly accomplish their nuclear goals. And while France remained willing to assist other states with their nuclear programs and stayed outside the NPT framework, Paris began insisting on safeguards as a way to appease the Americans. However, Israel escaped these pressures as French non-proliferation cooperation was a later development. Additionally, because Israel had a relatively small nuclear program and retained an ambiguous nuclear posture, it was not subject to sanctions or a reduction in assistance later with its program. As such, Israel emerged relatively unscathed in material terms with its program.

Additionally, there is scant evidence that Israel recognizes or had internalized norms against non-proliferation. Certainly, Israeli leaders likely accurately calculate that if Israel declared itself a nuclear weapons state, this would have material ramifications. But there is little to suggest that it agrees with these values or that it would hesitate to change its stance if security requirements dictated otherwise. At the same time however, Israel has not sought to undermine the regime in any significant way—rather, Tel Aviv just avoids its obligations.

India and Pakistan have suffered more in material terms than Israel from the non-proliferation regime. Indeed, it was the 1974 Indian nuclear test that prompted U.S. policymakers to adopt a more rigorous non-proliferation stance, including passing laws

specifically targeting states that conduct nuclear tests. Yet, as previously discussed, much of the non-proliferation regime at the time was driven the U.S. as the primary enforcer, with some Western nuclear supplier state cooperation. The Soviet Union shared an interest in non-proliferation but was unwilling to exert any pressure on India that would rupture the relationship. France continued to cooperate on nuclear terms, requiring only that French assistance would be subject to safeguards, but did not require that of indigenous facilities or others that did not include this original obligation.

India's stance towards the non-proliferation regime was also somewhat bifurcated. On the one hand, Indian leaders promoted disarmament norms, and early on were on the forefront of seeking to pass agreements that would limit the spread of nuclear weapons. However, India was not satisfied with the nature of the agreements that were passed as they entrenched existing nuclear powers and did not effectively constrain growing Chinese nuclear development. As such, India excoriated existing agreements as discriminatory.

Nonetheless, India did not directly challenge the non-proliferation regime. For example, it did not test in 1995 with the permanent extension of the NPT or in 1996 when the CTBT treaty was signed. At the same time however, it sought to signal that it remained outside of this framework, and the tests in 1998 reminded the world that India was not bound to follow the dictates of the agreements. New Delhi did lose one of its traditional justifications in 1992 though when France and China signed the NPT. With these traditional holdouts signing the treaty, India no longer had this reason to refrain from signing; nonetheless, Indian leaders repeated the refrain that the treaty was

discriminatory. India has also studiously avoided all regional proposals by Pakistan that would limit the Indian nuclear program but not include China.

In short, there is some evidence that India was limited in material terms by cooperating nuclear suppliers after the 1974 nuclear test. However, beyond that and U.S. measures, there was generally an anemic response by the international community at large. As such, as India correctly calculated, it had few concerns with long lasting effects from testing in 1998. Moreover, India has challenged a normative framework that is based on discriminating between “have” nuclear states and “have not” nuclear states. This suggests that it has internalized few of international non-proliferation norms.

Pakistan’s nuclear program similarly suffered material constraints from India’s 1974 nuclear test, notwithstanding the fact that Islamabad had not tested. But its early declarations that it would pursue nuclear weapons if India did so, combined with relatively frequent reports of surreptitious nuclear activities served to capture U.S. attention, and Washington’s efforts to convince other states to not cooperate with Pakistan. And, as with India, Pakistan knew that there would be sanctions from the 1998 nuclear tests. However, in its weakened economic state, Pakistan was in a less viable position to ride them out; still, few states were interested in a bankrupt Pakistan and it was able to service its foreign debt to avoid this outcome.

There is no evidence that Pakistan has internalized any non-proliferation norms. Islamabad’s security concerns trump all other considerations. As to the regional non-proliferation proposals that it would trot out on occasion, there is little to suggest that Pakistan’s leaders considered these options as viable. Rather, the measures appeared to

be a way of highlighting Pakistan's restrained nuclear posture, while pointing to Indian unwillingness to sign agreements that would limit New Delhi's options. In short, the non-proliferation regime, as mainly enforced by the U.S., was a framework to largely avoid. Some of the regime members were willing to live up to the spirit of the agreement, which did impose some material constraints on later proliferators, but generally did little beyond slow down the programs. Figure 9 summarizes the evidentiary support for the international non-proliferation regime hypothesis.

Figure 9 – Summary of Evidentiary Support for International Non-Proliferation Regime Hypothesis and Predictions.

	India			Pakistan		Israel
	1974 Test	1974-1998	1998 Test	1971-1998	1998 Test	1957-1975
Material Costs	Limited - Moderate Support	Moderate Support	Limited - Moderate Support	Moderate Support	Limited – Moderate Support	Limited Support
Norm Recognition	Limited Support	Limited Support	Limited-Moderate Support	Limited Support	Limited Support	Limited Support
Internalized Norms	Limited Support	Limited Support	Limited Support	Limited Support	Limited Support	Limited Support

IV. Domestic Political Interests: Party/Interest Group Politics

The primary domestic politics explanation contends that nuclear opacity is a compromise solution between contending economic interests groups. According to this perspective, the cases should demonstrate evidence of the bargaining process based on particular interests and the compromise solution of opacity.

However, evidence across the three cases does not correlate with this model, or even the more generalized proposition that ambiguity is a function of compromised interests. Certainly there have been divergent interests as to whether a state should acquire nuclear weapons, and if this choice is made, when the best time is to publicly acknowledge this capability. Yet, the dividing lines in these debates are mainly drawn around the best way to provide for state security. In particular, the discussion has largely centered on the affordability of a nuclear weapons program, what type of systems are required for security, and most importantly, the effect that acquiring a nuclear option will have on external aid.

Further, once the decision is made to pursue a nuclear option, the debate centers around all of the factors discussed in this project and the effect on state security by publicly advertising state intentions. This suggests that parochial interests, wherever they may lie, were of a lesser issue than leaders coming to different conclusions based on differences in opinion on the best way to provide for state security.

By way of illustration, Solingen argues that Israeli chose ambiguity as a compromise solution between those that wanted a more open economic system—which thus required bending to U.S. wishes—and those that preferred a more closed model.¹⁹ While it is true that different leaders held varied perspectives on the economic model, U.S. nuclear policy preferences were paramount based on the economic and conventional military assistance Washington provided. This means that it didn't matter what type of economic model the U.S. adopted, what mattered was cooperation. Additionally, having

¹⁹ Etel Solingen, "The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East," *International Studies Quarterly* 38, no. 2 (June 1994), 318.

a mixed economic system, as described by Solingen, fails to address the primacy of conventional weapons assistance. And, as Solingen herself acknowledges, leadership preferences for a particular economic model are but one factor in the overall calculus—one that this research finds tertiary to explaining Israel's nuclear stance.

Another variant on this perspective suggests that a state's nuclear posture is largely the outcome of the leader in power. Ambiguity is thus explained as the leader in charge as having full control of the nuclear decision-making, with identifiable preferences for a restrained nuclear posture. To explain the 1974 Indian test and the Indo-Pakistani nuclear tests in 1998 then, the focus is on leaders who preferred an open stance and also sought to capitalize on broad domestic support for nuclear weapons.

As to the 1974 Indian test, some commentators have speculated that Indira Gandhi chose to test at the time in order to support her flagging domestic support. However, the evidence suggests that she was motivated to respond to Chinese advancements as well as cross-party calls for the same. As to timing, she tested as soon as Indian scientists developed the capability. Moreover, given the general popularity of the nuclear program with the public, there should have been additional testing by her and other leaders whenever a weak government was in power. This did not happen.

As to the 1998 tests, Prime Minister Vajpayee was head of the nationalist BJP party, which had included the induction of nuclear weapons in its party platform. However, Indian history suggests that this was neither a necessary nor sufficient condition for testing, although it does explain the timing of the tests. Vajpayee chose not to test during his short tenure in office in 1996—by definition his government was very

weak, but reports suggest he feared that a weak government would not be able to handle the international fallout. Similarly, Vajpayee had himself counseled against testing in 1977 as India sought to repair relations with the West and Pakistan in the wake of the 1974 test. In short, conditions had to be conducive for Vajpayee to test.

As to Pakistan, the military has primarily controlled nuclear policy since 1977. This has practically translated into a system of centralized decision-making. During the early 1990s there was increased rhetoric from Pakistani leaders, mainly in opposition to the government, that would make increasingly open statements about Pakistan's nuclear capabilities. However, this was never official policy and was likely a way to curry favor with the military, which had expressed some concern that the politicians would trade away the program under U.S. sanctions. In 1998, Prime Minister Sharif appeared to have wanted to forego testing in response to India, as he feared the economic repercussions; the Pakistani military trumped him as tensions with India continued to rise. In short, there is little indication that domestic politics mattered very much during Pakistan's history, particularly in comparison to the military's control over nuclear policy.

Taken together, there is some limited evidence in the Israeli and Indian cases that there were differences in opinion leading to compromise in the former, and interests in capturing public support in the latter. Neither explanation transcends the particular case very well. More importantly, there is the presence of other determinants in both instances that can explain a broader range of state behavior throughout history. As such, while there is some evidentiary support for these positions, they are less compelling, as shown in Figure 10.

Figure 10 – Summary of Evidentiary Support for Domestic Politics Hypothesis and Predictions.

	India			Pakistan		Israel
	1974 Test	1974-1998	1998 Test	1971-1998	1998 Test	1957-1975
Bargaining and Compromise	Limited Support	Limited Support	Limited Support	Limited Support	Limited Support	Limited-Moderate Support
Posture is in interest of centralized decision-maker	Moderate Support	Limited Support	Moderate Support	Limited – Moderate Support	Limited – Moderate Support	Limited Support

V. Moral or Strategic Culture Explanations

A second domestic politics explanation focuses on the effect of moral or strategic culture constraints on state leaders as a way of explaining ambiguity. One variant of this explanation was proposed by scholars studying India, and was based on observations of Indian leaders who have often publicly referred to the doctrine of ahimsa, or non-violence to living things. As applied to nuclear weapons, this proposition suggests that Indian leaders held deep reservations about immorality of relying on weapons of mass destruction for security purposes. Another variant focuses on strategic culture to explain ambiguity. As applied to Israel, some scholars have suggested that Israeli leaders did not reconcile themselves with the destruction nature of nuclear weapons, which over time ossified into a policy of nuclear opacity.

If either of these variants on leadership reservations is correct, then we should be able to observe expressions of doubt or lack of reliance by leaders on nuclear weapons

for security. Additionally, leaders should refrain from considering using nuclear weapons when they are a militarily useful option, and there should be little questioning or evaluation of existing policy.

This study finds that while there is evidence supporting the idea that many Indian and Israeli leaders held personal reservations about the role of nuclear weapons in providing for state security, there is little evidence that this affected their nuclear choices generally. That is, there is evidence supporting the first prediction, that there are expressions of doubt about relying on nuclear weapons for security. However, these doubts seemed to rarely affect nuclear policy in general. Rather, even leaders that opposed nuclear weapons took steps to further both the development of weapons and delivery mechanisms.

Starting with Prime Minister Nehru, there are numerous post-independence public comments by Indian leaders as to the immoral and unethical nature of nuclear weapons. Indian leaders have used this theme to underscore India's self-avowed disinterest in developing nuclear weapons even though it had the demonstrated capability to do so. However, even with these public pronouncements, even India's most morally opposed leaders have taken steps to further the program. For example, Prime Minister Shastri authorized the explosives program that would lead to the 1974 nuclear test. Even during the mid-1990s, both Prime Ministers Gowda and Gujral appeared to have opposed nuclear weapons on moral grounds, but both authorized additional testing shafts to be constructed. These examples demonstrate that even though Indian leaders may have publicly articulated a personal aversion to nuclear weapons, when charged with duties of

state security, they set aside these preferences. This suggests that they would do the same with India's nuclear posture if the circumstances warranted it.

