12-1-1998

Security Implications of the Proliferation of Weapons of Mass Destruction in the Middle East

Sami G. Hajjar Dr.

SECURITY IMPLICATIONS OF THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION IN THE MIDDLE EAST

Sami G. Hajjar

December 17, 1998

*****

*****

The author wishes to thank the United States Air Force Institute for National Security Studies for its generous financial support that made researching this topic in the Middle East possible. He is grateful to all those in the United States and the Middle East who granted him interviews and who took the time to brief him on proliferation issues.

*****

Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave., Carlisle, PA 17013-5244. Copies of this report may be obtained from the Publications and Production Office by calling commercial (717) 245-4133, DSN 242-4133, FAX (717) 245-3820, or via the Internet at rummelr@awc.carlisle.army.mil

*****

Selected 1993, 1994, and all later Strategic Studies Institute (SSI) monographs are available on the Strategic Studies Institute Homepage for electronic dissemination. SSI's Homepage address is: http://carlisle-www.army.mil/usassi/welcome.htm

FOREWORD

Operation DESERT FOX in December 1998 is the most recent demonstration of the centrality of the issue of weapons of mass destruction for U.S. foreign policy priorities. The proliferation of these weapons in a region of the world deemed vital for U.S. and Western interests because of its massive oil reserves, and the region's history of conflict and strife, mean that the potential for instability and adventurism is increased.

This monograph, by Dr. Sami Hajjar, addresses the important question of the security implications for the nations of the region of the proliferation of weapons of mass destruction in the Middle East. The Strategic Studies Institute is pleased to offer the monograph as a contribution to the national security debate on this important issue. The author offers a unique perspective based on extensive interviews that he conducted in the region, and makes specific policy recommendations for U.S. military and civilian decisionmakers.

LARRY W. WORTZEL
Colonel, U.S. Army
Director, Strategic Studies Institute

BIOGRAPHICAL SKETCH OF THE AUTHOR

SAMI G. HAJJAR is Director, Middle East Studies at the U.S. Army War College. He was born in Beirut, Lebanon, and educated at the American University of Beirut where he obtained his B.A. and M.A. in public administration. He received his Ph.D. in political science from the University of Missouri-Columbia in 1969. He taught a variety of courses including Middle East Politics and Islamic Political Theory at the University of Wyoming where he was employed as Professor of Political Science from 1966-87. While at Wyoming, Dr. Hajjar was assigned for 2 years to the Governor's Office and worked on international trade promotion for the State of Wyoming. In 1987 he joined the U.S. Information Agency and was assigned first to Riyadh as Cultural Affairs Officer, and in 1990 to Abu Dhabi as Public Affairs Officer, before returning to Washington in 1992 as Gulf Desk Officer. In 1993 he resigned the Foreign Service to become consultant to the Emirates Center for Strategic Studies in Abu Dhabi. In September 1994, he joined the U.S. Army War College as Professor and Director of Middle East Studies. Dr. Hajjar is the author of more than 30 professional articles in public administration and political science.

SUMMARY

This monograph focuses on the proliferation of chemical, biological, and nuclear weapons in the Middle East. The weapons and their means of delivery are referred to collectively as weapons of mass destruction (WMD). The author argues that the Arab-Israeli conflict and the lack of progress in the peace process are strong incentives for nations in the region to acquire WMD. Iran-Iraq rivalry is another incentive affecting nations in the Gulf region. The analysis assumes the theme of the inter-connectivity of proliferation issues across regional divides. Therefore, a successfully concluded peace process may not necessarily reverse the proliferation trend as Israel might continue to be concerned about Iran's WMD capability. The inter-connectivity theme complicates U.S. efforts on behalf of nonproliferation in the region.

Relying on unclassified U.S. Government and other open sources, the author documents the Israeli, Iranian, and major Arab WMD programs. Besides outlining each nation's WMD capabilities, he makes reference to documented use of WMD in the region, considers the reasons why the major regional powers seek WMD capabilities, and examines the nature of the proliferation dynamic in the region.

Based on interviews that the author conducted with Middle Eastern officials and scholars, the monograph offers a regional view on the problem of proliferation. These interviews revealed that the quest to achieve a balance of power, the lack of trust between Arabs and Israelis, and the perception that the United States in its regional role is not evenhanded in its treatment of local actors are the factors contributing to the vertical and horizontal proliferation trends that are making the region highly dangerous and volatile.

Given U.S. vital interests in the Middle East, stemming the proliferation trend is an important policy goal. The nonproliferation and the counterproliferation approaches are examined as they apply to the region. The author makes several recommendations designed to strengthen these efforts and to deal more effectively with the causes of proliferation. The recommended measures include a more focused examination of the capability (deployment), motivation (doctrine), and use (employment) components of the WMD threat, the abandonment of declared statements guaranteeing Israel's military superiority, and a change in the language designating certain states in the regional as "rogue" or "outlaw." Also recommended is the creation of a U.S. Central Command Middle East Center, similar to the Marshall Center in Europe or the Asia-Pacific Center in Hawaii, to focus on instruction and research in the area of security and defense issues. Such changes should create a more positive environment in which the nations of the region might be motivated to devise security regimes that could tackle the issue of proliferation.

SECURITY IMPLICATIONS OF THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION IN THE MIDDLE EAST

> Israel had "built a nuclear option not in order to have a Hiroshima but an Oslo."
>
> Shimon Peres
> *Jerusalem Post* (Internet Edition) July 14, 1998

The focus of this monograph is the proliferation of nuclear, biological, and chemical weapons, and their means of delivery—collectively referred to simply as weapons of mass destruction (WMD)—in the Middle East. It concerns the underlying dynamics of WMD proliferation, and seeks to explain the quest to proliferate in terms of the interconnectivity of the region, the motivations of the major regional powers, and local perceptions as to the nature of security threats. Finally, the author discusses the implications of proliferation for U.S. policy toward the region that may require a shift in that policy.

Introduction.

In defiance of the 149 countries which in 1996 signed the Comprehensive Test Ban Treaty, India's nationalist government of Prime Minister Atal Bihari Vajpayee conducted on May 11, 1998, three underground nuclear tests at a desert site in the northwestern part of the country. Two days later, despite international condemnations and the threat of sanctions by the United States, Japan, and other nations, India conducted two additional underground nuclear blasts.

Not to be undone by India's "coming out," a week after India's test, Pakistan conducted its own six underground nuclear tests on May 16, more than evening the score with its arch rival. Suddenly, the world had seven declared

nuclear powers, with one acknowledged nuclear state—Israel—remaining undeclared.

The nuclear blasts on the South Asian subcontinent bring up a number of serious security concerns in the aftermath of the Cold War. Many international security experts believe that the absence of two rival superpowers enhances the chances for regional conflicts. Competing national, ethnic, religious, and other regional forces are now able to escalate their rivalries to higher forms of strife unhindered by superpower pressure to prevent regional conflicts from intensifying into direct superpower confrontations. The increased probabilities of regional conflicts coupled with the spread of WMD create an especially volatile international security circumstance. The obvious question is: What should (can) the international community do to avert a potential WMD-related disaster?

The India-Pakistan nuclear tests have a number of direct implications for the Middle East region. One serious question is whether Pakistan's so-called "Islamic bomb" provides a nuclear umbrella to various Arab countries against the Israeli nuclear threat. Another is the role that Israel was alleged to have played in the Indian nuclear program which raises the question of "horizontal" proliferation.[1] Another implication would be the perception that these tests have propelled India and Pakistan to some form of a great-power status. Given the relatively mild response of the international community to these tests, is there an incentive to other "great-power status" aspiring nations; e.g., Iran, to pursue vigorously the nuclear option? In this sense, the "coming out" of India and Pakistan is an incentive to other nations to get in the game of proliferation. Lastly, those in the Middle East who applauded the "Islamic bomb" have unwittingly justified the Israeli bomb insofar as one bomb deters the other.

The geographic area of the Middle East that concerns the WMD proliferation discussion in this monograph is the Arabian/Persian Gulf, the Levant, and North Africa

regions. The introductory remarks, in addition to their relevance to the topic, were designed to underscore the inter-connectivity of proliferation issues across regional divides. Because the political and security issues confronting Middle East nations, including the question of WMD proliferation, are often linked fundamentally to one another, inter-connectivity is a basic theme.

I will argue that the proliferation of WMD in the Middle East is largely linked to the peace process between Israel and its Arab neighbors. At the same time, however, a successfully concluded peace process may not necessarily reverse the proliferation incentive since that in turn is linked to other issues in the Gulf region involving the national aspirations of states like Iraq and Iran, or to political developments in North Africa such as the potential coming to power of a radical Islamic state. The inter-connectivity of these issues poses unique and complicated challenges to U.S. security efforts on behalf of nonproliferation, and to the U.S. military who may be called upon to engage in counterproliferation measures, or in military support to foreign consequence management operations to neutralize the effects of a WMD incident.

I will assume that the proliferation game (if it can be called such) that nations play, for whatever reason—prestige, deterrence, domestic politics, etc.—is essentially a mind game. Its essence is perceptions and beliefs irrespective of their absolute objectivity.[2] For this reason, I will attempt to report on attitudes from the region. If my assumption is correct, U.S. efforts at nonproliferation face yet another challenge, that of bridging the cultural gap between the pragmatically oriented United States and an often ideologically-driven Middle East.

