

NAVAL POSTGRADUATE SCHOOL
Monterey, California



THESIS

**INDO-RUSSIAN MILITARY AND
NUCLEAR COOPERATION:
IMPLICATIONS FOR U.S. SECURITY INTERESTS**

by

Jerome M. Conley

December 1999

Thesis Advisor:
Co-Advisor:

David S. Yost
Mikhail Tsyarkin

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 1999	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE INDO-RUSSIAN MILITARY AND NUCLEAR COOPERATION: IMPLICATIONS FOR U.S. SECURITY INTERESTS			5. FUNDING NUMBERS	
6. AUTHOR(S) Conley, Jerome M.				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Defense Threat Reduction Agency			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) This thesis analyzes the history of Indo-Russian military and nuclear cooperation. The "special" Moscow-New Delhi relationship during the Cold War, the thesis concludes, was based upon Indian needs, American ambivalence and Soviet opportunism. In the post-Cold War era this relationship has persisted due to continued American ambivalence, short-term Indian military needs, and Russian economic needs. This bond, therefore, may be fractured by an eventual improvement in Indian military self-reliance or a deepening in Indo-American military cooperation. India's strategic culture, rooted in Indian history, geography and political culture, has created an Indian strategic mindset impervious to American nonproliferation efforts. This thesis finds, moreover, that there are no short-term "silver bullets" to cure the current Indo-American				
14. SUBJECT TERMS Indo-Russian, Russian arms, India, South Asia, Proliferation			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std. Z39-18 298-102

SECURITY CLASSIFICATION OF THIS PAGE

#13 Abstract (Continued)

rift, which flows from causes in addition to India's nuclear weapons tests in 1998. While short-term measures can be taken to improve the bilateral relationship, the historical rift that has emerged between the two states cannot be easily mended. The United States, therefore, must strive to ensure that Indian nuclear expansion is conducted in a controlled, safe and limited manner.

Standard Form 298, (Reverse)

SECURITY CLASSIFICATION OF THIS PAGE
UNCLASSIFIED

Approved for public release; distribution is unlimited.

**INDO-RUSSIAN MILITARY AND NUCLEAR COOPERATION:
IMPLICATIONS FOR U.S. SECURITY INTERESTS**

Jerome M. Conley
Captain, United States Marine Corps
B.A., College of the Holy Cross, 1990

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

from the

**NAVAL POSTGRADUATE SCHOOL
December 1999**

Author: Jerome M. Conley
Jerome M. Conley

Approved by: David S. Yost
David S. Yost, Thesis Advisor

Tsyob
Mikhail Tsybkin, Co-Advisor

Frank Petho
Frank Petho, Chair
Department of National Security Affairs

ABSTRACT

This thesis analyzes the history of Indo-Russian military and nuclear cooperation. The “special” Moscow-New Delhi relationship during the Cold War, the thesis concludes, was based upon Indian needs, American ambivalence and Soviet opportunism. In the post-Cold War era this relationship has persisted due to continued American ambivalence, short-term Indian military needs, and Russian economic needs. This bond, therefore, may be fractured by an eventual improvement in Indian military self-reliance or a deepening in Indo-American military cooperation. India’s strategic culture, rooted in Indian history, geography and political culture, has created an Indian strategic mindset impervious to American nonproliferation efforts. This thesis finds, moreover, that there are no short-term “silver bullets” to cure the current Indo-American rift, which flows from causes in addition to India’s nuclear weapons tests in 1998. While short-term measures can be taken to improve the bilateral relationship, the historical rift that has emerged between the two states cannot be easily mended. The United States, therefore, must strive to ensure that Indian nuclear expansion is conducted in a controlled, safe and limited manner.

TABLE OF CONTENTS

I. INTRODUCTION.....	1
II. THE COLD WAR YEARS: 1947-1991.....	9
A. 1947-50: DIPLOMACY AND ECONOMICS.....	10
1. Early Indo-American Military Ties.....	11
2. U.S. Arms to Pakistan.....	12
B. SOVIET OPPORTUNISM AND WEAPONRY: 1954-62.....	15
1. Nikita Khrushchev.....	16
2. India's Quest for Weaponry: 1959-62.....	20
C. MiGs AND CHINESE AGGRESSION: 1962.....	24
1. The 1962 MiG Deal.....	24
2. Sino-Indian Conflict: 1962.....	27
3. Soviet Support of Indian Rearmament: 1962-65.....	31
D. THE GREEN SIGNAL: INDIA'S NUCLEAR "OPTION".....	36
1. India's Nuclear Program, 1948-1964.....	37
2. Shastri's Quest for Nuclear Protection.....	40
3. The Development of India's Missile Program.....	43
E. 1965 INDO-PAKISTANI CONFLICT.....	45
1. American Politics.....	45
2. Soviet Reliability.....	47
3. The Treaty of Tashkent.....	48
F. NON-PROLIFERATION, DROUGHTS AND CHINA, 1965-70.....	49
G. 1971: AMERICAN POLITICS, SOVIET COOPERATION AND WAR.....	53
1. The Treaty of Friendship and Cooperation.....	54
2. The 1971 Bangladesh Crisis.....	57
H. PNE, PROCUREMENT DIVERSIFICATION AND AFGHANISTAN, 1974-79.....	59
1. India's Peaceful Nuclear Explosion, 1974.....	59
2. Procurement Diversification, 1978-82.....	62
I. CONTINUED FOREIGN ASSISTANCE TO INDIA'S SPACE PROGRAM.....	63
J. NUCLEAR PROLIFERATION, AFGHANISTAN AND FOREIGN ARMS.....	66
1. Diversified Procurement, 1978-91.....	68
2. Soviet Aircraft: Quality versus Quantity.....	71
3. Self-Reliance and Dual-Use Technology.....	72
K. AN ASSESSMENT OF THE COLD WAR YEARS.....	76
1. Indo-Soviet Military Cooperation.....	76
2. The Indo-American Rift.....	77
3. Indian Strategic Culture.....	78
III. NEW DYNAMICS AND CONTINUITIES: THE POST-COLD WAR ERA.....	81
A. INDIA'S POST-COLD WAR IDENTITY.....	82
B. INDO-AMERICAN RELATIONS IN THE POST-COLD WAR ERA.....	83
C. RUSSIA'S POST-COLD WAR VIEW OF INDIA.....	86
D. STRAINED INDO-RUSSIAN RELATIONS.....	89
E. INDIA'S MILITARY NEEDS AND RUSSIA'S SUPPLIER-DEPENDENCY.....	95
F. THE ROLE OF RUSSIAN INTEREST GROUPS.....	98
G. 11 MAY 1998: POKHRAN II.....	101
H. POST-COLD WAR TRENDS: A BALANCE A SHEET.....	103

IV. CONCLUSION: IMPLICATIONS FOR U.S. SECURITY INTERESTS	105
A. INDIAN STRATEGIC CULTURE AND FUTURE NUCLEAR EXPANSION	107
B. RUSSIA'S SUPPORT OF INDIAN EXPANSION.....	114
C. AREA DENIAL AND THE INDIAN "THREAT".....	117
D. POLICY OPTIONS FOR THE UNITED STATES.....	119
 INITIAL DISTRIBUTION LIST	 127

I. INTRODUCTION

It is a strategic goal of the United States, rooted in the strategic self-interest of the United States, to see a secure India; a more economically vibrant India; and, of course, a better relationship between India and the United States. The nuclear issue is a complicating factor but not necessarily a contradictory one (and I insist on that distinction).

-U.S. Deputy Secretary of State Strobe Talbott¹

On 17 August 1999, India's National Security Advisory Board (NSAB) released a draft copy of its long awaited nuclear doctrine.² Arriving fifteen months after the May 1998 Pokhran II nuclear tests,³ the draft document refueled the debate within the United States over the future course of American policy towards India. But while the U.S. State Department was warning, "We think it would be unwise [for India] to move in the direction of developing a nuclear deterrent" due to the potential "action-reaction cycle"

¹ Strobe Talbott, address at the India International Center, New Delhi, India, 30 January 1999. Available online: <http://www.state.gov/www/policy_Remarks/1999/990130_talbott_india.html> [25 July 1999].

² "India Spells Out Draft N-doctrine." *The Hindustan Times* (18 August 1999). Available online:<<http://www.hindustantimes.com>> [19 August 1999]. "India Reserves Right To Retaliatory N-strikes." *The Times of India* (18 August 1999). Available online: <<http://www.timesofindia.com>> [19 August 1999].

³ Pokhran II is the name normally attributed to the testing of three nuclear weapons by India on 11 May 1998 at the Pokhran test range in India's Rajasthan desert. Pokhran I was the execution of a single Peaceful Nuclear Explosion (PNE) by India on 14 May 1974. The Pokhran III tests followed Pokhran II by two days and encompassed the testing of two additional nuclear weapons. In the months leading up to the execution of Pokhran II, the overall series of tests were code named "Operation Shakti." The word *Shakti* translates into "strength" or "power."

for a South Asian arms race,⁴ the Russian response was diametric. Rather than aligning Russia's reaction with that of the other global powers, Grigory Karasin, the Russian Deputy Minister in charge of relations with India, stated, "We shall carefully study this draft and in due time clearly state our opinion."⁵ More telling is the fact that as the Clinton Administration pushed for a continuation of sanctions against India,⁶ Russia was negotiating with India for the sale of TU-22 BM strike-bombers.⁷ This contrast in American and Russian approaches to Indian "security needs," and the legacy created by these polar approaches, typifies Indo-Russian and Indo-American relationships over the last five decades and is the focus of this thesis.

Moreover, this thesis analyses the proposition that the history of Indian procurement of Soviet/Russian military hardware provides a framework for understanding Indian strategic culture and its influence on past, present and future development of military and nuclear forces. Intertwined in the history of Indo-Russian military cooperation, one can also find the roots of the Indo-American diplomatic divide

⁴ Barry Bearak, "An Indian Call for a Nuclear Arsenal." *The New York Times* (22 August 1999): A16.

⁵ Vladimit Radyuhin, "Russia Refuses to Join India Bashing." *The Hindu* (22 August 1999). Available online: <<http://www.indiaserver.com/thehindu/1999/08/22/stories/03220001.htm>> [22 August 1999].

⁶ "N-doctrine Invites G-8 Wrath, Sanctions to Stay." *The Times of India* (20 August 1999). Available online: <<http://www.timesofindia.com/200899/20home1.htm>> [20 August 1999].

⁷ "Russia May Sell Four Bombers To India," *The Economic Times Online* (28 August 1999).

that continues to separate the world's two largest democracies. This divide, and the numerous factors that may prevent it from being completely bridged, is also discussed in this thesis.

Finally, this thesis examines the implications of the fact that India does not pose a direct military threat to the United States homeland. Any possibility for future strife between these two states, while remote, would most likely emerge from an area denial scenario in which the United States attempted to project military power into the Asian subcontinent or its surrounding waters. In this aspect, any possibility for military conflict between India and the United States would be, from an Indian perspective, the product of American aggression and Indian defense.

When the draft nuclear doctrine was released in August 1999, American policy goals in South Asia consisted of five short-term "steps" and one long-term goal. The short-term steps entailed: the signing and ratification of the Comprehensive Test Ban Treaty (CTBT); a cessation of the production of fissile material by both states; a limitation on the development and deployment of ballistic missiles and nuclear capable aircraft; tightening the export controls in both India and Pakistan for nuclear technology; and the expansion of Confidence Building Measures (CBMs) between India and Pakistan. The long-term objective of American policy in South Asia was "universal adherence to the Nuclear Non-Proliferation Treaty."⁸ To promote these "steps" and the end-state goal,

⁸ Strobe Talbott, "U.S. Diplomacy in South Asia: A Progress Report" (speech delivered at The Brookings Institute, Washington, D.C., 12 November 1998). Available online: <<http://www.brook.edu/comm/transcripts/19981112a.htm>> [25 July 1999].

the United States utilized a broad application of economic sanctions. American policy in South Asia during the fifteen months following Pokhran II can therefore be viewed as strictly nuclear-centric. Choosing a dialogue based on nonproliferation, the United States was certain to meet with eventual failure. As a proud nation and emerging power, India would not allow a foreign power, especially the United States, to dictate "internal" decisions, particularly with regard to national security and international status.

Contrary to America's nuclear-focused approach to India, Russia adopted a more balanced approach to India in the period following Pokhran II. While the reaction of Russia's political leadership to India's proliferation was mixed, the signing of a ten-year treaty of military and technological cooperation in December 1998 sent a clear signal that Russia would neither condemn India nor would it support American nonproliferation efforts in South Asia. Claiming that it would continue to honor the historically "special" relationship, Russia would solidify the Indo-Russian military bond during this period.

The crux of the "Indian problem" for American policy makers, therefore, is twofold. The first issue is the need to realize that *India is not a problem*. India is not a rogue state. Having based its post-Cold War policy objectives in India on the issue of nonproliferation, the United States allowed no flexibility in the Indo-American dialogue. While the Indian decision to overtly weaponize its nuclear program may have been a slap in the face of American preferences, the catalysts for the tests ran much deeper than simple anti-American sentiments. There is a need, therefore, for American policy-makers to understand the role of Indian strategic culture as the medium through which Indian

military and nuclear procurement decisions are made. An underlying theme of this thesis, therefore, is to draw out the essence of India's strategic culture and to demonstrate how Russia has historically catered to this aspect of Indian thought while America has remained impervious to its influence.

As defined by Ken Booth, strategic culture is the product of a nation's "history, geography and political culture," and it helps to "shape behavior on such issues as the use of force in international politics, sensitivity to external dangers, civil-military relations and strategic doctrine."⁹ As shown below, the value of this definition when applied to an analysis of India's nuclear weapons program is that it embraces three core theoretical models normally attributed to nuclear proliferation: the "security," "domestic politics" and "norms" models.¹⁰

From an American policy perspective, an understanding of Indian nuclear proliferation must embrace a broad spectrum of proliferation incentives and the reality that "security," "domestic politics," and perceived international "norms" have all been instrumental at various times during the evolution of India's nuclear weapons program.

⁹ Ken Booth, "The Concept of Strategic Culture Affirmed," in Carl G. Jacobsen, ed., *Strategic Power: USA/USSR* (London: Macmillan, 1990), 121.

¹⁰ The *security model* claims that "states build nuclear weapons to increase national security against foreign threats, especially nuclear threats." The *domestic politics model* "envisions nuclear weapons as political tools used to advance parochial domestic and bureaucratic interests." The *norms model* highlights the acquisition or restraint from acquisition of nuclear weapons as a "symbol of a state's modernity and identity." See Scott D. Sagan, "Why Do States Build Nuclear Weapons?" *International Security* 21, no. 3 (Winter 1996/97), 55.

As the status of India in the international arena has changed, Indian perceptions of international "norms" have also changed. Changes in India's domestic politics have sharply changed the role and influence of nuclear weapons as a symbol of national self-esteem and power. Furthermore, changes in the military and nuclear capabilities of Pakistan and China have reduced the geographic security of India and have provided nuclear proponents a rhetorical foundation, if not a fully credible military-technical foundation, for pursuing nuclear security. While the confines of this thesis do not allow a detailed discussion of Indian strategic culture,¹¹ critical junctures in Indian history, geographic security and political culture that influenced the evolution of India's nuclear program are highlighted below.

The second aspect of the American approach to the "Indian problem" is a failure to understand the dynamics of the "special" Indo-Russian relationship. The continued references by Indian and Russian officials to the unique quality of their bipolar relations imply a certain resilience and common perspective in Indian and Russian strategic, diplomatic and economic interests. This thesis argues, however, that the Indo-Russian relationship is not "special" when placed in a vacuum, devoid of outside influences. While India and Russia have had, and will continue to have, common interests that are *necessary* for the development of a resilient bond, said commonality has not been in and

¹¹ For a discussion of India's strategic culture, see George Tanham, "Indian Strategic Culture," *The Washington Quarterly* 15, no. 1 (Winter 1992), and Jerry Conley, "Indian Strategic Culture: A Past, Present and Future Analysis," unpublished paper, The Naval Postgraduate School, Monterey, CA (19 March 1999).

of itself *sufficient* to solidify their relationship. The glue in the Indo-Soviet/Russian “special” relationship, therefore, has been and continues to be American ambivalence towards India and Indian military needs. If American ambivalence dissipates and India’s military-industrial complex achieves a high-level of self-reliance, the Indo-Russian bond will fragment.

Chapter II of this thesis presents an historical overview of India’s Cold War military procurement decisions. Central to this period was an Indian desire for diplomatic independence and military self-reliance. Indeed, the Cold War Indo-Soviet relationship was created by Indian needs, Soviet opportunism and American ambivalence. While not intended as a critique of American Cold War policies in South Asia, Chapter II highlights the pivotal decisions made by the United States in South Asia, explains the short-term consequences of said decisions upon Indian military procurement, and shows how a legacy of mistrust and suspicion was created towards the United States. This legacy continues to influence Indo-American and Indo-Russian relations today.

Chapter III encompasses the period from the end of the Cold War up through the Pokhran tests of 1998. This period is defined by a shift in Indo-Russian relations as Russian economic needs became a dominating factor for continued military cooperation with India. While an Indian attempt to sever the umbilical cord to the Russian military-industrial complex would fall short, India would take advantage of Russian cooperation to expand its military base. Furthermore, a rigid American approach to India, centered on nonproliferation concerns, would permeate all aspects of Indo-American relations. This

period represents an opportunity lost for American security interests in South Asia as Russian influence was allowed to remain and American influence was not properly developed.

The final chapter of this thesis examines Indo-Russian and Indo-American relations in the post-Pokhran II era. The legacy of the Cold War will continue to influence bilateral interactions. Additionally, the ability of the United States to influence Indian nuclear expansion will be limited. With Russian assistance, India will pursue a nuclear triad and develop its "minimal" nuclear deterrent. The primary option available to the United States, therefore, will be to endeavor to ensure that Indian nuclear expansion is conducted in a controlled, safe, and limited manner, and to promote an improvement and redefining of the Indo-American dialogue. The future policy options of the United States will be weighed against Indian economic, political and military needs, American strategic interests, and Russian influence. While no "silver bullet" for Indo-American bilateral bliss is evident, the need and the means to improve a teetering strategic situation are elucidated. This thesis concludes that India does matter to future American security interests, and that future American policy must be scripted accordingly.

II. THE COLD WAR YEARS: 1947-1991

The real reason why there is now an increasingly open conflict between Western and Indian policy and attitudes on so many issues is, quite simply, almost tautologically, that the West and India are running an increasing risk of pursuing policies which cut severely across each other's interests. The Russians have done no more than act as a catalyst....The real symbol of what has happened is not the welcoming millions who cheered Messrs. Bulganin and Khrushchev in Calcutta, but the grim sharpness of the reaction which met Mr. Dulles's description of Goa as a "Province of Portugal."¹²

—*The Round Table*, 1956

The purpose of this chapter is to analyze Indo-Soviet and Indo-American diplomatic, economic and military relations during the Cold War years from 1947 to 1991. This analysis highlights an historical pattern in the Indo-Soviet relationship that supported India's quest for regional security and independent global stature and an oscillating Soviet vision of India based upon India's changing geo-strategic and diplomatic significance. This chapter argues that, far from being an enduring and close "special relationship,"¹³ the historical foundations of the Indo-Soviet relationship reveal an opportunistic relationship in which "India's needs are a match for Soviet capabilities, and Soviet needs are a match for India's strengths."¹⁴ Moreover, the strength of the Indo-

¹² "Tovarishchi Errant," *The Round Table*, no. 182 (March 1956): 117.

¹³ The term "special relationship" has often used by Indian and Russian officials to describe the Indo-Soviet/Russian bond. The implication of this term is that the bilateral ties go beyond Indian and Russian self-serving interests and serve a greater good. This chapter will argue otherwise.

¹⁴ Peter Zwick, *Soviet Foreign Relations: Process and Policy* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc, 1990), 317.

Soviet relationship depended upon the short-term impact of Indo-American interactions. Additionally, this chapter highlights major South Asian policy decisions made by the United States during the Cold War and shows that the cementing of the “special” Indo-Soviet relationship was a product of American inattention as much as Soviet perseverance.

A. 1947-50: DIPLOMACY AND ECONOMICS

During the early years of Indian independence, the focus of Soviet and American foreign policies was the shoring-up of Western and Soviet areas of influence in Europe and Eastern Asia. From the Soviet perspective, India and Pakistan remained “satellites of British imperialism with no real capacity for independent action.”¹⁵ It was the personal opinion of Stalin that India’s leadership and the dominant Congress Party were “bourgeoisie.” According to one Indian scholar, Stalin believed that “India under the rule of the bourgeoisie was as good as India under British rule.”¹⁶ American policy-makers tended to view India through the prism of British foreign policies. More concerned about strong Anglo-American ties than Indo-American ties, the United States was willing to align itself with British policies concerning Kashmir. While both the Soviet Union and the United States would initiate economic agreements with India during this period, the Euro-centric focus of the emerging Cold War opponents would marginalize India.

¹⁵ “India and Pakistan Through Russian Eyes,” *British Survey Main Series* (April 1958): 15.

¹⁶ J. A. Naik, *Soviet Policy Towards India: From Stalin to Brezhnev* (Delhi: Vikas Publications, 1970), 190.

1. Early Indo-American Military Ties

During the pivotal years of 1951-54, the United States made foreign policy decisions that would initiate a diplomatic divide with India. In 1951, India signed a reimbursable military aid agreement with the United States that totaled \$38 million by 1957.¹⁷ Included in this package was the 1952 sale of two hundred World War II-era Sherman tanks for \$19 million.¹⁸ The American willingness to sell military hardware to India was not limitless, however, and a simultaneous request to purchase two hundred military jets, valued at \$150 million, was denied by President Truman. American lawmakers had found it difficult to rationalize a \$150 million military aid package to a country that had just been granted \$190 million in food aid the previous year.¹⁹ Instead, the U.S. Congress and State Department authorized a less expensive package of fifty-four C-119 transports. These initial Indo-American military transactions highlight the willingness of India's leadership in the early 1950's to expand the existing Indo-American economic relationship into the realm of military cooperation.²⁰ The American

¹⁷ "Outline Plan of Operations With Respect to India and Nepal," Operations Coordination Board, Washington, D.C. (27 February 1957): 7. *Digital National Security Archives*, Nonproliferation Collection. Item number: NP00290.

¹⁸ Dennis Kux, 86.

¹⁹ *Ibid.*

²⁰ Nehru's willingness to ask the United States for arms may also have been fueled by his depreciated opinion of the Soviet Union. This was brought about by the adverse treatment of his sister during her tenure as Ambassador to the Soviet Union and attempts by the Indian Communist Party to overthrow the government. "India: Problems and Perspectives," OIR Report No. 5052 (Secret), U.S. Department of State (04 October 1949): 42.

decision to prevent any deepening in military assistance to India in 1952 marked a first step to future Indo-Soviet military cooperation.

2. U.S. Arms to Pakistan

On 24 February 1954, U.S. Ambassador George Allen informed Prime Minister Nehru of the American decision to supply arms to Pakistan.²¹ President Eisenhower sent Nehru a letter in which he promised that Pakistan would not use the American-supplied weapons against India.²² Eisenhower also extended an offer to sell the same type of armaments to India.²³ Although India's leadership believed that American interests in Pakistan centered on an American desire for basing rights in Kashmir,²⁴ an American-

²¹ The United States sold Pakistan F-104 Starfighters and F-86 Sabres which were superior to any aircraft in the Indian inventory. S. Nihal Singh, 711. Moreover, the F-104 was the same aircraft requested by and denied to India two years earlier. From 1954 to 1965, "Pakistan received over \$630 million in grant military assistance for weapons, \$619 million for defense support assistance, and some \$55 million worth of equipment purchased on a cash or concessional basis. In the same period, India purchased over \$50 million in military equipment." See Stephen P. Cohen, "U.S. Weapons and South Asia: A Policy Analysis," *Pacific Affairs* 49, no. 1 (Spring 1976): 50.

²² This promise was broken in both the 1965 and 1971 Indo-Pakistani wars. See Raju G. Thomas, "U.S. Transfers of 'Dual-Use' Technologies to India," *Asian Survey* 30, no. 9 (September 1990): 838.

²³ Bimal Prasad, 56. Sumit Ganguly, presentation at conference titled, "Influencing the Motivations of WMD States: New Directions in Nonproliferation and Counterproliferation," held at the Naval Postgraduate School, Monterey, CA (19 August 1999).

²⁴ "Indian Countermeasures to US Military Aid to Pakistan," Report No. 6885, Division of Research for Near East, South Asia and Africa, U.S. Department of State (7 April 1955): 1. "India's Political and Economic Position in the East-West Conflict," OIR Report No. 5526 (Secret). U.S. Department of State (15 May 1951): 8.

Pakistani agreement to base American spy planes and electronic intelligence equipment at Peshawar Airbase in Kashmir was not made until 1959.²⁵

“The basic idea [of selling arms to Pakistan] remained one of providing greater stability to the northern tier region through association with the United States, making it easier for these countries to deal with the presumed Communist threat. Because Washington saw this danger more as political and psychological than military, the Defense Department played almost no role in the decision-making process.”²⁶

From the American viewpoint, the decision to arm Pakistan was based on the need to contain Communist expansion and was not meant to be anti-Indian in nature.²⁷ Though the United States rejected the Indian claim that Pakistan would turn the American

²⁵ In a Top Secret analysis of the possible repercussions of U.S. military aid to Pakistan, conducted one month prior to the official announcement, the first two “assumptions” of the analysis were that the program would be “of modest proportions” and “would not involve establishment of US military bases or a formal US-Pakistani mutual assistance commitment.” This analysis was performed by the Central Intelligence Agency, which would oversee the U-2 spy plane program. See “The Probable Repercussions of a US Decision to Grant or Deny Military Aid to Pakistan,” Central Intelligence Agency Special Estimate (15 January 1954): 1. Declassified: 9 September 1992. Former U.S. Ambassador to India Dennis Kux writes that in early 1959, “Pakistan agreed to provide the United States facilities for sensitive US intelligence operations near the city of Peshawar.” See Dennis Kux, 160.