Similarly, there is evidence that some Israeli leaders were concerned about the "very apocalyptic nature of planning the unthinkable."²⁰ However, there is little to suggest that these reservations have substantially informed Israel's nuclear postures. As even advocates of the strategic culture arguments accept, there were other determinants that created the policy during the late 1950s and early 1960s.²¹

Further, the evidence suggests that Israeli leaders have thought dynamically about Israel's nuclear posture. Both Prime Minister Eshkol and Meir considered using nuclear bombs during the 1967 and 1973 wars. After the 1973, further evidence suggests that Israel has significantly advanced its capability, which includes tactical nuclear weapons. While never confirmed, there is also suspicion that Israel conducted a joint nuclear test with South Africa in the Vela incident in 1979. Additionally, Israel maintains its existing nuclear monopoly and still issues opaque threats about its nuclear capability, such as during the first Gulf War. In short, Israel's nuclear capability appears readily accessible to its leaders, even if it is not an option for the country's day-to-day security problems.

Finally, this study did not find any instances of Pakistani leaders expressing any moral concerns related to nuclear weapons. Consistent with this finding, other scholars have not proposed this as an explanation for Pakistan's nuclear posture.

²⁰ Avner Cohen, "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars," Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R Lavoy, Scott D. Sagan, and James J. Wirtz, eds. (Ithaca: Cornell University Press, 2000), 105.

²¹ Cohen, "Nuclear Arms in Crisis Under Secrecy," 343.

In short, contributions to developing a nuclear weapons program by leaders who seem to publicly entertain doubts inferentially suggests that such beliefs are not the primary factor motivating their decisions. Moreover, there is little evidence that either India or Israel's leaders did not consider their nuclear options during times of war and crisis. Further, continued review by both governments also suggests that the policies are not culturally entrenched to the extent that they are not subject reevaluation. Thus, while there is evidence of moral doubts regarding nuclear weapons, there is missing evidence linking those concerns to each state's nuclear posture. As such there is little support for this proposition, particularly across all three cases, as seen in Figure 11.

Figure 11 – Summary of Evidentiary Support for Moral and Strategic Culture Hypothesis and Predictions.

	India			Pakistan		Israel
	1974 Test	1974-1998	1998 Test	1971-1998	1998 Test	1957-1975
Expressions of Nuclear Doubt	Limited - Moderate Support	Moderate Support	Limited Support	No Support	No Support	Limited Support
Nuclear Weapons Not an Option	Limited Support	Limited Support	Limited Support	No Support	No Support	Limited Support
Lack of questioning existing policy	Limited Support	Limited Support	Limited Support	No Support	No Support	Limited Support

VI. Conclusions

The three cases studied here reveal several important lessons about the constraints facing second-generation nuclear states. First, the regional security environments create countervailing pressures. On the one hand, severe security environments encourage nuclear proliferation. Insecure states seek nuclear weapons as a way to offset existing conventional deficiencies, or as insurance in the event the conventional balance shifts. At the same time, disparities in nuclear development, as well as the need to retain sufficient conventional forces, counsel in favor of a conservative development strategy.

In the case of Israel, this realization came later, after the compromise with the U.S. that Israel would not be the first state to introduce nuclear weapons into the Middle East. As Israeli leaders realized that some states, in particular Egypt, were not particularly motivated to compete in nuclear terms, and with the combined threat of Soviet intervention, ambiguity gave Israel a tool to retain its nuclear monopoly. The regional dynamic was, however, present in the Indian and Pakistani cases from the beginning, and gave both sides some incentives for a least nascent forms of cooperation to reduce the risks of both states transition to nuclear weapons status. For India, there was the added concern of Chinese nuclear and military assistance to Pakistan.

A second important factor influencing the nuclear posture of second-generation nuclear states arises from patron state pressures. Given strong interests in nuclear non-proliferation, combined with the power to actually effectuate this policy, the United States operated as the primary source of this pressure on all three states. This pressure

was particularly effective as to Israel and Pakistan, given the number of avenues of influence the U.S. had from economic and conventional assistance.

U.S. patron state pressure on India was more complicated. Prior to the 1974 test, the U.S. rejected Indian efforts to justify conducting peaceful nuclear explosions, but was not successful in dissuading them from going forward. This is mainly because a general lack of other areas of cooperation, given the low point in relations between the two states. After the 1974 test, India sought to reengage with the United States in order to garner economic and technological benefits, as well as encourage the U.S. to pressure Pakistan to slow down its program. By the mid-1990s, India was economically growing compared to Pakistan and had relatively stable relations with the U.S. These factors, combined with arguably some Clinton administration signals that it was softening its non-proliferation stance vis-à-vis India, made it possible for India to both test and then repair relations with its now longer-term partner.

Third, the non-proliferation regime was effective to the extent that India and Pakistan calculated the material costs of testing. However, since Israel did not seriously consider public testing and had previously obtained nuclear assistance prior to most non-proliferation measures, this factor was missing from the Israeli calculations. Moreover, there is little evidence across all three cases that any of the state seriously recognized or internalized non-proliferation norms, having not joined the agreements or made other efforts to support the framework. There is the most evidence in the Indian case, to the extent that its leaders early on supported non-proliferation and disarmament measures,

but at the same time, Indian leaders have been among the most vocal critics of the existing regime.

Fourth, there were few evidentiary similarities among the cases related to domestic politics factors. That is, there is really no generalizable statement to make about all three cases, other than domestic politics mattered to a limited extent. The primary hypothesis for Israel is that its nuclear posture was a result of compromise among its leaders who feared the economic repercussions of testing. This explanation fails to fully capture the regional constraints, as well as the full panoply of U.S. non-proliferation pressures, which certainly included an economic component, but also conventional military assistance and diplomatic bargaining in the Middle East.

As to Indian and Pakistan, their decision-making models are centralized. In the Pakistani case, its leaders mainly tracked the preferences of the military, the governing body for the nuclear weapons program. The Indian case has the most evidentiary support for some domestic political factors, as for example, the cross-party calls for a more robust Indian nuclear policy before the 1974 test, or the BJP's promise to induct nuclear weapons on coming to power in 1998. Still, when these specific instances are analyzed carefully, while they were contributing factors, they were neither necessary nor sufficient for explaining Indian nuclear policy.

Fifth, notwithstanding state leaders' individual moral reservations about nuclear weapons in the cases of Israel and India, there is little evidence that this generally affected nuclear policy. In the case of Israel, there is little evidence that moral reservations ossified the program into one of ambiguity, where there are numerous

instances of the program dynamically moving forward and being subject to review. In moral terms, India's leaders were often publicly vocal in their opposition to nuclear weapons, but simultaneously authorized measures that continued to move both the weapons and delivery components forward. Additionally, there was no evidence that Pakistani leaders suffered any doubts about moving forward with a nuclear weapons program. In short, this particular explanation is neither especially compelling in individual cases, nor readily generalizable across the three cases.

CHAPTER VII

CONCLUSION

Second-generation nuclear states—such as Israel, India, and Pakistan—have followed a different proliferation pattern than the previous five nuclear states. Instead of choosing to openly acknowledge and publicly demonstrate their nuclear weapons capabilities, they have instead adopted ambiguous nuclear postures. In the case of Israel, this was a carefully worded statement that it would not be the first state to introduce nuclear weapons into the Middle East. Similarly, for decades after its self-labeled “peaceful nuclear explosion” in 1974, India maintained that its program was for entirely peaceful purposes and that it was not developing nuclear weapons. Pakistan also denied that it was acquiring nuclear weapons, despite mounting evidence to the contrary. India, followed within a few weeks by Pakistan, shrugged off this pretense in 1998 by both conducting a series of nuclear tests and simultaneously declaring itself a nuclear weapons state. These tests came after a period of twenty-four years during which New Delhi explicitly foreswore nuclear weapons.

This restrained behavior against adopting an overt nuclear posture is particularly puzzling given the regional security environments in which these states have existed since their independence. Israel has fought in five wars with its hostile Middle Eastern neighbors, which fought primarily in coalitions, from its independence through the 1973

Yom Kippur war. India and Pakistan have engaged in three wars since their independence, and have had multiple shooting skirmishes and crises over the Kashmir region. India and China have also engaged in armed conflict over their contested territorial claims in the Himalayas. In short, these states have existed in severe security environments.

Based on these realities, the predicates of rational deterrence theory suggest that second-generation nuclear states should have sought to bolster their deterrence posture by credibly communicating to their adversaries their nuclear weapons capabilities and intentions. Yet, they did not do so. As this study has found, this is because second-generation nuclear states have a host of countervailing factors that they must necessarily balance in order to best preserve their security options. Nuclear ambiguity has facilitated balancing these often contradictory demands.

In the main, these previously described security environments have created strong imperatives for each state to acquire a nuclear capability, notwithstanding the significant costs and technology barriers for developing states. And the ambiguous nuclear postures allowed for some deterrence through uncertainty. In particular, once a weapons capability was achieved, meaning mainly that enemy attacks on their nuclear facilities were unlikely given the radiation risks, each state's posture left some uncertainty as to whether it actually possessed nuclear weapons. And, indeed, the ambiguous nuclear postures went even further by signaling that there was the capability to develop nuclear weapons, but the intention was lacking. This meant that nuclear postures could quickly change if needed.

For example, Israel would never deny that it had a nuclear weapons capability; its leaders just stated that they would not be the first to introduce nuclear weapons. India signaled that it could develop a bomb capability by testing in 1974, even though it denied that it intended to. Similarly, in response to continued Pakistani nuclear development during the 1980s and 1990s, Indian leaders would signal that they had the capability to construct nuclear weapons, but they were choosing not to. And Pakistan would deny that it was developing nuclear weapons, but under conditions of extreme threat, such as during the 1987 Brasstacks Crisis, Islamabad would signal in private undertones to India and intervening states such as the U.S. that its stance could change. In short, by emphasizing capabilities over intentions, an ambiguous nuclear posture has a deterrent component embedded in the stance.

Yet, at the same time, the regional security environment also created incentives for second-generation nuclear states to maintain an ambiguous posture because of the differential rates of nuclear development in each region. This dynamic was present early on in the cases of India and Pakistan. China developed and exploded its first nuclear device in 1964, which it shortly followed up with a reportedly thermonuclear test a few years later and relatively advanced delivery systems that could soon reach India. It would be another ten years from this initial explosion before India could respond with a test of its own, and many decades before it developed sophisticated enough delivery platforms to ensure an advanced strike capability.

As a result, Indian incentives were to downplay an interest in nuclear weapons to avoid competitive policies with its northern neighbor, against whom New Delhi could not

compete. On the other hand, India was far stronger than Pakistan, in both conventional and nuclear terms and could have outstripped it. Still, the shadow of China affected this incentive as well, given Chinese predilections for supplying Islamabad with conventional and nuclear support. Additionally, New Delhi had economic growth priorities and wanted to avoid the potential for an expensive arms race. As such, India sought to keep the nuclear competition between its much stronger and weaker adversaries balanced.

Pakistani regional calculations were much simpler—avoid provoking India so that New Delhi would be less inclined to outstrip its much weaker conventional and nuclear capabilities. It was also this vulnerability that would make Pakistan much more amenable to U.S. non-proliferation pressures in exchange for conventional weapons support and economic assistance.

Israel was also affected by the imbalance of nuclear power in the Middle East, although in a different way as it achieved a nuclear monopoly early on. Eventually the Israelis began to recognize that they might be able to maintain the monopoly through a combination of refraining from issuing nuclear threats towards states such as Egypt that were not seriously pursuing nuclear weapons, as well as the use of force towards determined proliferators such as Iraq. At the same time, a restrained nuclear posture reduced incentives for outside intervention, in both conventional and nuclear terms, by the Soviet Union on behalf of its Arab allies. In short, restraint was a practical response for maintaining paced development and minimizing reasons for stronger states to intervene regionally and upset the balance of power. This was also important for each

state given the priority for maintaining adequate conventional forces vis-à-vis their adversaries.

At the same time, patron state pressures, mainly from the United States, played an important role in instituting and maintaining ambiguous postures. This dynamic mattered the most initially in the Israeli case. Existing evidence suggests that the U.S. used economic and conventional military incentives, as well as diplomatic pressure, to convince the Israelis to adopt a restrained nuclear posture. This exchange was palatable to Israel's leaders as it guaranteed that Israel would be able to retain a conventional superiority without having to give up its nuclear arsenal, in the event it was ever needed in emergency circumstances.