Finally, the focus of my analysis is on strategic security issues as they are affected by the proliferation of WMD. While factual information concerning the available WMD in the Middle East region is important, an accurate accounting is nearly impossible. The nations concerned do not reveal

this type of information. Nevertheless, the question of why proliferation takes place, and not how it does or by how much, is relevant for this study's purpose.

Proliferation and U.S. Interests.

The National Security Strategy of the United States recognizes that:

> Weapons of mass destruction pose the greatest potential threat to global stability and security. Proliferation of advanced weapons and technologies threatens to provide rogue states, terrorists and international crime organizations the means to inflict terrible damage on the United States, its allies and U.S. citizens and troops abroad. We must continue to deter and be prepared to counter the use or threatened use of WMD, reduce the threat posed by existing arsenals of such weaponry and halt the smuggling of nuclear material.[3]

Proliferation of WMD in the Middle East region poses a serious threat to the United States since some of its most vital global interests are in this region, which also contains the majority of states who are openly hostile to it or who are on the U.S. list of nations that support international terrorism. They are often referred to as "outlaw" or "rogue" states and include Iran, Iraq, Libya, and Syria, all of whom are seeking to expand their WMD capabilities.

In the post-Cold War period, access to Middle East oil has become perhaps the only vital interest the United States has in that region. The State of Israel was elevated to the status of a strategic ally during the Reagan administration which meant that its security and well-being were a vital U.S. interest. Today, treating Israel as a strategic ally may be done more for U.S. domestic political considerations than national security reasons.

Among the most important U.S. interests in the region is the successful conclusion of the Arab-Israeli peace process. The Arab-Israeli conflict has for the past five decades been a major source of instability and strife in the region. This

conflict has, furthermore, contributed substantially to the regional arms race and to the proliferation of WMD. All these manifestations impact negatively on U.S. foreign policy objectives that seek to promote nonproliferation, regional stability, and security for U.S. allies.

Related to access to oil and the peace process are other important U.S. interests such as freedom of navigation, access to regional markets, security of key regional partners, protection of U.S. citizens and property, and human rights and democratic development.[4] As the Gulf crisis of 1990 demonstrated, these interests are extremely vulnerable to attack by a regional power determined to thwart U.S. interests or to harm its allies. Also, as the Gulf War of 1991 showed, had Saddam Hussein armed the Scud missiles that he fired on Saudi Arabia and Israel with chemical or biological warheads, the region would have experienced a major catastrophe. In the aftermath of the Gulf War, the United States has concluded that the threat of WMD use is likely in future warfare. In places where the United States has deployed forces such as the Middle East, potential adversaries possess WMD and may seek to counter U.S. conventional superiority through the use of these types of weapons.[5] Consequently, U.S. forces must today train and be equipped to operate in a potential WMD theater.

There are a variety of open literature sources that provide an outline of the WMD inventory in the Middle East region.[6] Given the essentially classified nature of this inventory, it is difficult to assess the accuracy of this information. The starting point of this paper is a general assessment of WMD capabilities of Middle East countries as arrived at by the U.S. Department of Defense.[7]

The United States has concluded that "Iran, Iraq, Libya, and Syria, which are aggressively seeking NBC (nuclear, biological, chemical) weapons and increased missile capabilities, constitute the most pressing threats to regional stability."[8] Prior to the imposition of the U.N.

sanctions and the inspection regime after the Gulf War, Iraq had a well-developed WMD program. In its 8-year war with Iran, Iraq used chemical weapons against Iranian troops, and also against its Kurdish population during the 1980s. Iran, in turn, employed chemical agents on a limited scale during that war. Libya is the other nation on the list of "outlaw" states that used chemical agents in 1987 against Chadian troops. By contrast, Syria has never used chemical or biological agents. On the other hand, Egypt was the first nation in the region to employ chemical agents in the 1963-67 war in Yemen.

In addition to this recent history of the use of chemical weapons and because of continued disputes and rivalries, it is estimated that the

> Middle East and North Africa have the highest concentration of emerging NBC weapons and missile programs of any region in the world . . . [that] have been acquired through direct purchase, domestic development, or a combination of the two . . . This trend is dangerous because as states become self-sufficient, they become less susceptible to outside pressure.[9]

The U.S. Government report being referred to does not address the issue of proliferation in specific major Middle East countries not labeled "outlaw" or "rogue" states. These include the nations of Israel, Egypt, Algeria, and Saudi Arabia. Of these, Israel, by virtue of its historical circumstances and highly developed scientific base, is acknowledged to possess the region's most advanced WMD arsenal including nuclear weapons and the means of their delivery. No other regional power has comparable capabilities, although Iraq has actively pursued the nuclear option, and Iran is said to have nuclear aspirations.

In the next section, I will summarize the existing WMD programs in the region before turning to the general discussion of causes for proliferation and their security implications.

Regional WMD Programs.

The quest to acquire WMD in the Middle East for strategic objectives began shortly after Israel became an independent nation in 1949 amidst a hostile Arab world. Security considerations were the primary impetus for Israel to possess the ultimate WMD—the nuclear weapon option. Given the difficulties associated with the scientific, engineering, technical, and manufacturing processes associated with building a nuclear capability, the successful development of a nuclear program marks the passage to modernity by that nation. This realization, along with pressure to further develop an existing program, constitutes the other reasons for proliferation especially in the nuclear area.[10]

From a general Arab perspective, the Israeli nuclear arsenal (which Arab states assume exists) poses a threat to their security and is the primary catalyst for their quest to acquire a strategic balance. By and large, Arab nations have sought WMD capabilities in the form of the "poor man's" weapons; i.e., chemical and biological capabilities. In the case of Iraq, however, it is now known that it had an active nuclear program and was on the verge of developing nuclear weapons when the U.N. inspection and sanction regimes in the aftermath of the Gulf War effectively terminated its program.[11] For Saddam Hussein, the nuclear option was an important element in establishing Iraq as a modern nation and bestowing upon it the right to be the dominant nation in the Gulf region. Also, it is alleged today that Iran, a non-Arab nation, is actively seeking the nuclear option.

The security dynamics of the Middle East environment, influenced by the absence of a lasting and comprehensive Arab-Israeli peace, are responsible for the proliferation of WMD. Various countries in the region are driven to proliferate in an attempt to overcome what they perceive to be a security gap between their military capabilities and those of the enemy. It is a quest to achieve strategic balance.

Israel.

The literature of WMD consistently refers to Israel as one of the few nations in the world possessing advanced capabilities across the entire WMD spectrum including advanced missile delivery systems.[12] Its nuclear arsenal is assumed to be the ultimate manifestation of competency in this area.

Most knowledgeable sources confirm, despite official Israeli denials, that Israel possesses chemical weapons (CW), and most probably, biological weapons (BW) as well.[13] It is assumed that Israel embarked on the development of CW following reports that Egypt used chemical agents in Yemen in 1963. The CW program was probably accelerated as a result of rumors that Egypt might use chemical weapons in the Sinai during the 1967 and 1973 wars, and Iraqi capabilities and demonstrated willingness to use chemical agents.

Recent official U.S. accounts name Israel as one of a handful of countries in the world that has chemical stockpiles.[14] Over the years, there have been accusations and allegations by the former Soviet Union and several Arab states that Israel actually used chemical agents during its invasion of Lebanon in 1982 against Syrian troops, and also against Palestinian civilians in Lebanon and during the *intifada*.[15] However, there is no credible public record of such use by Israel, save for the use of tear gas in riot situations. The record on biological agents, however, is different. There is the well-documented incident in Amman in September 1997, when Israeli Mossad agents attempted the assassination of Khaled Mashall, a Hamas leader, by injecting him with a toxic (biological) agent. In the deal to have the captured agents released, Israel had to provide the antidote that saved Mashall's life.[16]

Much has been written about Israel's nuclear weapons and their relationship to its strategic security.[17] The estimated size of the Israeli nuclear arsenal ranges from

50-300 warheads along with modern aircraft and missile delivery means including the Jericho-2 missiles with a range of 1400 kilometers. The estimates are essentially based on statements to the London *Sunday Times* (published October 5, 1986) by the former technician at the Dimona nuclear reactor, Mordechai Vanunu, who claimed that Israel was capable of producing 100-200 warheads.[18]

Regardless of the number of warheads, it should be noted that it was the State's founder and its first prime minister, David Ben Gurion, who advocated during the 1950s the development of the nuclear option as an ultimate deterrent against the quantitative edge of the Arab military. From the beginning, Israel has pursued a deliberate policy of ambiguity with respect to its nuclear option.[19] Unlike its emphatic denials concerning an offensive chemical capability, Israeli leaders have consistently refused to either deny or affirm the existence of a nuclear program. The policy of ambiguity, or to use Avner Cohen's term from *Israel and the Bomb*, "nuclear opacity," meant that Israel would not sign the NPT and make its nuclear facilities subject to international inspection and control, nor would it deny the existence of nuclear capability and risk an Arab attack that goes beyond what they otherwise believe to be the threshold that would trigger an Israeli nuclear response.[20]

Iran.