²⁶ Dennis Kux, 110. While the strategic advantage of U.S. basing rights in Pakistan would not emerge until five years later, it has been argued that another catalyst to the American decision was “a wish to give vent to anti-Indian feelings.” See Dennis Kux, 115.

²⁷ It has also been argued, however, that Vice President Richard Nixon and Senate Majority Leader William Knowland were interested in arming Pakistan as a “counterweight to India.” Dennis Kux, 110.

arms against India, subsequent reports show that U.S. diplomats were in fact aware of these Pakistani intentions.²⁸

Nehru's response to Eisenhower's letter was immediate. He rejected the American offer for military hardware²⁹ and condemned the American decision as an impetus for further destabilization in Kashmir.³⁰ Nehru also stated that U.S. personnel stationed in Kashmir as part of the UN observer force could no longer be viewed as neutrals.³¹

The American decision to supply military hardware to Pakistan in 1954 is often cited as one of the defining moments in Indo-American relations. By placing American geo-strategic concerns above the regional security concerns of India, the United States

²⁸ Immediately after receiving Eisenhower's letter, Nehru addressed the Indian Parliament and cited Pakistani Prime Minister Ali's claim that the Kashmir problem would be solved by the purchase of American arms. See "Indian Countermeasures to US Military Aid to Pakistan," 1. Hemen Ray, *Indo-Soviet Relation: 1955-1971* (Bombay: Jaico Publishing House, 1973): 180. Ray cites testimony by former U.S. Ambassador to India Chester Bowles given before the joint committee of the U.S. Congress in which Bowles states, "from the outset the Pakistani government had made it clear that it had no quarrel either with the USSR or China and privately admitted that its military build up was in fact directed against India." From the Indian perspective, the fact that this testimony was given on 21 January 1971, at the beginning of a pivotal year in Indo-American relations, is probably as critical as the actual content of the testimony. See the "1971" subsection below.

²⁹ "Outline Plan of Operations With Respect to India and Nepal," 7. Sumit Ganguly, conference presentation at NPS.

³⁰ "Indian Countermeasures to US Military Aid to Pakistan," 1-2.

³¹ Ibid.

interfered “with the balance of things in India and Asia.”³² While American policy-makers may well have known about and understood Pakistan’s intentions in procuring American weaponry, there appears to be no doubt that the United States vastly underestimated the long-term damage that the 1954 arms agreement would have on Indo-American relations. As an editorial in the British Commonwealth magazine, *The Round Table*, observed in 1956, “Indians inevitably, and increasingly, regard all military aid given to Pakistan as a hostile act against themselves, an act which, they fear, may drive them in turn into increasing their own armed forces...[T]hey fear that the need to get the most modern equipment to match what Pakistan is getting may drive them either into political dependence upon a Western supplier, or into taking arms from the very ready Russians.”³³ The sale of American arms to Pakistan would validate Nehru’s long-held suspicions of American motives and provide the initial opening for an eventual influx of Soviet military assistance to India.

B. SOVIET OPPORTUNISM AND WEAPONRY: 1954-62

The rise of Indian diplomatic strength in the early 1950’s and the death of Joseph Stalin in March 1953 paved the way for a revision of Soviet policy in South Asia. Additionally, the formation of cracks in the Sino-Soviet relationship provided for “two pillars of common interest” between India and the Soviet Union. These pillars were the need to counter-balance growing Chinese influence and the desire to reduce the Western

³² Nehru, cited in “Indian Countermeasures to US Military Aid to Pakistan,” 2.

³³ “Tovarishchi Errant,” 122.

presence in South Asia.³⁴ The period 1954 to 1962 would usher in a surge in Indo-Soviet military and diplomatic cooperation and widen the gap in Indo-American relations.

1. Nikita Khrushchev

Under the guidance of Nikita Khrushchev, Soviet foreign policy towards the Third World would make a dramatic turn. Understanding the diplomatic importance of the Non-Aligned Movement³⁵ and seeing the strategic vulnerability created in the Soviet Union's periphery by Stalin's "passive neglect,"³⁶ Khrushchev guided a new Soviet perspective of the Third World that resulted in a philosophy of "optimistic activism."³⁷ The timing of Khrushchev's rise to power coincided with American arms shipments to Pakistan and the emergence of a Chinese threat to India.³⁸ Able to exploit the Indian fear

³⁴ Peter Zwick, 317. Anita Inder Singh, "A New Indo-Russian Connection," *International Affairs* 71, no. 1 (January 1995): 70.

³⁵ J. A. Naik, 191.

³⁶ Daniel S. Papp, *Soviet Policies Toward the Developing World During the 1980s: The Dilemmas of Power and Presence* (Maxwell Air Force Base, AL: Air University Press, December 1986): 8-9.

³⁷ The fact that Khrushchev did not hold the same animosity towards "national bourgeoisie" as Stalin, and that he had a personal fascination with Third World countries and their leadership, may have also been contributing factors to this policy change. See Daniel S. Papp, 8, and Peter Zwick, 287.

³⁸ In 1954, India and China adopted a relationship based on the "Five Principles of Peaceful Coexistence." These principles, called *Panch Sheela* in Hindi, emphasized: mutual respect for each other's territorial integrity and sovereignty; mutual non-aggression; mutual non-interference in each other's internal affairs; equality and mutual benefits; and co-existence. See John Rowland, *A History of Sino-Indian Relations: Hostile Co-Existence* (Princeton, New Jersey: D. Van Nostrand Company, Inc: 1967), 85-86; and "Indians to Arms," *The Economist* (8 June 1963): 993. While Nehru would cling

of an American-Pakistani military relationship³⁹ while also experiencing a divergence with China over the role of China in the global Communist movement,⁴⁰ Khrushchev saw the value of a strong Indo-Soviet partnership and acted accordingly.⁴¹ Beginning with the Khrushchev era, Table 2.1, highlights thirty-three years of Soviet economic aid to India.

The first transfer of Soviet military hardware to India took place in 1955 with the sale of two Il-14 transport aircraft.⁴² While Khrushchev appeared extremely eager to engage India in 1955, Nehru was much more cautious in guiding India's first steps towards Indo-Soviet military cooperation. Nehru's primary concern was still the economic health of his country and not its military might. Accordingly, he found in

to this vision of a peaceful Indo-Chinese relationship, a series of armed Chinese incursions into Northern India in 1959 would shatter this hope.

³⁹ Hemen Ray, 180.

⁴⁰ Robbin F. Laird, ed., *Soviet Foreign Policy* (Montpelier, VT: Capital City Press, 1987): 22.

⁴¹ During a speech in Srinagar in 1955, Khrushchev stated that "Kashmir was an integral part of India," and set the stage for over one hundred Soviet vetoes of United Nations resolutions concerning Kashmir. Jyotsna Bakshi, "India in Russia's Strategic Thinking," *Strategic Analysis* 21, no. 10 (January 1998): 1470. Available online: <<http://www.idsa-india.org/an-jan-6.html>>. Cited in Shirin R. Tahir-Kheli, *India, Pakistan and the United States: Breaking with the Past* (New York: Council on Foreign Relations Press, 1997), 32.

⁴² P. R. Chari, "Indo-Soviet Cooperation: A Review," *Asian Survey* 19, no. 3 (March 1979): 232.

Khrushchev's "optimistic activism" and America's willingness to continue Indo-American economic cooperation⁴³ a rare opportunity to remain neutral while promoting

1954-87		KHRUSHCHEV, 1954-64		BREZHNEV, 1965-82		GORBACHEV, 1985-87	
Recipient	%	Recipient	%	Recipient	%	Recipient	%
India	19	Egypt	26	Turkey	11	India	51
Afghanistan	10	India	21	India	11	Nicaragua	14
Turkey	8	Afghanistan	14	Morocco	10	Afghanistan	12
Iraq	7	Algeria	6	Afghanistan	10	South Yemen	5
Morocco	5	Iraq	5	Nigeria	6	Algeria	4
Algeria	5	Syria	3	Iran	5	Brazil	4
Syria	5	Ethiopia	3	Pakistan	4	Egypt	3
Egypt	4			Algeria	4		
Nicaragua	4			Syria	3		
Ethiopia	4			Ethiopia	3		
Pakistan	3						
Nigeria	3						
Iran	3						
Total:	80		78		67		93

Source: Peter Zwick, *Soviet Foreign Relations: Process and Policy* (Englewood Cliffs, NJ: Prentice-Hall, Inc, 1990): 295, Table 9-1.

* This table denotes countries that received at least three percent of the total Soviet economic aid during the given period.

Table 2.1: Soviet Economic Aid to Noncommunist Less-developed Countries, 1954 to 1987 and by Regimes*(million \$ U.S.)

Indian economic growth. While the Soviet Union provided economic assistance to India's industrial base, the United States continued to support Indian agriculture and infrastructure development.

⁴³ From 1955 to 1965, India was the largest recipient of American economic aid. Raju G. C. Thomas, 838.

From 1955 to 1960, several events validated Nehru's cautious approach to Indo-Soviet and Indo-American relations. The Soviet invasion of Hungary in 1956 severely tainted the Indian image of Khrushchev's Soviet Union.⁴⁴ Although Nehru criticized the invasion privately,⁴⁵ India did not condemn the Soviet aggression during a United Nations vote.⁴⁶ India also declined to support the Soviet initiative for a troika governing body in the United Nations,⁴⁷ the Soviet plan for a unified Germany,⁴⁸ and the aggressive Soviet stance during the Suez Crisis.⁴⁹ The following year, however, the Soviet Union supported India diplomatically by vetoing a resolution in the United Nations concerning the placement of an armed United Nations force in Kashmir.⁵⁰ Three years later the Soviets blocked a UN resolution condemning the Indian invasion of Goa.⁵¹ From an

⁴⁴ "The Prospects for India Over the Next Few Years," OIR Report No. 8342, U.S. Department of State (12 September 1960). [SECRET/NOFORN] Declassified 23 February 1978. "Asian Reaction to Events in Hungary," Office of Current Intelligence, Central Intelligence Agency (5 November 1956). Declassified: September 1997.

⁴⁵ "Asian Reaction to Events in Hungary." Top Secret Memorandum, Central Intelligence Agency Office of Current Intelligence (5 November 1956). Declassified: September 1997. Available online: <http://www.foia.ucia.gov>. Bimal Prasad, 101-2.

⁴⁶ Shirin R. Tahir-Kheli, 31-32. J. A. Naik, 140.

⁴⁷ J. A. Naik, 120.

⁴⁸ Ibid., 123.

⁴⁹ Ibid., 100.

⁵⁰ Bimal Prasad, 141. J. A. Naik, 123.

⁵¹ Hemen Ray, 183; P. R. Chari, "Indo-Soviet Cooperation: A Review," 233; S. Nihal Singh, "Why India Goes to Moscow For Arms," *Asian Survey* 24, no. 7 (July 1984): 711.

Indian perspective, therefore, the ability to draw upon Soviet diplomatic support, without forfeiting Indian neutrality, became a diplomatic balancing act for Nehru.

2. India's Quest for Weaponry: 1959-62

From 1947 to 1962, Prime Minister Nehru focused India's foreign policies around the Non-Aligned Movement and India's economic development. According to S. Nihal Singh, "The pacifism and non-alignment of Jawaharlal Nehru, the builder of modern India and its prime minister for seventeen years, meant that the modernization and strengthening of the armed forces was a low priority....Nehru was loath to pour money into modernizing the armed forces at the cost of economic development."⁵² Extremely sensitive to becoming dependent on foreign suppliers, India obtained "licenses to manufacture a wide range of defense items...including Gnat interceptors (U.K.), HS-748 transport aircraft (U.K.), Alouette helicopters (France), L-70 anti-aircraft guns (Sweden), Vijayanta tanks (U.K.), Brandt mortars (France), and 106mm recoilless guns (U.S.)."⁵³ What little foreign procurement India did pursue during the first fifteen years of independence came mostly from Western suppliers. Table 2.2 below represents India's importation of major weapons systems from 1947 to 1962.

⁵² S. Nihal Singh, 710.

⁵³ P. R. Chari, "Indo-Soviet Cooperation: A Review," 231.

<u>Type</u>	<u>Number</u>	<u>Supplier</u>
Sherman tank	180	Great Britain
Centurion tank	300+	Great Britain
AMX-13 tank	160	France
Aircraft carrier	1	Great Britain
Cruiser	2	Great Britain
R/Hunter-class destroyer	6	Great Britain
Frigates	8	Great Britain
Vampire aircraft	230	India (British license)
Ouragon aircraft	104	France
Hunter aircraft	182	Great Britain
Canberra aircraft	80	Great Britain
Il-14 transport	26	Soviet Union
Mystere aircraft	110	France
Fairchild Packet aircraft	55	United States
An-12 transport	16	Soviet Union
Mi-4 helicopter	26	Soviet Union

Source: P. R. Chari, "Indo-Soviet Military Cooperation: A Review," *Asian Survey* 19, no. 3 (March 1979): 231-2.

Table 2.2: Indian Foreign Procurement of Weaponry, 1947-62

Nehru's ability to neglect his armed forces came to an abrupt halt with a series of Chinese military incursions into India during October 1959.⁵⁴ The rugged and remote nature of the Himalayas meant that India had to rapidly expand its airborne resupply and transport capabilities. Turning to the United States, Indian Defense Minister Krishna

⁵⁴ Hemen Ray, 179; J. A. Naik, 148; and John Rowland, 117-30.

Menon secured the purchase of twenty-nine Fairchild C-119 transport aircraft.⁵⁵ The United States, however, would not expand this transaction to include the sale of Sidewinder missiles,⁵⁶ which would have given the Indian Air Force a decided edge over a Chinese air force equipped with MiG-17s/19s. Among the factors which most likely influenced Eisenhower's rejection of the Sidewinder deal were: an American view of a "tough, virile Pakistan, coupled with a perception of an India on the verge of fragmentation and disintegration;"⁵⁷ the strategic importance of the now operational Peshawar U-2 spy plane program in Pakistan; and an American diplomatic desire not to reward Krishna Menon with advanced weaponry.⁵⁸ The United States may also have been content to allow the Soviet Union to stabilize India against a Chinese threat.⁵⁹

The Soviet response to the 1959 Chinese incursions into India, while rhetorically cautious in nature, signaled clear support for India against Chinese aggression. Diplomatically, the Soviet Union released a press statement, followed a month later by a Khrushchev speech delivered at the Third Session of the Supreme Soviet, expressing

⁵⁵ Dennis Kux, 168-9. Stephen P. Cohen, "U.S. Weapons and South Asia: A Policy Analysis," 52, footnote 11.

⁵⁶ Dennis Kux, 168.

⁵⁷ Stephen P. Cohen, "U.S. Weapons and South Asia: A Policy Analysis," 57.

⁵⁸ Dennis Kux, 168.

⁵⁹ Richard L. Siegel, *Evaluating the Result of Foreign Policy: Soviet and American Efforts in India* (Denver, CO: University of Denver Press, 1968): 3.

“regret” over the hostilities between “fraternal” China and “friendly” India.⁶⁰ By not siding with “fraternal” China against a democratic India, Khrushchev was sending a clear message of “neutral” diplomatic support to India.

Militarily, the Soviet Union responded with the sale of twenty-four Il-14 transports in 1960; ten Mi-4 helicopters, eight An-12 transports and six jet engines for India’s indigenous HF-24 aircraft in 1961; and sixteen Mi-4s and eight An-12s in 1962.⁶¹ While all of these aircraft were to be given to India’s “Border Roads Development Board for communication purposes,” their military airlift potential was self-evident.⁶² Additionally, “Indian Air Force officers were sent to the Soviet Union for training in the operation and maintenance of Soviet aircraft,” and “forty Soviet pilots, navigators and ground crews came to India for training Indian crews.”⁶³ In a few short years, changes in India’s security environment had dictated the need to modernize a long-neglected Indian military. Lacking the indigenous capability to produce major weapons systems, and finding Western governments reluctant to sell their most modern hardware, India began to

⁶⁰ J. A. Naik, 148-50.

⁶¹ P. R. Chari, “Indo-Soviet Cooperation: A Review,” 232. The sale of six modified MiG-19 engines in support of India’s HF-24 project came about only after an earlier contract to purchase British Bors-12 engines was cancelled when NATO withdrew its commission for Bors-12 engines, thus forcing India to decide between fully funding the project or shopping elsewhere. See Hemen Ray, 183. Eventually, however, India would purchase Orpheus 703 engines from Britain for the HF-24. S. Nihal Singh, 707.

⁶² P. R. Chari, “Indo-Soviet Cooperation: A Review,” 232.

⁶³ *The Hindu*, 13 April 1962. Cited in Hemen Ray, 182, footnote 9.

take longer strides towards military cooperation with the Soviet Union. The events of 1962 would force India one step closer to reliance on Soviet weaponry.

C. MiGs AND CHINESE AGGRESSION: 1962

As India began its quest for military modernization, the initial inclination of its military and bureaucratic leadership was to look westwards. A large majority of India's leadership had been educated in the West, and the military continued to maintain links with Great Britain. Additionally, the preponderance of India's military hardware was of Western origin, which meant that large scale procurement of Soviet hardware "exacerbated problems of training, logistics, maintenance, and eventual absorption. In the interim period the military effectiveness of the armed forces was impaired."⁶⁴ The reluctance of the United States to sell India one of its top-line military aircraft, and the questionable quality of British and French weaponry, would lead India into a pivotal arms deal with the Soviet Union that would be a precursor to India's eventual reliance on Soviet arms. This choice was not the preferred option for India; it was "predicated by dire necessity."⁶⁵

1. The 1962 MiG Deal

When Nehru visited Moscow in 1955, Khrushchev extended an offer to sell India 60 to 100 MiG fighters. Fearful of becoming reliant on the Soviet Union for arms,⁶⁶ and

⁶⁴ P. R. Chari, "Indo-Soviet Cooperation: A Review," 234.

⁶⁵ Ibid.

⁶⁶ *The New York Times* (27 August 1955), cited in Hemen Ray, 180, footnote 1.

more concerned over India's economic development, Nehru declined the Soviet offer. The MiG offer would resurface again in 1961 when an Indian delegation was finalizing the purchase of Soviet transport aircraft for the Himalayan operations.⁶⁷ This time, however, the offer was taken seriously as India's security environment had changed due to the Chinese aggression in the north and Pakistan's recent receipt of F-104 Starfighters from the United States.⁶⁸

While India explored the possibility of procuring Soviet MiGs, inquiries were also made into the availability of purchasing American F-104s, British P1 Lightnings and French Mirage IIIs. The Indian request for F-104s was flatly rejected by the United States, however, due to the Pentagon's strategic interest in Pakistan.⁶⁹ After exploring the British and French options, Indian delegates ruled these aircraft out since neither country was willing to grant India the licensing rights for indigenous production.⁷⁰ It is also believed that the United States, while unwilling to sell F-104s directly to India, may have conferred with Britain over the sale of the British P1s.⁷¹ The end result of the

⁶⁷ Hemen Ray, 182-83.

⁶⁸ Dennis Kux, 168; P. R. Chari, "Indo-Soviet Cooperation: A Review," 233; S. Nihal Singh, 711; Hemen Ray, 184.

⁶⁹ S. Nihal Singh, 711.

⁷⁰ Hemen Ray, 183. The British, aware of the impending MiG deal, were especially eager to secure an agreement with India in order to keep the British military pipeline open to India. While the P1 Lightning was offered at "one-half its market price," Britain would not go the final step and offer a licensing agreement. See, P. R. Chari, "Indo-Soviet Cooperation: A Review," 232; and S. Nihal Singh, 712.

⁷¹ S. Nihal Singh, 712; and P. R. Chari, "Indo-Soviet Cooperation: A Review," 232.

West's inability to meet India's immediate requirement to modernize its Air Force was the signing of the historically significant MiG deal in the summer of 1962.

The terms of the MiG deal are worth noting because they highlight the difference between the Soviet and Western approaches to military cooperation with India, and more importantly, why the Soviet approach was more appealing to India. The initial agreement was for the delivery of nineteen MiG-21s and the establishment of indigenous production facilities within India.⁷² "Moscow seemed to be the only arms supplier sympathetic to India's philosophy of a self-sufficient military establishment."⁷³ Additionally, India could pay in rupees or bartered goods⁷⁴ and did not have to dip into its foreign reserves. This part of the deal was crucial for India's continued economic development. Furthermore, the outcry from Western leaders, such as John F. Kennedy and Harold Macmillan,⁷⁵ over the sale of Soviet arms to India fostered a defiant and nationalistic attitude in India. Nehru declared that "No independent country, certainly not India, can agree to a proposition that our purchase of aircraft or anything can be vetoed by any other country. We are not going to be influenced either by pressure or pressure tactics from

⁷² Bimal Prasad, 147; and Hemen Ray, 185. The initial contract, however, did not provide for MiGs with all-weather and night fighting capabilities, which were crucial from the Indian perspective for intercept operations along the Himalayan border. The agreement was amended in 1964 to include these capabilities. See S. Nihal Singh, 712; and Richard Siegel, 12.

⁷³ S. Nihal Singh, 713.

⁷⁴ Hemen Ray, 185.

⁷⁵ Dennis Kux, 200-201; and S. Nihal Singh, 712.

outside.”⁷⁶ Finally, the opening of an Indo-Soviet military relationship sent a clear signal to China about the Soviet stance on South Asian affairs.⁷⁷ Underlining all of these factors, however, was the Indian perspective that the MiG deal of 1962 was a *commercial endeavor*⁷⁸ (that is, a decision taken largely on financial grounds, with no political fealty to the Soviet Union) undertaken to ensure the rapid modernization of a neglected Air Force against a rising threat from the west and northeast.⁷⁹

2. Sino-Indian Conflict: 1962

The poor readiness of India’s armed forces became apparent on 20 October 1962, when “Chinese forces attacked Indian positions all along the northern borders and ‘most of the [Indian] troops deployed...[were] swept away like driftwood before a torrent.’”⁸⁰ Fifteen years of neglect under the leadership of Nehru had left the Indian military woefully unprepared to stop a large-scale invasion force. While the indicators of impending Chinese aggression towards India had been present since the 1959 Tibetan

⁷⁶ Jawaharlal Nehru in *Indian Affairs Record*, Vol. VIII, No. 7, p. 172, cited in Hemen Ray, 185.

⁷⁷ P. R. Chari, “Indo-Soviet Cooperation: A Review,” 234; and S. Nihal Singh, 712.

⁷⁸ Hemen Ray, 179.

⁷⁹ India’s “commercial” perspective of the MiG deal is well underscored by the fact that even two years after signing the MiG deal, India continued to pursue the purchase of F-104s from the United States. Dennis Kux, 229-30; and P. R. Chari, 233. As discussed above, the Soviet motivations for entering into the 1962 MiG deal were more geo-strategic in nature and included the desire to offset growing American influence in Pakistan and to support India against Chinese belligerence.

⁸⁰ Apurba Kundu, *Militarism in India: The Army and Civil Society in Consensus* (London: Tauris Academic Studies, 1998), 136.

uprisings, the short period of time available between 1959 and 1962 and India's limited indigenous defense industry had not provided the cushion necessary to improve military readiness.

India is desperately short of such conventional military hardware as automatic rifles, artillery, trucks, ammunition and cargo planes. But it also requires pilots, skilled maintenance men, a reliable military communications network, a better intelligence system, totally revamped supply methods and a modernized air force.⁸¹

Adding to India's troubles was the fact that China's aggression was being played out in the shadow of the Cuban Missile Crisis. With the two states most capable of providing India with rapid military relief preoccupied by their own military confrontation, India had to initially provide for its own defense.⁸²

The initial Soviet response to India's request for military assistance was to back-step from its 1959 neutral stance on Sino-Indian hostilities and attempt to rally the "socialist camp" in order to gain Chinese support during the Cuban Missile Crisis.⁸³ A few days after the Chinese invasion, however, the Soviet Union renewed its neutral stance with two editorials in *Pravda*, one on the 25th of October and one on the 5th of

⁸¹ Igor Oganessoff, "Shaky India: Shortages of Weapons, Skills Will Keep Nation Vulnerable a Long Time," *The Wall Street Journal* (30 November 1962): A1.

⁸² In the months leading up to the 20 October invasion, India had indeed prepared for a conflict with China by forward deploying its forces. Not only were these forces unable to stop the rapid Chinese invasion, but their forward positioning has been cited as a possible impetus for the Chinese aggression. See Apurba Kundu, 129-136. Some critics, however, have also pointed to lackluster military leadership and poor operational planning as the primary source of India's defeat. See Major Edgar O'Ballance, "India Arms," *Eastern World* (October 1963): 12-14. Apurba Kundu, 144.

⁸³ J. A. Naik, 154; Daniel S. Papp, 321; and Dennis Kux, 205.

November.⁸⁴ Stating that the Soviet Union wanted “peace” between India and China, these editorials, and subsequent promises for the delivery to New Delhi of more transport aircraft and helicopters, showed that the Soviet Union was again willing to side with India against China.⁸⁵

While the American response to India’s request was more immediate than that of the Soviet Union, the outlay of American military hardware still continued to be measured. Following China’s initial success, the United States provided C-130’s, flown by U.S. Air Force pilots, to ferry Indian troops up to bases in the Himalayas. Additionally, American medical personnel, trained in cold weather medicine procedures, were sent as advisors.⁸⁶ But the rapid and decisive nature of the initial Chinese advance into India made the effectiveness of American logistical support limited.⁸⁷ On 19 November, a month into the Chinese onslaught, Nehru wrote to President Kennedy

⁸⁴ Bimal Prasad, 257. J. A. Naik, 154. Stephen P. Cohen, 52.

⁸⁵ Ibid. Hemen Ray, 181.

⁸⁶ Igor Oganessoff, A1.