Similarly, U.S. non-proliferation pressures also operated to keep the Pakistani nuclear capability hidden; otherwise U.S. domestic laws would have mandated sanctions and a cut off in assistance. The Indians were not immune to U.S. non-proliferation interests, although they did not have as many ties since they acquired most of their conventional assistance from the Soviets. However, the lure of increased access to trade and advanced technology during the 1980s and 1990s operated as an incentive to keep the Indian nuclear program hidden. At the same time, the Indians calculated that they had established strong enough ties and an economic base to weather the certain sanctions after the 1998 nuclear tests. And of course, Pakistani security motivations were so strong to respond to the Indian test that the relatively moderate American offers of renewing cooperation with Islamabad were ineffective in convincing Pakistan to not test at this time.

There were few other states with the same interest in preventing nuclear proliferation as well as the clout to enforce these interests as the U.S. Not only did this minimize the importance of other patron states, but it also had implications for the efficacy of the non-proliferation regime. In particular, all three of these states avoided treaty commitments that would limit their ability to acquire nuclear weapons. Israel also escaped most of the material restrictions of the regime because its nuclear program was at the forefront of these measures. India and Pakistan were impacted more, although this was limited to slowing down their programs. And the case studies revealed that there was little evidence supporting the proposition that any of these states internalized or genuinely supported the non-proliferation regime or norms espoused in the same. Rather, to the extent that these states proposed non-proliferation measures, they were always empty proposals, likely knowing that their adversaries would refuse to adopt the stringent conditions provided for in the propositions.

Given these powerful external incentives, it is not surprising that leaders of second-generation nuclear states face almost the exact same set of conflicting factors as their predecessors. The result is remarkably consistent decisions across different generations of leaders, political parties, and interest groups. As suggested in the preceding pages, security calculations dominate the domestic political discussion, to the extent that there is one. Even in the case of India, where the BJP decided to test in 1998, this was not a foregone conclusion. Rather, it was the result of years of economic and technological preparations, based on the policies of previous Indian leaders, down to the testing shafts dug in the couple years preceding the tests. And following the tests, Prime

Minister Vajpayee set about repairing the rift with Western states so that India could have its nuclear weapons and eat its economic cake too. In short, all leaders of the second-generation nuclear states faced the same constraints, which narrowed the range of options available to them in making nuclear decisions. Ambiguity provided a way of balancing the most security interests, given these constraints.

Similarly, even though some leaders of second-generation nuclear states have exhibited moral reservations about relying on nuclear weapons for state security, these have been largely cast aside as each state has marched steadfastly forward to acquiring advanced nuclear capabilities. That is, there is little evidence that these personal moral reservations have significantly affected state policy in any meaningful way.

CHAPTER BIBLIOGRAPHY

Chapter I

Cohen, Avner and Benjamin Frankel. "Opaque Nuclear Proliferation." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co., 1991.

Handel, Michael. Israel's Political-Military Doctrine. Harvard University, Center for International Affairs, Occasional Papers, no. 30. Cambridge: July 1973.

Jones, Rodney W. "Minimum Nuclear Deterrence Postures in South Asia: An Overview." Report prepared for Defense Threat Reduction Agency Advanced Systems and Concepts Office. 1 October 2001.

Sagan, Scott D. "The Perils of Proliferation: Organization Theory, Deterrence Theory, and the Spread of Nuclear Weapons." International Security 18, no. 4 (Spring 1994).

Sagan, Scott D. and Kenneth N. Waltz. The Spread of Nuclear Weapons: A Debate. New York: W. W. Norton & Company, 1995.

Van Evera, Stephen. "Why States Believe Foolish Ideas: Non-Self-Evaluation by Government and Society." Presented at the Annual Meeting of the American Political Science Association (1988).

Van Evera, Stephen. Causes of War. Ithaca: Cornell University Press, 1999.

Chapter II

Achen, Christopher H. and Duncan Snidal. "Rational Deterrence Theory and Comparative Case Studies." World Politics 41, no. 2 (January 1989).

Aronson, Shlomo. The Politics and Strategy of Nuclear Weapons in the Middle East: Opacity, Theory and Reality, 1960-1991. Albany: State University of New York Press, 1992.

- Art, Robert J. "The Four Functions of Force." In The Use of Force, Robert J. Art and Kenneth N. Waltz, eds. Lanham: University Press of America, 1993.
- Cohen, Avner. Israel and the Bomb. New York: Columbia University Press, 1998.
- Cohen, Avner. "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars." In Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.
- Cohen, Avner. "Stumbling Into Opacity: The United States, Israel, and the Atom, 1960-1963." Security Studies 4, no. 2 (Winter 1994-1995).
- Cohen, Avner and Benjamin Frankel. "Opaque Nuclear Proliferation." in Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co, 1991.
- Embassy of India. "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine." Available from http://www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html; Internet. Accessed March 2004.
- Fearon, James D. "Signaling versus the Balance of Power and Interests: An Empirical Test of a Crisis Bargaining Model." Journal of Conflict Resolution 38, no. 2 (June 1994).
- Feldman, Shai. Israeli Nuclear Deterrence: A Strategy for the 1980s. New York: Columbia University Press, 1982.
- Frankel, Benjamin. "An Anxious Decade: Nuclear Proliferation in the 1990s." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co, 1991.
- George, Alexander L. "Case Studies and Theory Development: The Method of Structured, Focused Comparison." In Diplomacy: New Approaches in History, Theory, and Policy, Paul Gordon Lauren, ed. New York: Macmillan Press and Co., 1979.
- George, Alexander L. and Andrew Bennett. Case Studies and Theory Development in the Social Sciences. Cambridge, Mass.: The MIT Press, 2005.
- George, Alexander L. and Richard M. Smoke. Deterrence in American Foreign Policy: Theory and Practice. New York: Columbia University Press, 1974.

_____. "Deterrence and Foreign Policy." World Politics 41, no. 2 (January 1989).

Glaser, Charles L. Analyzing Strategic Nuclear Policy. Princeton: Princeton University Press, 1990.

_____. "The Security Dilemma Revisited," World Politics 50, no. 1 (October 1997).

_____. "When are Arms Races Dangerous? Rational versus Suboptimal Arming," International Security 28, no. 4 (Spring 2004).

Hagerty, Devin T. "The Power of Suggestion: Opaque Proliferation, Existential Deterrence, and the South Asian Nuclear Arms Competition." In The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results, Zackary S. Davis and Benjamin Frankel, eds. Portland: Frank Cass & Co., 1993.

Hersh, Seymour M. The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy. New York: Random House, 1991.

Huth, Paul K. Extended Deterrence and the Prevention of War. New Haven: Yale University Press, 1988.

Janis, Irving and L. Mann. Decision-Making: A Psychological Analysis. New York: Free Press, 1977.

Jervis, Robert. Perception and Misperception in International Politics. Princeton: Princeton University Press, 1976.

_____. "Cooperation Under the Security Dilemma." World Politics 30, no. 2 (January 1978).

_____. "Deterrence Theory Revisited." World Politics 31, no. 2 (January 1979).

_____. The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon. Ithaca: Cornell University Press, 1989.

Joeck, Neil. "Tacit Bargaining and Stable Proliferation." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co., 1991.

_____. "Maintaining Nuclear Stability in South Asia." Adelphi Paper 312. New York: Oxford University Press for IISS, 1997.

- Jones, Rodney W. "Minimum Nuclear Deterrence Postures in South Asia: An Overview." Report Prepared for the Defense Threat Reduction Agency. Reston, Virginia: Policy Architects International, 2001.
- Keohane, Robert O. "The Big Influence of Small Allies." Foreign Policy no. 2 (Spring 1971).
- King, Gary, Robert O. Keohane, and Sidney Verba. Designing Social Inquiry: Scientific Inference in Qualitative Research. Princeton: Princeton University Press, 1994.
- Krasner, Stephen D. "Structural Causes and Regime Consequences: Regimes as Intervening Variables." In International Regimes, Stephen D. Krasner, ed. Ithaca: Cornell University Press, 1983.
- Lebow, Richard Ned and Janice Gross Stein. "Rational Deterrence Theory: I Think, Therefore I Deter." World Politics 41, no. 2 (January 1989).
- Mearsheimer, John J. The Tragedy of Great Power Politics. New York: W.W. Norton & Co., 2001.
- McGinnis, Michael D. "A Rational Model of Regional Rivalry." International Studies Quarterly 34 (1990).
- Morgan, Patrick M. Deterrence: A Conceptual Analysis. Beverly Hills: Sage Publications, 1983.
- Morgenthau, Hans. "A Political Theory of Foreign Aid." The American Political Science Review 56, no. 2 (June 1962).
- Morrow, James D. "The Strategic Setting of Choices: Signaling, Commitment, and Negotiation in International Politics." In Strategic Choice and International Relations, David Lake and Robert Powell, eds. Princeton: Princeton University Press, 1999.
- Mueller, John. "The Essential Irrelevance of Nuclear Weapons: Stability in the Postwar World." International Security 13, no. 2 (Fall 1988), 55-79.
- Paul, T.V. "Nuclear Taboo and War Initiation in Regional Conflicts." Journal of Conflict Resolution 39, no. 4 (December 1995).
- Powell, Robert. Nuclear Deterrence Theory: The Search for Credibility. Cambridge: Cambridge University Press, 1990.
- Rydell, Randy J. "Opaque Proliferation and the Public Agenda." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co, 1991.

- SarDesai, D. R. and Raju G. C. Thomas, eds. Nuclear India in the Twenty-First Century. New York: Palgrave, 2002.
- Schelling, Thomas C. The Strategy of Conflict. Cambridge: Harvard University Press, 1960.
- Schelling, Thomas C. Arms and Influence. New Haven: Yale University Press, 1966.
- Shimshoni, Jonathan. Israel and Conventional Deterrence: Border Warfare from 1953-1970. Ithaca: Cornell University Press, 1988.
- Smith, Roger K. "Opaque Proliferation and the Fate of the Non-Proliferation Regime." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co, 1991.
- Snyder, Glenn H. "Deterrence and Defense" In The Use of Force, Robert J. Art and Kenneth N. Waltz, eds. Lanham: University Press of America, 1993.
- _____. Alliance Politics. Ithaca: Cornell University Press, 1997.
- Solingen, Etel. "The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East." International Studies Quarterly 38, no. 2 (June 1994).
- _____. "The Political Economy of Nuclear Restraint." International Security 19, no. 2 (Fall 1994).
- _____. Nuclear Logics: Contrasting Paths in East Asia and the Middle East. Princeton: Princeton University Press, 2007.
- Stein, Janice Gross. "Deterrence and Reassurance." In Behavior Society and Nuclear War, Tetlock, et al., eds. Oxford: Oxford University Press, 1991.
- Stern, Paul C., et al. "Deterrence in the Nuclear Age." In Perspectives on Deterrence, Paul C. Stern, et al., eds. Oxford: Oxford University Press, 1989.
- Van Evera, Stephen. Guide to Methods For Students of Political Science. Ithaca: Cornell University Press, 1997.
- _____. Causes of War: Power and the Roots of Conflict. Ithaca: Cornell University Press, 1999.
- Walt, Stephen. The Origins of Alliances. Ithaca: Cornell University Press, 1987.

Waltz, Kenneth N. "The Origins of War in Neorealist Theory." In The Origin and Prevention of Major Wars, Robert Rotberg and Theodore Rabb, eds. Cambridge: Cambridge University Press, 1988.

_____. "More May Be Better." In The Spread of Nuclear Weapons: A Debate Renewed, Scott D. Sagan and Kenneth N. Waltz, eds. New York: W.W. Norton & Company, 2003.

Chapter III

Arms Control and Disarmament Agency. "Proposed Program Under NSAM No. 335," 31 July 1965. Presidential Directives. Washington D.C.: The National Security Archive and Proquest, 2008, no. PD01128.

Aronson, Shlomo. "The Nuclear Dimension of the Arab-Israeli Conflict: The Case of the Yom Kippur War." The Jerusalem Journal of International Relations 7, nos. 1-2 (1984).

_____. Israel's Nuclear Programme, the Six Day War and its Ramifications. London: King's College, 1999.

Associated Press. "Arab League will call for leaving nuclear treaty if Israel admits to atomic weapons." International Herald Tribune (5 March 2008).

Cohen, Avner. "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars." In Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R Lavoy, Scott D. Sagan, and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.