Iran is the other non-Arab country and one of those classified by the United States among the "rogue" states discussed in this monograph. Unlike Israel, it is a Muslim nation whose majority population belongs to the Shi'a sect of Islam. By contrast, most Arab populations belong to the Sunni sect, a fact which accounts for the historical ideological-religious competition, as well as the national rivalry, between Iran and its Arab neighbors.[21]

Iran's attempt to acquire WMD was largely to balance Iraq's capabilities and to retaliate against Iraqi use of

chemical weapons during its 1980-88 war with Iran.[22] In addition to its war with Iraq and the long-term potential that Iraq might one day, after the lifting of the sanctions, resume its WMD development, Iran also has to be concerned about other regional threats to its security. These include the perceived threat from the presence of the U.S. military in the Gulf region; the threat from Israel whose bombing of the Iraqi Osirak reactor on June 7, 1981, clearly demonstrated the far-reaching application of its military might; border conflicts with Pakistan—now a declared nuclear power—and Afghanistan; and finally, Iran's traditional rivalry with Turkey which is under the nuclear umbrella of NATO. In short, despite the reported initial reluctance of Ayatollah Khomeini during the Iraq-Iran war to develop and use chemical weapons on religious grounds,[23] ultimately the Iranian leadership concluded that there was sufficient national security reason that would legitimate its acquisition of WMD capabilities.[24]

Today, by most knowledgeable accounts, Iran possesses chemical weapons capabilities, has developed biological weapons, is seeking a nuclear capability, and as recent press reports demonstrated, has developed a variety of delivery means including a missile (Shahab-3) with a range of about 800 miles capable of reaching the eastern Mediterranean coast. The likely source of the missile is North Korea.[25]

At the same time, the United States alleges that Iran is seriously attempting to acquire fissile material for the development of nuclear weapons. It could do so in a variety of ways including purchase or by stealing fissile material. It also might be able to enrich uranium which was otherwise obtained for use in a power generating reactor and divert it for a weapons program. Its last option would be to follow in the path of North Korea by producing plutonium if it could develop a full fuel cycle which would permit it to reprocess the spent fuel. During the early part of this decade, the United States and Israel estimated that Iran could develop nuclear weapons by the end of the decade.[26] As of 1997, the

official U.S. assessment was that Iran does not yet have the necessary infrastructure to support a nuclear weapons program.[27] Still, Iran continues to seek the technology, expertise, and infrastructure for a weapon from a variety of sources, principally Russia and China. On the other hand, DeSutter suggested that Iran may reportedly possess "stockpiles of uranium" and that it may have acquired enough material for radiological weapons.[28] What appears certain from the open literature is that by all the evidence, Iran desires to become a nuclear power. What is not certain is whether and when it can achieve this status.

The Iranian chemical weapons program has been given priority since the early 1990s in response to the Iraqi efforts with advanced chemical agents including the deadly VX nerve agent. Iran possessed a variety of agents (blister, blood, choking) including artillery shells and bombs. However, the country continues to depend on outside sources for technologies in this area, with China suspected of being the main supplier.

Likewise, Iran's biological program began during the Iraq-Iran war. Given the Iranian expertise with pharmaceuticals, and, although at present only a small quantity of usable agents exists, within a decade Iran is likely to be able to use biological agents in warfare.

Iran's testing of the 800-mile Shehab-3 missile confirmed Anthony Cordesman's observation made in 1994 that its missile "capabilities have expanded steadily since the beginning of the Iran-Iraq war."[29] Iran's missile inventory includes Scud B and Scud C (North Korean origin) and the Chinese surface-to-surface missile CSS-8.[30] In addition, Iran has a number of short-range cruise missiles, some of which were used during its war with Iraq as anti-ship weapons. Finally, Iran possesses a number of conventional means of delivery systems for NBC including aircraft, artillery, and rockets. In short, Iran's current inventory gives it the capability of striking several key military (bases, airfields, ports, etc.) and economic (oil

fields, refineries, power station, etc.) targets in neighboring countries including Turkey, Saudi Arabia, and the Gulf littoral states.

The Arab World.

The Western literature on WMD in the Arab world focuses primarily on Iraq, Syria, and Libya.[31] These are the states often labeled "rogue" for their alleged support of international terrorism, their anti-Israeli stances, and their general opposition to U.S. policies in the region.

Of the three, Iraq's WMD program is the most widely discussed since the imposition of the U.N. inspection regime in 1991 following the Gulf War (U.N. Security Council Resolution 687). The U.N. Special Commission on Iraq (UNSCOM) obtained documents following the defection in the summer of 1995 of Hussein Kemal, Saddam's son-in-law and the person in charge of Iraq's military industries, that disclosed an extensive WMD program much larger than previously suspected to exist. According to official U.S. estimates,

> These efforts included an intensive crash program to develop a nuclear device using IAEA safeguarded nuclear fuel, the manufacture of advanced chemical agents (i.e., VX), a very sizable biological agent production and weaponization program, and a sophisticated missile production and testing program.[32]

Three years after the termination of the Gulf War and the institution of the sanctions regime against Iraq, Cordesman made three observations about Iraq's WMD that remain true to this date. First, Iraq, more than any other country in the region, has spent large amounts of money (not less than $10 billion) to acquire WMD. Second, the Gulf War destroyed much of Iraq's capability to build and use weapons of mass destruction. And, third, because of concealment efforts, Iraq has retained a large portion of its biological warfare equipment, and some chemical weapons.[33] Given Iraq's persistent attempts to restrict the

activities of UNSCOM, a fourth observation could be inferred; namely, Iraq continues its efforts to proliferate and to bolster its concealed WMD program.[34]

At the present it does not appear that UNSCOM will be able to certify with any degree of certainty that Iraq is completely free of WMD. Likewise, it is highly unlikely that the regime of Saddam Hussein will honestly cooperate with the inspectors, or that it will voluntarily give up its residual WMD capabilities. Weapons of terror are essential tools in the repertoire of an authoritarian regime that has used them before and which will not shy from using them again against any domestic or external enemy that may seriously threaten its survival. But beyond this insurance against domestic insurrection, WMD may very well be an essential element in the Iraqi arsenal irrespective of the character of the regime. This is because Iraq has a number of serious security concerns. They include Iraq's lifeline in the form of the Tigris and Euphrates rivers that spring from its more powerful neighbor to the north that controls the downstream flow; it has a long history of rivalry and enmity with Iran; and historically Iraq has always sought to be a leading country in the Arab world—recently by being the hegemonic power in the Arabian peninsula. These are powerful incentives to possess a WMD capability. It is reasonable to assume that the members of the Gulf War coalition against Iraq, and especially the United States, would rather see an Iraq without Saddam as opposed to one totally free of WMD. In the final analysis, the Iraqi people will not deny themselves, nor can the international community successfully deny post-Saddam Iraq what most major countries in the region possess.

Syria.

Of all the major powers in the Middle East, Syria's WMD have received the least attention in the open literature primarily because little or no primary information about them exists. At the same time, Syria is considered a major

proliferator and assumed to have credible offensive chemical weapons capabilities.

The collapse of the Soviet Union has deprived Syria of a superpower protector and a major weapons supplier. Although Syria participated in the U.S.-sponsored Madrid Peace Conference and entered into direct negotiations with Israel, it has not yet been able to recover the Golan Heights from Israel—a fundamental strategic goal. Also, Egypt, Syria's principal ally during the 1967 and 1973 Arab-Israeli wars, by virtue of its peace treaty with Israel, was removed as a direct military ally of Syria in a potential future confrontation with Israel. Meanwhile, Syria's conventional weapon systems are becoming increasingly outdated, especially as compared to Israel's well-stocked and modern arsenals.

In response to this new environment, Syria has adopted a strategic posture that involves: 1) the strategic option of peace with Israel based on the "land for peace formula"; 2) development of WMD capabilities as a deterrent against Israel's superior conventional forces; 3) hegemony (otherwise dubbed cooperation and coordination between two sisterly states) over Lebanon to ensure that Israel does not succeed in concluding a separate peace with Lebanon and leave Syria isolated and the only Arab neighbor of Israel that has not boarded the peace train. Syria's presence in Lebanon has the critical element of giving it the power to "play the Hizballah card" against Israel; and, 4) alliance with Iran that recently became more critical as Israel and Turkey forge a bilateral alliance.