⁸⁷ While most scholars agree that the West responded quickly to India’s initial request for help, it has also been argued that the American Ambassador to India at the time, John Galbraith, exacerbated the consequences of the initial Chinese invasion by convincing Indian officials not to deploy the Indian Air Force in the Himalayas against China. Sumit Ganguly, Naval Postgraduate School presentation, 19 August 1999. In his memoirs, Ambassador Galbraith states that he “affirmed [his] intention to keep the Indians from using their Air Force with the associated expectation of [American] support” because “we learned in Korea that even with complete control of the air, we could not keep [the Chinese] from supplying their forces or advancing.” Galbraith’s primary concern was that the deployment of the Indian Air Force would escalate tensions on the Sino-Indian border. See John Kenneth Galbraith, *Ambassador’s Journal* (Boston: Houghton Mifflin Company, 1969), 424.

requesting that American fighter aircraft and air defense systems be provided to protect India's cities and that B-47 bombers, flown by American pilots, strike Chinese positions behind the front.⁸⁸ Two days later, before Kennedy had decided on a final response to Nehru's request, the fighting had ended.⁸⁹ The Chinese had "added the final humiliation of declaring a unilateral cease-fire on all fronts and a withdrawal, to begin on 1 December, to positions behind the same line of actual control which Nehru refused to accept earlier."⁹⁰

In the immediate aftermath of India's defeat by China, many observers interpreted India's need for rearmament and the initial willingness of the West to aid India as a potential path to renewed Indian ties with the West.⁹¹ According to a report in *The Wall Street Journal*, "In the event of a new Chinese offensive, the U.S. might be drawn into assisting India in much the same way it is helping South Vietnam fight Communist insurgents."⁹² Additionally, while the Soviet Union did not cancel the MiG deal made

⁸⁸ Apurba Kundu, 141. Dennis Kux, 207.

⁸⁹ It is of historical interest that in response to Nehru's 19 November request, Kennedy had dispatched the *U.S.S. Enterprise* to the Bay of Bengal. The deployment of this same aircraft carrier to the Bay of Bengal nine years later, during the 1971 Indo-Pakistani War, continues to be a point of contention between India and the United States. See Dennis Kux, 207. Selig S. Harrison and K. Subrahmanyam, *Superpower Rivalry in the Indian Ocean: Indian and American Perspectives* (New York: Oxford University Press, 1985): 20-21.

⁹⁰ Apurba Kundu, 141.

⁹¹ Richard L. Siegel, *Evaluating the Result of Foreign Policy: Soviet and American Efforts in India*, 9.

⁹² Igor Oganessoff, A1.

two months prior to the Chinese invasion, it did delay the delivery of the aircraft. This “delay” has been attributed to several possible factors, including: Chinese pressure on the Soviet Union,⁹³ the possibility that “the Soviet Union was not fully committed to transferring these warplanes” or the belief that the Soviet Union “may also have entertained reservations about India’s technological ability to manufacture an advanced jet aircraft.”⁹⁴ Conversely, it has also been speculated that the Soviet Union did assist India during the conflict by threatening to cut off the supply of oil to the Chinese air force, which would have grounded the Chinese air campaign.⁹⁵ But the slow Soviet response to India’s military needs was quickly corrected and coincided with a pullback in American military aid to India.

3. Soviet Support of Indian Rearmament: 1962-65

Shocked out of their selective pacifism, the Indians became arms-hungry. In effect, they are now trying, within two years, to make up for fifteen years of neglect.⁹⁶

Following its humiliating defeat in the Sino-Indian War, India began a program to rapidly modernize its armed forces. After having gone ten years with defense spending

⁹³ Richard L. Siegel, “Chinese Efforts to Influence Soviet Policy To India,” *India Quarterly* (July-September 1968): 223.

⁹⁴ P. R. Chari, “Indo-Soviet Cooperation: A Review,” 233.

⁹⁵ J. A. Naik, 157.

⁹⁶ “Indians to Arms,” *The Economist* (8 June 1963): 993.

never exceeding two percent of its Gross National Product,⁹⁷ India increased its defense expenditure in 1963 to over four percent of the gross national product (GNP). Figure 2.1 reflects the pattern of Indian defense spending, as a percentage of GNP, during the final three decades of the Cold War.

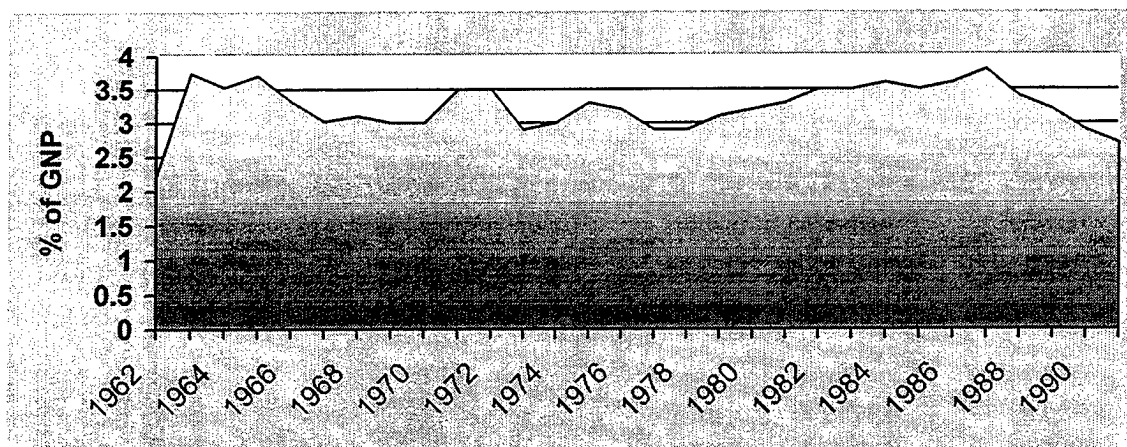


Figure 2.1: Indian Defense Expenditures as a Percentage of GNP, 1962-89

Source: *World Military Expenditures and Arms Trade*. 1971 through 1993 Series (Washington, D.C.: U.S. Arms Control and Disarmament Agency).

In 1964, India passed legislation for a five-year defense procurement plan (1964-69) that was a direct result of India's 1962 defeat and that was geared towards developing a credible conventional deterrence posture against China.⁹⁸ Among the primary goals of The First Five-Year Defense Plan were the following procurement objectives: to double

⁹⁷ Fiscal years 1951-52 to 1961-62. S. Nihal Singh, 710; and Lorne J. Kavic, "Force Posture: India and Pakistan," in Frank B. Horton, et al., *Comparative Defense Policy* (Baltimore: John Hopkins University Press, 1974), 42.

⁹⁸ Shelton Williams, *The U.S., India and the Bomb*, 29-30. Major Edgar O'Ballance, 13.

the size of the army to 825,000 well-equipped men; to equip and man forty-five Air Force squadrons and improve air defense capabilities; and to maintain the current strength of the navy while phasing out outdated naval vessels and replacing them with modern warships.⁹⁹ Additionally, the Plan highlighted the need to strengthen and improve the domestic defense industry.¹⁰⁰ These incompatible elements, the need for rapid procurement and an insufficient defense industry to support said procurement, would force India to again look externally to meet its military needs.

The strong response to India's military requirements initially shown by the United States in the fall of 1962 began to stagnate in 1963. The voluntary withdrawal of Chinese forces in 1962 and the continuation of pro-Pakistani sentiment in the Pentagon resulted in restraint in U.S. military support to India in 1962-65.¹⁰¹ Additionally, there was a concern that if the United States provided a large amount of aid and became more aligned with India, Sino-Russian relations might improve.¹⁰² While the United States would

⁹⁹ P. R. Chari, "Indo-Soviet Cooperation: A Review," 235.

¹⁰⁰ Ibid.

¹⁰¹ S. Nihal Singh, 711-12. Dennis Kux, 213. Richard L. Siegel, *Evaluating the Result of Foreign Policy: Soviet and American Efforts in India*, 10. It is also possible that the dismissal of the pro-Soviet Krishna Menon as India's Defense Minister, following the 1962 conflict, may have led American officials to believe that a major conduit to strong Indo-Soviet military cooperation was now removed, thus decreasing the necessity for a strong American military courtship of India.

¹⁰² "Indians to Arms," *The Economist* (08 June 1963): 993. Moscow's negative reaction to a 1963 joint air exercise by India, Britain and the United States highlights this fear. See Richard L. Siegel, *Evaluating the Result of Foreign Policy: Soviet and American Efforts in India*, 26.

provide India with \$97 million worth of military equipment, mostly radar systems, air defense weapons and cold weather equipment,¹⁰³ Indian requests for major weapons systems were not granted.¹⁰⁴ “The result was to push India into military purchases from the Soviet Union because Pakistani objections prevailed over Indian requests for weapons.”¹⁰⁵

In the first six months after the Chinese invasion, Indo-Soviet military relations were uncertain. By February 1963, the Soviet Union had only delivered four of the nineteen MiG-21s provided for in the 1962 MiG deal.¹⁰⁶ But Soviet military cooperation with India quickly accelerated in the spring and summer of 1963, propelled most likely by increasing Sino-Soviet tensions,¹⁰⁷ the appearance of an American attempt to engage India following the Chinese invasion, and a Soviet Third World policy of “overoptimistic activism.”¹⁰⁸ In August 1963, India and the Soviet Union signed an agreement for the

¹⁰³ S. Nihal Singh, 711-12. Stephen P. Cohen, “U.S. Weaponry for South Asia.” 52.

¹⁰⁴ In 1964, India was primarily interested in purchasing F-104 fighters, which were vastly superior to the MiG-17s/19s flown by China and which the United States had begun selling to Pakistan in the late 1950s. Among India’s military leadership, there was a preference for American hardware as well as an apprehension of becoming too reliant on the Soviet Union for hardware. Hemen Ray, 187. The United States did, however, begin to collaborate in 1963 with India on its domestic missile program. This is discussed below.

¹⁰⁵ Dilip Mukerjee, “U.S. Weaponry for India,” *Asian Survey* 26, no. 6 (June 1987): 595.

¹⁰⁶ Hemen Ray, 186.

¹⁰⁷ Siegel, 221. William E. Griffith, *Sino-Soviet Relations, 1964-65* (Cambridge, MA: MIT Press, 1967), 11-15. S. Nihal Singh, 711.

¹⁰⁸ Peter Zwick, 287.

transfer of light and heavy tanks, heavy artillery, surface to air missiles for the northern air defense network, and an unspecified number of MiGs. Additionally, the Soviet Union agreed to help India build a missile training center and to supply the radar and training equipment necessary.¹⁰⁹ By the end of 1963, the Soviet Union had helped India build an “airframe factory at Nasik, an engine factory at Koraput and a factory at Hyderabad to produce air-to-air missiles and radar equipment.”¹¹⁰ In September 1964, the Soviet Union extended “military credits” for the procurement of forty-four additional MiG-21s, twenty helicopters, and seventy PT-76 tanks.¹¹¹ Addressing India’s need for rapid procurement *and* the Indian quest to develop its indigenous industry, the Soviet Union used post-war fears and Western ambivalence to solidify its position as India’s chief arms supplier.¹¹² “Hence, it was basically the non-availability of Western arms that led to India’s shift towards the Soviet Union.”¹¹³ Figure 2.2, below, reflects the primary sources of Indian and Pakistani foreign procurement from 1964 to 1973.

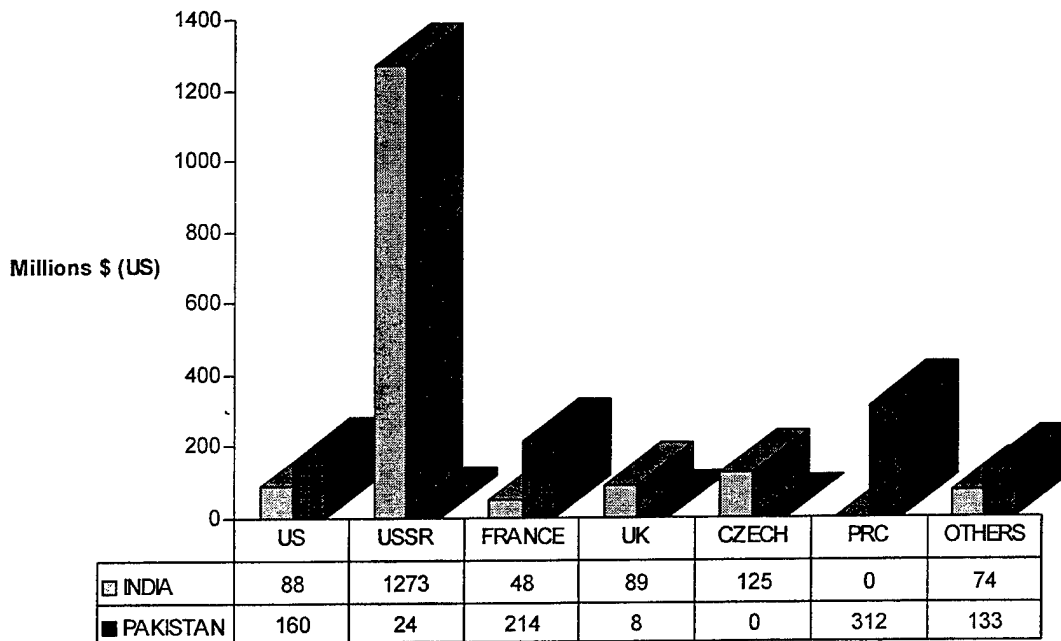
¹⁰⁹ Hemen Ray, 186.

¹¹⁰ *Ibid.*

¹¹¹ S. Nihal Singh, 712.

¹¹² This view should be considered as being from the Soviet perspective. Even after the 1963 arms deals, India continued its attempt to purchase American F-104s, with a mission being sent to the United States in June 1964. See, Dennis Kux, 229. Hemen Ray, 188. Failing in its attempt to diversify its procurement sources, India continued to fall into deeper reliance on Soviet arms.

¹¹³ P. R. Chari, “Indo-Soviet Cooperation: A Review,” 234.



Source: World Military Expenditures and Arms Trade: 1963-73
(Washington, D.C.: U.S. Arms Control and Disarmament Agency): 71.

Figure 2.2: Major Arms Suppliers to India and Pakistan, 1964-73

D. THE GREEN SIGNAL: INDIA'S NUCLEAR "OPTION"

In addition to expediting India's procurement of Soviet hardware, the Chinese invasion of 1962 had a much more obvious and long-term impact upon Indian strategic thinking – the emergence of a Chinese threat. Whether one subscribes to the belief that China is a real strategic threat or a perceived threat manipulated by domestic politicians and mythmakers, the shattering of the "Five Principles of Peaceful Coexistence" in the autumn of 1962 would continue to reemerge in Indian strategic dialogue for the remainder of the century. The image of a Chinese threat would take one more fateful step with China's first nuclear weapon test on 16 October 1964. Whether real or imagined,

the Chinese threat, embodied in an atomic mushroom cloud, provided the necessary catalyst for the weaponization of India's nuclear program.

1. India's Nuclear Program, 1948-1964

The history of India's nuclear energy program dates back to the creation of its Atomic Energy Commission in 1948 and is often presented as one of nuclear *restraint*. Concerned about India's economic development, Nehru initiated India's civilian nuclear power program under the auspices of the American-sponsored Atoms for Peace program. Nehru was further motivated by the desire to ensure that India did not remain a "backward country" as it had after missing out on the development of steam power and the subsequent industrial revolution.¹¹⁴ He qualified the pursuit of a nuclear energy program, however, by stating that "we must develop this atomic energy quite apart from war."¹¹⁵ While the introduction of nuclear technology into India was under the auspices of economic and developmental incentives, Nehru nonetheless laid the nuclear foundation that would permit India to pursue the nuclear option in the mid-1960s.¹¹⁶

¹¹⁴ Amitabh Mattoo, ed. *India's Nuclear Deterrent: Pokhran II and Beyond* (New Delhi, Har-Anand Publications, 1999), 16-17. For a detailed discussion of Nehru's vision of science, embodied in nuclear power, as a tool for national prestige, see Itty Abraham, *The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State* (London: Zed Books Ltd, 1998), 46-63.

¹¹⁵ Amitabh Mattoo, 17.

¹¹⁶ Contrary to the traditional perception of Nehru as being vehemently against nuclear weapons, Mattoo cites a 1948 speech to the new India Department of Atomic Energy in which Nehru states, "[O]f course, if we are compelled as a nation to use it [nuclear technology] for other purposes, possibly no pious sentiments will stop the nation from using it that way." See Amitabh Mattoo, 17. Abraham argues that Nehru believed he had

The early steps of India's nuclear development were made with Western assistance under the Atoms for Peace program. India's initial benefactor for nuclear knowledge became Great Britain, which provided India with six kilograms of enriched uranium fuel rods and technical data and drawings to develop a "swimming pool type" research reactor.¹¹⁷ This one-megawatt (1MW) reactor, named Aspara, went critical in August 1956.¹¹⁸

While developing Aspara, India also planned the next step in its "indigenous" civilian power program, a large research reactor. Negotiations took place with the Soviet Union, the United States, Great Britain and Canada in 1955. The United States could not conclude an agreement with India because "the Government of India strongly objects to the safeguards and control provisions which are a necessary part of our bilateral agreements."¹¹⁹ While preferring a "more advanced" British reactor design, Homi Bhabha finally settled on a 40MW Canadian NRX reactor in September 1955.¹²⁰ Named

a "super-patriotic" ability to control the dangerous potential of atomic energy and to ensure it was channeled for peaceful purposes. See Abraham, 48.

¹¹⁷ Itty Abraham, 84-5.

¹¹⁸ Ibid., 85. Waheguru Pal Singh Sidhu, 22.

¹¹⁹ Letter from the Chairman of the United States Atomic Energy Commission to the President of the United States (30 August 1956): 2. *Digital National Security Archives*, Nonproliferation Collection. Item Number: NP00272.

¹²⁰ Itty Abraham, 90-91. Abraham cites a 1989 unpublished MA thesis which argues that Canada lobbied India hard to secure this contract to "set the stage for further possible ventures" and to also make a statement of "the difference between American and Canadian approaches to both atomic energy and North-South relations." See Abraham, 90; and Iris Lonergun, "The Negotiations Between Canada and India for the Supply of the

Cirus, this Canadian-built reactor went critical in 1960. By the time China detonated its first nuclear weapon in 1964, India had commissioned the Trombay plutonium-reprocessing facility, with the assistance of chemical reprocessing data that had been made public by France.¹²¹ By developing and commissioning both the Trombay and Cirus facilities outside the parameters of the International Atomic Energy Agency (IAEA) safeguards regulations, India in 1964 had the ability to produce limited amounts of unsafeguarded fissile material.¹²²

After India was humiliated by China in 1962, it was the common perception of most Indian leaders that “India could not be caught in that position again.”¹²³ A debate within the Indian legislature immediately escalated between those who advocated the immediate development of nuclear weapons (“a small group”), those who opposed weaponizing altogether and those who wanted to constantly “re-examine” the nuclear

NRX Nuclear Research Reactor, 1955-56: A Case Study of Participatory Internationalism,” unpublished MA thesis (Ottawa: Carleton University, August 1989).

¹²¹ Rodney W. Jones, et al, *Tracking Nuclear Proliferation: A Guide in Maps and Charts, 1998* (Washington, D.C.: Carnegie Endowment for International Peace, 1998), 119, footnote 9.

¹²² Itty Abraham, 120-24. It has been argued that the United States prevented India from conducting a nuclear test following China’s 1964 test with the implicit threat of cutting off PL 480 food grants. See Michael Edwardes, “India, Pakistan and Nuclear Weapons,” *International Affairs*, 43, no. 4 (October 1967): 658, cited in Waheguru Pal Singh Sidhu, 38. A more critical analysis of the technical and bureaucratic factors influencing Indian restraint is offered below.

¹²³ Confidential Airgram, from the United States Embassy, India, to the U.S. Department of State (27 November 1964). *Digital National Security Archive*, Nuclear Non-Proliferation Collection. Item Number: NP01050.

question.¹²⁴ While Prime Minister Shastri “flatly stated that if such weapons are ever made in India it will not be by [a] ministry headed by him,”¹²⁵ he nonetheless gave Homi Bhabha, the “father of India’s nuclear programme,” the “green signal to pursue India’s nuclear-weapon option.”¹²⁶

Shastri’s approval of the “nuclear option” highlights a key factor in understanding Indian strategic culture. By pursuing a nuclear “option” and not a “weapon,” India’s leadership was showing *restraint* in the development of its nuclear program. India was developing a nuclear capability and option only for defensive purposes and was not bellicose like the United States and the Soviet Union. Table 2.3 shows an Indian perspective on the nuclear restraint it has historically shown. This concept of Indian restraint, or the *perception of restraint*, is discussed in Chapter IV.¹²⁷

2. Shastri’s Quest for Nuclear Protection

While Homi Bhabha was given the political authority to develop a nuclear option, India approached the United States and Soviet Union for joint nuclear protection against

¹²⁴ Ibid.

¹²⁵ Secret Telegram from American Embassy, New Delhi, to the U.S. Department of State (21 January 1965). *Digital National Security Archive*, Nuclear Non-Proliferation Collection. Item Number: NP01102.

¹²⁶ Mattoo, 17. Shrikant Paranjpe, “American Policy Toward Problems of Nuclear Proliferation in South Asia: An Indian Perspective,” *Asian Affairs* 16, no. 4 (Winter 1989-90): 192.

¹²⁷ This study also examines how the “perception” of restraint can be as important as actual restraint in the course of Indian military and nuclear expansion. It is argued that

the emerging Chinese nuclear threat.¹²⁸ According to *The Economist*, “The tensions between India and China are not going to be resolved by some form of words. The real value of such a joint declaration would lie in the fact that it would involve Russia with the western world in a public statement of their common interest in preserving India from nuclear blackmail.”¹²⁹

Date	Event	The “Restraint”	Incentive to Advance
1948	Atomic Energy Commission Created	Nuclear energy vice weapon	Economic Development
1964	“Green light” for nuclear option	Nuclear option vice weapon	Domestic Politics & Strategic Concerns
May 1974	Peaceful Nuclear Explosion (PNE)	PNE vice test of weapon	Domestic Politics & Strategic Concerns
May 1998	Pokhran II and III Weapons tests	Nuclear weapons for self-defense	Domestic Politics & International Norms
August 1999	Release of “Draft” Nuclear Doctrine	Minimal Nuclear Deterrence	Domestic Politics & International Norms

Table 2.3: Professed Indian Nuclear Restraint

Indian restraint was also the product of external pressures, fiscal restraints and technological barriers.

¹²⁸ George Perkovich, *India’s Nuclear Bomb: The Impact on Global Proliferation* (Berkeley, CA: University of California Press, 1999), 86-88; Itty Abraham, 56-7; and Dennis Kux, 263-64.

¹²⁹ “India and the Bomb,” *The Economist* (12 December 1964): 1221.

Despite India's apparent desire to secure multilateral nuclear protection, and the potential implications for global nonproliferation efforts if said request was not granted, neither the Soviet Union or the United States was forthcoming.

The unwillingness of the Soviet Union to provide a nuclear umbrella to India was most likely influenced by ideological considerations.¹³⁰ To guarantee nuclear protection to a capitalist state over a fellow communist state, even one with which a rift had emerged, would have undermined the domestic and international foundations of the communist movement. This ideologically awkward situation would have been even further amplified by aligning Soviet weapons with American weapons against Communist China.

On initial inspection, it seems that the United States may well have had reason to provide a nuclear guarantee to India in 1964. In 1963, a memorandum from Secretary of Defense McNamara to President Kennedy stated that the primary motivation for India pursuing nuclear weapons would be China's possession of nuclear weapons.¹³¹ In June 1964, four months prior to China's nuclear test, U.S. Secretary of State Dean Rusk is reported to have recommended that, should China test, the United States should consider providing India and Japan with nuclear weapons.¹³²

¹³⁰ Lorne J. Kavic, 378.

¹³¹ "The Diffusion of Nuclear Weapons With and Without a Test Ban Agreement," Memorandum from Secretary of Defense Robert S. McNamara to President John F. Kennedy, Secret (12 February 1963). Table One. Declassified 01 June 1977.

¹³² Peter Lavoy, "The Strategic Consequences of Nuclear Proliferation," *Security Studies* 4, no. 4 (Summer 1995): 714.

Nevertheless, the United States did not provide India with a public pledge of nuclear protection. The American rationale most likely lies with a limited American strategic interest in South Asia, the growing strategic focus on Vietnam, and a resumption of American arms transfers to Pakistan.¹³³ It has also been argued that the United States prevented India from testing in 1964 by blackmailing it with Public Law 480 food aid funds.¹³⁴ Additionally, it may have been assumed that the removal of Menon and the death of Nehru placed in power a government more susceptible to American pressure. While the United States would not provide India with a nuclear umbrella, it would provide technical assistance to India's future ballistic missile program.

3. The Development of India's Missile Program

Another factor most likely driving India's preference for a nuclear "option" over a "weapon" is the fact that, in 1964, India did not have a credible means with which to deliver a nuclear warhead to a high-value target in China. Having a weapon without a delivery vehicle would have been a hollow deterrent. "[N]uclear weapons would serve no defensive or deterrent purpose while India lacked the delivery capabilities to attack Chinese nuclear launching systems or Chinese industrial centers. The Indian space

¹³³ Shelton Williams, 33. In 1967, the United States partially lifted the 1965 embargo against India and Pakistan by allowing the shipment of spare parts, a decision which obviously favored Pakistan's military, which relied on American military hardware.

¹³⁴ Waheguru Pal Singh Sidhu, 38.

program had started only in 1963 and was still a long way from developing its own rocket systems that could be converted into a ballistic missile delivery system.”¹³⁵

Similar to the path taken by India’s nuclear weapons program, India’s ballistic missile program began under the auspices of a “peaceful” space program. As in the Atoms for Peace Program, India again found the West to be the main supplier of its technological and financial needs. In 1963, United States launched an experimental sounding rocket from India’s Thumba test range. This launch would be followed by over 350 similar launches during the next twelve years at the Thumba range by the United States, Great Britain, France and the Soviet Union.¹³⁶ In November 1963, India would launch its first research rocket, which was based on the American Nike sounding rocket.¹³⁷

In the period 1963-64, A.P.J. Abdul Kalam spent four months training in the United States at various NASA facilities, including the Langely Research Center where the U.S. Scout rocket program was coordinated. Upon his return in 1964, Kalam began work on India’s Space Launch Vehicle (SLV-3) program. In 1965, Homi Bhabha, the “father of India’s nuclear program,” requested, *and received*, from the United States

¹³⁵ Raju G. C. Thomas, “India’s Nuclear and Space Programs: Defense or Development?” *World Politics* 38, no. 2 (January 1986): 324.