Cohen, Avner and Benjamin Frankel. "Opaque Nuclear Proliferation." In Opaque Nuclear Proliferation: Methodological and Policy Implications, Benjamin Frankel, ed. Portland: Frank Cass & Co, 1991.

Ball, George W. to U.S. Embassies. "U.S. Inspections Verify That The Israeli Reactors Are For Peaceful Purposes Only," 28 June 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01171.

Barbour, Walworth to State Department. "Leading Nuclear Scientist Discusses Nuclear Policy," 29 June 1966. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01172.

Ben-Dor, Gabriel. "Arab Rationality and Deterrence." In Deterrence in the Middle East: Where Theory and Practice Converge, Aharon Klieman and Ariel Levite, eds. Boulder: Westview Press, 1993.

- Bruce, David K.E. to State Department. "Israel's Nuclear Policy," 16 January 1969. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Proquest, 2008, no. WM00134.
- Catudal, Honore M., Jr. Israel's Nuclear Weaponry: A New Arms Race in the Middle East. London: Grey Seal Books, 1991.
- Central Intelligence Agency. "The Advanced Weapons Programs of the UAR and Israel," Heavily excised secret National Intelligence Estimate, 8 May 1963. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Proquest, 2008, no. WM00059.
- _____. "Nuclear Weapons Programs Around the World," 3 December 1964. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Proquest, 2008, no. WM00093.
- Cirincione, Joseph. Deadly Arsenals: Nuclear, Biological and Chemical Threats. Washington D.C.: Carnegie Endowment for International Peace, 2005.
- Cohen, Avner. Israel and the Bomb. New York: Columbia University Press, 1998.
- Dale, William N. to State Department. "Current Status of the Dimona Reactor," 9 April 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01114.
- "Dayan Says Israelis Have The Capacity to Produce A-Bombs," The New York Times. (25 June 1981).
- Donnelly, Warren H. "Israel and Nuclear Weapons," 8 August 1988. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP02605.
- Dowty, Alan. "Israeli Perspectives on Nuclear Proliferation." In Security, Order, and the Bomb: Nuclear Weapons in the Politics and Defence Planning of Non-Nuclear Weapon States, Johan Jorgen Host, ed. Oslo: Universitetsforlaget, 1972.
- Ealum, James M. to U.S. Department of State. "Israel's Uranium Potential," Despatch, 26 August 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00671.
- "Experts Accept Claim about Israel's Nuclear Capability," 8 January 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP02407.

- Farr, Warner D. "The Third Temple's Holy Of Holies: Israel's Nuclear Weapons." Counterproliferation Paper No. 2. U.S. Air Force Counterproliferation Center (September 1999).
- Feldman, Shai. Israeli Nuclear Deterrence: A Strategy for the 1980s. New York: Columbia University Press, 1982.
- Feldman, Shai. "Superpower Nonproliferation Policies: The Case of the Middle East." In The Soviet-American Competition in the Middle East, Steven L. Spiegel, et al., eds. Lexington: D.C. Heath and Company, 1988.
- Feldman, Shai. "Israeli Deterrence and the Gulf War." In Deterrence in the Middle East: Where Theory and Practice Converge, Aharon Klieman and Ariel Levite, eds. Boulder: Westview Press, 1993.
- Herter, Christain A., Jr. "Regarding Israel's Nuclear Capability," Statement to U.S. Senate Foreign Relations Committee, 6 January 1961. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00739.
- Herter, Christian A. "Press Guidance for Discussion of Israeli Nuclear Energy Activities," 22 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00726.
- Hirsh, Seymour M. The Samson Option: Israel's Nuclear Arsenal and American Foreign Policy. New York: Random House, 1991.
- Karpin, Michael. The Bomb in the Basement: How Israel Went Nuclear and What That Means for the World. New York: Simon & Schuster Paperbacks, 2006.
- Kimmit, Robert M. to Richard V. Allen. "Israeli Strike—Legal Aspects," NSC Memorandum, 11 June 1981. Terrorism and U.S. Policy. Washington D.C.: The National Security Archive and Proquest, 2008, no. TE00672.
- Lakeland, William C. to State Department. "Embassy's Efforts to Set the Record Straight on Israeli Atomic Energy Activities," 30 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00733.
- Lipson, Charles. "American Support for Israel: History, Sources, Limits." In U.S.-Israeli Relations at the Crossroads, Gabriel Sheffer, ed. Portland: Frank Cass, 1997.
- Macomber, William B. to James T. Ramey. "Additional Recent Information on the Israeli Atomic Energy Program," 19 January 1961. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00744.

- McNamara, Robert S. to John F. Kennedy. "The Diffusion of Nuclear Weapons With and Without A Test Ban Agreement," 27 July 1962. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00892.
- McClintock, Robert M. to State Department. "Israeli Invitation to the IAEA to Visit Nuclear Power Sites Would Allay Arab Fears," 27 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00731.
- McClintock, Robert M. to State Department. "Lebanese Foreign Minister is Questioned About the Israel Nuclear Reactor," 29 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00732.
- Miller, Judith. "3 Nations Widening Nuclear Contacts," New York Times Article, 28 June 1981, Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01902.
- Mills, Sheldon T. to State Department. "Appraisal of Atomic Developments in Israel Is Given to Jordan," 24 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00729.
- Murphy, Patricia, U.S. Department of State. "U.S.-U.K. Bilaterals: Israeli Nuclear Issues," 18 November 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP02380.
- Nuclear Regulatory Commission. "Inquiry into the Testimony of the Executive Direct for Operations," February 1978. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01567.
- Pry, Peter. Israel's Nuclear Arsenal. Boulder: Westview Press, 1984.
- Reid, Odgen R. to State Department. "Israeli Prime Minister David Ben-Gurion's Responses to Questions Asked in the Knesset Concerning a New Israeli Nuclear Reactor," 21 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00722.
- Reid, Ogden R. to State Department. "Israeli Press Reports on Alleged Nuclear Power Plant Construction," 18 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00718.
- Rostow, Walt W. "A Way of Thinking About Nuclear Proliferation," 19 November 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01046.

- Rusk, Dean to President John F. Kennedy. "Israel's Atomic Energy Activities," secret memorandum, 30 January 1961. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00745.
- _____. "U.S. Government Is Committed at Every Level to Stopping Nuclear Proliferation In Israel and Elsewhere," 3 March 1961. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00755.
- _____. to U.S. Embassies, "Israel's Dimona Reactor," 31 October 1962. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00922.
- _____. to Lyndon B. Johnson, "Second McCloy Mission on Near East Arms," 22 August 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00991.
- Shalom, Zaki. Israel's Nuclear Option: Behind the Scenes Diplomacy Between Dimona and Washington. Portland: Sussex Academic Press and Jaffee Center for Strategic Studies, 2005.
- Shaw, John F. to State Department.. "Ben Gurion on Israel's Two Reactors," 17 August 1962. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00898.
- Solingen, Etel. "The Domestic Sources of Regional Regimes." International Studies Quarterly 38, no. 2 (June 1994).
- Solingen, Etel. Nuclear Logics: Contrasting Paths in East Asia and the Middle East. Princeton: Princeton University Press, 2007.
- Spector, Leonard S. Nuclear Proliferation Today. Cambridge: Ballinger Publishing Co., 1984.
- Spector, Leonard C. New Nuclear Nations. New York: Vintage Books, 1985.
- Stoessel, Walter J., Jr. to U.S. Embassy, Saudi Arabia. "Saud's Remark on Issues and Answers," 15 June 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01899.
- Tannenwald, Nina. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use," International Security 53, no. 3 (Summer 1999).

U.S. Department of Defense "Public Affairs Guidance 14C – Israel Nuclear Reactors," 6 January 1961. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00738.

U.S. Department of State. "Suggested Press Guidance for Chairman McCone if Asked About Reported Israeli Atomic Weapons Development," secret, 17 December 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00717.

_____. "Background Paper on Factors Which Could Influence National Decisions Concerning Acquisition of Nuclear Weapons," 12 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01079.

_____. "Review Group Consideration of Response to NSSM-40," 30 June 1969. Kissinger Transcripts. Washington D.C.: The National Security Archive and Proquest, 2008, no. KT00030.

_____. "Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement," 12 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01078.

"Value and Feasibility of a Nuclear Non-Proliferation Treaty," 10 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP01070.

Chapter IV

Abraham, Itty. The Making of the Indian Atomic Bomb. New York: Zed Books, 1998.

"Administration Eyes Sale of Supercomputer to India, Sources Say," Associated Press (8 April 1990), in Lexis-Nexis Academic Universe, <http://www.lexis-nexis.com>.

Amstutz, J. Bruce to U.S. Department of State. "Journalist Alleges India Has One Atomic Bomb Ready in Reserve," Limited Official Use, Cable 03285, 4 September 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01915.

Anthony, Ian and Elisabeth M. French. "Non-Cooperative Responses to Proliferation: Multilateral Dimensions." In SIPRI Yearbook 1999: Armaments, Disarmament and International Security, Stockholm International Peace Research Institute, comp. Oxford: Oxford University Press, 1999.

- Arnett, Eric. "Nuclear Tests by India and Pakistan." In SIPRI Yearbook 1999: Armaments, Disarmament and International Security, Stockholm International Peace Research Institute, comp. Oxford: Oxford University Press, 1999.
- Arnett, Eric. "What Threat?" The Bulletin of the Atomic Scientists 53, no. 2 (March 1997-April 1997).
- Asian Development Bank, "Key Indicators of Developing Asian and Pacific Countries." Internet; accessed March 2005, http://www.adb.org/Documents/Books/Key_Indicators/2004/pdf/IND.pdf
- Atwood, J. Brian to Edmund S. Muskie. "The Congressional Agenda: Issues and Strategies," Briefing Memorandum, 16 May 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwyck-Healey, 1992, no. NP01781.
- Balman, Sid, Jr. "India Assures US on Nuke Test," Reuters (19 January 1996), in Compuserve-Executive News Service.
- Banerjee, Dipankar. "The New Strategic Environment." In India's Nuclear Deterrent: Pokhran II and Beyond, Amitabh Mattoo, ed. New Delhi: Har-Anand Publications PVT LTD, 1999.
- Barnes, Harry G. to U.S. Department of State. "Mrs. Gandhi Rebuffs Speculation about Nuclear Blast at Pokhran," Confidential Cable 09505, 15 May 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01955.
- _____. "Indo-Pakistan Relations: Mistaken AP Story of Pakistani Nuclear Blast in China," Confidential Cable 16186, 27 March 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02123.
- _____. "Status of India's Nuclear Program and Policy," New Delhi, cable, 11 June 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwyck-Healey, 1992, no. NP01964.
- _____. "Official Informal No. 402," Confidential Cable 11098, 9 June 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01963.
- Benjamin, Milton R. "India Said to Eye Raid on Pakistani A-Plants," The Washington Post (20 December 1982), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

Benjamin, Stan. "NRC Refuses to Approve Nuclear Shipments; Issue Goes to Carter," Associated Press (16 May 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>

Bhatia, Shyam. India's Nuclear Bomb. Sahibabad: Vikas Publishing House, 1979.

Blood, Archer K. to U.S. Department of State. "Current Status of Indian Nuclear Facilities," Confidential Cable 01647, 26 January 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01859.

_____. "Indian Press Reports Preparation for Nuclear Explosion and U.S. Attitudes Towards It," Cable, 5 May 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01885.

Bowles, Chester to U.S. Department of State. "Prime Minister Shastri Comments on the Chinese Nuclear Detonation," Unclassified Cable 1256, 23 October 1962. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01018.

_____. "Views of Overseas Indian Correspondents on the Chinese Nuclear Detonation," Limited Official Use, Cable 1271, 24 October 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01022.

_____. "Recent Nuclear Developments in India," Secret Report, 18 January 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01099.

_____. "News Articles on the Chinese Nuclear Detonation," Unclassified Cable 1203, 17 October 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01002.

_____. "Debate among the Indians As to What Should Be Done in the Wake of the Chinese Nuclear Detonation," Confidential Cable 1323, 29 October 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01031.

_____. "Jerome Weisner's Report on Visit to India and Discussion of Indian Nuclear Capabilities and Intentions," Secret Cable, 21 January 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01101.