The Department of Defense does not believe that Syria is pursuing nuclear weapons development, but that it has vigorously pursued the development of chemical weapons and ballistic missiles, and to a lesser extent, biological weapons. These weapons are supposedly the means by which to counter Israel's superior conventional forces and presumed possession of nuclear weapons. Syria believes that its chemical and missile forces act as deterrents

against Israeli attacks. President Asad apparently regards his ability to inflict unacceptable damage on Israel through the use of these weapons—and Israeli awareness of his willingness to do so under extreme circumstances—as a safeguard of the utmost importance.[35]

Burck and Flowerree detailed Syria's chemical weapons stockpiles and pointed out that the sources of its CW capability were primarily the former Soviet Union, Iran, Egypt, and Libya.[36] In addition to its existing ballistic and cruise missile capabilities that include Scud B, Scud C, and SS-21 missiles, Syria is seeking longer range missiles (a possible source is North Korea) in order to "spread" its missile launch sites away from the parameters of Damascus and thus farther from Israel. The goal is to make it more difficult for the Israeli Air Force to strike at those sites as the Israelis would have to fly longer over Syrian territory and presumably its air defenses.[37] Lastly, and as the Department of Defense report noted,

> Syrian leaders have acted rationally and, in general, have been unwilling to take significant political or military risks. In the future, Syria will not likely use chemical weapons or ballistic missiles . . . against Israel, or any other enemy, unless the regime's survival is at stake.[38]

As for Syria's biological weapons, one open literature source notes that Syrian forces, while equipped to defend themselves against biological weapons, do not appear to have included these weapons in their offensive doctrine. The assumption is that, "Both Israel and Syria presumably recognize the negative military utility of BW because of the geographical proximity of the two states."[39] As with CW, if a BW program exists in Syria, it is for defensive purposes and is not likely to be used except in the most extreme cases.

Libya.

Of the so-called "rogue" states, Libya's case is the most peculiar and one which has received much public attention.

On the one hand, Libya is a small country in terms of population size, it lacks a developed infrastructure and a diverse economy to support domestic development and production of WMD, so that its seemingly limited WMD capabilities are not a major factor in combat. On the other hand, the grandiose political aspirations of its leader Qadhafi as the self-proclaimed heir of the late Jamal Abdul Naser of Egypt, as champion of Arab nationalism with its anti-Western and anti-Zionist overtones, and Qadhafi's documented record in support of international terrorism, make Libya's quest for WMD capabilities worrisome. It also makes it a subject of great interest in the Western media.

Qadhafi has attempted for over a quarter of a century to develop a nuclear capability. According to the U.S. Department of Defense, "Libya's nuclear program remains in the embryonic stage."[40] Shai Feldman has detailed Libya's effort in this regard beginning in 1973 when Qadhafi formed an Atomic Energy Commission under his directorship.[41] Since then, Libya managed to build a small nuclear research facility under IAEA safeguards at Tajura. However, its attempts to acquire military capabilities from a variety of sources including France, the Soviet Union, Pakistan, and India have all failed.[42] Still Qadhafi is said to be attempting to recruit foreign scientists to help in developing nuclear weapons.

Likewise, Libya's biological weapons program is in its infancy, largely for the same reasons as its nuclear program. Its core problem is the lack of a competent scientific and technical base. Apparently, this has not been the case with regard to chemical weapons.

Burck and Flowerree have given an extensive accounting of Libya's attempt to acquire a chemical weapons program, and the instances of alleged chemical agent use by Libya in Chad in 1987 and 1988, and in the Sudan in 1988 against rebels in the south.[43] They also provide a comprehensive examination of the Rabta chemical facility that began operating in 1987. That plant received wide

international media attention in conjunction with the allegation that the primary purpose of the facility was the production of blister and nerve agents that ultimately led Libya to close the plant in 1990 following a March 1990 fire that damaged the facility.[44] In 1995 the plant was reopened as a pharmaceutical facility, and, according to the U.S. Department of Defense,

> Libya shifted its emphasis to the construction of an underground chemical warfare facility at Tarhunah, southeast of Tripoli. In response to international attention, Qadhafi claimed that Tarhunah was part of the Great Manmade River Project, a nationwide irrigation effort.[45]

Given Libya's dated Scud missile force and its inability to obtain long-range ballistic missiles, the aging nature of its other means of delivery systems, its embryonic nuclear and biological weapons program, and seemingly provisional nature of its chemical warfare capabilities (U.N. sanctions have probably contributed to deteriorating and retarding Libya's capabilities), Libya's WMD capabilities have more "bark than bite." The publicity surrounding them is related to Qadhafi's notoriety rather than Libya's national security concerns. Nevertheless, because of Libya's record on international terrorism and its continued effort to enhance its WMD capabilities, the potential threat to its neighbors and Southern Europe cannot be totally discounted.

Other Arab States.

As is the case with "rogue" states, reliable open literature information on WMD programs in other Arab nations is nonexistent. Still, it is possible to draw some general conclusions based on circumstantial evidence as to these programs.

Egypt, the post-World War II leader of the Arab world and the largest Arab nation, was the first country in the Middle East to have used chemical agents in combat. With the exception of a possible chemical program, Egypt, which

has signed and ratified the NPT in 1981, does not appear to be a WMD proliferator. Its nuclear program is essentially a research program limited to the production of power but which has yet to bear fruit.[46] It is unclear if Egypt has a biological weapons program.

Egypt's use of chemical agents was during the war in Yemen in 1963-67, where it was alleged to have used mustard gas. The origin of this gas may have been a small stockpile that Egypt inherited from the British.[47] This first use, Egypt's ties to the Soviet Union during the 1950s and 1960s—decades where the Soviets could have easily made chemical weapons available to its major Middle Eastern ally—and Egypt's developed scientific infrastructure, lead to the logical speculation that Egypt possesses some chemical weapons capabilities, most probably for deterrence purposes.[48]

While Egypt has repeatedly denounced the introduction of WMD to the Middle East theater and has denied any efforts to produce, develop, or stockpile such weapons, it recently has refused to sign the CWC which entered into force on April 29, 1997. Its refusal to sign was linked to Israel's refusal to sign the Nuclear Non-Proliferation Treaty (NPT) stating that Egypt "has reservations about some countries in the region having nuclear programs not subject to international guarantees."[49] The informed guess, therefore, is that Egypt has a covert chemical program but one which is probably less developed than that of Syria.

The other major Arab country with both reason and capability to develop WMD is Saudi Arabia. Having been the target of Iranian antipathy ever since the Shi'a clergy took power in that country and having been subjected to Iraqi Scud missile attacks during the Gulf War, suspicion exists that the Kingdom might, for self-defense, be interested in WMD programs.

The suspicion is based on two factors. The first is that Saudi Arabia negotiated a secret deal with China in 1986, a nation with whom it had no formal diplomatic relations at

the time, for the acquisition of 50 CSS-2 "East Wind" intermediate range ballistic missiles and nine launchers. This information came to light in 1988 and brought to question how the missiles will be armed.[50] Given the fact that the CSS-2 missiles are inaccurate and that the Chinese inventory is nuclear-tipped, it is doubtful that they are armed with unconventional warheads. The second factor is that Saudi Arabia has the necessary scientific and technical infrastructure to develop a chemical weapons program. However, there are no open sources in the literature that would confirm the existence of such a program. In fact, it was reported that the Reagan administration obtained written assurances from the Saudis, following the disclosure of the Chinese missile deal, that the Kingdom would not obtain or use chemical or nuclear warheads with the CSS-2 missiles.[51]

Two additional Arab countries, Algeria and Sudan, are worth noting in the context of WMD. John M. Deutch, then Director of Central Intelligence, testified before Congress that Algeria is among a number of countries that represent a nuclear-proliferation challenge to the Intelligence Community. He noted that Algeria has two nuclear reactors—one supplied by Argentina, the other by China—and, while both reactors are being used for civilian purposes, "Aspects of Algeria's nuclear development program cause concern in the West . . . Algerian scientists could apply the experience gained in running both reactors to a possible future weapons program."[52] Given the volatile nature of Algerian politics at present and the possibility of coming to power of an Islamic regime hostile to the West, Western concern about Algeria's potential capabilities in the nuclear field, and presumably also in other WMD areas, is understandable.

Lastly, there is the Sudan. In August 1998, the Sudanese pharmaceutical factory *Al Shifa* was destroyed by a U.S. cruise missile attack in retaliation for the bombing on August 7 of the U.S. embassies in Kenya and Tanzania. The United States alleged that this factory produced chemical

weapons and had a link to Osama Bin Laden, the Saudi millionaire suspected to have masterminded the attack on the embassies. However, doubts began to mount as to the correctness of the U.S. decision to attack that was apparently based on a single soil sample obtained from outside the factory. Subsequent press reports suggested that the United States may have erred in identifying a legitimate target.[53]

Sudan's link to the production and use of chemical warfare has been alleged by an opposition group to the National Islamic Front (NIF) that is in power in Khartoum. The allegations include the manufacturing of chemical weapons in collaboration with Iran, Iraq, Russia, Bulgaria, and Croatia, and the suggestion that the regime intends to use these weapons in all of the war zones against the rebels in the southern and eastern parts of the country. Information based on this source, however, should be used advisedly.[54]

The Regional Proliferation Dynamic.

The above survey is limited. There are no comprehensive, systematic, and absolutely accurate sources offering conclusive evidence about which nations possess precisely what and how many weapons of mass destruction. Nevertheless, we have adequate information to make several observations.[55] Foremost, the various nations of the region known to possess WMD have been motivated to acquire this capability for a host of different reasons. For Israel, it was a matter of survival and to ensure the continued existence of the Jewish State in a hostile environment. Iraq's arsenal was apparently linked to its aggressive regional ambitions seeking hegemony over its oil-rich Arab neighbors and as offensive weapons against its larger enemy, Iran. Syria, Egypt, and Saudi Arabia have obtained these weapons for deterrence and defensive purposes against potential enemies who possess superior WMD capabilities. Libya's efforts in this regard were

largely for prestige reasons to bolster the image of Qadhafi in the Arab world.