¹³⁶ Gary Milhollin, “India’s Missiles: With A Little Help From Our Friends,” *Bulletin of Atomic Scientists* (November 1989): 31-32.

¹³⁷ Gennadiy Khromov, “A View of India’s Policy on Missile and Nuclear Nonproliferation,” *Yadernyy Kontrol* 41, no. 5 (September-October 1998): 5. Translated by FBIS. Document ID: FTS19990127001680.

unclassified technological reports on the Scout missile.¹³⁸ When the SLV-3 was finally launched in 1980, experts would consider it a copy of the U.S. Scout rocket.¹³⁹ Moreover, the first stage of the SLV-3 would become the first stage of India's Agni missile, an intermediate range ballistic missile (IRBM).¹⁴⁰ By the late 1980s, forty percent of Indian space technology was perceived to have been of American origin.¹⁴¹

E. 1965 INDO-PAKISTANI CONFLICT

In August 1965, Pakistani-backed guerrilla forces infiltrated into Kashmir and began a campaign to incite a Kashmiri rebellion against Indian rule. When Indian regular forces responded to the insurrection and closed down vital entry points to the guerrillas, thus cutting-off their supply lines, Pakistan's military leadership launched a major ground attack. On 6 September, India's army launched a counter-campaign into Pakistan. The 1965 Indo-Pakistani conflict had begun.

1. American Politics

America's response to the outbreak of fighting in South Asia was a decision to embargo arms shipments to both India and Pakistan. From the Indian perspective, it was

¹³⁸ Gary Millhollin, 32.

¹³⁹ Ibid. Anita Bhatia, "India's Space Program: Cause for Concern?" *Asian Survey* 25, no. 10 (October 1985): 1024.

¹⁴⁰ Gary Millhollin, 32.

¹⁴¹ David J. Karl, "Proliferation Pessimism and Emerging Nuclear Powers," *International Security* 21, no. 2 (Winter 1996/97): 106. A more extensive discussion of Soviet and European assistance to India's space program in the 1970s and 1980s follows below.

the victim of "injured innocence" and was being penalized for Pakistani aggression.¹⁴² American military aid promised after the 1962 Sino-Indian conflict was stopped, with only \$75.6 million of the \$157 million package delivered.¹⁴³ Moreover, the Pakistani forces that threatened India were not of the same quality as the forces that India had fought eighteen years earlier. Pakistan attacked India using the weapon systems it had procured from the United States over the previous decade. "Pakistan would not have become a serious military power without U.S. equipment; virtually her entire army and Air Force were equipped with relatively modern U.S. weapons; most notably M-47 and M-48 Patton Tanks (once the main battle tank for NATO), and B-57 light attack jet bombers."¹⁴⁴ The United States also sold Pakistan a squadron of F-104s in 1964, the same year that it denied a request by India.¹⁴⁵ To exacerbate the Indian perspective of "injured innocence," the United States, after enacting the embargo, did not block, and may have facilitated, the transfer to Pakistan of a squadron of F-104s from Libya and Jordan¹⁴⁶ and a squadron of F-86s from West Germany and Iran.¹⁴⁷

¹⁴² Sumit Ganguly, Naval Postgraduate School conference presentation. It should also be noted, however, that while Indian pride was injured, Pakistan's reliance on American hardware made the initial impact of the embargo much more significant to Pakistan. A consequence of the American embargo was that Pakistan turned to China and received 200 medium tanks and several IL-28 bombers. S. Nihal Singh, 713

¹⁴³ Richard L. Siegel, *Evaluating the Result of Foreign Policy: Soviet and American Efforts in India*, 10.

¹⁴⁴ Stephen P. Cohen, "U.S. Weapons and South Asia: A Policy Analysis," 52.

¹⁴⁵ *The Economist* (26 September 1964): 1208.

¹⁴⁶ Ram R. Subramanian, 38.

2. Soviet Reliability

While India considered the United States' unwillingness to support it against Pakistani aggression as a validation of its anti-American suspicions, the 1965 Indo-Pakistani conflict would also highlight to India the role of the Soviet Union as a reliable supplier of military hardware.¹⁴⁸ Prior to the outbreak of hostilities in September, the Soviet Union offered India submarines,¹⁴⁹ destroyers and escorts after the United States rejected an Indian request for three destroyers.¹⁵⁰ Furthermore, during the brief period of fighting in the fall, the Soviet Union did not stop its shipments of arms to India.¹⁵¹ The Soviet Union's desire to maintain and strengthen military ties with India in 1965 may be linked to its desire to keep India from turning westwards following Nehru's death in 1964,¹⁵² as well as Khrushchev's continued pro-Indian and anti-Chinese stance.

¹⁴⁷ S. Nihal Singh, 713.

¹⁴⁸ S. Nihal Singh, 713.

¹⁴⁹ India entered into a submarine deal with the Soviet Union only after its traditional supplier of naval vessels, Great Britain, refused to give India credit or accept payments in rupees, and after the United States said no, owing to Pakistani-American politics. See Hemen Ray, 190.

¹⁵⁰ S. Nihal Singh, 713. One month before the Pakistani invasion, India and the Soviet Union had reached an agreement to transfer four to six submarines and to train Indian crews in the Soviet Union. See Hemen Ray, 191.

¹⁵¹ S. Nihal Singh, 713.

¹⁵² Dennis Kux, 38.

3. The Treaty of Tashkent

In late September, India and Pakistan ceased hostilities in the Kashmir region following pressure from the United Nations Security Council. While neither state achieved a territorial success, India was perceived as the victor due to its success in halting the Pakistani-backed insurgency.¹⁵³ Three months later, under the new leadership of Leonid Brezhnev, the Soviet Union brokered the Treaty of Tashkent.

In an attempt to reverse some of the damage done to Soviet-Chinese and Soviet-Pakistani relations by Khrushchev's pro-Indian policies, Brezhnev approached Tashkent with the objective of promoting Soviet neutrality in the sub-continent. From the American perspective, Brezhnev's approach to the South Asian crisis was welcomed. Prior to the Tashkent negotiations, Dean Rusk told the Senate Committee on Foreign Relations:

I am not particularly opposed to the Soviet Union having a fling at trying to bring these two countries together. I doubt that they would succeed in doing it, but if they did, then although it would be a substantial diplomatic feather in the Soviets' cap, it might also lead the way to an arrangement in the sub-continent that we ourselves could live with.¹⁵⁴

¹⁵³ Ibid., 238.

¹⁵⁴ "Statement of the Honorable Dean Rusk, Secretary of State, before the United States Senate Committee on Foreign Relations (Secret)," *The United States Senate Report of Proceedings, vol. 1, no. 2 of 3* (13 October 1965), 36. Declassified.

While the Soviet Union would in fact secure a short-term peace between India and Pakistan, its “neutrality” in South Asian affairs would also be of only a short duration.¹⁵⁵

F. NON-PROLIFERATION, DROUGHTS AND CHINA, 1965-70

During the five years following the 1965 Indo-Pakistani Conflict, the United States reduced its military presence in South Asia while its strategic focus centered on the war in Vietnam. Economically, the United States responded to India’s worst drought in over a century with massive relief and better monetary terms than those provided by the Soviet Union. India, however, viewed the American food aid program as a tool of diplomatic “blackmail.”¹⁵⁶ In March 1966, President Johnson offered food aid to India under the condition that American-dictated agricultural policies were implemented. While India did agree to and implemented the American demands, the food aid experience of 1966 left an impression on India’s leadership of American meddling in India’s internal affairs. The reaction of Indian Prime Minister Indira Gandhi was that India would “never beg for food again.”¹⁵⁷ It has also been reported that the United States attempted to tie its food aid package to India with Indian support in the United

¹⁵⁵ Richard Siegel, 13. While the Soviet Union would transfer 12 Mi-6 helicopters to Pakistan in 1967, it would also sign a simultaneous agreement with India for the transfer of one hundred SU-7s. S. Nihal Singh, 714. Hemen Ray, 192

¹⁵⁶ Richard Siegel, 7.

¹⁵⁷ Dennis Kux, 257.

Nations for America's Vietnam policy.¹⁵⁸ If true, this incident probably also caused considerable consternation among India's leadership.

Adding to the Indian suspicions of American food aid were several other diplomatic points of consternation between India and the United States during the late 1960s. The American and Soviet promotion of the 1968 Non-Proliferation Treaty was countered by open Indian defiance of the regime. While India supported the goal of a nuclear-weapons-free world, it contended that the NPT fell far short of said goal since it did not contain provisions for a comprehensive ban of further nuclear testing. Moreover, New Delhi pointed out, it did not call for the freezing of nuclear weapons production in the current nuclear power states; and it did not stipulate a schedule for reducing (and eliminating) nuclear weapons stockpiles.¹⁵⁹ Furthermore, India's leadership was infuriated with the notion that China would be rewarded for its 1964 test, which placed it within the cut off window to qualify as "a nuclear weapons state," while India would conversely be punished for showing nuclear "restraint,"¹⁶⁰ thereby missing the cut off window.¹⁶¹ In the months leading up to the final treaty conference, India was considered

¹⁵⁸ Myron Weiner, lecture at the Naval Postgraduate School, Monterey, CA (06 December 1998).

¹⁵⁹ Shelton Williams, 47.

¹⁶⁰ *Ibid.*, 49.

¹⁶¹ According to Article IX of the NPT, "For the purposes of this Treaty, a nuclear-weapon state is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967."

to be the biggest obstacle to the successful negotiation and implementation of the treaty.¹⁶²

While the U.S. State Department privately acknowledged in 1968 that India was the “more important power” in South Asia,¹⁶³ military preference continued to be given to Pakistan. In 1967, the United States had partially lifted the 1965 embargo imposed on India and Pakistan by allowing the shipment of spare parts.¹⁶⁴ This decision, while intended to show America’s balance in its handling of South Asian affairs, clearly favored the Pakistani military with its abundant stockpile of American hardware. Finally, in 1970, the United States authorized a “one-time exception” for the sale of 300 APCs to Pakistan for \$13.3 million.¹⁶⁵ As the American use of the Peshawar air base for electronic warfare and U-2 spy plane missions ended in 1969,¹⁶⁶ this “exception” was most likely approved to facilitate the use of Pakistan as the medium through which the United States would initiate its engagement with China in the 1970s.

While the Soviet Union had declared “neutrality” in the sub-continent following the Treaty of Tashkent, the limited scope of arms sales to Pakistan was greatly

¹⁶² *The Economist* (20 May 1967): 770.

¹⁶³ Preparatory Notes for U.S. Secretary of State Meeting with Morarji Desai, Deputy Prime Minister of India. Department of State Memorandum [Secret] (25 September 1968): 4. Declassified 15 March 1996. LBJ Library Collection.

¹⁶⁴ *Ibid.*, “Current Policy and Its Options” Addendum. Shelton Williams, 33.

¹⁶⁵ Stephen P. Cohen, 62. The delivery of the APCs did not occur until 1973 because of the 1971 Indo-Pakistani War.

¹⁶⁶ Shelton Williams, 34. Stephen P. Cohen, 53.

overshadowed by growing Soviet assistance to India's naval forces. The first Soviet submarine was delivered to India in July 1968,¹⁶⁷ and by the end of 1969, India had secured contracts with the Soviet Union for the delivery of twenty-four naval vessels, "including three submarines, six light frigates, six patrol boats, six motor torpedo boats, three landing crafts and destroyers."¹⁶⁸ Additionally, the Soviet Union offered to help India develop its Port Blair naval facility on the Andaman Islands in the outer Bay of Bengal.¹⁶⁹ In return for these sales and military assistance, the Soviet Union requested the use of mainland Indian ports for the deployment of its navy. India denied this Soviet request, but did offer the Soviet Union use of Indian naval facilities for the repair and re-supply of Soviet vessels.¹⁷⁰ A similar agreement already existed with the United States. Despite this Indo-Soviet rift over the permanent basing of Soviet forces in India, the late 1960s would signal a complete immersion of all three branches of India's military into reliance on Soviet-manufactured hardware (see Table 2.4).

¹⁶⁷ Hemen Ray, 192.

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

¹⁷⁰ Hemen Ray, 193. In 1969, the Soviet Union entered into negotiations with Pakistan to develop the Gwadar submarine facility, fifty miles east of the Iranian border. While this cooperation never materialized, the Indian perspective at the time was that this Soviet offer was in response to India's refusal to allow the basing of Soviet vessels in India. See S. Nihal Singh, 714.

Type	1964-68	1969-72	1973-76
Tanks	100 PT-76 (Soviet) 400 T-54/55 (Soviet) 70 Sherman (U.K.) 50 Vijayanta (Indian)	50 PT-76 (Soviet) 50 T-54/55 (Soviet) 250 Vijayanta (Indian) 50 AMX-13 (French)	450 T-54/55/62 (Soviet) 400 Vijayanta (Indian)
Naval Vessels	1 F-Class Submarine (Soviet) 1 Petya-Class Frigate (Soviet)	3 F-Class Submarine: (Soviet) 4 Petya-Class Frigate: (Soviet)	5 Petya-Class Frigate: (Soviet) 2 Osa-Class Patrol (Soviet) 5 Poulchat-Class Patrol (Soviet) 6 Polnocny Landing (Soviet) 4 Leander Frigates (Indian)
Combat Aircraft	4 Mig-21 Squadrons (Soviet) ½ SU-7 Squadron (Soviet) 2 ½ Gnat Squadrons (Indian)	4 Mig-21 Sqdns: (Indo-Soviet) 6 SU-7 Squadron (Soviet) 4 ½ Gnat Squadrons (Indian) 2 HF-24 Squadrons (Indian)	2 Mig-21 Squadrons (Indian) 1 Gnat Squadron (Indian) 2 HF-24 Squadrons (Indian)
Other Major Soviet Systems	100 mm. Guns 130 mm. Guns SA-2 SAM Complex MI-4 helicopters	OT-62 APC Mi-8 Helicopters More SA-2 SAMs More Mi-4 Helicopters	OT/62/64 APC ZSU-23-4 SPS

Source: Data derived from, P. R. Chari, "Indo-Soviet Military Cooperation: A Review," *Asian Survey* 19, no. 3 (March 1979): 237, Table 1.

Table 2.4: Major Military Equipment Procured by India, 1964-1976

G. 1971: AMERICAN POLITICS, SOVIET COOPERATION AND WAR

The year 1971 would be a definitive year in Indo-Soviet military cooperation and Indo-American diplomatic relations. The year commenced with the congressional testimony of former U.S. Ambassador Chester Bowles that the United States knew "from the outset" in 1954 that Pakistan's "military build-up [using American arms] was in fact directed against India."¹⁷¹ During the spring, President Nixon and Secretary of State Kissinger would begin efforts to re-establish diplomatic relations with China. In August, India and the Soviet Union would sign their first Treaty of Friendship and Cooperation.

¹⁷¹ Bowles quoted in *The Hindustan Times* (21 January 1971), cited in Hemen Ray, 180.

At the year's end, in the waning days of the Indo-Pakistani conflict, the United States would deploy the *USS Enterprise* and an Amphibious Task Force to the Bay of Bengal. From the Indian perspective, 1971 would therefore be a year in which the United States aligned itself with India's two main rivals while the Soviet Union reinforced its commitment to Indian security and military expansion.

1. The Treaty of Friendship and Cooperation

A major advance in Indo-Soviet relations came in the summer of 1971 when Soviet Foreign Minister Andrei Gromyko visited India. On 9 August, less than a month after Kissinger's trip to China, India and the Soviet Union signed a twenty-year Treaty of Peace, Friendship and Cooperation. The primary elements of the treaty were Articles VIII and IX which emphasized, respectively, that each nation "shall not enter into or participate in any military alliance directed against the other Party," and that each would "abstain from providing any assistance to any third party that engages in armed conflict with the other Party."¹⁷² The timing of this bilateral treaty does not appear to be haphazard, because it followed the recent strengthening of US-Chinese relations and it preceded the Third Indo-Pakistani War by less than four months.¹⁷³ For both the Soviet

¹⁷² Bimal Prasad, 393.

¹⁷³ It has been speculated by some observers that India may well have entered the Treaty of Friendship and Cooperation with the Soviet Union knowing that conflict with Pakistan was imminent and hoping that Soviet support would keep China from bearing arms against India.

Union and India, the emergence of a Sino-American détente in 1971 made the strengthening of Indo-Soviet relations prudent.

The context and quality of the 1971 Indo-Soviet Treaty of Friendship and Cooperation is perceived differently, however. India was in fact simply one of numerous developing countries with which the Soviet Union signed such treaties. Under Brezhnev, the Soviet Union employed Treaties of Friendship and Cooperation to develop a “system of client states in the Third World.”¹⁷⁴ Moreover, unlike most of the twelve Soviet Treaties of Friendship and Cooperation, the Indo-Soviet treaty was one of the few in which direct military assistance was *not* guaranteed.

While the Western powers viewed the 1971 Indo-Soviet Treaty as evidence that India had entered the Soviet camp,¹⁷⁵ India’s Prime Minister at the time, Indira Gandhi, was adamant that the new Treaty of Cooperation was “not a reversal of the Indian traditional nonalignment policy.”¹⁷⁶ An analysis of Article IX of the Treaty shows that the declaration *does* stop short of bilateral military operations. “In the event of either Party being subjected to an attack or a threat thereof, the High Contracting Parties shall immediately enter into mutual *consultations* in order to remove such threat and to take

¹⁷⁴ Peter Zwick, 289.

¹⁷⁵ Dennis Kux states that following the signing of the 1971 Indo-Soviet Treaty, “Nixon regarded India as a Soviet client” up through the end of the December 1971 Indo-Pakistani War. Dennis Kux, 296.

¹⁷⁶ Quoted in Edgar O’Ballance, *Tracks of the Bear: Soviet Imprints in the Seventies* (Novato, CA.: Presidio Press, 1982), 154.

appropriate effective measures to ensure peace and the security of their countries.”¹⁷⁷

Furthermore, Prime Minister Gandhi’s commitment to Indian non-alignment would be validated two years later when Brezhnev visited India. Brezhnev wanted to conclude a “Soviet-Indian Collective Security Agreement,” but Indira Gandhi refused the offer on the grounds that it would go against India’s non-alignment policy.¹⁷⁸

From the Soviet perspective, the deepening of Sino-Pakistani relations and the emergence of a Sino-American dialogue in 1971 seriously reduced Soviet influence in the sub-continent. Moreover, an increase in American naval activity in the Indian Ocean raised strategic concerns for the Soviet Union as well.

A U.S. naval presence in the Indian Ocean was thought to permit the United States to exercise its nuclear deterrent with fewer nuclear submarines. The range of Polaris and Poseidon missiles is relatively limited, and while Trident signifies a marked improvement in that respect, their presence in the Indian Ocean would greatly aggravate Soviet ASW problems. Simultaneously, U.S. targeting flexibility would be enhanced vis-à-vis some targets in the Soviet Union. The Indian Ocean was thus regarded as an attractive deployment site for U.S. SLBMs because the Soviet Union would find it most difficult to deploy adequate ASW forces there to contain the U.S. threat of attack from the sea.¹⁷⁹

For the Soviet Union, therefore, the strategic isolation and military requirements that India experienced as a result of the Sino-American-Pakistani détente provided an opportune foothold for further Indo-Soviet cooperation.

¹⁷⁷ Bimal Prasad, 393-94. Emphasis added.

¹⁷⁸ Ibid., 155.

¹⁷⁹ Selig S. Harrison and K. Subrahmanyam, *Superpower Rivalry in the Indian Ocean: Indian and American Perspectives* (New York: Oxford University Press, 1989), 86.

2. The 1971 Bangladesh Crisis

On 3 December 1971, Pakistan launched an air raid against eight airfields in western India.¹⁸⁰ The build-up to this air strike, however, was one year in the making. As a result of a December 1970 election, which elevated a "Bengali regionalist" to the position of Pakistan's Prime Minister, Pakistan's military had begun in March 1971 systematic attacks on members of the Hindu population in East Pakistan which would result, by one account, in the death of one million civilians as well as ten million refugees displaced into India.¹⁸¹ Hoping to draw Indian military might away from the escalating conflict in East Pakistan, Pakistan took the first major military action in the 1971 Indo-Pakistani War.

India responded to the Pakistani air strike by launching counterattacks in East and West Pakistan. Additionally, India recognized the displaced Bengali government-in-exile as the rightful government of Bangladesh. The United States responded to these Indian actions by declaring that India was escalating the conflict, and Washington therefore "hardened its stance toward India."¹⁸² Among the initial actions taken by the United States was the suspension of the sale of military equipment to India, including a \$70 million communications upgrade for India's air defense network.¹⁸³ One week after the

¹⁸⁰ Dennis Kux, 302.

¹⁸¹ Sanjoy Banerjee, "Explaining the American 'Tilt' in the 1971 Bangladesh Crisis: A Late Dependency Approach," *International Studies Quarterly* 31 (1987): 201.

¹⁸² Dennis Kux, 302.

¹⁸³ *Ibid.*

initial Pakistani air strike, and as India was exploiting its military successes against the Pakistani forces, the United States dispatched the *USS Enterprise* and a Marine amphibious unit from off the coast of Vietnam to the Bay of Bengal. While the reported purpose of the deployment was to ensure the safety of American citizens, the Indian government saw it as a direct challenge to India's success over Pakistan.¹⁸⁴ Henry Kissinger would later state that the purposes of this American "tilt" towards Pakistan were to protect West Pakistan from possible retaliatory Indian strikes and to signal to China that, in times of crisis, the United States could be counted on as a reliable partner.¹⁸⁵ From the Indian perspective, "The sailing of the *USS Enterprise* was the ultimate in symbolic insult...Above all, it is remembered as a nuclear as well as a military threat."¹⁸⁶ The thought of China, Pakistan and the United States all cooperating together

¹⁸⁴ George Tanham, "Indian Strategic Culture," *The Washington Quarterly* 15, no. 1 (Winter 1992): 139. "From India to North Africa: Sowing a Missile Crop," in *Exploring U.S. Missile Defense Requirements in 2010: What are the Policy and Technology Challenges?* Institute for Foreign Policy Analysis (April, 1997). Available online <http://www.fas.org/spp/starwars/advocate/ifpa/report696_ch4_ind.htm>. Myron Weiner, NPS lecture. Weiner aptly described the 1971 incident as a "footnote in US Navy history," but an insult to all Indians to this very day.

¹⁸⁵ Waheguru Pal Singh Sidhu, 21. Dennis Kux, 305. In a detailed analysis of numerous official accounts of the 1971 "tilt," Sanjoy Banerjee concludes that "American diplomatic support for Pakistan, its small-scale arms supply, and above all, the dispatch of the fleet, can be explained as the discharge of the role of guarantor of client states." See Banerjee, 215.

¹⁸⁶ Waheguru Pal Singh Sidhu, 21.

raised Indian isolation and anxiety to new heights and further strengthened Indo-Soviet ties.¹⁸⁷

H. PNE, PROCUREMENT DIVERSIFICATION AND AFGHANISTAN, 1974-79

The 1970s would be a decade in which India demonstrated its nuclear capabilities, attempted to diversify its military procurement sources and found its regional security challenged by the injection of Cold War tensions into the sub-continent. Changes in India's political leadership during the decade would shift India from a pro-Moscow stance, to a more balanced and diversified East-West approach. India would conclude the decade still dependent upon the Soviet Union for most major military hardware.

1. India's Peaceful Nuclear Explosion, 1974

On 18 May 1974, after receiving authorization from Prime Minister Indira Gandhi, India's Atomic Energy Commission (AEC) conducted a Peaceful Nuclear Explosion (PNE).¹⁸⁸ The rationale for the change in India's nuclear posture has often been linked to changes in India's security environment. Most notably, the events of 1971

¹⁸⁷ Sanjoy Banerjee, 202.

¹⁸⁸ In a 1991 book and a 1997 conversation, Raja Ramanna, the "architect" of the Pokhran I test, debunks the notion of a PNE and suggests that Pokhran I was in fact a test of a nuclear weapon. See Toby F. Dalton, "Towards Nuclear Rollback in South Asia," *Current History* (December 1998): 413; and Mattoo, 17. The argument that Pokhran I was motivated by more than "peaceful" purposes is also supported by the fact that Prime Minister Indira Gandhi, who authorized the PNE, planned additional tests in 1982-83 that were canceled due to U.S. pressure. See Mattoo, 18, and "The Nuclear Journey Through Various Governments," *India Today* (25 May 1998). Available on-line: www.india-today.com/itoday/25051998/march.html.

have been pointed to as having had a great impact upon India's decision-makers. Any Indian hope for American nuclear protection versus China diminished as Sino-American ties improved.¹⁸⁹ The American conduct of "gunboat diplomacy" with the nuclear-armed *USS Enterprise* highlighted India's strategic vulnerability in a nuclear world.¹⁹⁰ While these strategic concerns may well have provided useful material for the rhetoric of India's bomb lobby, a closer examination of India's domestic environment in 1974 clarifies the political, technical and organizational factors that led to ten years of Indian "restraint" and the eventual 1974 PNE.

Domestic support for Indira Gandhi's Congress Party "had fallen to an all time low in late 1973 and early 1974 due to a prolonged and severe domestic recession, the eruption of large-scale riots in a number of regions, and the lingering effects of the splintering of the ruling Congress Party."¹⁹¹ By conducting a PNE, Prime Minister Indira Gandhi demonstrated India's "peaceful" nuclear capability to the world and increased her overall domestic approval rating by one-third.¹⁹² One catalyst to India's 1974 PNE, therefore, can be considered domestic politics.

¹⁸⁹ Raju G. C. Thomas, "India's Nuclear and Space Programs," 326.

¹⁹⁰ Sanjoy Banerjee, 202.

¹⁹¹ Scott D. Sagan, "Why Do States Build Nuclear Weapons?" *International Security* 21, no. 3 (Winter 1996/97), 68. This view is also expressed in, Raju G. C. Thomas, "India's Nuclear and Space Programs," 326.