- _____. "Editorial Comments in the Indian Press Concerning the Chinese Nuclear Detonation," Unclassified Cable 1263, 23 October 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01019.
- _____. "Effect of Chinese Nuclear Tests on India's Desires to Speed Up Its Nuclear Program," Unclassified Cable 02253, 10 February 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01106.
- "Briefly: India," Nucleonics Week (10 January 1985).
- Central Intelligence Agency. "Indian Nuclear Energy Program," Confidential Scientific Intelligence Report, 25 March 1958. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00026.
- _____. "Likelihood and Consequences of the Development of Nuclear Capabilities by Additional Countries," Secret, National Intelligence Estimate, 20 September 1960. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00043.
- _____. "Scientific Intelligence Digest: The Indian Nuclear Weapons Program and Delivery Capabilities," Secret Periodical, December 1965. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00109.
- _____. "Nuclear Weapons and Delivery Capabilities of Free World Countries Other than the U.S. and U.K.," Secret National Intelligence Estimate, 21 September 1961. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00052.
- _____. "Nuclear Weapons Programs around the World," Top Secret Memorandum, 4 December 1964. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00093.
- _____. "India's Nuclear Weapons Policy," Secret Special National Intelligence Estimate, SNIE 31-1-65, 21 October 1965. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00107.
- _____. "Indian Government Policy on Development of Nuclear Weapon[s]," Classification Excised, Intelligence Information Cable, 24 October 1964. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00088.

- _____. "The Indian Nuclear Weapons Capability," Classification Unknown, Memorandum, 18 October 1965. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00106.
- _____. "Central Intelligence Bulletin—India," Top Secret, National Intelligence Bulletin, 20 May 1974. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00167.
- _____. "Indian Nuclear Policies in the 1980s," Secret Intelligence Appraisal, September 1981. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00251.
- Chengappa, Raj. Weapons of Peace: The Secret Story of India's Quest to Be a Nuclear Power. New Delhi: Harper Collins Publishers India, 2000.
- Cirincione, Joseph. Deadly Arsenals: Tracking Weapons of Mass Destruction. Washington D.C.: Carnegie Endowment for International Peace, 2002.
- Cohen, Stephen P. "Why Did India "Go Nuclear"?" In India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. Boulder: Lynne Rienner Publishers, 2000.
- "Congressional Fight Seen If Carter Approves India Fuel Exports," Nucleonics Week 21.
- Cortright, David and Amitabh Mattoo, eds. India and the Bomb: Public Opinion and Nuclear Options. Notre Dame: Notre Dame University Press, 1996.
- Cullen, Robert B. "US May Still Ship Nuclear Fuel to India," Associated Press (10 March 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>
- Dean, John Gunther to U.S. Department of State. "Foreign Minister Speaks in Parliament on Pak Nuclear Bomb," Confidential Cable 28599, 21 November 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02280.
- _____. "Article on the Pak Nuclear Program," Unclassified Cable 07381, March 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02444.
- Defense Intelligence Agency, "Press Coverage of India's Developing Nuclear Capability," Secret Cable, 7 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01060.

- Department of External Affairs, Canada, "Nuclear Relations with India," Classified Statement, 18 May 1976. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01468.
- Dixit, Aabha. "Status Quo: Maintaining Nuclear Ambiguity." n India and the Bomb: Public Opinion and Nuclear Options, David Cortright and Amitabh Mattoo, eds. Notre Dame: Notre Dame University Press, 1996.
- Donnelly, Warren H. "India and Nuclear Weapons," Issue Brief, 5 January 1988. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02577.
- Donnelly, Warren H. "India and Nuclear Weapons," Unclassified Report, 10 July 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02483.
- Elliott, John. "US Eases Curbs on High Technology Exports to India," Financial Times (20 November 1984), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Embassy of India. "Prime Minister's Statements and Interview." Internet. Available from [http://www.indianembassy.org/pic/nuclear/pm\(interview\).htm](http://www.indianembassy.org/pic/nuclear/pm(interview).htm); Accessed March 2004.
- _____. "Draft Report of National Security Advisory Board on Indian Nuclear Doctrine Embassy of India." Internet. Available from http://www.indianembassy.org/policy/CTBT/nuclear_doctrine_aug_17_1999.html; Accessed March 2004.
- Eliot, Theodore L., U.S. Department of State. "NSSM 156 on Indian Nuclear Developments," Secret Cover Memorandum to Henry A. Kissinger, 11 September 1972. Presidential Directives II. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. PR01075.
- Foran, Virginia I. "Indo-US Relations After the 1998 Tests: Sanctions Versus Incentives." In Engaging India: US Strategic Relations With the World's Largest Democracy, Gary K. Bertsch, Seema Gahlaut, and Anupam Srivestava, eds. New York: Routledge, 1999.
- Frankel, Benjamin, ed. Opaque Nuclear Proliferation: Methodological and Policy Implications. Portland: Frank Cass & Co, 1991.
- Frazier, Mark W. "China-India Relations Since Pokhran II: Assessing Sources of Conflict and Cooperation." Access Asia Review 3, no. 2 (July 2000).

- Fri, Robert W. to Jimmy Carter. "Press Conference," Press Briefing, 28 October 1976. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01518.
- "Gandhi Warns South Asia Region 'Drifting toward War,'" United Press International (28 April 1981), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Ganguly, Sumit. "India's Pathway to Pokhran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program." International Security 23, no. 4 (Spring 1999).
- _____. "Explaining the Indian Nuclear Tests of 1998." In India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. Boulder: Lynne Rienner Publishers, 2000.
- Gilinsky, Victor. "U.S.-Indian Nuclear Relations," Speech, 5 February 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01732.
- Goheen, Robert F. "Indian Nuclear Policy," Unclassified Cable 05298, 13 March 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01752.
- Goheen, Robert F. "Tarapur Fuel," Talking Points, 8 April 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01762.
- Hagerty, Devin T. "The Power of Suggestion: Opaque Proliferation, Existential Deterrence, and the South Asian Nuclear Arms Competition." In The Proliferation Puzzle: Why Nuclear Weapons Spread and What Results, Zackary S. Davis and Benjamin Frankel, eds. Portland: Frank Cass & Co., 1993.
- _____. "Nuclear Deterrence in South Asia: The 1990 Indo-Pakistani Crisis." International Security 20, no. 3 (Winter 1995).
- _____. "South Asia's Big Bangs: Causes, Consequences, and Prospects." Australian Journal of International Affairs 53, no. 1 (1999).
- Hansen, Thomas Blom and Christophe Jaffrelot, eds. The BJP and the Compulsions of Politics In India. Delhi: Oxford University Press, 1998.
- Hathaway, Robert M. "The US-India Courtship: From Clinton to Bush." In India As An Emerging Power, Sumit Ganguly, ed. Portland: Frank Cass Publishers, 2003.
- Hazarika, Sanjoy. "India Moves to Improve Relations with US," International Herald Tribune (16 March 1992).

- Heck, L. Douglas to U.S. Department of State. "India's Nuclear Policy in the Wake of ChiCom [Chinese Communist] Nuclear Detonation," Confidential Airgram, 23 October 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01016.
- Housego, David. "Indians Shift Stance on N-Weapons," Financial Times (17 March 1992).
- Hymans, Jacques E. C. "Why Do States Acquire Nuclear Weapons? Comparing the Cases of India and France." In Nuclear India in the Twenty-First Century, D. R. Sar Desai and Raju G. C. Thomas, eds. New York: Palgrave, 2002.
- "India MPs call for 'Deterrent' Against Pakistan's Nuclear Capability," Press Trust of India (8 December 1986), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- "India, Pakistan Summit to Resolve Nuclear Issue Suggested by US Senator," Xinhua General Overseas News Service (11 January 1992), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>
- "India Rightists want Bomb," The New York Times (23 June 1985).
- "Indian Nuclear Weapons," Federation of Atomic Scientists. Internet. Available from <http://www.fas.org/nuke/guide/india/nuke/index.html>; Accessed August 2004.
- Ingersoll, Robert S. to Gerald R. Ford. "U.S. Nuclear Non-proliferation Policy," Secret Memorandum, 4 December 1974. Presidential Directives II. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. PR01263.
- Jacobson, Harold W. to U.S. Department of State "[Excised] Views on India and the Bomb," Confidential Airgram, A-499, 27 November 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01050.
- Jain, J.P. Nuclear India, vol. 2. New Delhi: Radiant, 1974.
- Jha, Prem Shankar. "The Indian Economy After Pokhran II." In India's Nuclear Security, Raju G. C. Thomas and Amit Gupta, eds. Boulder: Lynne Rienner Publishers, 2000.
- Joeck, Neil. "Nuclear Developments in India and Pakistan." Access Asia Review 2, no. 2 (July 1999).

- Joint Committee on Atomic Energy, "Concerns Whether Some Information Presented in a Newsweek Article Is Classified," Letter, 19 August 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01131.
- Kapur, Ashok. "Nuclear Development of India and Pakistan." In Nuclear Rivalry and International Order, Jorn Gjelstad and Olav Njolstad, eds. London: Sage Publications, 1996.
- Kapur, Devesh. "The Domestic Consequences of India's Nuclear Tests." In Nuclear India in the Twenty-First Century, D. R. SarDesai and Raju G. C. Thomas, eds. New York: Palgrave, 2002.
- Karnad, Bharat. Nuclear Weapons & Indian Security: The Realist Foundations of Strategy. Delhi: Macmillan India Limited, 2002.
- Keating, Kenneth B. to U.S. Department of State. "Indian Space and Atomic Energy Programs," Unclassified Airgram, 23 July 1971. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01301.
- Khan, Saira. Nuclear Proliferation Dynamics in Protracted Conflict Regions: A Comparative Study of South Asia and the Middle East. Burlington, VT: Ashgate, 2002.
- Kile, Shannon. "Nuclear Arms Control and Non-Proliferation." In SIPRI 1999 Yearbook: Armaments, Disarmament and International Security. Oxford: Oxford University Press, 1999.
- Kramer, Gene. "India Says US Nuclear Fuel is for Peace," Associated Press (20 June 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Kux, Dennis. The United States and Pakistan, 1947-2000: Disenchanted Allies. Baltimore: Johns Hopkins University Press, 2001.
- Lancaster, John. "India, Pakistan to Set Up Hotline: Talks End With Deal to Maintain Moratorium on Nuclear Testing," Washington Post Foreign Service (21 June 2004).
- Lingam, T.S.K. "US Signs First Sale of Supercomputers to non-Western Nation," United Press International (9 October 1987), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Malik, Mohan. "Nuclear Proliferation In Asia: The China Factor." Australian Journal of International Affairs 53, no. 1 (1999).

- Markter, Jamsheed K.A. to John Glenn. "Pakistan's Policy on Nuclear Non-Proliferation," Letter, 20 January 1988. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwyck-Healey, 1992, no. NP02590.
- McGinley, James A. to U.S. Information Agency. "PM Gandhi's Parliament Statement on His U.S. Visit," Unclassified Cable 27419, 12 November 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02551.
- Mirchandani, G.G. India's Nuclear Dilemma. New Delhi: Popular Book Services, 1968.
- "Mrs. Gandhi Leaves Open Her Nuclear Options," Associated Press (13 March 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Mohan, C. Raja. Crossing the Rubicon: The Shaping of India's New Foreign Policy. New York: Palgrave Macmillan, 2004.
- Mohan, C. Raja. "Fostering Strategic Stability and Promoting Regional Cooperation." In Engaging India: US Strategic Relations With the World's Largest Democracy, Gary K. Bertsch, Seema Gahluat, and Anupam Srivestava, eds. New York: Routledge, 1999.
- "NRC Refuses to Approve Nuclear Shipments," Associated Press (17 May 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Office of the Assistant Secretary of Defense. "Meeting between the Secretary of Defense and Mr. L.K. Jha, Tuesday, 18 April at 10 a.m.," Memorandum of Conversation, 25 April 1967. In National Security Archive Electronic Briefing Book No. 6: India and Pakistan – On the Nuclear Threshold, Joyce Battle, ed. Washington D.C.: The National Security Archive, accessed at <http://www.gwu.edu/~nsarchiv/NSAEBB/>
- Ollapally, Deepa M. "Mixed Motives In India's Search for Nuclear Status." Asian Survey 41, no. 6 (2001).
- _____. "Indo-Russian Strategic Relations: New Choices and Constraints." In India As An Emerging Power, Sumit Ganguly, ed. Portland: Frank Cass Publishers, 2003.
- Paul, T. V. Power Versus Prudence: Why Nations Forgo Nuclear Weapons. Montreal: McGill University Press, 2000.
- _____. "India, the International System and Nuclear Weapons." In Nuclear India in the Twenty-First Century, D. R. SarDesai and Raju G. C. Thomas, eds. New York: Palgrave, 2002.