A second general observation, based on familiarity with the history of arms transfer to the Middle East, is that WMD proliferation has a quantitative and a qualitative dimension. Regional powers have been stockpiling larger WMD arsenals (nuclear, chemical, biological munitions), delivery systems especially rockets and missiles, and expanding scientific training and research to gain indigenous development capabilities. At the same time, however, the trend since the early 1970s has been to acquire longer-range missiles, more accurate missiles, more lethal chemical agents, and agents with longer shelf life. No dimension of this trend can be expected to abate in the near term.

During the latter stages of the Iran-Iraq war, Iraq used chemical weapons against the Iranian military and used its missiles (with conventional warheads) to target Iranian cities and their civilian populations. Iraq also fired Scud missiles against Saudi Arabian and Israeli civilian targets during the 1991 Gulf War. The third observation, therefore, is that a combination of the proliferation of WMD and the relative inaccuracy of the delivery systems led to a change in the targeting doctrine from military to civilian targets.[56] The consequence of this targeting change is conflict escalation that could be pursued as an offensive tactic by one party when the possibility of retaliation (for military or political reasons) is limited. During the Iran-Iraq war, for instance, Iran, unable to retaliate to Iraq's extensive missile bombardment of Tehran, was forced to accept Iraq's demand for a cease-fire. During the Gulf War, the United States, fearing the dissolution of the international coalition against Iraq, exerted tremendous pressure on Israel not to retaliate.

Fourth, WMD proliferation is vertical and horizontal. Vertical proliferation refers to the quantitative and qualitative dimensions discussed above. Horizontal prolif-

eration refers to the possibility that proliferation could be contagious. In the conflict-ridden Middle East, the acquisition of WMD by one state is often an incentive for others to do the same. This has characterized the dynamics of proliferation with respect to Iran and Iraq, and Israel and several of its Arab neighbors.

The fifth observation is the inter-connectivity of the region. Those familiar with the Middle East readily recognize the dynamics that link the various sub-regions and problems of the area to one another. A myriad of historical, cultural, social, political, and economic factors accounts for the centripetal forces connecting North Africa, the Nile Valley, the Levant, and the Gulf region. For example, the prospects of a radical Islamic regime coming to power in Algeria deeply concerns moderate regimes in the entire Middle East. Another example was the linkage made by some Arab observers during Operation DESERT SHIELD between Iraq's occupation of Kuwait and Israel's occupation of Arab lands. Because this argument implied that U.S. policy was based on double-standards in dealing with regional conflicts, the Bush administration strongly denied any linkage between the Gulf crisis precipitated by Saddam's occupation of Kuwait and the Arab-Israeli conflict. Ultimately, however, it was precisely because of that linkage that the United States was motivated to convene the Madrid Peace Conference immediately in the aftermath of the Gulf War with Israeli and broad Arab participation.

The proliferation of more accurate, long-range missiles coupled with the spread of more lethal chemical and biological weapons has had complicating implications for the states in the region. Thus, for instance, even if a political settlement is finally reached between Israel and the Arabs to end their dispute, such a happenstance is not likely to lead to a verifiable agreement to rid themselves of WMD. Israel would still be concerned about Iran's WMD capabilities, Syria about Turkey's superior conventional

forces, Saudi Arabia about a potentially bellicose Iraq, and so on. The proliferation of WMD acts as a centrifugal force.

Finally, we note that nonproliferation of WMD is one of the fundamental national strategic goals of the United States; in the Middle East, it is one of the U.S. foreign policy priorities.[57] The nonproliferation strategy faces formidable obstacles. Besides the fact that the region is replete with WMD capabilities and structural factors buttressing the tendency to proliferate, there are other impediments. Among these are the existence of several suppliers willing to sell sensitive material, technologies, and scientific information to countries in the region leading to the development of WMD capabilities; the difficulty to control dual-use items; indigenous production; and the relative ease by which proliferators can cheat.[58]

What are the security implications of the proliferation trend for the Middle East and beyond? How are the security concerns viewed by people in the region? And, how does the proliferation dynamic in the region affect U.S. interests and policies in the Middle East? These are the basic questions that the rest of the monograph will attempt to address.

Regional Perspectives.

The India and Pakistan nuclear tests resulted in heightened public awareness in the Middle East regarding the broad issues of proliferation, national security, and the role of the U.S. regional policies. In the Arab world, these issues were publicly addressed and debated by the two most prominent Arab journalists, Mohammad Hasnyn Haykal, the former editor of the influential Egyptian *Al-Ahram* daily, and Mr. Ghassan Tueini, founder and owner of the respected Lebanese daily *Al-Nahar*. Mr. Haykal speculated about the possibility of an Arab-Islamic-Hindu cultural clash in light of his claim that the Arabs had invested $300-$400 million in the Pakistani nuclear program, and the need of both of these newly declared nuclear powers for added resources which will gravitate them toward the Gulf

states. The Gulf region is vulnerable, according to Haykal, because the U.S. military presence as security guarantees cannot be counted on due to shifting strategic priorities. Mr. Tueini alluded to the discrepancies in military strength between Israel and the Arab states and stated that the Arabs remain 12-15 years away from developing a nuclear capability.[59]

Even before the India-Pakistan tests, there had been some serious discussion on the Arab side of the implications of Israeli weapons of mass destruction for Arab security. In a series of newspaper articles, one military writer discussed extensively the role of nuclear, chemical, and biological weapons in the Israeli military doctrine.[60] He noted, for example, how Israel's nuclear capability placed restrictions on the Arabs in the October 1973 war, whereby Egypt and Syria decided to limit that war to the Arab-occupied lands in Sinai and the Golan and not to cross over to Israel proper, as this could trigger an Israeli nuclear response. During the initial stages of that war when the Arabs appeared to be on the verge of victory, Prime Minister Golda Meir, the writer alleged, authorized the deployment of 13 nuclear warheads in a manner that would be detected by U.S. satellites. Her purpose was to send a message to the Americans to urgently meet Israeli defensive requirements. Otherwise, Israel might be compelled to use its nuclear weapons. In a more recent article, the writer analyzed the implications of a reported secret security forum composed of 85 Israeli strategic and military experts charged with a comprehensive review of Israel's military doctrine in light of the changing regional geostrategic realities. These include the India and Pakistan nuclear tests, the progress made thus far in the peace process, the situation on the Lebanese and Syrian fronts, the possibility of a Syria-Iranian military cooperation to confront the Israeli-Turkish military cooperation, and so on.

The point of this discussion is that a trend has existed, probably since 1973, whereby knowledge of Israel's WMD programs and their impact on the national security of

various Arab states has been gradually spreading from the ranks of political and military leadership, to the elites, and the general public. The consequence of this trend, in light of such recent developments as the Arab military defeats in 1967 and 1973, Arab military inaction during Israel's 1982 invasion of Lebanon, the stalled peace process due to the hard-line policies of the present Likud Government, and the India-Pakistan nuclear tests, is that the Arab public is more openly questioning the security policies of its leadership and demanding that the power gap in which the Arabs find themselves be bridged.[61] These public demands translate to the political pressure to proliferate. How is this political pro-proliferation phenomenon assessed and justified?

Based on interviews that I conducted with a number of Arab and Israeli analysts in June 1998, the regional view can be summarized in the following.

The Parity Imperative. Since World War II, all nations with nuclear power balanced one another. Hence, there was a balance between the two superpowers; in Europe the two declared nuclear powers, France and England, balanced the nuclear threat of the Soviet Union; and, in Asia the declared nuclear power of China was, until recently, balanced by the undeclared nuclear power of India, whose power was in turn balanced by Pakistan. The Middle East has been an aberration whereby an undeclared nuclear power—Israel—remains unbalanced. This situation has resulted in military, strategic, and political dislocations at the expense of the Arabs. Since Israel is unwilling to sign the Nuclear Non-proliferation Treaty (NPT) and to dismantle its WMD, the Arabs are left with no choice but to seek ways and means to balance Israel's power.[62] Because of economic, technological, and legal reasons (Egypt and other major Arab states have signed and ratified the NPT), the Arabs cannot balance the Israeli nuclear program with a similar one of their own. Their only option is, therefore, to resort to chemical and biological weapons as deterrents. According to one journalist, the Arabs' possessing such a deterrent capability is made that much more urgent by the fact that

Prime Minister Netenyahu has proven to be a "strange person, extremely dangerous, one who does not abide by international agreements, and hence capable of using nuclear weapons for tactical reasons."[63]

The NPT Shortcomings Incentive. The NPT has, according to this view, certain inherent shortcomings, the most important of which is that nations like Israel which have not signed the treaty can develop their nuclear capabilities without violating international law. Furthermore, the CWC was designed in such a way as to give equal security assurances to those states that have signed the NPT and those that have not. Hence, Israel also benefits from this arrangement and gains added advantages over the Arabs. While the United States pressures the Arab states to adhere to the NPT and the other international instruments concerning WMD, it fails to require the same of Israel. As the sole remaining superpower, the United States can force Israel to sign the NPT and to end its nuclear proliferation as it successfully did with Argentina, Brazil, and South Africa. Its policy of double-standards force the Arabs to seek to balance Israel's WMD capabilities.[64]

The Vertical Proliferation Factor. There had been a tacit understanding between several Arab leaders and intellectuals that the initial Israeli nuclear program was designed primarily to guarantee the survival of the country and hence was a weapon of last resort. Recent reports concerning the large size of Israel's nuclear arsenal, development of radiological weapons, its continued efforts to develop and enhance all other aspects of its WMD programs (chemical, biological, missiles) leads to the conclusion that Israel's WMD program has now become a potential tool of its foreign policy. According to Major General Abdel Halim, "Israel does not yet use its arsenal in this way, but it could in the future use nuclear weapons to enforce foreign policy goals and not just as weapons of last resort. We, as Arabs, must think about this and how to confront it."[65]

The Israeli vertical proliferation factor as an incentive for Egypt to proliferate was rationalized in a different manner by another analyst. Dr. Hala Mustafa was more concerned about the post-peace process period whereby regional powers—including Egypt, Turkey, Saudi Arabia, and Israel—may find themselves in competition with one another. States that possess a good mix of the economic, political, and military instruments of power will have an advantage in this competition.[66] This logic leads to the conclusion that, if Israel does not dismantle its weapons of mass destruction in the post-peace process period, then Egypt is compelled to strengthen its military instrument of power by bolstering it with WMD capabilities.