¹⁹² A poll taken in June 1974 also showed that 90 percent of the adult literate population polled were "personally proud of the achievement." *Ibid.*

Organizational and technical factors also contributed to the ten-year delay between the “green signal” and the PNE. In January 1966, Homi Bhabha, the father of India’s atomic program, died in a plane crash while en route to an IAEA meeting in Vienna.¹⁹³ Having chaired and directed numerous agencies within India’s nuclear establishment at the time of his death, Bhabha seemed irreplaceable. Following Bhabha’s death, Indira Gandhi chose Vikram Sarabhai as the second chair of the Atomic Energy Commission and as the secretary to the Department of Atomic Energy, “the senior civil position in the government.”¹⁹⁴ Sarabhai’s view of the nuclear “option” was markedly different from that held by Bhabha. Under Bhabha, the AEC pursued the nuclear option as a symbol of state achievement and as a link between national development and security.¹⁹⁵ Sarabhai, however, considered the channeling of funds towards the development of an “option” a waste of limited resources, especially in light of the cost associated with procuring delivery vehicles.¹⁹⁶

From an organizational viewpoint, therefore, having Sarabhai assume several key posts in 1966 that controlled the direction of and funding for India’s nuclear option would bureaucratically and financially demote the importance of *the option*. This “demotion” would be amplified into a technical “restraint” on India’s nuclear program as reduced

¹⁹³ Itty Abraham, 129.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid, 144-45.

¹⁹⁶ Quoted in J. P. Jain, *Nuclear India*, vol 2. (New Delhi: Radiant Publishers, 1974): 179-80, cited in Itty Abraham, 143-44.

funding to research and development projects would delay India's *capability* to pursue an option.¹⁹⁷ The explanation for India's 1974 PNE should therefore be viewed as the delayed union of technical capability and political will, and not a dramatic change in India's security environment.

2. Procurement Diversification, 1978-82

In the aftermath of the 1971 Indo-Pakistani War, India began to search for a new fighter-bomber aircraft to replace both the indigenous Marut and the Soviet-made SU-7B jets. The ability of Pakistan to successfully conduct a "lightning strike" deep into India on 3 December 1971, the inability of India to intercept Pakistani Mirage-3s, and the difficulty encountered by Indian Canberra bombers on similar deep strike missions into Pakistan, all pointed towards a gap between Indian and Pakistani air warfare capabilities.¹⁹⁸ Additionally, India was becoming disenchanted with the Soviet Union due to a growing surplus in non-convertible Russian rubles¹⁹⁹ and the ability of the Soviet Union to influence the combat readiness of the Indian military with "spare parts

¹⁹⁷ Special thanks to Peter Lavoy for highlighting this action-reaction cycle of bureaucratic and technical restraint. It has also been argued that it was not until 1972, when the Purnima research reactor went critical, that India gained the "basic data on neutron multiplication factors, effectiveness of reflectors, critical mass assembly, and so on for manufacturing the Pokhran [I] device." P. R. Chari, "Indo-US Relations: Non-Proliferation Concerns," in Gary K. Bertsch, et al, *Engaging India*, 6.

¹⁹⁸ Raju G. C. Thomas, "Aircraft For the Indian Air Force: The Context and Implications of the Jaguar Decision," *Orbis* 24, no. 1 (Spring 1980): 88.

¹⁹⁹ Salamat Ali, "Buried in Roubles," *Far Eastern Economic Review* (2 June 1983): 96-97.

diplomacy.”²⁰⁰ This disharmony between India and its primary arms supplier would result in two major procurement deals in the late 1970s involving India, France and Great Britain. While by no means dislodging the Soviet Union from its position as India’s primary arms supplier (see Figure 2.3), the trade agreements would signal an Indian attempt to lessen dependence on the Soviet military-industrial complex.

I. CONTINUED FOREIGN ASSISTANCE TO INDIA’S SPACE PROGRAM

During the 1970s and 1980s, India would continue to receive considerable foreign assistance to its space program. Following the initial aid provided by the United States in the 1960s, West Germany and France became key technical supporters of India’s “indigenous” space program. France would provide India with crucial data concerning liquid propulsion and West Germany would become a central clearinghouse for technological data concerning rocket guidance, the use of composites in rocket construction, and the testing of rockets.²⁰¹ The Soviet Union would also assist India by signing a 1972 agreement that provided Soviet technical assistance in the design and manufacturing of Indian satellites.²⁰² When India launched its first three satellites, in April 1975, June 1979 and November 1981, they were all carried aboard Soviet Intercosmos rockets.²⁰³ Finally, just as American technical data assisted in the

²⁰⁰ Raju G. C. Thomas, “Aircraft For the Indian Air Force,” 89.

²⁰¹ Gary Milhollin, 32.

²⁰² Anita Bhatia, 1017.

²⁰³ Indian Space Research Organisation Homepage. <http://www.isro.org/old_sat.htm>.

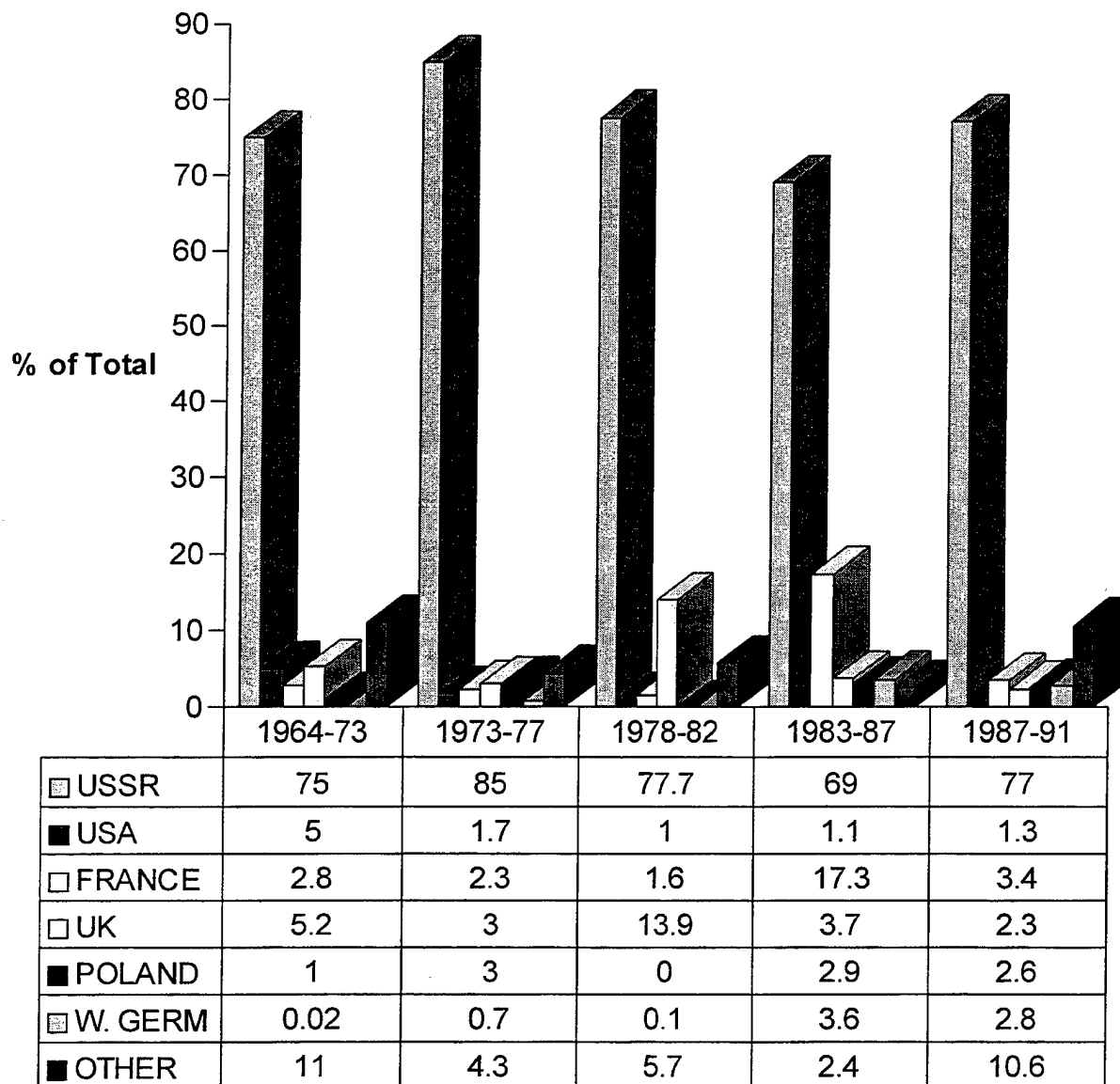


Figure 2.3: SOURCES OF INDIAN FOREIGN PROCUREMENT, 1964-91

Source: Data derived from, *World Military Expenditures and Arms Transfers, 1963-1973: 71. World Military Expenditures and Arms Transfers, 1968-1977: 156. World Military Expenditures and Arms Transfers, 1972-1982: 98. World Military Expenditures and Arms Transfers, 1988: 114. World Military Expenditures and Arms Transfers, 1991-1992, 134* (Washington, D.C.: Arms Control and Disarmament Agency).

development of India's SLV-3, India's first short-range ballistic missile, the Prithvi, has been reported to be based on the Soviet Scud-B missile.²⁰⁴ Whereas the American Scout would become the first stage of India's Agni IRBM, the Soviet Scud-B would become the second stage of the two-stage Agni I.²⁰⁵

In 1980, following the launch of an indigenous Indian space launch vehicle (SLV-3) that was based on the design of the American Scout missile, the United States, Canada, France, West Germany, Italy, Japan and Great Britain began talks on halting the future spread of ballistic missile technology.²⁰⁶ In response to this emerging challenge to India's procurement of foreign missile technology, the Integrated Guided Missile Development Program (IGMDP) was created by India in 1983. It encompassed India's five primary missile projects. While Indian officials downplayed Western accusations of Indian IRBM development, the first chairman of the Indian Space and Research Organisation (ISRO), Satish Dhawan, provoked Western accusations when he speculated that the SLV-3 could be converted into an IRBM with a range of 1480 km.²⁰⁷

²⁰⁴ Gary Milhollin, 32.

²⁰⁵ Yadernyl Kontrol, 6-7. While India was a receiver of missile technology, it did not become an exporter of said technology. In 1974, India denied requests by Libya and Iraq for missile technology. See Waheguru Pal Singh Sidhu, 76.

²⁰⁶ Alexander A. Pikayero, et al. *Russia, the U.S. and the Missile Technology Control Regime*. Adelphi Paper 317 (New York: Oxford University Press, 1998): 9.

²⁰⁷ Waheguru Pal Singh Sidhu, 18.

J. NUCLEAR PROLIFERATION, AFGHANISTAN AND FOREIGN ARMS

After the 1971 Indo-Pakistani conflict, the remainder of the 1970s would be a period of relatively low and balanced military expenditures in the sub-continent.²⁰⁸ India would, however, rely heavily on the Soviet Union for its military procurement during this period, with eighty-five percent of its imported procurement being of Soviet origin (see Figure 2.3). While Indo-Soviet military ties would continue to grow, the historical rift in Indo-American relations would also persist.

When the Carter Administration took office in 1977, non-proliferation was one of its primary foreign policy objectives.²⁰⁹ Within a year, the United States Congress would pass the Nuclear Non-Proliferation Act (NNPA). This act was enacted in response to India's use of American-supplied Tarapur reactor fuel to obtain plutonium for the 1974 PNE test.²¹⁰ On 20 April 1978, a month after the NNPA was passed, the U. S. Nuclear Regulatory Commission (NRC) rejected an Indian export license request for seventeen tons of enriched uranium to be used in the Tarapur reactor.²¹¹ When it became public

²⁰⁸ *World Armaments and Disarmaments, SIPRI Yearbook: 1982* (Cambridge, MA: Oelgeschlager, Gunn & Hain, Inc: 1982), 123.

²⁰⁹ Ram R. Subramanian, *Nuclear Competition in South Asia and U.S. Policy*. Policy Papers on International Affairs, No. 30 (Berkeley, CA: Institute of International Studies, 1987), 5.

²¹⁰ Shrikant Paranjpe, "American Policy Toward Problems of Nuclear Proliferation in South Asia: An Indian Perspective," *Asian Affairs* 16, no. 4 (Winter 1989-90): 189.

²¹¹ Ram R. Subramanian, 7. The United States did, however, make arrangements for France to assume its role of supplier of low enriched uranium (LEU) fuel to India after the final American shipment in 1980. Rodney Jones, et al., 120, footnote 27.

knowledge in April 1979 that Pakistan was attempting to import enrichment technology, the United States invoked Section 669 of the Foreign Assistance Act (the Symington Amendment) and cut-off all military aid to Pakistan.²¹²

The appearance of a uniform American nonproliferation stance in South Asia came to halt, however, in December 1979 when the Soviet Union invaded Afghanistan.²¹³ According to Richard Cronin, "Moscow's December 1979 invasion of Afghanistan caused the United States to subordinate its nuclear dispute with Pakistan to U.S. policy to oppose Soviet expansion."²¹⁴ In response to Soviet military actions in Afghanistan, the Central Intelligence Agency (CIA) established an arms pipeline via the Pakistani intelligence service, the Inter-Service Intelligence (ISI), to the Afghani Mujahideen freedom fighters.²¹⁵ To ensure Pakistan's support for American efforts in Afghanistan, the Reagan Administration announced on 11 June 1981 that the United

²¹² Shrikant Paranjpe, 189-90. Unlike the Indian nuclear weapons program which is plutonium-based, Pakistan's nuclear weapons utilize enriched uranium. Between 1974 and 1977, Pakistan smuggled in ultra-centrifuges and established a facility for uranium enrichment. Additionally, Pakistan acquired "sizeable quantities" of "yellow cake," or low enriched uranium, from Libya. See Shikant Paranjpe, 188.

²¹³ While India did not publicly denounce the Soviet invasion, private conversations between Indira Gandhi and Soviet officials highlighted an Indian fear that the Soviet invasion would create a Sino-American-Pakistani triangle with India in the middle. Waheguru Pal Singh Sidhu, 39.

²¹⁴ Richard P. Cronin, "Pakistan's Nuclear Program: U.S. Foreign Policy Considerations," Issue Brief, Foreign Affairs and National Defense Division, Congressional Research Service (13 January 1988): CRS-2.

²¹⁵ Chris Smith, "The Impact of Light Weapons on Security: A Case Study of South Asia," in *Armaments, Disarmaments and International Security*, SIPRI Yearbook 1995 (New York: Oxford University Press, 1995), 587-88.

States would waive the restrictions of the Symington Amendment and give Pakistan a six-year military aid package worth \$3.2 billion.²¹⁶ Included in this military aid package was the authorization to sell American F-16 fighters to Pakistan. The arrival of the Cold War at India's doorstep, coupled with the renewed threat of American arms transfers to Pakistan, would necessitate an escalation in Indian military expenditures and procurement during the 1980s. India would again attempt to diversify its foreign procurement sources and to reduce its dependence on Soviet hardware. Despite the political, military and developmental incentives for diversification, fiscal constraints and Western suspicions would limit the numbers and types of military hardware made available to India.

1. Diversified Procurement, 1978-91

In 1977, two years before the Soviet invasion of Afghanistan, Indira Gandhi's Congress party was defeated in national elections. The newly elected Janata government, under the leadership of Morarji Desai, "considered the Soviet leaning policy of the previous Congress administration incompatible with the practice of 'genuine' or 'proper' nonalignment. In weapons acquisition, the new interpretation called for a more balanced policy between East and West in the purchase of arms or in seeking military and technical collaboration for the production of arms in India."²¹⁷ India's desire to diversify its procurement sources was also motivated by a desire for more advanced Western military

²¹⁶ Mitchell Reiss, *Bridled Ambition* (Baltimore, MD: Johns Hopkins University Press, 1995), 211.

²¹⁷ Raju G. C. Thomas, "Aircraft for the Indian Air Force," 92.

technology, concerns over the level of Soviet influence on India's military preparedness, and displeasure regarding the financial impact of the Indo-Soviet military relationship.

A fundamental aspect of Soviet arms transfers to the Third World during the Cold War was that the Soviet Union obtained influence over the recipient state by retaining both the ability to produce spare parts for the systems and the technological capacity to perform intermediate and upper-level maintenance. Financially, the Soviet Union would make only twenty-five percent of its profit from the sale of an end item. The other seventy-five percent would be made by providing maintenance and selling spare parts over the life of the system.²¹⁸ For India this meant that a major end item purchased from the Soviet Union, such as a submarine, had to return to Vladivostok shipyards to have periodic maintenance performed. This resulted in a twenty-five percent reduction in the operational readiness of India's submarine forces.²¹⁹ Moreover, there was a concern that Soviet control over military spare parts could result in a Soviet attempt at "spare parts diplomacy," such as was performed earlier by the Soviet Union in Egypt.²²⁰

Another factor deeply influencing India's desire to diversify its sources of procurement in the late 1970s was the huge Indian surplus in non-convertible Russian

²¹⁸ "Soviet and Russian Military Industrial Complex: A Look from Inside," lecture given by Vitaly Kataev, General Director, Business Center of the Military Industrial Complex, Russia; at the Monterey Institute of International Studies (13 October 1999).

²¹⁹ Salamat Ali, "Cheap, But at a Price," *Far Eastern Economic Review* (7 March 1985): 35.

²²⁰ Raju G. C. Thomas, "Aircraft for the Indian Air Force," 89.

rubles.²²¹ Since the first Indo-Soviet barter agreement in 1953, India had exported domestic products and crops to the Soviet Union in exchange for Soviet products and rubles. The terms of the barter trade agreements stipulated that any account surplus that India accumulated from non-military trade could not be used to pay for capital goods and credits accumulated through arms transfers.²²² Up through 1971, the Indo-Soviet trade balance was always in favor of the Soviet Union. After 1971, however, the balance of trade shifted, and India began to achieve a surplus in trade with the Soviet Union and thus accumulated rubles. This growing pool of non-convertible rubles, valued at \$862.5 million in 1982, became an even greater burden to India as the Soviet Union began to decrease the importation of certain Indian goods.²²³ Weighed down by a growing trade surplus that could only be depleted by purchasing more Soviet goods, but not arms, India had an economic incentive to look elsewhere to diversify its procurement portfolio.

The first major break that India made in procurement diversification came in October 1978 when India chose the Anglo-French Jaguar over the Soviet-made MiG-23.²²⁴ An earlier Indian inquiry into Swedish SAAB-37 Wiggens had been denied because the aircraft contain American-made Pratt & Whitney engines.²²⁵ The Jaguar

²²¹ Salamat Ali, "Buried In Roubles," *Far Eastern Economic Review* (2 June 1983): 96.

²²² Ibid.

²²³ Ibid.

²²⁴ Raju G.C. Thomas, "Aircraft for the Indian Air Force," 96.

²²⁵ S. Nihal Singh, 715.

contract, worth \$2.5 billion, was the largest arms contract to date in India's history.²²⁶ Three years later, in 1981, India would diversify its naval procurement and sign a contract for the purchase of two West German Type-1500 submarines. In 1982, the final major foray into Indian procurement diversification came about with a contract to purchase sixty French Mirage-2000s. While this deal was later reduced to forty aircraft, it signaled a continued effort by India to look beyond the Soviet Union for military hardware.

2. Soviet Aircraft: Quality versus Quantity

In the late 1970s and early 1980s, Soviet hardware had begun to receive less than flattering reviews during combat operations in Afghanistan, Angola, Iraq, Kampuchea and Lebanon.²²⁷ Concurrently, Israel's American-made F-16's were making headlines following a successful Israeli attack on Iraq's Osiraq nuclear facility in 1980²²⁸ and the high kill-ratios they achieved in 1983 versus the Soviet-made MiGs in Lebanon.²²⁹ The questionable performance of Soviet-made aircraft during this period would provide India with an additional incentive to diversify.

²²⁶ Ibid., 708.

²²⁷ *World Armaments and Disarmament, SIPRI Yearbook 1986* (New York: Oxford University Press, 1986), 332.

²²⁸ S. Nihal Singh, 709.

²²⁹ Ram R. Subramanian, "Nuclear Competition in South Asia and U.S. Policy," 14.

3. Self-Reliance and Dual-Use Technology

A long-standing objective of the Indian leadership has been to achieve autonomy in the country's military procurement and development. Due to India's limited military-industrial complex, initial aspirations for complete self-sufficiency had been deemed unobtainable. Instead, a course for Indian self-sufficiency was plotted. Central to Indian self-sufficiency aspirations were the necessities of ensuring the uninterrupted supply of spare parts, whether from indigenous sources or a reliable trade partner, and developing military hardware that was appropriate for the harsh and varied environmental conditions of the subcontinent.²³⁰ During the 1960s and early 1970s, India downplayed the pursuit of self-reliance and instead focused on the domestic production of foreign military equipment.²³¹

With the arrival of President Reagan in the White House in 1981, the United States enacted a policy to create an "opening to India."²³² Understanding India's respect for science and its quest for self-reliance, the United States hoped to engage India with high-technology. The basic motivations for the Reagan Administration's reevaluation of America's India policy were to contain the spread of communism, to prevent nuclear

²³⁰ Eric Arnett, "Military Technology: The Case of India," in, *SIPRI Yearbook 1994* (New York: Oxford university Press, 1994), 344-45.

²³¹ Raju G. C. Thomas, "U.S. Transfers of 'Dual-Use Technologies to India,'" *Asian Survey* 30, no. 9 (September 1990): 834-35.

²³² Waheguru Pal Singh Sidhu, 40.

proliferation and to provide India with strategic autonomy and freedom from Soviet influence.²³³

In 1980, India and the United States appeared to be on the verge of their first major arms deal since the 1962 Sino-Indian conflict. Under negotiation was the sale of two hundred 155mm howitzers and TOW anti-tank weapons. The eventual failure of this contract would highlight two key aspects of Indo-American military cooperation. The first was a hesitancy within the Department of Defense to transfer high-technology equipment to a country that cooperated so closely with the Soviet Union. As the TOW anti-tank weapons desired by India were to have night targeting sights on them,²³⁴ there was a concern that the technology involved in designing the night sights might leak back to the Soviet Union. As one government official would comment, "You're trading off political gains on the one hand for possible technological compromises on the other."²³⁵ Following the signing of an Indo-American Memorandum of Understanding (MOU) in May 1985, the United States would in fact transfer classified data on night gunsights to India, even though India did not sign a General Security of Military Information Agreement.²³⁶

²³³ Ibid. Reagan's "opening" policy was facilitated by Indira Gandhi's falling out with Moscow in the early 1980s. See Steve Patten, "India Pulling Away From Russia?" *U.S. News and World Report* (15 February 1982): 25.

²³⁴ Dilip Mukerjee, 603.

²³⁵ Molly Moore, "High-Tech Arms Sales Arouse Concerns," *The Washington Post* (6 December 1986): A20.

²³⁶ Dilip Mukerjee, 607.

The second key aspect of Indo-American military cooperation in the 1980s was the American willingness to slowly transfer technological information, while blocking the transfer of military end-items.²³⁷ Among the items that the United States would transfer to India during the 1980s were General Electric F-404 jet engines and General Electric LM2500 marine engines. The F-404s were the same engines used in American F-18s, and they were destined for India's indigenous Light Combat Aircraft (LCA) program.²³⁸ The LM2500 engines were used on American Spruance-class destroyers, and they were intended for an upgrade of Indian frigates.²³⁹ While these transfers were of obvious importance to India, the United States would still place a limit on the transfer of its technology. Most notable was the decision to cancel the transfer of the Cray XMP-24 supercomputer, capable of aiding India in the advancement of its missile and nuclear weapons programs as well as in cracking codes, and to replace the computer with a less advanced Cray XMP-14, which would still satisfy India's stated need for weather-forecasting.²⁴⁰

While India reduced its importation of Soviet military hardware by sixteen percent between the mid-1970s and the mid-1980s (see Figure 2.3, page 64), it was still economically impossible to cut the Soviet military supply-line. By the mid-1980s, India

²³⁷ Ibid., 611.

²³⁸ Ibid., 605. Raju G. C. Thomas, "U.S. Transfers of 'Dual-Use Technologies to India,'" 826.

²³⁹ Dilip Mukerjee, 602.

²⁴⁰ Waheguru Pal Singh Sidhu, 45.

again began to increase its contracts for Soviet military hardware. Among the primary reasons for continued Soviet dominance in Indian foreign procurement were the lower initial costs and the willingness of the Soviet Union to agree to licensing for the production of said systems in India.²⁴¹ In 1985, India and the Soviet Union would sign licensing contracts for the production of 200 MiG-27s and 1,000 T-72s in India.²⁴² The T-72 was reported to cost one-third the price of its Western equivalent, and Soviet aircraft on average would cost about one-half of their Western peers. Again, from the Soviet perspective, the profit in arms transfers remained in the long-term costs of maintenance and spare parts.²⁴³

During the Cold War, India would be the only non-socialist country to receive arms production technology from the Soviet Union.²⁴⁴ While New Delhi wished to remain independent of Soviet influence, economics and U.S. ambivalence would force India to remain reliant on the Soviet Union. As one Indian official remarked, "We haven't

²⁴¹ Salamat Ali, "Cheap, But at a Price," 35.

²⁴² *World Armaments and Disarmament, SIPRI Yearbook 1985* (New York: Oxford University Press, 1986), 415.

²⁴³ See S. Nihal Singh, 715-16. Although it would agree to licensing agreements with India, the Soviet Union would allow for the assembly of these systems only from Soviet-manufactured parts. India did not produce the weapon systems from scratch.

²⁴⁴ *World Armaments and Disarmament, SIPRI Yearbook 1986* (New York: Oxford University Press, 1986), 331.

gone to the Russians as a matter of choice. Their stuff is damn cheap, and the U.S. made it impossible for us to do otherwise."²⁴⁵

K. AN ASSESSMENT OF THE COLD WAR YEARS

The pattern of Indian military procurement during the period 1947 to 1990 highlights three central themes of this study. The first is the fragile nature of the Indo-Soviet "special" relationship. The second theme is the emergence and growth of the Indo-American divide. The final theme is the evolution of India's strategic culture and its role in procurement decisions. A summary of these three topics is provided below.