Paul, T. V. and Baldev Raj Nayar. India in the World Order. Cambridge: Cambridge University Press, 2003.

Perkovich, George. India's Nuclear Bomb: The Impact on Global Proliferation. Berkeley: University of California Press, 1999.

_____. "What Makes the Indian Bomb Tick?" In Nuclear India in the Twenty-First Century, D. R. SarDesi and Raju G. C. Thomas, eds. New York: Palgrave, 2002.

Platt, Nicholas to Robert C. McFarlane. "Fact Sheets for the President's Use During Meetings with Rajiv Gandhi," Memorandum, 31 May 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02225.

Poulose, T.T. "India's Nuclear Policy." In Perspectives of India's Nuclear Policy, T.T. Poulose, ed. New Delhi: Young Asia, 1978.

Quester, George. The Politics of Nuclear Proliferation. Baltimore: Johns Hopkins, 1973.

Racine, Jean-Luc. "The Indo-French Strategic Dialogue: Bilateralism and World Perceptions." In India As An Emerging World Power, Sumit Ganguly, ed. Portland: Frank Cass Publishers, 2003.

Reiss, Mitchell. Bridled Ambition: Why Countries Constrain Their Nuclear Capabilities. Washington D.C.: Woodrow Wilson Center Special Studies, 1995.

"Resources on India and Pakistan," The Center for Nonproliferation Studies. Internet. Available at <http://cns.miis.edu/research/india>; Accessed January 2005.

Rochlin, Robert S. "Comments on Non-Proliferation Background Papers of December 12, 1964," Secret Memorandum, 31 December 1964. Japan and the U.S. Washington, D.C.: The National Security Archive, no. JU00402.

Rostow, Walt W. "A Way of Thinking about Nuclear Proliferation," Confidential Internal Paper, 19 November 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01046.

Roy, S.G. "India Hints at Nuclear Race with Pakistan," United Press International (9 April 1981), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

_____. "India Warns Pakistan against Making Nuclear Bomb," United Press International (10 April 1981), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

- _____. United Press International (29 July 1981), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Schneider, David T. to U.S. Department of State, "Indian Space and Indian and Pakistani Atomic Energy Programs," Unclassified Airgram, 21 February 1975. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01398.
- Secretary of Defense. "The Diffusion of Nuclear Weapons with and without a Test Ban Agreement," Memorandum to the President, 12 February 1963. US Nuclear Non-Proliferation Policy. Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00941.
- Secretary of Defense to the President. "The Diffusion of Nuclear Weapons with and without a Test Ban Agreement," Memorandum, 12 February 1963. Nuclear Non-Proliferation. Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00941.
- Secretary of State Dean Rusk to U.S. Embassies. "United States Government Is Committed at Every Level to Stopping Nuclear Proliferation in Israel and Elsewhere," airgram, circular CG-769, 3 March 1961. Nuclear Non-Proliferation. Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00755.
- Sidhu, Waheguru Pal Singh. "Enhancing Indo-US Strategic Cooperation," Adelphi Paper 313. New York: Oxford University Press, 1997.
- _____. "India's Nuclear Use Doctrine." In Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott S. Sagan, and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.
- Singh, Jaswant. "Against Nuclear Apartheid." Foreign Affairs 77, no. 5 (September 1998-October 1998).
- _____. Defending India. New Delhi: St. Martin's Press, Inc., 1999.
- Skons, Elisabeth, Agnes Courades Allebeck, Evamaria Loose-Weintraub, and Petter Stalenheim, "Military Expenditure." In Armaments, Disarmament and International Security, Stockholm International Peace Research Institute, comp. Oxford: Oxford University Press, 1999.
- Sober, Sidney. "Indian Nuclear Development – NSSM 156," Secret Cover Memorandum, 31 May 1974. Presidential Directives, Part II. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. PR01076.

- Som Dutt, Major General D. "India and the Bomb." Adelphi Paper Series, no. 30. London: International Institute for Strategic Studies, 1966.
- Spector, Leonard S. The Undeclared Bomb. Cambridge: Ballinger Publishing Company, 1988.
- Springsteen, George S. to Brent Scowcroft. "Indian Nuclear Developments: NSSM 156," Secret Memorandum, 11 July 1974. Presidential Directives II. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. PR011077.
- "Statement by Prime Minister Indira Gandhi to Lok Sabha," 24 April 1968. In Nuclear India, vol. 2, J.P. Jain, comp. New Delhi: Radiant, 1974.
- Streeb, Gordon L. to U.S. Department of State. "Rajiv Gandhi Airs Known Views on Pakistan," Limited Official Use, Cable 13830, 5 June 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02226.
- Subrahmanyam, K. "Indian Nuclear Policy – 1964-98." In Nuclear India, Jasjit Singh, ed. New Delhi: Institute for Defence Studies and Analyses, 1998.
- Sundariji, General K. "India's Nuclear Weapons Policy." In Nuclear Rivalry and International Order, Jorn Gjelstad and Olav Njostad, eds. London: Sage Publications, 1996.
- Synnott, Hilary. The Causes and Consequences of South Asia's Nuclear Tests, Adelphi Paper no. 332. Oxford and New York: Oxford University Press for the International Institute for Strategic Studies, 1999.
- Talbott, Strobe. Engaging India: Diplomacy, Democracy, and The Bomb. Washington D.C.: Brookings Institution Press, 2004.
- Tannenwald, Nina. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." International Organizations 53, no. 3 (Summer 1999).
- Tellis, Ashley J. India's Emerging Nuclear Posture: Between Recessed Deterrent and Ready Arsenal. Santa Monica: RAND, 2001.
- Thayer, Bradley A. "The Causes of Nuclear Proliferation and the Utility of the Nuclear Nonproliferation Regime." Security Studies 4, no. 3 (Spring 1995).
- Thomas, Raju G. C. and Amit Gupta, eds. India's Nuclear Security. Boulder: Lynne Rienner Publishers, 2000.

- The New York Times, "Informational Bank Abstracts" (3 May 1972), in Lexis-Nexis Academic Universe, www.lexis-nexis.com.
- The New York Times, "Information Bank Abstracts" (28 April 1978), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- The Times, "Atom Bomb Urged for India," Article, 11 May 1970. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01281.
- "US Accepts India Will Not Test N-Weapon," Reuters (19 January 1996); in Compuserve-Executive News Service.
- U.S. Arms Control and Disarmament Agency. "Ribicoff: U.S. Heavy Water and the Indian Cirus Reactor," Non-Classified Memorandum, 17 June 1976. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01472.
- U.S. Atomic Energy Commission. "Ninth Report on Progress of Program for International Cooperation in Peaceful Uses of Atomic Energy," Letter, 30 August 1956. Nuclear Non-Proliferation. Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00272.
- _____. "Commission Decision on Sale of Heavy Water to India," Memorandum, 10 October 1956. Nuclear Non-Proliferation. Washington, D.C.: The National Security Archive and Chadwick-Healey, 1992, NP00276.
- _____. "Development of an Indian Nuclear Reactor," Confidential Memorandum of Conversation, 19 November 1960. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00701.
- U.S. Defense Intelligence Agency. "Operational and Logistical Considerations in the Event of an India-Pakistan Conflict," Classification Excised Report, December 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02159.
- U.S. Department of Defense. "The Indian Nuclear Problem," Secret Report, 24 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01086.

U.S. Department of State. "Background Paper On Factors Which Could Influence National Decisions Concerning Acquisition Of Nuclear Weapons," Secret Background Paper, 12 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01079.

_____. "Background Paper on National Attitudes towards Adherence to a Comprehensive Test Ban Treaty and to a Non-Proliferation Agreement," Secret Background Paper, 12 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01078.

_____. "Discussion with Indian Officials about U.S.-India Nuclear Cooperation," Secret Cable 1393, 12 January 1965. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01095.

_____. "India: Uncertainty over Nuclear Policy," Confidential Intelligence Note, 13 June 1974. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00169.

_____. "India-Pakistan: Pressures for Nuclear Proliferation," Limited Official Use, Report, 10 February 1984. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00283.

_____. "Military Supply for Pakistan," Secret Memorandum of Conversation, 3 June 1974. Kissinger Transcripts. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. KT01215.

_____. "The Pakistani Nuclear Program," Secret Briefing Paper, 23 June 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02057.

_____. "Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions," Classification Excised Report, 25 June 1981. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00247.

_____. "Transcript of Press Conference Held by PM," Press Conference, 20 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02534.

_____. "Indo-U.S. Joint Statement on Gandhi Visit," Confidential Memorandum, 15 June 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02233.

- _____. "Pakistan's Short Term Prospects," Secret Report, 24 August 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01657.
- _____. "Report by the Secretary of State on Recent Activities by the United States Government in Encouraging Adherence to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Made Pursuant to Section 507 (b) of the International Development Cooperation Act of 1979," Non-Classified Report, 1 November 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01686.
- _____. "U.S.-USSR Non-Proliferation Bilaterals--Regional Aspects of Non-Proliferation," Confidential Background Paper, 20 July 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02498.
- _____. "India's Nuclear Energy Program--1987 Update," Confidential Cable 24852, 10 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02526.
- _____. "Media Reaction Report No. 84," Unclassified Cable 209208, 28 July 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01977.
- _____. "Visit of Indian Prime Minister Indira Gandhi," Washington D.C., cable, 2 August 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01981.
- _____. "Visit of Indian Prime Minister Indira Gandhi," Confidential Memorandum, 3 August 1982. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01982.
- _____. "Fact Sheets on Selected Items Regarding U.S. Relations With Pakistan," Briefing Paper, 9 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02525.
- _____. "NEA Guidance for Press Spokesman on India," Non-Classified Press Guidance, 5 June 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02228.
- _____. "Suggested Statement for the President's Use," Confidential Memorandum, 20 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02528.

- _____. "Transcript of PM's Press Conference," Press Conference, 20 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02533.
- U.S. Embassy Pakistan. "Pakistan's Nuclear Program: Press Reports of Chinese Involvement," Confidential Cable 06864, 6 August 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02144.
- U.S. Foreign Broadcast Information Service. "Mrs. Gandhi on Nuclear Policy, Soviet Intervention," Non-Classified Article, 17 January 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01718.
- U.S. Information Agency. "P.M. Gandhi's U.S. Visit," Unclassified Cable 15117, 19 June 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02238.
- _____. "Special Media Reaction Report No. 45--Pakistan's Testing of Nuclear Triggers," Unclassified Cable 17173, 16 July 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02241.
- _____. "Media Reaction Report No. 133," Unclassified Cable 17729, 22 July 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02332.
- _____. "The Official Working Visit to Washington of Indian Prime Minister Rajiv Gandhi," Non-Classified Press Briefing, 11 June 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02231.
- _____. "The Official Working Visit of Indian Prime Minister Rajiv Gandhi," Press Briefing, 19 October 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02531.
- "US to Export Nuclear Fuel to India," Xinhua General Overseas News Service (20 June 1980), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>
- "US Threat on A-Bomb Derided in India," The New York Times (23 October 1981), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Ur-Rehman, Shahid. "India and Pakistan Pledge No Harm to Nuclear Facilities." Nucleonics Week (5 January 1989).

“Value and Feasibility of a Nuclear Non-Proliferation Treaty.” Confidential Internal Paper, 10 December 1964. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01070.

Vance Cyrus R. to U.S. Embassy Pakistan. “U.S.-Pak. Talks: Regional Issues,” Confidential Cable 277901, 24 October 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01670.

Vance, Cyrus R. “Reasons for Presidential Authorization to Export Fuel to India for Tarapur Power Station,” Confidential Background Paper, 18 May 1978. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01592.

Weisman, Steven. “Gandhi-Zia Talks Said to Bear Fruit,” The New York Times (18 December 1985).