The Monitoring Proposal. Another view argues that the United States, which in the age of globalization occupies the position of "chairman of the board," [read the U.S. President] does not regard the Israeli nuclear arsenal as a destabilizing issue. The Arab public rejoiced over the Indian and Pakistani nuclear tests as these Third World nations successfully challenged the New World Order and developed nuclear capabilities on their own. In addition, some of the Arab masses have applauded the Pakistani "Islamic bomb" as if this bomb empowers them against Israel, and without understanding that to "legitimize the so-called Islamic bomb by implication legitimizes the Israeli bomb. The reality, however, is that no one has invited the Arabs to the nuclear banquet, and, since they are unable to develop their own nuclear capabilities, an alternative had to be found."[67]

Mindful of the fact that Israel, in the present circumstances, will not dismantle its nuclear program, and because Egypt is at peace with Israel, Egypt would like Israel to agree to bilateral inspection of the Israeli nuclear facilities. This proposal serves two purposes. Its implementation will constitute a confidence-building measure between the two states, and by extension between Israel and the rest of the Arab world. An inspection regime

will also alleviate Egyptian concerns regarding the safety and environmental impact of the Israeli nuclear program.

Because Israel is unwilling for a host of reasons to become a declared nuclear state, the Egyptian bilateral inspection proposal cannot be seriously entertained. The net result, according to this argument, is for Egypt to pursue a chemical weapons option for deterrence objectives as advocated by Amin Hoeidi, a prominent Egyptian writer on strategic and military affairs.[68]

The Ideological Quest. There exists a virtual unanimity among Arab analysts that the hard-line policies of the Netenyahu government are responsible for the rise of radicalism and instances to terrorism in the region. Under Netenyahu, Arab governments have been left with nothing to bargain with, since:

> all the negotiating cards are with Israel, military power, land, and a powerful ally in the form of the United States. . . . The two variables in the Middle Eastern equation are Israel and the United States; the Arabs are a constant. Hence the key to the regional peace is with Israel and the United States.[69]

Not only has Netenyahu frozen the peace process, his policies have even harmed Arab countries that concluded peace treaties with Israel. In Jordan, for example, there is a serious concern that peace with Israel has not produced any economic dividends as was promised by the late Prime Minister Rabin. Because of Netenyahu's policies that reneged on previous agreements, "we cannot even export one pencil to Israel; Israel does not want it; they use Jordan to export textiles and other goods to the Arab world . . . Why does the United States allow Israel to get away with violating international law?"[70]

The consensus among many Arab observers is that Arab governments are in a helpless position to achieve progress on the peace process. Netenyahu's insistence that the process is based on the "peace for peace" formula rather than the U.S.-sponsored Madrid Conference's "land for

peace" formula has stripped Arab negotiators of any bargaining chips. From an Arab perspective, these developments have helped create a regional political environment characterized by alienation and desperation—the prerequisite conditions for the rise of radicalism. The concern is the potential acquisition by a radical group of a chemical or biological weapon. In the name of national liberation or resistance, such a weapon could be used against an Israeli target; it could also be used to destabilize regimes with whom the group has ideological differences.[71] Arab governments face the dilemma of combating terrorism without appearing to thwart legitimate resistance efforts in south Lebanon and by Palestinian groups. The responsible course of action, as an Arab League official stated, is for Arab governments to "guide" and "channel" resistance groups such as Hizballah and Hamas to ensure that innocent civilians are not harmed, and that CB weapons are not used.[72]

Weapons Control and Confidence-Building Measures Tracks. The Israeli nuclear program is of major concern to the Arab League and the Arab states. This concern was clearly referred to by Usam al-Baz, political advisor to President Husni Mubarak, when he stated, "We consider this program [Israel's nuclear program] very seriously, and are working to develop our armed forces and to enhance our military capabilities for Egypt has the right to protect its regional security and preserve its sovereignty."[73] This represents one form of Arab response, namely, enhanced military readiness which presumably includes weapons capable of deterring Israel's nuclear power; in short, a proliferation path.

An alternative approach would be to seek confidence-building measures (CBM) that ultimately would lead to the control and eventual elimination of nuclear and other weapons of mass destruction. The logic of this approach is essentially the same as the "Monitoring Proposal" discussed above with one fundamental difference. The scheme concerns an Arab non-government organization (NGO)—a

novel phenomenon in the Arab world—focusing on arms control and security issues.

The Amman-based Center for Research on Arms Control and Security, using equipment donated by several European governments, has allegedly been able to provide scientific proof of Israeli nuclear activities in its four reactors. Using krypton and gamma ray sensors, the Center claims to have documented Israeli plutonium separation and uranium enrichment in extremely high quantities. It claims to have also measured above normal levels of radiation in the city of Karak and other parts of southern Jordan that were linked to increased cancer rates among Jordanians. The source of the radiation is the 40-year-old Dimona reactor.[74]

The Center director, Dr. Khalil, had suggested to an Israeli academic and consultant to the Israeli Defense Forces the possibility of a joint Jordanian-Israeli committee composed of non-government personnel to conduct scientific sampling in the periphery areas of Israel's known four reactors. A few weeks later, Dr. Khalil was informed by an Israeli official that sampling of Israeli soil is in violation of a sovereignty clause contained in the Comprehensive Test Ban Treaty (CBTB) which Israel has signed. As is the case with the Egyptian monitoring proposal, Israel could not agree to such a measure, even by a group of private scientists, and remains an undeclared nuclear state.

While the Center is dedicated to the ideals of arms control and the elimination of all WMD from the region, it believes that, if it were to make its data public, the gravity of the situation would enrage the Arab masses and would place more pressure on governments to confront the Israeli nuclear program. The only hope lies in bilateral approaches which might become feasible in the distant future as Israeli citizens become more concerned about the safety of their nuclear programs. For the present, the failure of this path represents yet another argument in favor of Arab proliferation as a deterrent.[75]

Israeli Views. Because of Israel's policy of ambiguity with regard to its nuclear capability, and its denial as to the existence of a chemical and biological weapons program, Israel's WMD programs are not debated openly. They are state secrets whose disclosure would subject the offender to severe penalties.[76] Consequently, Israeli officials are prepared to voice concern especially about Iraq, Syria, and Iran's WMD programs, discount the ability of any inspection regime to detect CB weapons that a country wishes to hide as these weapons defy intelligence assessment, and surmise that under certain circumstances an Arab country could use WMD as an offensive weapon. Their approaches to the question of regional proliferations include the short-term proposal of an U.S.-led vigorous counter-proliferation scheme to get at the supply-side of proliferation, the development of more advanced technologies to neutralize CB weapons, and the long-term proposal of confidence-building measures among the nations of the region.[77]

The long-standing Israeli concern about Arab intentions, and the assessment of Arab enhanced capabilities in the CB weapons spheres must justify their own WMD arsenal, although an open WMD (read nuclear) strategy does not exist. In attempting to deal with the broad question of regional WMD proliferation, a number of dilemmas face the Israelis. To begin with, they are unable to become a declared nuclear state and openly negotiate WMD reduction measures with their adversaries as this will immediately jeopardize their relationship with the United States. As one Israeli scholar stated, "by law the United States will slap sanctions on us . . . We get some $3 billion a year and much of our technology . . . "[78] Another dilemma is that progress on the peace process may lessen the motivation to develop WMD by the countries involved in the peace process. This lessened motivation, however, does not apply to Iraq and Iran whose drives to acquire WMD are unrelated to the peace process. Israel must retain a

deterrent capability against these countries. Iraq remains a problem for,

> in a strategic confrontation in the Gulf, Saddam may once again send Scuds to Israel. This cannot be discounted. On the other hand, in the ideological climate of Iran, Israel fears Iran for we don't know it . . . Israel does not have a feel for Iran. Iran acts in contradictions: an ideological state but a very lively press . . . it develops chemical weapons and then signs CWC (Chemical Weapons Convention) . . . [79]

A third major dilemma is that if a strategic balance is to exist in the Middle East, this may not necessarily lead to the nonuse of WMD as was the case in the West-East confrontation. "The logic of the cold war does not apply; in the Middle East there are different social and political cultures so that constraints on the first use of these weapons are different from the West."[80] From an Israeli perspective, therefore, "Israeli security doctrine prefers for other countries not to have WMD capabilities."[81] And as Egyptian President Mubarak complained, "Israel wants to possess nuclear arms and missiles but does not want other countries to have anything."[82] Clearly the dilemma lies, to use the vernacular, in how to have your cake and eat it to.