1. Indo-Soviet Military Cooperation

The history of Indo-Soviet military cooperation can be summarized as a relationship determined by Indian needs, Soviet opportunism and Western ambivalence. When India commenced the rapid modernization of its armed forces following the 1962 Sino-Indian conflict, its initial objective was to continue and expand upon its historical Western supply-line. After failing to secure arms transfer agreements with the West, India turned to the Soviet Union out of "dire necessity." For India, the agreement was a commercial one based on economics. Soviet military contracts usually had favorable financial terms and included provisions for production licensing. But in the long-run, these deals became a burden as India failed to secure a reliable supply of spare parts and

²⁴⁵ Cited in, June Kronholz, "Is India's Romance With Russia Losing Its Thrill?" *The Wall Street Journal* (14 June 1982): 21.

also experienced a drop in operational readiness due to a void in indigenous maintenance capabilities.

When India made a concerted effort in the 1980s to diversify its procurement portfolio, it found itself returning to the Soviet Union to satisfy its short-term military needs. With a long-term goal of self-reliance in military procurement, India would continue to use Soviet arms as a stepping stone between the bygone era of the British Raj and future Indian procurement autonomy. While Soviet arms would be used to offset American influence in South Asia, they did not pose a direct military threat to American forces during this period.

2. The Indo-American Rift

Central to the discussion of Indo-American relations during the Cold War is the fact that India did not play a vital role in American geo-strategic thinking during this period. The ideological significance of India as the world's largest democracy was negated by India's unwillingness to align itself with the West in the pivotal East-West struggle. From the American perspective, a lack of Indian support versus the "communist threat" equated to Indian hostility. India's quest for diplomatic independence and self-reliance did not fit into the American paradigm for a bipolar world.

From the Indian perspective, the confrontational American style threatened a return to colonial methods and subservience. In Indian eyes, America's willingness to engage Pakistan and China, and thereby impair India's regional security, illuminated American hegemonic aspirations and American indifference towards less developed

countries. The unwillingness of the United States to provide arms to a fellow democracy when needed seemed hypocritical and incredible. The essence of the Indo-American “problem” was quite clear. Both states were acting in the same manner and securing their own national needs, with little regard for what other states might desire. The United States believed that as a superpower it had the right to take a superior position. India felt that as the world’s largest democracy, and a victim of centuries of repression, it had the right to demand equality. With both states proceeding forward and neither willing to give way to the other, a collision was imminent.

3. Indian Strategic Culture

History, geography and political culture all played crucial roles in the development of India’s conventional forces and nuclear capabilities during the Cold War. India’s sudden emancipation in 1947 after centuries of subservience created “a fierce determination to preserve Indian independence no matter what the cost – an attitude often bordering on paranoia.”²⁴⁶ Any attempt by outside powers, whether Soviet or Western, to exert influence upon India was often met with open defiance. While the Soviet Union, especially under Khrushchev, would be more understanding of India’s “paranoia” and would treat India with respect, the United States often presented India with demands, even when providing food aid. Furthermore, the United States would exacerbate India’s

²⁴⁶ Ashley J. Tellis, *India: Assessing Strategy and Military Capabilities in the Year 2000* (Santa Monica, CA.: The Rand Corporation, 1996), 12.

geographic isolation by providing arms and technical data to both Pakistan and China, thus adding fuel to Indian militarism.

Finally, India's political and bureaucratic leaders were crucial in determining the course that India would take in weapons development and procurement. Nehru neglected the country's military forces until it was too late to recover. Shastri provided the green signal to Bhabha, who manipulated the emerging Chinese threat skillfully. When Sarabhai replaced Bhabha in crucial posts within India's atomic energy program, pursuit of the nuclear option was neglected. Indira Gandhi preferred cooperation with the Soviet Union during her first premiership (1966-1977), then became more pro-Western during her second term (1980-1984). Desai understood the limitations of a single-track procurement source and set the course for diversified procurement. While all these individuals had the will to shape and direct India's weapons programs, their hands were often tied by financial, technical and diplomatic constraints. When these bonds began to loosen in the post-Cold War era, the influence and role of India's political culture would become even more decisive.

III. NEW DYNAMICS AND CONTINUITIES: THE POST-COLD WAR ERA

India is becoming a harder, more selfish and pragmatic entity. No longer encumbered by leaders besotted by larger-than-life images of themselves on the international stage, the new India is inclined to look at the world in terms of its own interests.²⁴⁷

The Soviet pullout from Afghanistan in 1989 and the end of the Cold War brought about a drastic change in India's geo-strategic and diplomatic importance. At the same time, India experienced internal economic turmoil and an increase in domestic instability due to numerous insurgency movements. These factors contributed to a sharp decrease in Indian military expenditures and arms importation. Furthermore, a rigid American approach to India, centered on nonproliferation concerns, would permeate all aspects of Indo-American relations and prevent a broadening of these relations. Finally, the foundations of the Indo-Soviet/Russian military relationship would shift from Indian needs and Soviet opportunism to Russian economic needs and Indian military needs and opportunism. This chapter encompasses the period from the end of the Cold War up through the Pokhran tests of 1998. This period represents an opportunity lost for American security interests in South Asia as Russian influence was allowed to remain while Indian suspicions of American intentions were continually validated.

²⁴⁷ Shekhar Gupta, *India Redefines its Role*. Adelphi Paper 293 (London: Oxford University Press, 1995), 66.

A. INDIA'S POST-COLD WAR IDENTITY

Having defined its identity and prestige in international politics as the leader of the Non-Aligned Movement, India's *raison d'être* and identity in international relations became uncertain with the collapse of the Soviet Union in 1991. "The pursuit of autonomy without power was premised, first, on a balanced stalemate between the Atlantic and Soviet blocs..."²⁴⁸ The removal of the "Soviet bloc" from the "stalemate" effectively ended the stalemate and, consequently, the rationale for the non-aligned movement. Indians also came to realize that the absence of a bilateral competition between the two superpowers meant that India's geo-strategic role as a "counter-weight" no longer existed. "When the Cold War ended and the Soviet Union collapsed, India found that few people outside the region cared much about the country. India neither had economic influence nor risked becoming a major source of instability – the two most important criteria for earning foreign attention."²⁴⁹ Furthermore, the rise of secessionist movements throughout India, South Asia and Central Asia shifted Indian defense concerns back to the issue of internal stability. Finally, after three decades of protectionist economic policies, India was forced to abandon its Soviet-supported

²⁴⁸ Gopal Krishna, "India and the International Order – Retreat From Idealism," in, Hedley Bull and Adam Watson, ed., *The Expansion of International Society* (Oxford: Clarendon Press, 1984), 283.

²⁴⁹ James Manor and Gerald Segal, "Taking India Seriously," *Survival* 40, no. 2 (Summer 1998): 63.

“fortress mentality” and turn to the World Bank and the International Monetary Fund for economic rejuvenation.²⁵⁰

Aiding the collapse of the Indian “fortress” was a realization among Indian elites that other Asian countries were experiencing rapid economic growth via the global market.²⁵¹ It was during this transition period of the early 1990s that India emerged from centuries of subservience to (or, during the Cold War, dependence on) external powers to begin defining a global role for itself that was solely egocentric and not centered on India’s reliance on other states. On the strategic level, to rephrase Ashley Tellis’ Cold War depiction of India, the post-Cold War era became a time of transition as India evolved from being a *consumer* of security to being a *producer* of its own security.²⁵²

B. INDO-AMERICAN RELATIONS IN THE POST-COLD WAR ERA

In the early 1990s, economic reforms in India and the end of the East-West competition of the Cold War provided an opportunity for improved Indo-American relations. Many observers hoped that the continued growth in Indo-American trade relations would provide a “cornerstone” for improved relations.²⁵³ As a result of India’s Economic Reform Programme, foreign investment in India had risen sharply, with the

²⁵⁰ Bhabani Sen Gupta, “India in the Twenty-First Century,” *International Affairs* 73, no. 2 (April 1997): 301-02.

²⁵¹ James Manor and Gerald Segal, 63.

²⁵² Ashley J. Tellis, 2.

²⁵³ M. J. Vinod, “India-United States Relations in a Changing World: Challenges and Opportunities,” *Strategic Analysis* 20, no. 3 (July 1997): 442.

United States taking the lead as India's largest foreign investor.²⁵⁴ Additionally, the United States became a major source of technology for India.²⁵⁵

Against this backdrop of opportunity, however, the legacy of the Cold War Indo-American rift persisted. During the 1990-91 Gulf War, India had silently allowed American cargo aircraft transiting from the Philippines to the Gulf States to refuel at several airports. When an Indian press photographer happened upon an American aircraft in Bombay that was delayed due to maintenance problems, the story exploded into the Indian press.²⁵⁶ Domestic politics elevated the refueling operations into a breach of India's nonalignment policies, and the new Indian Prime Minister, Chandra Shekhar, was forced to halt the operations.

Following the Gulf War, however, Indo-American military cooperation improved as the two nations conducted a joint naval exercise in 1992 and signed a pact on military cooperation in 1995.²⁵⁷ Additionally, the United States continued to provide technical support to India's Light Combat Aircraft (LCA) program and also authorized the transfer

²⁵⁴ P.R. Rajeswari, "From Geo-Politics to Geo-Economics: Indo-US Experience," *Strategic Analysis* 21, no. 8 (November 1997). Available online: <<http://www.idsa-india.org/an-nov-4.html>>.

²⁵⁵ *Ibid.*, page 6 of 11.

²⁵⁶ Dennis Kux, 440.

²⁵⁷ John F. Burns, "U.S.-India Pact on Military Cooperation," *The New York Times* (13 January 1995): A12.

of 315 Texas Instruments Paveway bomb-guidance kits to the Indian Air Force.²⁵⁸ Despite these efforts, Indo-American relations continued to flounder.

During the first term of the Clinton Administration, the United States adopted foreign policy goals in South Asia based upon human rights issues, the desire to resolve tensions in Kashmir, and the need to “cap, roll-back and eliminate” nuclear weapons in the region.²⁵⁹ As the Clinton Administration continued into its second term, there appeared to be no attempt to readdress Indo-American relations. “One third of the Clinton Administration saw India in terms of arms control, one third saw it as an economic opportunity and one third saw it as a possible strategic partner. There was no policy review, no attempt to bring all this together.”²⁶⁰ Additionally, in 1995, the U.S. Congress passed the Brown Amendment, which lifted most of the sanctions dictated by the Pressler Amendment and allowed the sale of \$658 million worth of military equipment to Pakistan.²⁶¹ Finally, the United States chose not to impose sanctions on China for the transfer to Pakistan of M-11 missiles and parts and 5,000 ring magnets for

²⁵⁸ Eric Arnett, “Nuclear Stability and Arms Sales to India: Implications for U.S. Policy,” *Arms Control Today* 27, no. 5 (August 1997): 9.

²⁵⁹ “U.S. Policy Toward South Asia,” *Dispatch* 6, no. 13 (27 March 1995). Published by the Bureau of Public Affairs of the U.S. Department of State. P. M. Kamath, “Indo-US Relations During the Clinton Administration: Upward Trends and Uphill Tasks Ahead,” *Strategic Analysis* 21, no. 11 (February 1998): 1604.

²⁶⁰ Ainslie Embree and Stephen P. Cohen cited in Barbara Crossette, “From Guru to Rogue: American Re-examines India,” *The New York Times* (17 May 1998): A4.

²⁶¹ Virginia Foran, “The Case for Indo-US High-Technology Cooperation,” *Survival* 40, no. 2 (Summer, 1998): 84.

Pakistan's unsafeguarded centrifuges.²⁶² From the Indian perspective, in the early post-Cold War years, the United States continued to show a preference towards Pakistan and China while simultaneously infringing upon Indian sovereignty.

C. RUSSIA'S POST-COLD WAR VIEW OF INDIA

Unable to stabilize its own domestic environment, Russia's leadership, specifically President Boris Yeltsin, emphasized a need for the "'de-ideologization' of its foreign policy."²⁶³ This "de-ideologization" policy resulted in Russia adopting a "wait and see" policy towards India.²⁶⁴ "The main thing was that Moscow wanted its policy towards India to be pragmatic and flexible."²⁶⁵ Perhaps the greatest source of Russian neutrality towards India during the transition period of the early 1990s was a Russian political leadership that was "dominated by 'Westerners' and the 'Atlanticists.'"²⁶⁶ Mikhail Gorbachev and Boris Yeltsin both appeared to rest their hopes for a rejuvenation of the Russian economy on some variant of the Marshall Plan.²⁶⁷ Both men failed to understand that a Marshall Plan scenario – at least in the variation pursued in West Germany – required not only defeat but also an occupation of the targeted state to ensure

²⁶² Virginia Foran, 84.

²⁶³ Anita Inder Singh, "A New Indo-Russian Connection," *International Affairs* 71, no. 1 (January 1995): 70.

²⁶⁴ *Ibid.*

²⁶⁵ Jyotsna Bakshi, "India in Russia's Strategic Thinking," page 4 of 18.

²⁶⁶ *Ibid.*, page 1 of 18.

²⁶⁷ *Ibid.*

that the required infrastructure and “rule of law” were in place. As is well documented, the tremendous amount of corruption and disorganization within Russia’s bureaucracy curtailed the potential effectiveness of Western financial assistance.

The foreign policy struggle between the “Westerners” and “Asia first” groups in the new Russian state placed Indo-Russian relations in a precarious position. Two schools of thought concerning India existed within Russia in the early 1990s. The first school was composed of academics, members of the Duma and the defense industry who believed that Russia should maintain its “special” relationship with India.²⁶⁸ A strong India, they argued, could help fight the wave of Islamic fundamentalism that was sweeping across the Central Asian region between Russia and India. Additionally, this group believed that a strong India could offset the hegemonic status of the United States. If Russia promoted areas of regional strength throughout the globe, this school believed, the United States’ ability to rest upon its post-Cold War laurels would be short-lived.²⁶⁹ Finally, India was the top importer of Soviet armaments during the final years of the Cold War, and many experts in Russia believed that this income source was crucial in Russia’s transition to a free-market economy.²⁷⁰

The second Russian school of thought concerning future relations with India was headed by Russian Foreign Minister Andrei Kozyrev. This group believed that Pakistani

²⁶⁸ The crucial role of Russian interest groups is discussed below.

²⁶⁹ Jyotsna Bakshi, “India in Russia’s Strategic Thinking,” page 2-3 of 18.

²⁷⁰ Ibid. Yuri Maslyukov, “Russia’s Future Lies With The Defense Industry,” *Military Parade* (July-August 1998).

relations were more valuable in fulfilling Russia's immediate foreign policy and security concerns. The southern periphery of Russia was a hotbed for Islamic fundamentalism and Pakistan held the necessary credentials to be an effective middleman for Russia. This view obviously countered the pro-India school that believed the solution to the growing Islamic threat was a strong Indian counter-balance. Finally, the Russian Foreign Ministry considered Pakistan, Iran and Turkey as having a higher priority than India due to their geographic proximity to Russia.²⁷¹

As the transition from Soviet to Russian rule took place, the anti-India school of thought dominated Russian foreign policy-making. This domination resulted in a major shift in Soviet/Russian policy towards South Asia. "In November 1991, when the Soviet Union was breathing its last, in a dramatic change of policy, Moscow suddenly supported the Pakistan-sponsored UN Resolution calling for the establishment of a nuclear-free zone in South Asia to the great consternation of New Delhi."²⁷² A nuclear-free zone would mean that both India and Pakistan would discontinue their nuclear programs and become "equals" as non-nuclear states. The signal sent by the collapsing Soviet regime, with many of its leaders taking positions in the new Russian government, was that it sided with the West and Pakistan against India's ambitions for regional leadership and security.

²⁷¹ Shubha Singh, "There Has Been An Improvement in Indo-Russian Bilateral Trade in The Past Year," *The Pioneer* (24 December 1998): 9. FBIS Document ID: FTS19981224000277. Jyotsna Bakshi, "India in Russia's Strategic Thinking," page 2 of 18.

²⁷² Jyotsna Bakshi, "Russia's Post-Pokhran Dilemma," *Strategic Analysis* 22, no. 5 (August 1998): 721. Available online: <<http://www.idsa-india.org/an-aug8-4.html>>.

A second impetus for Soviet/Russian support of the Pakistani-sponsored resolution may have been the strong desire to put closure to the war in Afghanistan. To accomplish this, the Soviet/Russian leadership wanted to “secure the release of their prisoners of war who were in the custody of the Pakistan-backed Mujahideen factions.”²⁷³ In January 1992, one month after a delegation of Afghan Mujahideen traveled to Russia, Moscow severed all “military supplies, ordnance and fuel for military transport” that were sustaining the Najib government’s war effort against the Mujihadeen. This decision effectively negated the airpower advantage that the Najib government had held over the Mujihadeen and tilted the conflict back in favor of the insurgents. New Delhi felt a certain sense of betrayal because of the reversal in Soviet policy since the Indian government had worked with the Soviet Union in supporting the nationalist and secular Najib government.²⁷⁴

D. STRAINED INDO-RUSSIAN RELATIONS

It was in this atmosphere of uncertain Russian foreign policy objectives that the post-Cold War relations between Russia and India were further strained by two events. The first of these destabilizing events centered around a contract dispute between the Russian space directorate “Glavkosmos” and the government of India for the purchase of cryogenic engines and the related technology. The contract, signed on 18 January 1991, stemmed from India’s desire to gain knowledge of the liquid oxygen propulsion system of

²⁷³ Jyotsna Bakshi, “India in Russia’s Strategic Thinking,” page 3 of 18.

²⁷⁴ Ibid., 3-4 of 18.

Russian cryogenic engines in order to advance India's geo-synchronous satellite launch vehicle (GSLV) program. If produced indigenously and without Russian assistance, the project was forecast to require fifteen years until it would be operational.²⁷⁵ For Glavkosmos, the \$350 million deal would provide crucial funds during a period of tremendous reductions in Russian defense expenditures.²⁷⁶

Over the next two years, the United States protested the proposed transfer of missiles and technology to India on the grounds that the sale would violate the April 1987 Missile Technology Control Regime (MTCR). The growing threat of missile proliferation became well known to the United States following the Iraqi Scud missile attacks during the Gulf War²⁷⁷ and the testing of India's Agni IRBM missile in 1989. However, the ability of the United States to coherently protest the sale was hampered by the changing of governments in Moscow as the Soviet Union collapsed and as the U.S. Executive Branch changed administrations from President Bush to President Clinton.²⁷⁸

From the Indian and Russian perspectives, the cryogenic engine deal was legal under the MTCR on the grounds that the treaty did not block the support of "peaceful

²⁷⁵ Alexander A. Pikayeo, et al., *Russia, the US and the Missile Technology Control Regime*, Adelphi Paper 317, International Institute for Strategic Studies (Oxford: Oxford University Press, 1998), 21.

²⁷⁶ *Ibid.*, 22.

²⁷⁷ *Ibid.*, 12.

²⁷⁸ *Ibid.*, 26-35.

space ventures.”²⁷⁹ Furthermore, India asserted that U.S. attempts to block the sale were financially motivated since General Dynamics and the French space-booster manufacturer Arianespace had both been outbid by Glavkosmos.²⁸⁰

The new Russian government under Boris Yeltsin promised India’s leadership that it would not give in to U.S. diplomatic pressure. This promise was compromised, however, after the United States applied sanctions in May 1992,²⁸¹ and threatened further economic measures. On 16 July 1993, Boris Yeltsin agreed to suspend the transaction and to alter the nature of the transfer to the sale of only the cryogenic engines and not the technology.²⁸² In exchange, Glavkosmos was given bidding rights on over \$950 million worth of future U.S. space projects.²⁸³

While the ability of India to indigenously produce GSLVs and ICBMs was delayed by several years due to the cancellation of the original cryogenic engine deal, the

²⁷⁹ Anita Inder Singh, 73.

²⁸⁰ Alexander A. Pikayev, et al. 22-23.

²⁸¹ The authority for the United States to apply sanctions was vested in the 1991 Missile Technology Control Act (MTCA). See Eric Arnett, “Military Technology: The Case of India,” in *Armaments, Disarmament and International Security: SIPRI Yearbook 1994* (New York: Oxford University Press, 1996): 358.

²⁸² Despite this pledge not to transfer technology, fifteen Indian scientists continued to train at Glavkosmos through 1994. See Eric Arnett, “Military Technology: The Case of India,” 359. Moreover, by the time that Yeltsin “corrected” the cryogenic contract with India, 85% of all the technological documents had already been transferred to India. See Gennadiy Khromov, “A View of India’s Policy on Missile and Nuclear Nonproliferation,” *Yadernyy Kontrol* 41, no. 5 (Sep-Oct 1998). Translated by FBIS. Document ID: FTS19990127001680.

²⁸³ Alexander A. Pikayev, 55.

main concern in New Delhi was that the Yeltsin government had given in to Western pressure. "The conclusion they drew was that Russia's overriding need for American economic aid would make it susceptible to American pressure. In Indian eyes, Russia is unreliable, and it has also lost its international stature."²⁸⁴ As Indo-Russian relations appeared to weaken under Western pressure, direct bilateral interactions between the two states also revealed tensions.

During the same time frame as the cryogenic engine fiasco, the "rupee versus ruble" debate flared up in Indo-Russian relations. As the Cold War concluded, India had an amassed debt of \$12-16 billion owed to the Soviet Union for arms purchases. While India proved willing to pay off its debt, a dispute emerged between the two states over the nature of the currency and the exchange rate that would be used. As noted earlier, the Soviet Union had been willing to accept rupee-for-arms arrangements since the initial Soviet intent in the military cooperation was to use India as a strategic counter-balance, not a financial pool. Since there was not a huge demand for Indian imports in the Soviet Union, almost half of the rupee-based debt remained in Indian banks uncollected.²⁸⁵ When the new and financially strapped Russian state took over the old Soviet trade books, the vast Indian debt became an issue of concern. "Goodwill alone cannot forge mutually advantageous economic ties. Trade between Russia and India almost collapsed in 1991-92 because of arguments over the rupee-ruble exchange rate and the amount

²⁸⁴ Anita Inder Singh, 74.

²⁸⁵ *Ibid.*, 75.

India owed Russia as the successor state to the USSR.”²⁸⁶ After much domestic squabbling in each country, a resolution was reached in January 1993 that called for India to repay Russia \$1 billion a year in Indian goods until 2005, after which the remaining thirty-seven percent of the debt would be repaid, interest free, over forty-five years.²⁸⁷

Although a repayment schedule was established, controversy over distribution of the “Rupee Fund” continued. Russia had originally agreed to establish a three-year import schedule with India which would allow Indian exporters to forecast the amount of products needed in advance. In September 1994, the Russian government reversed this decision out of fear that long-term financial commitments would be too constricting. The new plan offered by Moscow provided a 180-day export forecast to Indian producers.²⁸⁸

To further stimulate investor interest in India’s currency, the Russian government began to auction off vast sums of the Indian currency to Russian importers at discounted rates. The average discount of fifteen percent during the auctions led to rampant corruption and manipulation of the rupee fund, especially among Russia’s banking oligarchy.²⁸⁹ Meanwhile, the Indian government continued to petition Russia to accelerate the repayment schedule while it simultaneously maintained its protectionist

²⁸⁶ Anita Inder Singh.

²⁸⁷ Ibid., 76. “Interfax Financial Report For 26 November 1998,” *Moscow Interfax* (26 November 1998). Available from FBIS. Document ID: FTS19981126001140. “India, Russia To Sign Seven Accords,” *The Hindu* (20 December 1998).

²⁸⁸ Anita Inder Singh, 76

²⁸⁹ Arun Mohanty, “Russia Allots Rs 28,000 Core in Rupee Funds for Indian Imports,” *The Times of India* (23 March 1999).

import-export policies.²⁹⁰ By 1993, the level of bilateral trade between India and Russia had dropped to one-fifth of the 1990 level of \$5.5 billion.²⁹¹

India was finally revived in the Russian strategic focus in January 1996, when Yevgeny Primakov replaced the pro-Western Andrei Kozyrev as Russia's Foreign Minister.²⁹² The result was an immediate swing in Russia's foreign policy focus that included considerations for both the Western and Eastern Hemispheres. A clear signal was sent by Moscow to New Delhi, and the rest of the world, one year later when an agreement was reached to build two Russian light-water nuclear reactors (LWR) in India in defiance of a Nuclear Suppliers Group ban.²⁹³ "The two countries signed an accord paving the way for the construction of two 1,000 MW light water nuclear reactors at Kudankalam in Tamil Nadu. Hence it seems that Russia would not succumb to external pressure this time."²⁹⁴ Diplomatically, Russia appeared to no longer look strictly westwards.

²⁹⁰ Arun Mohanty.

²⁹¹ Sujata Rao, "India, Russia Repair Trade Ties," *The Moscow Times* (12 February 1997).

²⁹² Alexander Golz, "Primakov's Realpolitik," *The Moscow Times* (11 April 1996). Jyotsna Bakshi, "India in Russia's Strategic Thinking," page 13 of 18.

²⁹³ Dmitry Zaks, "Moscow Courts Eastern Giants," *The Moscow Times* (26 March 1997). The Nuclear Suppliers Group ban forbids all nuclear-related sales to states that do not subject all of their nuclear facilities to full IAEA safeguards. See "Non-Proliferation Fact Sheet," Carnegie Endowment for International Peace (19 August 1998). Available online: <<http://www.ceip.org/programs/npp/factsheet2.htm>>.