_____. “India and US Agree on Supercomputer Sale,” The New York Times (9 October 1987), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>

West German Broadcasting. “Wanted...Bomb Business: Nuclear Aid for Pakistan and India,” Transcript, 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02283.

White House. “Memorandum of Conference with the President,” Secret Memorandum of Conversation, 13 November 1959. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP00602.

“Who's Afraid of the BJP?” Economist 346, no. 8062 (April 1998).

Wilson, Stephen. “India and Pakistan Pledge Not to Destroy Each Other's Nuclear Plants,” Associated Press (17 December 1985), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

Chapter V

Ahmed, Khaled. “The Nuclear Non-proliferation Treaty and Pakistan.” In Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. Lahore: Gautam Publishers, 1995.

Ahmed, Samina. “Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices.” International Security 23, no. 4 (1999).

_____. “Security Dilemmas of Nuclear-Armed Pakistan.” Third World Quarterly 21, no. 5 (2000).

- Ahmed, Samina and David Cortright, eds. Pakistan and the Bomb: Public Opinion and Nuclear Options. Notre Dame: University of Notre Dame Press, 1998.
- “American Arms to Pakistan: ‘A Test of Credibility,’” US News and World Report (21 September 1981).
- “An Assertion That Pakistan Is Not Building Nuclear Weapons,” Nuclear News (16 July 1986).
- “Apprehensions Regarding Pakistan’s Nuclear Intentions,” Confidential Memorandum of Conversation, 3 September 1975. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP01433.
- Babar, Farhatullah. “Time for a Third Nuclear Debate.” In Pakistan’s Atomic Bomb and the Search for Security, Zia Mian, ed. Lahore: Gautam Publishers, 1995.
- “Ban This Bomb-To-Be,” World Politics and Current Affairs, International, Economist (14 April 1979).
- Benjamin, Milton R. “Pakistan Says France Killing Controversial Nuclear Deal,” The Washington Post (24 August 1978).
- “Bhutto Affirms Commitment to Nuclear Programme,” Reuters (7 December 1993).
- “Bhutto Denies Pakistan Has Weapons,” The Christian Science Monitor (9 June 1989).
- “Bhutto In Missile Warning,” Financial Times (1 July 1994).
- “Bhutto Says U.S. Moves Promote Nuclear Spread,” Reuters (26 November 1994), in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.
- “Bhutto Warns India Against Testing Nuclear Device” Daily Telegraph (6 January 1996), in NTI Nuclear and Missile Developments, http://nti.org/e_research/profiles/Pakistan/nuclear.
- Burr, William, ed. “China, Pakistan, and the Bomb: The Declassified File on U.S. Policy, 1977-1997.” National Security Archive Electronic Briefing Book No. 114 (March 5, 2004).
- Cass, Alain. “Pakistan Denies Giving Pledge on N-Testing,” Overseas News, Financial Times (15 January 1982).

- Aviation Week & Space Technology (30 August 1976), *Industry Observer*, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>, 11.
- Central Intelligence Agency. "Pakistan's Nuclear Program," Top Secret Intelligence Report, 26 April 1978. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00212.
- _____. "India: BJP Flexing Muscles, But How Far Will It Go?," Secret Intelligence Report, NESAF IR 98-40137, 29 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00511.
- Chakma, Bhumitra. "Road to Chagai: Pakistan's Nuclear Programme, Its Sources and Motivations." Modern Asian Studies 36, no. 4 (2002).
- Chari, P. R. Indo-Pak Nuclear Standoff: The Role of the United States. New Delhi: Manohar, 1995.
- Cheema, Zafar Iqbal. "Pakistan's Nuclear Policy Under Z.A. Bhutto and Zia-Ul-Haq: An Assessment." Strategic Studies 14, no. 4 (Summer 1992).
- _____. "Pakistan's Nuclear Use Doctrine and Command and Control." In Planning the Unthinkable, Peter R. Lavoy, Scott D. Sagan and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.
- "China Affirms Nuclear Links with Pakistan," The Associated Press (24 October 1985).
- "China Opposes Spread of Nuclear Arms," United Press International (25 September 1984), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- "Chinese-Pakistani Military Cooperation: Hegemonism and Expansionism," BBC Summary of World Broadcasts (22 May 1980).
- "Clinton Backs Review of Pakistan Policy," Reuters (4 April 1995).
- Cohen, Stephen P., U.S. State Department, "Pakistan: Security Planning and the Nuclear Option," Limited Official Use, Intelligence Report 83-AR, 6 March 1981. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00244.
- Coon, Jane A. "Testimony Before the Subcommittees on Asian and Pacific Affairs," Unclassified, 27 April 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP01879.

- DeThomas, Joseph. "Report to Congress: Pakistan's Nuclear Program," Secret Report, 14 March 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02022.
- Donnelly, Warren H. "Pakistan and Nuclear Weapons," Congressional Research Service, Issue Brief 2512 (5 August 1987).
- Dubs, Adolph to George S. Vest, "Nuclear Problems with Pakistan," Secret Memorandum, 18 April 1975. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01411.
- "Editorial on Pakistan, India 'Nuclear Luxury'" Nuclear Developments (24 July 1991), in NTI Nuclear and Missile Database, <http://nti.org/db/nuclear>.
- Eliot, Theodore L., Jr., U.S. Department of State, to Henry A. Kissinger. "NSSM 156 on Indian Nuclear Developments," Secret Cover Memorandum, NSSM 156 Related, 11 September 1972. Presidential Directives, Part II. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. PR01075.
- Foreign Broadcast Information Service, "Bomb Program Reportedly Slowed," Non-Classified Article, 30 April 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02217.
- "Framatome Can Bid," Nucleonic Week 23, no. 51-52 (23 December 1982).
- Gallucci, R. "Draft: Pakistan and the Non-Proliferation Issue," Secret, 22 January 1975, (Washington D.C.: The National Security Archive) 3, available at http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB6/ipn20_1.htm.
- Gelb, Leslie H. "Pakistan Tie Imperils US-China Nuclear Pact," Foreign Desk, The New York Times (22 June 1984).
- Gill, Bates and Evan S. Medeiros. "Foreign and Domestic Influences on China's Arms Control and Nonproliferation Policies." The China Quarterly 161 (March 2000).
- Gordon, Michael R. "Congress Delays New Pakistan Aid Amid Nuclear Rift," The New York Times (30 September 1987).
- Gwertzman, Bernard. "Pakistan Blast Could End Aid," Foreign Desk, The New York Times (17 September 1981).
- _____. "China's Signing of Atom Pact Seen as a Major Policy Change," Foreign Desk, The New York Times (3 May 1984).

Hartman, Arthur A., to U.S. Department of State. "Department of Higher Intelligence – Pakistan Reprocessing Division," Secret Cable 22584, 18 July 1978. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP01600.

Hinton, Deane R., U.S. Ambassador, to U.S. Department of State, "SFRC Amendments to Foreign Assistance Legislation," Unclassified Cable 07602, 11 April 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02126.

_____. "U.S. Policy on Non-Proliferation: 'Amoral but Practical,'" Unclassified Cable 03689, 21 February 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02193.

Hoodbhoy, Pervez. "Nuclear Myths and Realities." In Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. Lahore: Gautam Publishers, 1995.

Hummel, Arthur W., Jr. "PK [Pakistan] Nuclear Intentions," Confidential Cable 10329, 23 October 1978. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01613.

_____. "Pakistani Public Relations Campaign on Nuclear Issue," Secret Cable 08088, 19 July 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01647.

Hussain, Syed Talat. "A Regional Nuclear Issue With A Regional Solution." In Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. Lahore: Gautam Publishers, 1995.

IDS Database, "Chronology of Responses to Pokhran II," Strategic Digest 7 (1998), 1096.

Inayatullah, D.R. "The Nuclear Arms Race and Fall of the Soviet Union." In Pakistan's Atomic Bomb and the Search for Security, Zia Mian, ed. Lahore: Gautam Publishers, 1995.

"Information Bank Abstracts," The New York Times (26 February 1976).

"Information Bank Abstracts," The New York Times (11 August 1976).

"Information Bank Abstracts," The New York Times (17 December 1976).

"Japan Aid Release Called Tilt to Pakistan Nonproliferation View," Nucleonics Week (19 August 1993).

Jones, Gordon M., U.S. Department of State, to Clay G. Nettles, "Discussion of Pakistan's Nuclear Program," Confidential Letter, 1 April 1975. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01401.

Kapur, Ashok. Pakistan's Nuclear Development. New York: Croom Helm, 1987.

Khan, Shahid Ahmed. "Sharif Acknowledges Pakistan's Nuclear Capability," The Times of India (8 September 1997).

King, Barrington, to U.S. Department of State. "Pakistan and Zia ul-Haq at the Two Year Mark," Secret Cable 07789, 11 July 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01645.

_____. "Zia's Remarks to U.S. Newsmen on U.S. Air Offer, Bilateral Agreement, Nuclear Issue," Confidential Cable 00449, 18 January 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01720.

_____. "Shahi Publicly Rejects Proposed U.S. Assistance Package," Unclassified Cable 02110, 6 March 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01749.

"Lahore Civic Reception," Xinhua General Overseas News Service (7 March 1984), in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.

Laufer, Rob. "Interview with Malone: Defense Policy and Assessment of 'Hot Spots,'" Nucleonics Week 23, no. 33 (19 August 1982).

Louis, John J., Jr. to U.S. Department of State. "Observer Article on Indo-Pak Nuclear Issue," Limited Official Use, Cable 00067, 4 January 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02005.

Marshall, Pearl. "Pakistan Hope LWR Fuel Supply Capability," Nuclear Fuel (16 August 1982), no. 17, 7, summary available at http://www.nti.org/e_research/profiles/Pakistan/Nuclear.

Matinuddin, Kamal. The Nuclearization of South Asia. Oxford: Oxford University Press, 2002.

Mark McDonough and Rodney W. Jones. Tracking Nuclear Proliferation: A Guide In Maps and Charts. Washington D.C.: Carnegie Endowment, 1998.

- McGinley, James A., U.S. Embassy India, to U.S. Information Agency. "Special Media Reaction Report No. 45--Pakistan's Testing of Nuclear Triggers," Unclassified Cable 17173, 16 July 1985. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02241.
- Memorandum to Henry Kissinger, "Official Visit of Pakistan Prime Minister," Secret Memorandum, 18 July 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02328.
- Miller, Judith. "US Cites Pakistani Pledge Not to Make Atom Arms," Foreign Desk, The New York Times (25 June 1981).
- _____. "US Says Pakistan's Nuclear Potential Is Growing," Foreign Desk, The New York Times (24 January 1982).
- _____. "Pakistan Seeking 2D Atom Reactor," Foreign Desk, The New York Times (3 December 1982).
- "Minister Refutes Bhutto's Allegation," Islamabad Domestic Service, 20 October 1990, in NIT Nuclear and Missile Database, <http://nti.org/db/nuclear>.
- Mistry, Dinshaw. "Diplomacy, Sanctions, and the U.S. Nonproliferation Dialogue with India and Pakistan." Asian Survey 39, no. 5 (September-October 1999).
- Murphy, Richard W. "Briefing the President for His Meeting with Pakistan Prime Minister Mohammad Khan Junejo," Secret Briefing Memorandum, 1 July 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02309.
- "Nuclear Non-Proliferation: Pakistan and Argentina," Secret Briefing Paper, 19 November 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP01693.
- Oberdorfer, Don. "Arms Sales Snags Pact with China" First Section, Washington Post, 15 June 1984, A1.
- "Other Reports on Korea; Turkish Leaders' Visit to Pakistan," BBC Summary of World Broadcasts, 26 November 1981, Part 3.
- "Pakistan: A Clue to the Bomb Mystery," World Politics and Current Affairs, International, Economist, 14 July 1979, 60.