The difficulties associated in resolving these predicaments do not bode well for reversing the proliferation trend in the region. A further complication is that Israeli continued insistence on absolute security based on self-reliance, which had led it to the development of the ultimate deterrence weapon, and its open alliance with the United States to ensure its military and technological superiority over the combined forces of its regional adversaries, create the very imbalance that is at the heart of the proliferation dynamic.

The regional perspectives outlined in this section reveal the extent of mistrust that exists among the major regional actors. Doubting the motivations of others at a time when more credible information about regional WMD programs is made available through intelligence leaks, journalistic

reporting, and academic writings, is likely to fuel the upward spiral of the proliferation trend.[83] At the same time, however, there is a desire and a sense of urgency on the part of the majority of Arab and Israeli intellectuals for a Middle Eastern security architecture which will eventually halt and reverse the WMD proliferation trend. How can the United States contribute to this goal? I will address this question in the next section.

U.S. Options and Policy Recommendations.

This monograph attempted to discuss the question of WMD proliferation in the context of the strategic security environment in the region. To draw the proper conclusions that have relevance to U.S. policy, we must note existing U.S. strategy on WMD proliferation.

Two concepts define U.S. efforts to halt and reverse the spread of WMD, and, in the unfortunate event of their use, to minimize their consequences. These are the policies of nonproliferation and counter-proliferation. While the two approaches are closely linked, nonproliferation refers generally to diplomatic efforts that the Department of State and other foreign policy agencies wage, and counterproliferation generally involves military measures that the Department of Defense and appropriate intelligence agencies conduct. Furthermore, the former approach is highly dependent on the cooperation and receptivity of other nations. The latter approach is essentially unilateral and less dependent on other countries.

Deputy Assistant to the President for National Security Affairs James Steinberg has clearly defined the key elements of U.S. nonproliferation strategy. He stated:

> First, establishing and strengthening international treaty regimes; second, dealing with the supply side of the problem through multilateral mechanisms to control the spread of proliferation-related technologies, equipment, and material, and finally, addressing the demand side by designing and

implementing regional approaches to reduce incentives for proliferation.[84]

Hence, U.S. nonproliferation efforts involve the creation of security regimes that address the proliferation threat through international treaties such as the NPT, the CWC and the BWC. A more recent proposal is the Fissile Material Cutoff Treaty (FMCT) envisioned to end the production of fissile material for nuclear weapons.

As for the supply side, controlling the export of technologies, material, and equipment, may be very challenging in this post-Cold War period where economic and commercial benefits constitute a strong proliferation incentive. A host of other challenges such as dual-purpose material, indirect shipments, and the tendency toward globalization make more difficult the regulation of the movement of material, technologies, and people that could contribute to the development of a WMD program.

The third element of addressing the demand side is especially pertinent to the Middle East. This involves the monumental diplomatic efforts to resolve some of the world's most intractable conflicts, the Arab-Israeli dispute, the Iran-Iraq rivalry, the national survival issue of water resources between Turkey and the down stream countries of Syria and Iraq, and a host of other regional issues no less fractious.

Complementing the nonproliferation approach is the counter-proliferation initiative launched in 1993 by Secretary of Defense Les Aspin. The initiative was in recognition of the threat posed to the United States and its national interests by the proliferation of nuclear, biological, and chemical (NBC) weapons. The prospects were (are) real that regional aggressors, terrorist groups, religious cults, and third-rate armies will attempt to use these weapons. A recent report of the National Defense Panel aptly summarized the counter-proliferation initiative when it stated,

> . . . our operational concepts stress preventive measures including enhanced intelligence operations, an adequate homeland defense, the means to manage the consequences of a serious attack within the United States or against our interests abroad, and force dispersion with a limited logistics footprint, as well as defenses for our forces and the ability to project power in the absence of forward bases.[85]

In the Middle East region, counter-proliferation measures are obviously critical given the presence of the U.S. military in the Gulf region. Also, intelligence operations are critical in a region where WMD proliferation occurs despite the often applicable international treaties, and where economic resources are plentiful to entice suppliers.

Given the calculus of WMD proliferation in the Middle East, assessing accurately the impact of the U.S. anti-proliferation strategy as outlined above is extremely difficult. Undoubtedly, there are successes and failures. Many nations in the region have signed and ratified international treaties and conventions dealing with the demand side of proliferation. While it is impossible to attribute these signings to U.S. nonproliferation policy, we cannot entirely dismiss the possibility given the disproportionate influence that the United States exerts in many parts of the region. Consider, for example, President Mubarak's statement, "If the time comes when we need nuclear weapons, then we will not hesitate. I say if we have to, because this is the last thing we think about. [But] we do not think now of joining the nuclear club."[86] Egypt, apparently a virtual nuclear state according to what this statement implies, is the recipient of a $1.2 billion annual aid package from the United States which would be jeopardized if it were to "join the nuclear club."

On the supply side, on the other hand, the 1994 agreement between the United States and North Korea to suspend operations at Yongbyon nuclear weapons complex, and to halt production of plutonium in exchange for U.S. aid to construct light-water nuclear power plants in North

Korea, may eventually prove critical, albeit indirectly, in limiting missile and related technology proliferation in the Middle East.[87]

Furthermore, a careful review of the U.S. record in anti-proliferation efforts with respect to countries like Iran, Iraq, Libya, Sudan, and others will likely reveal mixed results. Altogether, I believe, the U.S. strategy has succeeded in slowing WMD development programs, made the quest for them more expensive and more difficult, and proposed ideas for alternative security regimes that in a post-peace process period and a more stable Gulf region may be seriously considered. For these reasons, the current anti-proliferation strategy should continue. Also and because of the proliferation dynamic in the region, I recommend two basic adjustments in U.S. security strategy toward the Middle East.

First, policy makers should reassess the emphasis placed by the current strategy on the capabilities component of the capabilities, motivation, and use triad in a proliferation threat model. In military parlance these components are, respectively, deployment, doctrine, and employment. The logic that a reduction in WMD capabilities would lessen the probability that these weapons will be used appears sound. But the fact is that WMD capability in the region as a whole is increasing, perhaps at a slower rate, but nevertheless increasing in quantity and quality. The current strategy does recognize the motivation component as it attempts to design ways and means [shape the environment] to reduce incentives for proliferation and, so, use. The problem with this scheme is that the Arabs and Iranians question U.S. credibility because of the double-standards charge. Finally, as for the use component and as we have seen, there is the argument that the probability of using WMD by one side is reduced as the capabilities of the opposing side increase thus leading to an effective deterrence regime. This argument is especially true if nations are aware of each others' capability; that is, it assumes a degree of transparency. In other words, if the

ultimate objective of the anti-proliferation strategy is nonuse of WMD, then proliferation is more likely to ensure nonuse. The operating logic here is that a potential offending party will be deterred for fear of credible retaliation.

The discussion suggests that relationships among capabilities, motivation, and use are highly complicated and complex. I propose a more thorough examination of this model and the relationship between its components in the context of the nations of the Middle East to deal more effectively in our anti-proliferation strategy with the motivation and use elements.

Second, U.S. credibility is a critical factor in the attempt to shape the proliferation environment in the region. As we have seen in this study, Israeli nuclear power and its military superiority are at the core of the WMD proliferation trend in the area. To redress the imbalance, Arabs have sought to acquire the so-called "poor man's bomb" as a deterrent to Israeli nuclear power and to its superior conventional forces. In the Gulf, the Iran-Iraq rivalry is the other major cause for WMD proliferation.

In my judgement, U.S. strategy toward Israeli security and its strategy in dealing with the threat in the Gulf continue to result in the accusation of double-standards. They cast doubt as to the evenhandedness of U.S. anti-proliferation efforts.

The operative Department of Defense document on Middle East security strategy states:

> Today we support Israel's security through a combination of measures, including security assistance to maintain its qualitative military edge over any likely combination of aggressors.[88]

From an Arab perspective, this statement, as many other similar declarations by senior U.S. officials dedicated to ensuring Israel's qualitative superiority, leaves no doubt as

to the cause of the military imbalance in the region. In this context, U.S. nonproliferation initiatives, especially in that they do not include Israel, ring hollow in most Arab capitals. Similarly, the dual containment policy with respect to Iraq and Iran raises many eyebrows as to its fairness and appropriateness, particularly because of the interconnectivity of the region. For many Arabs, and the humanitarian consequences of the sanctions against Iraq aside, these sanctions raise questions as to the standards the United States so meticulously applies with regard to Iraq's adherence to international law (UNSC resolutions), and those standards applied to Israel's adherence to the same (UNSC 242, 338, 425, and Oslo Agreements).[89] For Iranians, the unilateral U.S. imposition of sanctions coupled with its military buildup in the Gulf represents an unjust and a serious threat to Iranian national security. Iran believes that it has no option but to seek to balance that threat.[90]

My second recommendation, like the first, is not a change in U.S. basic strategy but a more careful statement of the means by which the strategy is to be accomplished. I suggest that the stated policy of ensuring Israel's military superiority should be abandoned. The statement quoted above and similar declarations do not serve the purpose of enhancing Israel's security as much as they serve a domestic political agenda. The U.S. security strategy should be simply a commitment to the security, survival, and independence of Israel, exactly as it is toward all other friendly nations in the region. Arab leaders and intellectuals understand very well the close alliance and the special relationship between the United States and Israel, and have come to accept the reality of the state of Israel. Therefore, abandoning the notion of U.S. ensuring "Israel's military superiority" in favor of the more general idea of "commitment to Israel's security" will not change the ultimate outcome of guaranteeing the survival of Israel, but will go a long way in portraying U.S. security strategy for the Middle East in a more balanced fashion.