²⁹⁴ R. Adam Moody, "The Indian-Russian Light Water Reactor Deal," *The Nonproliferation Review* (Fall 1997): 112. Nirmala Joshi, "Towards Strategic

E. INDIA'S MILITARY NEEDS AND RUSSIA'S SUPPLIER-DEPENDENCY

The primary short-term military concern for India in the early 1990s was its limited supply of spare parts and supplies for its Soviet-produced armaments.²⁹⁵ After three decades of reliance on Soviet-produced hardware, India was in a position in 1991 in which seventy percent of Army armaments, eighty percent of Air Force armaments, and eight-five percent of Navy armaments were of Soviet origin.²⁹⁶ Lacking the indigenous capability to produce spare parts and supplies for these systems, India's military faced an immediate crisis. The break-up of the Soviet Union had caused a fracture in the Soviet-Indian military supply-line as the administrative control and actual locations of the Soviet defense industries were situated throughout the newly independent states. "As Air Vice-Marshall S. Krishnaswamy noted with some understatement, there was a 'hiccup' in supply relations during 1991-92."²⁹⁷ Over-reliance on Soviet military hardware had allowed India to postpone developing a self-reliant indigenous defense industry. More to

Partnership," *The Pioneer* (10 September 1998): 10. FBIS Document Number: FBIS-NES-98-253. Russia was most likely motivated also by a desire to "secure resources to pay the salaries of MINATOM employees, maintain work at the nuclear design bureaus and production facilities, and provide fresh momentum to the development of the domestic nuclear industry in general." Igor Khripunov and Anupam Srivastava, 249-50.

²⁹⁵ Anita Inder Singh, 74.

²⁹⁶ Yuriy Golotyuk, "Russia and India are experiencing a 'Military-Technical Renaissance,'" *Segodnya* (27 March 1996): 2. Translated by FBIS. Document Number: FBIS-UMA-9-080-S.

²⁹⁷ As quoted in Eric Arnett, ed., *Military Capacity and the Risk of War: China, India, Pakistan and Iran* (Oxford: Oxford University Press for SIPRI, 1997), 294.

the point, “the dependence on Russian weapons over 30 years was a serious strategic defect.”²⁹⁸

In response to its economic crisis in 1990-91 and the temporary loss of its primary foreign arms supplier, India imposed a reduction in defense expenditures and a sharp reduction in arms importation (see Figures 3.1 and 3.2 below). After having been the top

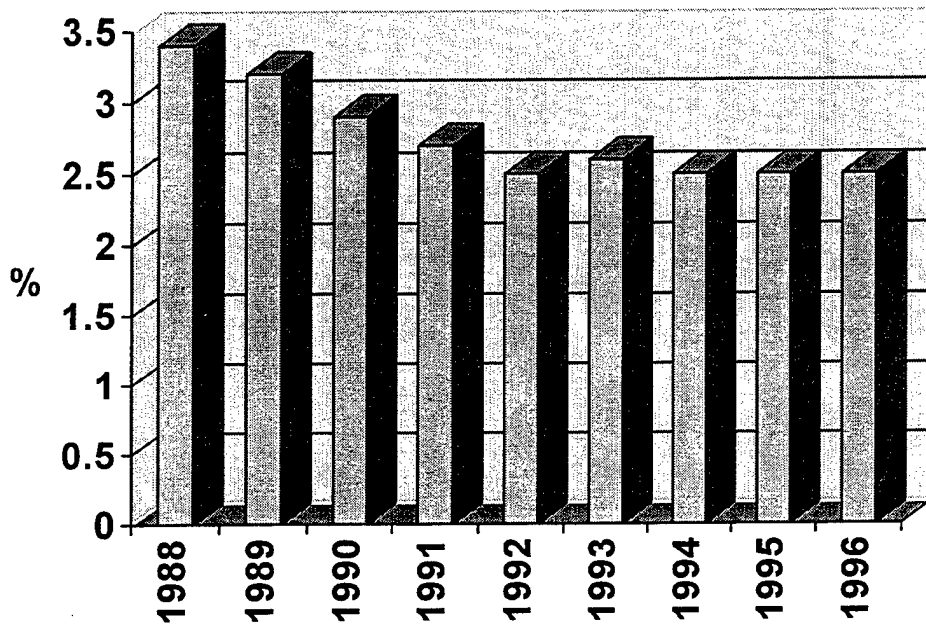


Figure 3.1: Indian Military Expenditures as a Percentage of GNP, 1988-96

Source: *Armaments, Disarmament and International Security, SIPRI Yearbook 1998* (New York: Oxford University Press, 1998), 230.

²⁹⁸ Yuriy Golotyuk, 2.

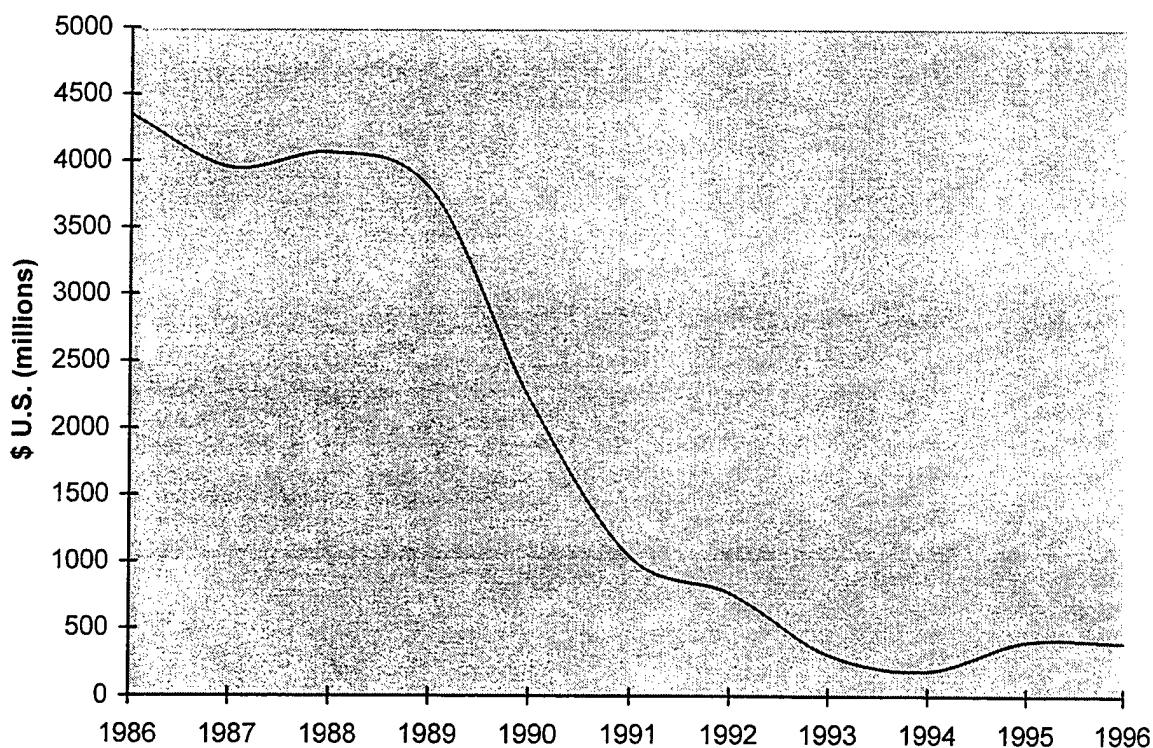


Figure 3.2: Indian Arms Imports in Constant 1996 U.S dollars.

Source: Data obtained from, *World Military Expenditures and Arms Transfers, 1997* (Washington, D.C.: Arms Control and Disarmament Agency, 1998), Table II. Available online: <<http://dosfan.lib.uic.edu/acda/wmeat97/wmeat97.pdf>>.

importer of conventional weapons in the world during the period from 1988 to 1992,²⁹⁹ India was ranked as the twenty-third largest importer of conventional arms by 1996.³⁰⁰ Meanwhile, Russia's share of the global arms market dropped from thirty-two percent in

²⁹⁹ *Armaments, Disarmament and International Security: SIPRI Yearbook 1994* (New York: Oxford University Press, 1996): 344.

³⁰⁰ *World Military Expenditures and Arms Transfers, 1997* (Washington, D.C.: Arms Control and Disarmament Agency, 1998), 100.

1989 to eight percent in 1994.³⁰¹ The inability of Russia to continue the Soviet flow of military hardware, coupled with the sharp reduction in Indian military expenditures, weakened the primary bond that had united India and the Soviet Union during the Cold War (see Figure 3.3).

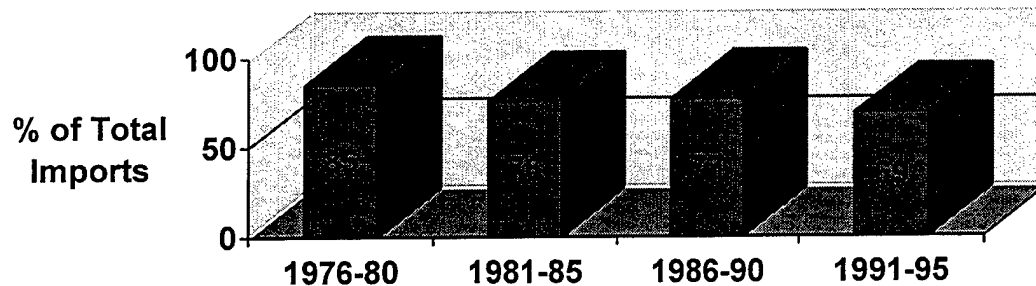


Figure 3.3: Percentage of Indian Arms Imported from the Soviet Union/Russia

Source: *Armaments, Disarmament and International Security: SIPRI Yearbook 1996* (New York: Oxford University Press, 1996), 482. Table 11.8.

F. THE ROLE OF RUSSIAN INTEREST GROUPS

Until the communist collapse, the Indo-Soviet relationship prospered because of the need for a balance against the West, and shared security and geopolitical concerns. The new Indo-Russian relationship will have to be based primarily on business interests, and colored only marginally by geopolitics and security.³⁰²

By the mid-1990s, however, the recovery of the Indian economy and the financial needs of Russia's military-industrial complex quickly mended the temporary "hiccup" in Indo-Russian military cooperation. In 1995, the sale of Russian arms on the international

³⁰¹ Deepa M. Ollapally, "India and the New 'Asian' Balance of Power," *Strategic Analysis* 22, no. 4 (July 1998): 516.

³⁰² Shekhar Gupta, *India Redefines its Role*. Adelphi Paper 293 (London: Oxford University Press, 1995), 62.

market increased by sixty percent over the previous year's total as the state shifted from "an ideological to a market-driven approach to selling its military hardware."³⁰³ Along with this shift in Russian arms sales practices came the decisive influence of Russian interest groups.³⁰⁴ During the Cold War, decisions to sell Soviet weaponry abroad had been made by the Politburo. But in the post-Cold War era, the choice of where and when to sell Russian arms rested with the power-brokers of the Russian military-industrial complex.³⁰⁵ As Vitaly Kataev, the General Director of Russia's Center of Military Industrial Complex, remarked, "Economics dictate the routes of trade."³⁰⁶

The likelihood of Russian interest groups dictating future military cooperation with India appears high. India buys more hardware from the Russian defense industry than Russia's own military forces.³⁰⁷ Estimates show that about eight hundred Russian defense production facilities are kept in operation by Indian defense contracts.³⁰⁸ Russian

³⁰³ Anton Zhigulsky, "Russia's Arms Sales Rose 60% in 1995," *The Moscow Times* (05 January 1996).

³⁰⁴ A detailed analysis of the influence of Russian interest groups has been conducted by Stephen De Spiegeleire of the Rand Corporation. These papers can be accessed at: <<http://ourworld.compuserve.com/homepages/sdspieg>. Of particular relevance to this study are the findings that rank Russia's military-industrial complex as the second most influential interest group in Russia after the gas-oil industry.

³⁰⁵ Pavel Felgenhauer, "Profits Driving Arms Trade," *The Moscow Times* (16 January 1997). Igor Khripunov and Anupam Srivastava, 239.

³⁰⁶ Vitaly Kataev, MIIS lecture, 13 October 1999.

³⁰⁷ Yevgenia Borisova, "St. Pete Shipyard Turns to State for Loan Bailout," *The Moscow Times* (02 February 1999).

³⁰⁸ Igor Khripunov and Anupam Srivastava, 246.

exports to China and India amount to about forty-one percent of the total revenue brought in by Russia's defense industry.³⁰⁹ The signing of a ten-year Indo-Russian agreement on military-technical cooperation, worth \$15 billion, in the aftermath of the Pokhran II tests is an example of this trend.³¹⁰ "In this sense it can be assumed that at the very least up to 2010, when aging begins of the most advanced Russian models already existing (SU-30MK and SU-35/37, T-90S tank, Mi-28 and Ka-50/52 attack helicopters), Russia can count on preserving a stable Indian demand for relatively large lots of arms and for their manufacturing technology."³¹¹

Outside the paradigm of arms sales, several trends are emerging that may promote strong Indo-Russia cooperation. The first is a common security interest as both countries have strong concerns about the spread of Islamic fundamentalism, the potential Chinese threat, and the prospect of U.S. world hegemony.³¹² "In private discussions Russian and Indian diplomats willingly open the cards: both Moscow and New Delhi see a threat in

³⁰⁹ Ibid., 244.

³¹⁰ "India to Buy Russian Arms Worth \$15 billion in 10 Years." *The Indian Express* (12 November 1998): 12.

³¹¹ Konstantin Makiyenko, "Prospects for Russian Presence in South Asian Arms and Military Market," *Yadernyy Kontrol* 38, no. 2 (March-April 1998): 64-73. Translated by FBIS. Document Number: FBIS-SOV-98-167.

³¹² Aleksandr Shumilin, "Russia Will Help India Become A Power," *Kommersant-Daily* (10 October 1997): 5. As cited in *The Current Digest of the Post-Soviet Press* 44, no. 41 (12 November 1997): 20.

the excessive strengthening of China and the Islamic extremists.”³¹³ Furthermore, by promoting the rise of Indian power, Russia may be able to offset the “heat of NATO’s eastward extension.”³¹⁴ There also remains a school of thought that Russia may be able to learn from India some lessons for sustaining a multi-ethnic, multi-linguistic democratic state. Finally, both states face an increasing criminal threat centered around narcotics and illegal arms smuggling.³¹⁵

G. 11 MAY 1998: POKHRAN II

The current disharmony, therefore, between India and the rest of the globe is that India has moved from being totally moralistic to being a little more realistic, while the rest of the nuclear world has arrived at all its nuclear conclusions entirely realistically. With a surplus of nuclear weapons and the technology for fourth-generation weapons, the other nuclear powers are now beginning to move towards a moralistic position. Here is the cradle of lack of understanding about the Indian stand.

-Jaswant Singh³¹⁶

A decisive turn was made along the historical path of India’s nuclear program when the Rajasthan desert was rocked by three nuclear explosions on 11 May 1998. This

³¹³ Jyotsna Bakshi, “Russia’s Post-Pokhran Dilemma,” *Strategic Analysis* 22, no. 5 (August 1998): 721. Available online: <<http://www.idsa-india.org/an-aug8-4.html>>.

³¹⁴ Jyotsna Bakshi, “India in Russia’s Strategic Thinking,” page 15 of 18.

³¹⁵ Lowell Bezanis, “An Enlarged Golden Crescent,” *Transitions* 2, no. 19 (20 September 1996). Aleksandr Shumilin; and Jyotsna Bakshi, “India in Russia’s Strategic Thinking,” p. 12 of 18.

³¹⁶ Jaswant Singh, “Against Nuclear Apartheid,” *Foreign Affairs* 77, no. 5 (September/October 1998): 47. The term “shakti” can be translated to “strength,” “force,” or “power.” It is quite revealing that the code name assigned to India’s nuclear tests in May, 1998, was *Operation Shakti*.

decision to overtly weaponize after twenty-four years of “restraint” has been the subject of much scrutiny in nonproliferation studies. The reasons normally highlighted as possible catalysts include: *technological considerations*, in that India needed to update the limited test data acquired in the 1974 test to allow supercomputer simulations for designing future warheads; *security concerns*, in that the recent testing of Pakistan’s IRBM Ghauri missile and increasing Sino-Pakistani military cooperation reduced India’s geo-strategic buffer zone; *normative factors*; in that nuclear weapons remain a symbol of international power;³¹⁷ and *domestic politics*, in that the Bharatiya Janata Party (BJP) had recently become the major party in the ruling Indian coalition after an election campaign which included an open promise to make India a nuclear power.³¹⁸ Of these four rationales for India’s 1998 tests, the normative and domestic politics motivations appear most salient when subjected to close scrutiny.³¹⁹

³¹⁷ Russia had increased its reliance on nuclear deterrence to compensate for crumbling conventional forces. Additionally, Gen. Sundarji, the former Indian army chief of staff, pointed at the recent defeat of Iraq in the Gulf War and stated that the true lesson of the war was that one should not fight the United States unless one possessed nuclear weapons. See Mario E. Carranza, “An Impossible Game: Stable Nuclear Deterrence After the Indian And Pakistani Tests,” *The Nonproliferation Review* (Spring-Summer 1999): 14.

³¹⁸ “The nuclearization of India has been an article of faith for the BJP.” Manoj Joshi, “Nuclear Shock Wave,” *India Today* (25 May 1998). Available on-line: <http://www.india-today.com/itoday/25051998/cover.html>.

³¹⁹ While it has been reported that India retrieved no data from the 1974 PNE due to the destruction of all the test gear in the shaft, the sudden decision to acquire new data after twenty-four years is not in and of itself sufficient to explain the test. Concerning a “strategic” incentive, Pakistan’s testing of a Ghauri missile does not address why the BJP initially gave authorization to test in 1996, but was removed from power within thirteen days. Additionally, the fact that the Defense Minister was not informed of the impending

H. POST-COLD WAR TRENDS: A BALANCE A SHEET

In the post-Cold War era, several definitive trends have emerged that do not bode well for American security interests in South Asia. India and the United States have allowed Cold War differences to persist untreated. These differences have consequently festered into a "we-versus-they" dialogue that promotes conflict rather than cooperation. While the decision to conduct the Pokhran II tests was motivated only partially by sentiments against American unilateralism, the effect has been a widening gap in Indo-American ties.

Furthermore, the revival of Indo-Russian military ties, driven by economic factors, has placed the United States in a quandary in which the Indo-Russian connection can only be severed by counter-offers of third-party arms³²⁰ or the slow but eventual emergence of Indian self-sufficiency. These options are long-term in nature and cannot offset India's short-term dependence on its Soviet-era military systems. Moreover, the likelihood of the United States authorizing the sale of high-technology arms to India after years of nonproliferation-centric diplomacy is minimal.

Pokhran II tests until two days prior, while the service chiefs were not informed until one day prior, suggests that the May 1998 tests were conducted outside of a civil-military strategic dialogue. See Manoj Joshi, 2. The "strategic" argument should also be examined closely in light of the fact that the decision to test was made *prior* to India performing a much-heralded Strategic Defense Review. See George Perkovich, "India Errs," *Newsday* (15 May 1998): A57.

³²⁰ India has in fact turned to France and other states to purchase aircraft and military hardware. These acquisitions, however, will only partially offset the dominance of Russian arms sales. See, Rahul Bedi: "India Seeks Mirage 2000 Nuclear Squadron," *The Asian Age* (29 Aug 99), Atul Aneja, "Arms Purchases Being Finalised," *The Hindu* (04 September 1999).

Finally, the most recent developments in Indian strategic culture have rejuvenated India's quest for global status and equity. The rise of the BJP has resulted in a new approach to international nuclear politics in New Delhi. India has played its nuclear card in the hope of receiving international power status. Having based Indian nationalism on the image of nuclear strength, it is unlikely that India will unilaterally rollback its program.

The final chapter addresses the security implications of these post-Cold War developments for the United States.

IV. CONCLUSION: IMPLICATIONS FOR U.S. SECURITY INTERESTS

Civilization clash is not so much over Jesus Christ, Confucius, or the Prophet Mohammed as it is over the unequal distribution of world power, wealth and influence, and the perceived lack of respect accorded to small states and peoples by larger ones. Culture is the vehicle for expression of conflict, not its cause.³²¹

Although it has become fashionable to argue that economic strength, not military might, is now the international currency of power, neither the patterns of post-cold war military expenditure and arms development nor the primacy of muscle and force in international relations supports that thesis...India has learned the hard way that a unilateral desire for peace cannot bring about peace. A country can enjoy peace only if it can defend peace.³²²

The above statements highlight the crucial contradiction that currently exists between Western nonproliferation goals in South Asia and Indian nuclear aspirations. While foreign and domestic critics of India's nuclear program have argued that the direct costs and opportunity costs associated with developing a nuclear deterrent are too high for an economically strapped nation such as India to undertake,³²³ the statement by Brahma

³²¹ Graham Fuller, "The Next Ideology," *Foreign Policy*, no. 98 (Spring 1995): 153-54, cited in, Satish Kumar, "The Post-Cold War International Perspective: An Indian Perspective," *Strategic Analysis* 21, no. 6 (September 1997). Available online: <<http://www.idsa-india.org/an-sep-2.html>>.

³²² Brahma Chellaney, "The Defence of India," *The Hindustan Times* (20 October 1999). Available Online: <http://www.hindustantimes.com>>.

³²³ See Peter R. Lavoy, "The Costs of Nuclear Weapons in South Asia." U.S. Information Agency (September 1999). Available online: <<http://www.usia.gov/journals/itps/0999/ijpe/pj29lavo.htm>>, and M. V. Ramana, "A Recipe For Disaster," *The Hindu* (09 September 1999). Available online: <<http://www.indiaserver.com/thehindu/1999/09/09/stories/05092523.htm>>.

Chellaney, one of the creators of India's new draft nuclear doctrine, asserts that economic concerns are secondary to the strategic and normative advantages afforded to India by the acquisition of nuclear arms. These polar views result in a "chicken or the egg scenario" in which one side argues that economic strength and stability are a prerequisite to modern global power and the other side argues that modern global power, symbolized by nuclear strength, provides security and can open the door to future economic growth. In this scenario, the resilience of the Indian view is amplified by a strategic culture that exudes suspicion towards Western motives as well as a deep drive towards decision-making free from external pressures.

This chapter explores three crucial topics surrounding the current nonproliferation standoff between the United States and India. The first is an analysis of the most likely path that India will pursue in the development of its nuclear deterrent. Enmeshed in this discussion is the role of Russia, and other foreign suppliers, in assisting the creation of a "credible" Indian nuclear triad. The second topic discusses the extent to which India's nuclear program is a direct threat to American security interests. This discussion includes both the global implications for American nonproliferation efforts and the hypothetical existence of a direct military threat to American power projection in the Indian Ocean. Finally, the third topic explores future policy options for the United States in India specifically, and South Asia in general.

A. INDIAN STRATEGIC CULTURE AND FUTURE NUCLEAR EXPANSION

In the preceding discussion of the parallels between India's strategic culture and the development of its nuclear weapons program, the key aspect of the "green signals" of 1948, 1964, 1974 and 1998 is that they all symbolize an Indian stair-stepping approach to the creation of a nuclear arsenal. From the Indian perspective, which is crucial to understand in a nonproliferation framework, the Indian nuclear weapons program has demonstrated fifty-one years of "restraint."³²⁴ This Indian perspective is well encapsulated by a policy paper delivered by Indian Prime Minister Vajpayee two weeks after the Pokhran III tests.

Our nuclear policy has been marked by restraint and openness. Restraint, however, has to arise from strength. It cannot be based upon indecision or doubt. Restraint is valid only when doubts are removed. The series of tests undertaken by India have led to the removal of doubts.³²⁵

The argument about a "restrained" Indian nuclear weapons program is not meant to discount the motives of many members of the Indian "bomb-lobby." As mentioned above, strategic concerns, domestic politics and international norms have all played crucial roles in the growth of the Indian bomb program. Homi Bhabha utilized the strategic fears created by the Chinese nuclear test in 1964 to obtain authorization to

³²⁴ While a non-Indian perspective could highlight economic and technological restraints in the early decades of the Indian program and U.S.-imposed restraints placed on planned tests in 1982-83 and 1995, the key aspect of this discussion is that from the Indian perspective, India has shown moral restraint in its nuclear weapons program for over half a century.

³²⁵ "Evolution of India's Nuclear Policy." Paper laid on the table of the Lok Sabha on 27 May 1998 by Indian Prime Minister Vajpayee.

develop the nuclear option.³²⁶ Despite these strategic “fears,” Prime Minister Shastri authorized the pursuit of the nuclear *option*, but did not authorize the actual building of a *weapon*. While this may seem to be a simple case of semantics, from the viewpoint of Indian strategic culture and nonproliferation analysis, a nuclear *option* and a nuclear *weapon* are two diametric concepts. One represents strength and the other represents *restrained strength*. It was quite fitting, therefore, that when “India...moved from being totally moralistic to being a little more realistic”³²⁷ and conducted the Pokhran II tests, the operation would be codenamed “Operation *Shakti*” (Strength). The most recent step up the ladder of Indian nuclear restraint was the release of India’s draft “minimal deterrent doctrine.” If one were to project the next rung up the ladder, the signing of a Fissile Material Cut-off Treaty (FMCT) or a Comprehensive Test Ban Treaty (CTBT) would still allow India to develop its arsenal while restraining the size of the arsenal. As India views most arms control treaties as discriminatory in nature, these treaty options would only come to fruition if the original P-5 states also became signatories and ratified the treaties.

Before projecting what step, or series of steps, India might take next in the development of its nuclear arsenal, it is necessary to evaluate the strength of current strategic, normative and political incentives for further proliferation. As the above discussion highlighted, domestic politics have always been a necessary catalyst for any

³²⁶ Peter R. Lavoy, “Nuclear Myths and Causes of Nuclear Proliferation,” *Security Studies* 2, no. 3&4 (Spring/Summer 1993): 201-202.

³²⁷ Jaswant Singh, 47.

major progression in India's program. The obvious difficulty with basing a projection on proliferation on the domestic politics of another country is that politics can be very difficult to predict and, from a policy standpoint, the ability to influence domestic politics within another country may be nearly nonexistent.

Despite this obstacle, certain trends in Indian politics can be tracked, especially in light of recent Indian national elections.³²⁸ Since the initial euphoria that swept India following the Pokhran tests of 1998,³²⁹ domestic politics have returned to the normal subjects of infrastructure improvements, overpopulation, insurgencies, illiteracy and poverty. Unable to deliver in these key areas, the BJP lost a significant segment of its voter base early in 1999 and subsequently lost cohesion within the ruling coalition with a resulting fall from political power. While serving as a caretaker and awaiting elections in the fall, Prime Minister Vajpayee returned the nation's focus to the same issue that was central to his election victory in 1998, nationalism based on Indian military strength. In the three months leading up to the fall 1999 elections, three events signaled that the BJP would indeed continue to use the nuclear issue as a tool in domestic politics.