- “Pakistan: Article Views Case for Further Nuclear Tests,” Muslim (Islamabad), 25 February 1996, in NTI Nuclear and Missile Developments, http://nti.org/e_research/profiles/Pakistan/nuclear, 1 and 4.
- “Pakistan Chief Asks US Talks On Atom Issue,” The New York Times, 30 November 1990, A8.
- “Pakistan: Increasing Involvement in Alliance with USA and China,” BBC Summary of World Broadcasts, 14 February 1980, part 1.
- “Pakistan May Get Weapons in Gulf,” The Washington Times, 11 June 1991, A8.
- “Pakistan Nuclear Issue,” Press Guidance, 9 March 1987, in Nuclear Non-Proliferation (Washington D.C.: The National Security Archive, 1992), no. NP02434.
- “Pakistan: Nuclear Program Can Be Independent, Khan Says,” Nucleonics Week, 15 November 1990, 13-14.
- “Pakistan’s Bhutto Seeks Regional Nuclear Arms Ban,” Reuters, 15 September 1994, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.
- “Pakistan Conducts Five Nuclear Tests,” The New York Times, 28 May 1998.
- “Pakistan President’s Peking Press Conference,” BBC Summary of World Broadcasts, 21 October 1982, part 3.
- “Pakistani Denies He Will Hold Talks in Paris on Atom Plant,” Foreign Desk, New York Times, 20 January 1982, A2.
- “Pakistani Efforts For Indigenous Reactor, Fuel Cycle Confirmed,” Nucleonics Weekly, 26 June 1986, 1-3.
- “Pakistani Premier Says Nuclear Programme On Hold,” Reuters (Islamabad), 24 September 1993, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.
- Paul, T.V. “Influence Through Arms Transfers: Lessons from the U.S.-Pakistani Relationship,” Asian Survey 32, no. 12 (December 1992).
- _____. “India, the International System, and Nuclear Weapons.” In Nuclear India in the Twenty-first Century, D.R. SarDesai and Raju G.C. Thomas, eds. New York: Palgrave, 2002.

- _____. "The Causes and Consequences of China-Pakistani Nuclear/Missile Collaboration." In South Asia's Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. Armonk: M.E. Sharpe, Inc., 2005.
- Peck, Robert A. "Statement of Robert A. Peck to Subcommittee," Testimony, 5 March 1987, in Nuclear Non-Proliferation (Washington D.C.: The National Security Archive and Chadwick-Healey, 1992), no. NP02432.
- Perkovich, George. India's Nuclear Bomb: The Impact on Global Proliferation. Berkeley: University of California Press, 1999.
- "Reagan Administration Concerned Despite No Evidence of Pakistani Bomb," The Associated Press, 4 November 1986.
- Reiss, Mitchell. "The Illusion of Influence: The United States and Pakistan's Nuclear Programme," RUSI Journal (1991).
- Rizvi, Hasan-Askari. "Pakistan's Nuclear Testing." In South Asia's Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. Armonk: M.E. Sharpe, Inc., 2005.
- Ross, Michael. United Press International, 10 January 1984, in Lexis-Nexis Academic Universe, <http://web.lexis-nexis.com>.
- Sagan, Scott D. and Kenneth N. Waltz. The Spread of Nuclear Weapons. New York: W.W. Norton & Company, 2003.
- Samad, Yunas. "The Military and Democracy in Pakistan," Contemporary South Asia 3, no. 3 (1994).
- Saunders, Harold to Cyrus Vance, "NSC Discussion of Support for Pakistan," Secret Memorandum, 1 January 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01707.
- Shultz, George P., U.S. Department of State, to U.S. Embassy Pakistan. "Pakistan: Cranston Nuclear Speech," Unclassified Cable 184740, 22 June 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02139.
- _____. "Washington Post Editorial on Pak Nuke Program," Unclassified Cable 321861, 30 October 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02158.

- _____. "Official Visit of Pakistan Prime Minister Junejo," Secret Briefing Memorandum, 1 July 1986. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02308.
- _____. "President Signs Symington, Solarz Waivers," Unclassified Cable 013951, 16 January 1988. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02589.
- Sidhu, Whegur Pal Singh. "India's Nuclear Use Doctrine." In Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R. Lavoy, Scott D. Sagan and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.
- Sisco, Joseph P. to Henry A. Kissinger, "Problems in Regard to a Nuclear Fuel Reprocessing Plant," Confidential Memorandum, 11 February 1976. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01449.
- "Spokesman Affirms Peaceful Nuclear Program," Karachi Domestic Service, 11 February 1987, in NTI Nuclear and Missile Database, <http://www.nti.org/db/nuclear>.
- Squassoni, Sharon A. "Weapons of Mass Destruction: Trade between North Korea and Pakistan," Congressional Research Service (October 11, 2006).
- Stoessel, Walter J., Jr., U.S. Department of State to U.S. Embassy, "Pakistan: Security Planning and the Nuclear Option," Limited Official Use, Cable 056987, 6 March 1981. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00245.
- Tahir-Kheli, Shirin R. India, Pakistan and the United States: Breaking with the Past. New York: Council on Foreign Relations, 1997.
- Talbott, Strobe, U.S. Department of State, "INR Assessment: China/South Asia, Gearing up for Geneva," Confidential Cable, 099524, 3 June 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00518.
- Thakar, Milind. "Coping with Insecurity: The Pakistani Variable in Indo-US Relations." In Engaging India: U.S. Strategic Relations with the World's Largest Democracy, Gary K. Bertsch, Seema Gahlaut and Anupam Srivastava, eds. New York: Routledge, 1999.
- "The Nuclear Backdrop," From Surprise to Reckoning: The Kargil Review Committee Report. New Delhi: Sage Publications, 15 December 1999.

- “Turkish Leader’s Visit to Pakistan; Pakistan Denies It Intends to Make Bomb,” BBC Summary of World Broadcasts (27 November 1981).
- “UN Delegate Reaffirms Peaceful Use,” Islamabad Domestic Service (26 October 1990), in NIT Nuclear and Missile Database, <http://nti.org/db/nuclear>.
- “U.S. Dangles Aid to Halt Pak N-Efforts,” The Times of India (7 November 1986).
- U.S. Department of State. “Indian-Pakistani Views on a Nuclear Weapons Option and Potential Repercussions,” Confidential Report 169-AR, 25 June 1981. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00247.
- _____. “The Pakistani Nuclear Program,” Secret Paper, 23 June 1983, Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00275.
- _____. “India-Pakistan: Pressures for Nuclear Proliferation,” Limited Official Use, Report 778-AR, 10 February 1984 Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00283.
- _____. “Current Foreign Relations [Bhutto Execution and U.S. Aid Cutoff to Pakistan],” Confidential Cable, 11 April 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01630.
- _____. “Military Supply for Pakistan,” Secret Memorandum of Conversation, 3 June 1974. Kissinger Transcripts. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992., no. KT01215.
- _____. “Pakistan’s Short Term Prospects,” Secret Report, 24 August 1979. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01657.
- _____. “General Advisory Committee on Arms Control and Disarmament,” Secret, 14 September 1979. Washington D.C.: The National Security Archive, available at <http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB114/chipak-6.pdf>.
- _____. “Report to Congress Pursuant to Section 735 of the International Security and Development Cooperation Act of 1981: Pakistan's Nuclear Program,” Secret Report, 14 March 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02022.
- _____. “Talking Points on Pakistan,” Secret Talking Points, 1 March 1981 Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP01867.

- _____. "Secretary's Morning Summary for 5/21/98," Top Secret Cable 000398, 21 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00505.
- _____. "Secretary's Morning Summary for 5/15/98," Top Secret Cable, 15 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00499.
- _____. "Secretary's Morning Summary for 5/16/98," Top Secret Cable 000354, 16 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00500.
- _____. "Secretary's Morning Summary for 5/22/98," Top Secret Cable 000407, 22 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00507.
- _____. "Secretary's Morning Summary for 5/26/98," Top Secret Cable, 26 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00509.
- _____. "Secretary's Morning Summary for 5/27/98," Top Secret Cable, 27 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00510.
- _____. "Secretary's Morning Summary for 5/29/98," Top Secret Cable 000484, 29 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00512.
- _____. "Secretary's Morning Summary for 5/18/98," Top Secret Cable, 18 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00502.
- _____. "Secretary's Morning Summary for 5/19/98," Top Secret Cable 000375, 19 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00503.
- _____. "India, New Warnings on Kashmir; India, Scant Effect of U.S. Sanctions," Top Secret Cable 000389, 20 May 1998. Weapons of Mass Destruction. Washington D.C.: The National Security Archive, 1992, no. WM00504.

U.S. Embassy China to U.S. Department of State. "Ranking MFA Official on PRC Nuclear Matters: No Proliferation or Subs for Pakistan," Secret Cable 014868, 30 May 1989. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00339.

Ur-Rehman, Shahid. "Long Road to Chagai," cited in NTI chronology (April 1976), 1461.

Veliotes, Nicholas A. to William P. Clark. "SIG Meeting on Pakistan," Secret Action Memorandum, 7 March 1981. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01870.

Weaver, Mary Anne. "Zia: Pakistan's Military Ruler, and 'The Bomb'," Monitor Interview. Christian Science Monitor. (30 November 1982), 12.

Weissman, Steve and Herbert Krosney. The Islamic Bomb: The Nuclear Threat to Israel and the Middle East. New York: Times Books, 1981.

White House, Office of the Press Secretary. "Presidential Waivers of Symington and Solarz Amendments," 15 January 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive, 1992, no. NP02410.

Wolpert, Stanley. Zulfi Bhutto of Pakistan: His Life and Times. Oxford: Oxford University Press, 1991.

Yasmeen, Samina. "Pakistan's Nuclear Tests: Domestic Debate and International Determinants," Australian Journal of International Affairs 53, no. 1 (1999).

Yuan, Jing-dong. "Foe or Friend? The Chinese Assessment of a Rising India After Pokhran II." In South Asia's Nuclear Security Dilemma: India, Pakistan and China, Lowell Dittmer, ed. Armonk: M.E. Sharpe, Inc., 2005.

Chapter VI

Associated Press, "Arab League will call for leaving nuclear treaty if Israel admits to atomic weapons," International Herald Tribune (5 March 2008).

Chengappa, Raj. Weapons of Peace: The Secret Story of India's Quest to Be a Nuclear Power. New Delhi: Harper Collins Publishers India, 2000.

Cohen, Avner. "Nuclear Arms in Crisis Under Secrecy: Israel and the Lessons of the 1967 and 1973 Wars." In Planning the Unthinkable: How New Powers Will Use Nuclear, Biological and Chemical Weapons, Peter R Lavoy, Scott D. Sagan, and James J. Wirtz, eds. Ithaca: Cornell University Press, 2000.

- Donnelly, Warren H. "India and Nuclear Weapons," Unclassified Report, 10 July 1987. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02483.
- Joeck, Neil. "Maintaining Nuclear Stability in South Asia," Adelphi Paper 312. New York: Oxford University Press for IISS, 1997.
- King, Barrington to U.S. Department of State. "Zia's Remarks to U.S. Newsmen on U.S. Air Offer, Bilateral Agreement, Nuclear Issue," Confidential Cable 00449, 18 January 1980. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP01720.
- Louis, John J., Jr. to U.S. Department of State. "Observer Article on Indo-Pak Nuclear Issue," Limited Official Use, Cable 00067, 4 January 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02005.
- Miller, Judith. "US Cites Pakistani Pledge Not to Make Atom Arms," Foreign Desk, The New York Times (25 June 1981).
- Mirchandani, G.G. India's Nuclear Dilemma. New Delhi: Popular Book Services, 1968.
- Rusk, Dean to U.S. Embassies. "Israel's Dimona Reactor," 31 October 1962. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Proquest, 2008, no. NP00922.
- Shalom, Zaki. Israel's Nuclear Option: Behind the Scenes Diplomacy Between Dimona and Washington. Portland: Sussex Academic Press and Jaffee Center for Strategic Studies, 2005.
- Solingen, Etel. "The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East," International Studies Quarterly 38, no. 2 (June 1994).
- U.S. Department of State. "Report to Congress Pursuant to Section 735 of the International Security and Development Cooperation Act of 1981: Pakistan's Nuclear Program," Secret Report, 14 March 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02022.
- _____. "The Pakistani Nuclear Program," Secret Briefing Paper, 23 June 1983. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02057.

_____. "India-Pakistan: Pressures for Nuclear Proliferation," Limited Official Use, Report 778-AR, 10 February 1984. Weapons of Mass Destruction. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. WM00283.

U.S. Embassy Pakistan. "Pakistan's Nuclear Program: Press Reports of Chinese Involvement," Confidential Cable 06864, 6 August 1984. Nuclear Non-Proliferation. Washington D.C.: The National Security Archive and Chadwick-Healey, 1992, no. NP02144.