The first was the BJP's use of the fighting in Kargil between Indian armed forces and Islamic insurgents and Pakistani armed forces. The BJP successfully packaged the

³²⁸ These elections were especially crucial as the BJP is trying to reform the coalition government that lost its majority votes and power in March 1999.

³²⁹ A poll taken two weeks after the Pokhran II test showed an 87% approval of the testing and an 86% approval for weaponizing. See, "Solid Support," *India Today* (25 May 1998). Available on-line: <<http://www.india-today.com/itoday/25051998/poll.html>>.

military operation as a “victory” for India.³³⁰ Adding to Indian nationalism was the outrage caused by the torture and execution of captured Indian pilots and soldiers.³³¹ Kargil also fueled the nuclear issue in India due to BJP claims that the fighting in Kashmir validated the decision to go nuclear in 1998 since the overall threat of nuclear retaliation prevented Pakistan from escalating the conflict. This last view has been sharply contested by critics who hold that the Kargil crisis would not have even started without Pakistan having been afforded strategic parity with India after testing its own nuclear weapons in response to the Indian nuclear tests.³³²

The second recent signal of a BJP-driven resurgence of nuclear politics came in August 1999 during several Independence Day speeches in which Prime Minister Vajpayee and other BJP leaders declared that India would induct its new Agni II IRBM

³³⁰ An opinion poll taken at the beginning of August 1999 showed that 81% of those polled believed that Kargil was a “decisive victory for India.” “BJP on Track for Landslide Victory,” *Economic Times Online* (14 August 1999). Available on-line: <<http://www.economictimes.com>>.

³³¹ “Indian pilot 'killed in cold blood.’” *BBC On-line* (30 May 1999). Available on-line: <http://news.bbc.co.uk>. Timothy D. Hoyt, “Conflict in Kargil,” *Southern Asian Internet Forum* (12 June 1999).

³³² W. P. Singh Sidhu, “Nuclearization of South Asia: The Kargil Experience,” Presented at the Eighth International Castiglione Conference. “Nuke Weaponisation Limited Our Options in Kargil: Cong,” *The Hindustan Times Online* (26 August 1999). Available online: <http://www.hindustantimes.com>. P.R. Chari, “Kargil and BJP’s Nuclear Agenda,” *Nuclear & Disarmament Issues*, Institute for Peace and Conflict Studies. Article No.202(11 June 1999). Available Online: <http://www.ipcs.org/issues/articles/202-ndi-chari.htm>. Stephen P. Cohen, “India’s Strategic Misstep,” *Nuclear & Disarmament Issues*, Institute for Peace and Conflict Studies. Article No. 110 (08 June 1998). Available online: <http://www.ipcs.org/issues/articles/110-ndi-cohen.htm>.

missile into the operational inventory.³³³ Coming one month before the commencement of national elections, this declaration that India would pursue the deployment of a missile that has been specifically advertised as a deterrent asset against China³³⁴ has again shown the willingness of the BJP to utilize the “Chinese threat” as a tool in domestic politics.

The final example of the BJP’s willingness to utilize India’s nuclear weapons for the garnering of votes can be seen in the decision to release the draft of India’s nuclear doctrine. Despite the fact that the draft had been approved for release for over two months, the BJP-led government did not publish the document until weeks before the commencement of national elections.³³⁵ What this incident and the Kargil and Agni II examples have demonstrated is that the BJP, unable to resolve the true domestic concerns of poverty, overpopulation and infrastructure bottlenecks, has continued to show a willingness to engage in nuclear gestures to secure its political power base.

While domestic politics may be pushing India’s nuclear program towards expansion, the primary obstacles to the growth of India’s nuclear program are financial and technological. The greatest criticism of the draft nuclear doctrine is that it does not

³³³ “BJP, Allies Hope to Gain From the Kargil Victory,” *The Economic Times Online* (16 August 1999). Available online: <http://www.economictimes.com>.

³³⁴ “Agni Described as ‘Effective’ Weapon Against PRC Missiles,” *The Pioneer in English* (12 Apr 99), 1. “Agni-II ‘ready’ to carry N-warhead,” *The Hindustan Times Online* (15 April 1999). Available online: <http://www.hindustantimes.com>.

³³⁵ “BJP plays nuclear politics on poll eve,” *Asian Age Online* (18 August 1999). Available online: <http://www.asianage.com>. “Opposition Sees a Design in Release of N-doctrine,” *The Economic Times Online* (18 August 1999). Available online: <http://www.economictimes.com>.

specify the actual size of India's "minimal deterrent." The absence of size projections and deployment timelines has led to greater ambiguity over how much India's nuclear deterrent will cost.³³⁶ What seems to be a common opinion is that the decision to pursue a nuclear triad is not, from an economic viewpoint, "minimal."

One study projects a nuclear arsenal of 328 warheads with a nuclear triad and the required command and control structure costing \$14.2 billion over thirty years. The study goes on to highlight an opportunity cost of over \$48 billion due to "sanctions, lost business, trade and investment,"³³⁷ bringing the total cost of the arsenal to approximately \$62 billion over a thirty year period (in 1998 prices). This equates to 2.38 percent of India's GDP annually.³³⁸ Not included in this estimate, however, are the vast costs associated with training personnel and deploying and maintaining equipment. According

³³⁶ Ninad D. Sheth, "Flaws Dog Nuclear Doctrine Draft," *The Hindustan Times Online* (18 August 1999). Available online: <http://www.hindustantimes.com>. "Deterrence and Debate," *The Times of India* (18 August 1999). Available online: <http://www.timesofindia.com>.

³³⁷ Bharat Karnad, "Going Thermonuclear: Why, With What Forces, At What Cost." *Journal of the United Service Institution of India* 128, no. 533 (July-September 1998): 310-336. Karnad projects a force of 4 SSBNs, 70 SU-30MKIs and 25 ICBMs, 40 IRBMs, 25 tactical missiles, and 48 SLBMs.

³³⁸ Ibid. In India's 1999 military budget, 2.5 percent of its GDP was designated for its conventional armed forces, which, by most accounts, were already severely under-funded. See Sudha Passi, "Give Defence More Funds, say Experts." *Economic Times Online* (03 August 1999). Available online: <http://www.economictimes.com>. "Defence Budget as Effective Regional CBM?" *The Hindustan Times Online* (1 March 1999). Available online: <http://hindustantimes.com>. Mahendra Ved, "In Real terms, Defence Gets Less." *The Times of India* (28 February 1999). Available online: <http://www.timesofindia.com>.

to one study, "building bombs consumed just seven percent of the total cost of the U.S. nuclear weapons program."³³⁹

The lost opportunity costs associated with India's nuclear weapons program are particularly difficult to predict, but also crucial to understand, in light of India's domestic needs. Dr. Peter Lavoy, who is currently the Director of Counterproliferation Policy in the Office of the Secretary of Defense, cites one study which concludes that "a single Agni missile costs as much as the annual operation of 13,000 health care centers."³⁴⁰ Additionally, numerous studies have shown that crucial foreign investments have dropped in India due to loss of confidence in India's economic future.³⁴¹ While the BJP remains adamant that sanctions and the costs associated with building a credible deterrent are only short-term in nature, one can argue otherwise.

India's ability to develop a credible nuclear deterrent also centers on its ability to produce, procure and maintain the delivery vehicles and warheads associated with a "minimal deterrent." At the time of its tests in May 1998, India was believed to have

³³⁹ Peter R. Lavoy, "The Costs of Nuclear Weapons in South Asia." U.S. Information Agency (September 1999). Available online: <http://www.usia.gov/journals/itps/0999/ijpe/pj29lavo.htm>.

³⁴⁰ Ibid.

³⁴¹ Sharif Rangnekar, "US Investors Shun India, but S. Korea Keeps the Faith." *The Economic Times Online* (15 September 1999). Available online: <http://www.economictimes.com>. Subhash Mohanti, "India Promises but Delivers Little: UK-based Agency." *The Economic Times Online* (4 September 1999). Available online: <http://www.economictimes.com>. Peter R. Lavoy, "The Costs of Nuclear Weapons in South Asia."

twenty to thirty nuclear warheads in its arsenal.³⁴² If Indian designs require five kilograms of weapons-grade plutonium per bomb, and India has an on-hand store of approximately 400 kilograms and a production capacity of 20 kilograms (four bombs) of weapons-grade plutonium a year,³⁴³ India can reach a level of just under 200 warheads by 2020.

The greatest obstacle to the deployment of a nuclear triad by India, however, lies in the issue of delivery vehicles. While continuing to emphasize the need to develop self-reliance in the procurement of its military hardware, India has been unable to surmount many of the technological, bureaucratic and financial obstacles to self-sufficiency.

B. RUSSIA'S SUPPORT OF INDIAN EXPANSION

While India continues to invest in the development of its indigenous aviation, naval and tank programs, notably the Light Combat Aircraft (LCA) and Arjun tank, it has been forced to continue to rely upon imports to meet its requirements for modernization of its conventional forces and the development of a nuclear triad. For strike aircraft, India is acquiring forty SU-30MKIs aircraft, plus IL-78 refuelers and IL-76 airborne early warning aircraft for strike support.³⁴⁴ Additionally the purchase of four Russian TU-

³⁴² David Albright, "The Shots Heard Round the World." *The Bulletin of the Atomic Scientists* 4, no. 4 (July/August 1998). Available on-line: <<http://www.bullatomsci.org/issues/98/a98albright.html>>.

³⁴³ *Ibid.*, page 8 of 9.

³⁴⁴ Thomas W. Zarzecki, "Arming China or Arming India: Future Russian Dilemmas." *Comparative Strategy* 18 (August 1999): 262-265.

22Ms strike aircraft and 16 to 18 French 2000 D Mirage fighter aircraft "soft wired for carrying nuclear missiles" is also being negotiated.³⁴⁵ To compensate for the high cost associated with the direct purchase of these systems, Russia has even offered to "lease" IL-76s and Tu-22s to India.³⁴⁶

The most controversial area, however, where India is reported to be receiving military assistance is in the development of its "indigenous" nuclear-powered submarine and submarine-launched ballistic missile (SLBM). India's Advanced Technological Vessel (ATV) program dates back to 1988 when India leased a Soviet Charlie-I Class SSN for three years.³⁴⁷ The knowledge shared and relationships established with the Soviet Navy during this period are reported to continue today as India struggles with the design of its propulsion plant and the installation of the reactor in the submarine hull.³⁴⁸ Additional reports indicate that the hull design and reactor design of the two unfinished ATVs are based on the new Russian Project 885 Severodvinsk Class and its 190MW

³⁴⁵ "Russia May Sell Four Bombers To India." *Agence France Presse* (27 August 1999). Rahul Bedi, "Delhi Plans Purchase of French Mirage 2000, Other Arms." *The Asian Age* (29 Aug 99): 1-2.

³⁴⁶ "Russia Offers Leasing of Military Hardware to India," *The Hindustan Times* (07 October 1999).

³⁴⁷ Dmitry Litovkin, "Indian Nuclear Submarine Fleet Development Program: Russian Participation," *Yaderny Kontrol*, no. 10 (Spring 1999): 48.

³⁴⁸ Mark Gorwitz, "The Indian Strategic Nuclear Submarine Project: An Open Literature Analysis." (December 1996). Available online: <http://www.fas.org/nuke/guide/india/sub/ssn/part01.htm>

pressurized water reactor.³⁴⁹ Additionally, the former “apprentices” of the Indian Navy during the three-year period of the submarine lease “have taken key posts in Indian design offices developing nuclear submarines.”³⁵⁰ Finally, an entire Indian submarine crew is reported to have spent at least six months during 1999 “on an official mission” in the closed northern Russian city of Severodvinsk.³⁵¹

The U.S. Department of State reported during 1998 that Russia was helping India develop the “Sagarika,” a submarine-launched ballistic missile.³⁵² The Sagarika has caused Indian scientists difficulty, especially with its guidance systems, and many foreign observers state that the system is a “far cry” from being operational.³⁵³ Again, Russian scientists are reported to be supporting this “indigenous” project.³⁵⁴

While the transfer of nuclear technology for military purposes is in violation of numerous international treaties, it is difficult to determine whether “Russian support” of

³⁴⁹ Sergey Golotyuk, “Nuclear Cooperation Between Moscow and Delhi: No One is Any The Wiser.” *Moscow Russkiy Telegraph* (1 July 1998): 1. Available on FBIS: Document ID: FTS19980701001186. Igor Kudrik, “Russia Helps India Build Nuclear Submarine.” Available from Bellona: <<http://www.bellona.no/e/russia/nfl/news/990324.htm>>.

³⁵⁰ Dmitry Litovkin, 48.

³⁵¹ Sergey Golotyuk, 1.

³⁵² Steven Lee Myers, “Russia is Helping India Extend Range of Missiles, U.S. Aides Say,” *The New York Times* (27 April 1998): A1. Some news reports have also referred to this system as a submarine-launched cruise missile. Its range is reported to be 250-350 km.

³⁵³ Dmitry Litovkin, 46.

D. POLICY OPTIONS FOR THE UNITED STATES

In 1998, both India and Pakistan tested nuclear weapons. Neither country has real-time surveillance capability; reliable command, control and communications; or early warning systems. This vulnerability could lead to a launch on warning posture, further aggravating the subcontinent's already serious instability. Moreover, this rivalry increases the possibility of Chinese and Russian involvement and more explicit missile and nuclear assistance.³⁶¹

-The Deutsch Report, 1999

The nuclear tests by India and Pakistan in May 1998 awoke the world to the reality that the spread of nuclear weapons had reached a dangerous new phase. Two regional powers with unresolved antagonisms had made their nuclear ambitions overt. The tests reflected the failure of global non-proliferation norms to prevail over regional security imperatives, and increased fears that regional conflicts could turn into real nuclear wars.³⁶²

-The Tokyo Forum, 1999

Having reviewed the historical motivations for nuclear proliferation in India and the current prospects for India to continue to expand its nuclear weapons capabilities, policy options for the United States must be discussed. Pokhran II has taught the United States several lessons concerning its nonproliferation policies that can be applied in South Asia and, to some extent, globally. While some observers cite the inability of the United States to prevent India's overt testing in May 1998 as a failure in American efforts, the analysis in this thesis of India's strategic culture suggests that India's decision to test was

³⁶¹ *Combating the Proliferation of Weapons of Mass Destruction*. "The Deutsch Report." (14 July 1999), 15.

³⁶² "Facing Nuclear Dangers: An Action Plan for the 21st Century," The Report of the Tokyo Forum for Nuclear Non-Proliferation and Disarmament (25 July 1999): 10.

driven primarily by domestic politics, and was therefore beyond the reach of American nonproliferation efforts.

The ability of the United States to rollback and eliminate India's nuclear arsenal hinges on the willingness of the other P-5 states to pursue this objective,³⁶³ and this is unlikely in the foreseeable future. As early as 1965, a National Security Council report to President Johnson noted that "lessened emphasis by the United States and the Soviet Union on nuclear weapons and agreements on broader arms control measures must be recognized as important components on the overall program to prevent nuclear proliferation."³⁶⁴ The statement by Brahma Chellaney, quoted in the beginning of this chapter, expresses the Indian belief that nuclear weapons remain a symbol of global power. If the United States and the other members of the P-5 opt to retain nuclear weapons, Indians argue, they cannot realistically expect India to abandon its arsenal; and they should therefore abandon such foreign policy goals.

Additional South Asian foreign policy objectives of the United States that require review are the goals of obtaining accession to the CTBT and the projected FMCT by India and Pakistan and a bilateral no-first-use agreement. Until the United States Senate ratifies the CTBT, or another treaty regime with significant testing restrictions, India's

³⁶³ George Perkovich, *India's Nuclear Bomb: The Impact on Global Proliferation* (Berkeley: University of California Press, 1999), 455-56.

³⁶⁴ "A Report to the President by the Committee on Nuclear Proliferation," Secret (21 January 1965): 5. Digital National Security Archives, Non-Proliferation Collection. Item Number: NP01104.

leadership will continue to view its stance on the treaty as "vindicated."³⁶⁵ Pakistan in turn has linked its accession to the CTBT with India's; and Islamabad also appears unlikely to adhere to the projected FMCT due to a perception of strategic inferiority, in view of India's superior air force and air defense systems.³⁶⁶ Moreover, the likelihood of securing a Pakistani promise for no-first-use of nuclear weapons is minimal as this strategic inferiority feeds Pakistan's sense of vulnerability.

American foreign policy in South Asia should recognize that India and Pakistan *will* expand their nuclear arsenals. It is incumbent upon the United States to ensure that said expansion is conducted in a limited and safe manner. The concerns highlighted above by the Deutsch Report and the Tokyo Forum for Nuclear Non-Proliferation and Disarmament are real. While both India and Pakistan claim that their nuclear arsenals are stable and safe due to their limited size, factors other than "size" can trigger nuclear release.³⁶⁷ Included in these factors are the lacunae of "real-time surveillance capability; reliable command, control and communications; or early warning systems."³⁶⁸

³⁶⁵ "Senate Debate on CTBT Vindicates India's Stand," *The Hindustan Times* (15 October 1999).

³⁶⁶ This sense of inferiority has only been escalated by the recent negotiations between India and Russia for the sale of Tu-22 strike-bombers and S-300V air defense systems. See Aroosa Alam, "India to Acquire Capability to Counter Pakistani Missiles," *Pakistan Observer* (29 June 1999): 1.

³⁶⁷ Neil Joeck, *Maintaining Nuclear Stability in South Asia*. Adelphi Paper 312 (New York: Oxford University Press, 1997).

³⁶⁸ *Combating the Proliferation of Weapons of Mass Destruction*. "The Deutsch Report." (14 July 1999), 15.

According to some interpretations of the NPT, the United States cannot provide India and Pakistan with nuclear-related command and control systems.³⁶⁹ However, transparency can be created with the sharing of American-provided intelligence and monitoring data with both states.³⁷⁰ The possibility of a border conflict escalating into a nuclear exchange should be weighed against the limited real-time intelligence capabilities of both states. During the Kargil crisis of 1999, a recurring complaint was that India's satellites and airborne reconnaissance assets did not provide adequate early-warning and imagery quality.³⁷¹ A Pakistani P-3 maritime surveillance aircraft was shot down during the waning days of the conflict while it performed a reconnaissance mission.³⁷² Lacking

³⁶⁹ An AP report in December 1998 stated that the United States did in fact provide a tour of an American command and control facility to a visiting Indian delegation. See Donna Bryson, "U.S. Tacitly Accepts India's Need For a Nuclear Deterrence," (17 December 1998).

³⁷⁰ India and Pakistan, however, would have to gain confidence in the reliability of American-supplied data, and the U.S. government may prove reluctant to compromise intelligence collection capabilities. Conversation with George Perkovich, 18 November 1999. Any sharing of American satellite imagery should also be weighed against the recent case of Iraq taking shared American imagery acquired during the Iran-Iraq War and using it to analyze and counter the ability of the United States to detect Iraq's nuclear weapons program. See Richard Kokoski, *Technology and the Proliferation of Nuclear Weapons* (New York: Oxford University Press, 1995), 221-22.

³⁷¹ Chandan Nandy, "Kargil Panel Quizzes Ex-RAW Chief," *The Telegraph* (28 OCT 99). "ISRO Plans Satellite with Surveillance Capability," *The Economic Times Online* (02 August 1999).

³⁷² Indrani Bagchi, "India Guns Down Pak Aircraft Near Kutch Border," *The Economic Times Online* (11 August 1999).

the technical capability for transparency during regional conflicts, India and Pakistan may fall victim to misperceptions.³⁷³

The benefit of American-provided technical transparency is it would take the orchestration of confidence-building measures out of the hands of India and Pakistan and *direct* it equitably to both states. While this may appear to be a case of American intervention in the internal matters of the subcontinent, India and Pakistan both proved willing to accept American-supplied intelligence as a de-escalatory mechanism during the 1990 Kashmir crisis.³⁷⁴ Left to their own devices, India and Pakistan have not historically taken confidence-building measures seriously enough. Providing the rhetoric but not the action, neither state's leadership has viewed CBMs for what they are: potentially useful instruments of national security, at least in some circumstances.³⁷⁵

Additionally, the United States should actively educate India and Pakistan about the vast hidden costs associated with deploying and maintaining a nuclear triad.³⁷⁶ While such information may not sway deployment decisions, a foundation of nuclear knowledge can influence the deployment levels selected.

³⁷³ Mario E. Carranza, 18.

³⁷⁴ Sumit Ganguly, NPS presentation.

³⁷⁵ The process of injecting American-proposed CBMs into the subcontinent, albeit delicate, can be performed if the United States addresses Indian sensitivities by conferring with New Delhi first at each stage of the process. Additionally, Pakistani compliance must not be secured via the habitual American method (a promise of arms sales) as this would cause a loss of Indian support. Conversation with George Perkovich, 18 November 1999.

³⁷⁶ Peter Lavoy, 205.

Another area of potential U.S. engagement in India concerns its vulnerable and crucial domestic economy and infrastructure projects. Measures to encourage U.S. investment in India will not only improve diplomatic ties between the countries, but will also greatly reduce anti-American sentiment among the Indian populace.³⁷⁷ Additionally, the arena of joint oil exploration projects holds promise.³⁷⁸ "By the early part of the next century, India would become the third largest consumer of petroleum products in the world, after the People's Republic of China (PRC) and Russia."³⁷⁹ In 1996-97, India imported approximately fifty percent of its crude oil demand, and by 2010, this import-to-domestic-demand percentage is expected to increase to seventy-three percent.³⁸⁰

Finally, the United States must address the role of Russia in South Asia. While there is no reason to recreate the Cold War competition, the willingness of Russia to undermine U.S. nonproliferation and security policies in South Asia raises serious questions. The difficulty arises, however, when American policy must cater to and "buy-out" Russian interest groups. While the United States may have been successful in such

³⁷⁷ One of the high points of American popularity in India during the Cold War was during the shipments of grain relief in the 1960s.

³⁷⁸ Russia is already conducting joint oil exploration ventures with India. See Madhumita Chakraborty, "India's ONGC to Explore Oil In Caspian Sea," *Delhi Financial Express* (4 January 1999); and Atul Aneja, "India, Russia to Tap Oil In Iraq," *The Hindu* (23 December 1998).

³⁷⁹ Rahul Roy-Chaudhury, "An Energy Security Policy for India: The Case of Oil and Natural Gas," *Strategic Analysis* 21, no. 11 (February 1998): 1675. This representation of the situation appears to omit U.S. consumption of petroleum products.

³⁸⁰ *Ibid.*, 1676.

an endeavor with the cryogenic engine deal, the recent failure to block the sale of two light-water reactors to India shows the limits of American diplomatic and financial weight. The United States does, however, continue to hold considerable influence in the World Bank and the IMF and can affect investor confidence in Russia through these institutions.

The history of Indo-Russian military cooperation provides a foundation for understanding the current rift in Indo-American relations and the ability and willingness of India to defy American nonproliferation goals. Moreover, Indian strategic culture highlights the likely course of military and nuclear expansion in India and how said course may cross the path of American forces and interests. While India is not a rogue state, future policy and doctrinal decisions by its leadership could result in the first bilateral nuclear exchange in history (with Pakistan or China) or lead to direct conflict with the United States. It is imperative that future American policy be designed to avoid such events.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center 2
8725 John J. Kingman Rd., STE 0944
Ft. Belvoir, Virginia 22060-6216
2. Dudley Knox Library2
Naval Postgraduate School
411 Dyer Road
Monterey, California 93943-5101
3. Director, Training and Education.....1
MCCDC, Code C46
1019 Elliot Road
Quantico, Virginia 22134-5027
4. Director, Marine Corps Research Center2
MCCDC, Code C40RC
2040 Broadway Street
Quantico, Virginia 22134-5107
5. Director, Studies and Analysis Division1
MCCDC, Code C45
300 Russell Road
Quantico, Virginia 22134-5130
6. Marine Corps Representative.....1
Naval Postgraduate School
Code 037, Bldg. 330, Ingersoll Hall, Rm. 116
555 Dyer Road
Monterey, CA 93940
7. Marine Corps Tactical Systems Support Activity.....1
Technical Advisory Branch
Attn: Major J. C. Cummiskey
Box 555171
Camp Pendleton, CA 92055-5080

8. David S. Yost, Code NS/Yt1
 Dept. of National Security Affairs
 Glasgow Hall, Naval Postgraduate School
 Monterey, California 93943

9. Mikhail Tsyarkin, Code NS/Ts1
 Dept. of National Security Affairs
 Glasgow Hall, Naval Postgraduate School
 Monterey, California 93943

10. Peter Lavoy, Code NS/La.....1
 Dept. of National Security Affairs
 Glasgow Hall, Naval Postgraduate School
 Monterey, California 93943

11. Michael Barletta1
 Center for Nonproliferation Studies
 Monterey Institute of International Studies
 425 Van Buren Street
 Monterey, California 93940

12. Guarav Kampani1
 Center for Nonproliferation Studies
 Monterey Institute of International Studies
 425 Van Buren Street
 Monterey, California 93940

13. George Perkovich.....1
 W. Alton Jones Foundation
 232 East High Street
 Charlottesville, Virginia 22902-5178

14. Jerome M. Conley1
 372A Bergin Drive
 Monterey, California 93940

15. Thomas Skrobala1
 Nebraska Avenue Complex
 Strategic Systems Programs
 Naval Treaty Implementation Program (SP2025)
 3801 Nebraska Avenue, NW
 Washington, DC 20393-5446

16. Gerald R. Baird, Jr.1
Nuclear Programs Division
Defense Threat Reduction Agency
6801 Telegraph Road
Alexandria, VA 22310-3398
17. Lt. Col. Steven H. Boyd, USAF.....1
Advanced Systems & Concepts Office
Defense Threat Reduction Agency
45045 Aviation Drive
Dulles, VA 20166-7517
18. Lt. Col. Michael E. Preston, USAF.....1
HQ USAF / XONP
1480 Air Force Pentagon
Washington, DC 20330-1480