Concerning the Gulf, the United States has insisted that its policy of "dual containment" is required by the fact that the "contained" states are "rogue" states. This "highfalutin" reference to Iran, accompanied by what is perceived by the Islamic Republic as confrontational posturing in the Gulf, accomplishes exactly the opposite objective of anti-proliferation. I have also recommended abandonment of the confrontational rhetoric and posturing in favor of gradual mutual confidence-building measures leading to restoration of diplomatic relations between the two nations. Under such circumstances, we can do no worse in shaping Iran's behavior than is currently the case.[91] As for Iraq, the United States should accept the fact that the hoped for revolution supposed to unseat Saddam Hussein is long in coming, and that greater and more veritable efforts should be made for the humanitarian needs of the Iraqi people.

Those with a cursory or no familiarity with the Arab and Islamic cultures may view some of the above recommendations as simplistic for they pertain to semantics. The advent of Islam in the 7th century with its Holy Book, the *Qur'an* (literally "The Reading"), reinforced a long tradition of the Arabs' preoccupation with semantics in the form of poetry or prose defining, as it continues to do, the very essence of their culture. Words and phrases are not only examined for their apparent meaning, but are often the subject of intense analyses to discern possible hidden messages. Middle Eastern intellectuals and journalists tend to process policy statements by the world's only superpower with the usual traditional zeal. This might account for the many conspiracy theories that frequently circulate in the region. The adjustments to the existing policy that I propose will, eventually, have a positive impact on enhancing the credibility of the United States and its ability to more effectively influence the proliferation dynamic. This would especially apply to the motivation component of the proliferation paradigm.

At the operational level, the United States should intensify its efforts in the area of confidence-building

measures (CBM). These measures span a wide spectrum of activities and involve many different actors. They might include official contacts at appropriate levels to work on bilateral and multilateral security issues, the sharing of information and expertise, fostering appropriate civilian understanding of security and defense issues, and the sponsorship of academic conferences and workshops. The U.S. Army, with its combat readiness and training experience, operating in a WMD-contaminated environment can especially play a constructive role in this regard. Its appropriate theater engagement plan, as that of the other services and commands, should emphazise training our regional allies to be combat-ready in a WMD-contaminated environment, including planning and conducting military consequence management operations in response to incidents involving nuclear, biological, and chemical weapons. In addition, the Army's "Mil-to-Mil" contacts should actively promote adherence to major international treaties including the CWC, the BWC, and the Nuclear Non-Proliferation Treaty. And, given the apparent accelerated proliferation trend in the region, the U.S. military should likewise intensify its efforts to monitor WMD activity in the region and particularly nuclear activity. To the extent possible, the monitoring activity should involve the cooperation and active participation of our allied regional military. A priority concern should be the potential acquisition of WMD capability by a nongovernment regional organization.

With respect to the general attempt to promote responsible behavior toward weapons of mass destruction in the region, I recommend the establishment of a U.S. Central Command Middle East Center comparable to the Marshall Center in Europe and the Asia-Pacific Center in Hawaii. It should have the dual mission of instructing military and civilian personnel in U.S. security strategy for the Middle East, and of conducting research in the general area of Middle East security and defense issues in collaboration with local scholars and research centers.

Finally, the few policy recommendations that I proposed address the question of WMD proliferation in the Middle East somewhat indirectly and in the long term. This is because in the current geo-strategic environment of the region, I doubt that more direct and practical policy recommendations are feasible until the underlying political and military causes of proliferation are dealt with. Nations in the region have yet to devise their own security regimes that would give the common confidence and incentive to reverse the proliferation trend.

Conclusion.

The proliferation of weapons of mass destruction and the means of their delivery in the Middle East is a real, pervasive, and a serious problem. The secrecy by which each nation in the region surrounds its WMD capabilities and doctrines add to the risk of conflict and the potential employment of WMD. This is because lack of credible information about an enemy's capabilities and intentions may result in a miscalculated adventurism. The inter-connectivity of the region at a time when Middle Easterners lack a common vision of the security paradigms to shape their future means those security regimes that could effectively manage the problem of WMD proliferation are nonexistent.[92] Also the risk of a nonstate actor or terrorist groups acquiring and using WMD is high in this region.

For these reasons, the WMD proliferation issue is of concern to the United States given its many interests in the region. The protracted nature of the problem requires the continuation of U.S. anti-proliferation strategy and the drive to find solutions to the regional causes of proliferation. These are the burdens of world leadership.

ENDNOTES

1. Pakistan has voiced deep concern about Israeli-Indian cooperation on defense issues and especially in the nuclear field.

Pakistan also alleged that the Israeli Air Force was planning to strike Pakistani nuclear facilities from bases in India, a charge that Israel vehemently denied. See "Pakistani Concern About Indian-Israeli Cooperation," in Abu Dhabi *Al-Ittihad*, Internet Edition, in Arabic, May 31, 1998; Rahma Chellaney, "Israel, India Cooperate on Defense Issues," *Washington Times*, June 2, 1998, p. 1; and Arieh O'Sullivan, *et.al.*, "Israel Denies Targeting Pakistan, *The Jerusalem Post*, Internet Edition, June 2, 1998. In addition, the Clinton administration has voiced concern about Israeli sales of arms and military know-how to India as part of the sanctions imposed on the latter following its nuclear tests. See Arieh O'Sullivan, "Report: Israel Won't Stop Selling Arms to India," *The Jerusalem Post,* Internet Edition, November 6, 1998.

2. For example, several months following the India and Pakistan nuclear tests, press reports suggested that both nations have exaggerated the number and size of the nuclear weapons each had detonated as part of a "game of nuclear bluff." See Robert Lee Hotz, "Tests by India and Pakistan are disputed," *The Philadelphia Inquirer,* September 16, 1998, p. A2.

3. The White House, *A National Security Strategy For A New Century*, Washington, DC, October 1998, p. 6.

4. For an excellent, although somewhat dated but still valid, discussion of U.S. regional interests see, Department of Defense, Office of International Security Affairs, *United States Security Strategy for the Middle East,*Washington, DC: The Pentagon, May 1995. This document refers to the fact that the Middle East region contains 70 percent of the world's oil and notes that, "The world will be even more dependent on Persian Gulf oil in the early 21st century than it is today," p. 3. To put this in perspective, Saudi Arabia alone has ten times as much oil as the United States, and since oil is traded on a worldwide market, any changes in the volume of supplies or in prices would immediately impact the international market, and especially the U.S. market, which imports about 20 percent of its total energy needs from the Middle East, and those of its principal economic partners, some of which, like Japan, depend on Gulf oil for a large percent of their consumption needs.

5. This is essentially one of the major conclusions of Secretary of Defense William S. Cohen, *Report of the Quadrennial Defense Review,* Washington, DC, May 1997.

6. *Jane's Defense Weekly*, *Jane's Intelligence Review*, and *Jane's Strategic Weapons Systems* have published many studies about the WMD arsenals of specific Middle Eastern nations. Also, Anthony Cordesman, *Weapons of Mass Destruction in the Middle East*, London:

Brassey's, 1991; U.S. Congress, Office of Technology Assessment, *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, OTA-ISC-559, Washington, DC: U.S. Government Printing Office, 1993. For a specific discussion on nuclear weapons, see Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East,* Cambridge, MA: The MIT Press, 1997, especially chapter two, focusing on Israel, Iraq, Iran, Libya, Syria, Egypt and Algeria; and for a discussion of chemical weapons proliferation see Gordon M. Burck and Charles C. Flowerree, *International Handbook on Chemical Weapons Proliferation*, New York: Greenwood Press, 1991, chapter four, which focuses on the Middle East and North Africa.

7. U.S. Department of Defense (DoD), *Proliferation: Threat And Response*, Washington, DC, 1997; available on the Internet at http://www.defenselink.mil/pubs/prolif97/meafrica.html.

8. "The Middle East And North Africa: Goals and Interests, in *Ibid.*, Internet Edition, p. 1 of 20.

9. "The Middle East And North Africa: Capabilities, Intentions, And Trends," in *Ibid.*, p. 2 of 20.

10. For a general discussion on the reasons for proliferation, see Scott D. Sagan, "The Causes of Nuclear Proliferation,"*Current History,* April 1997, pp. 151-156.

11. See "Testimony before the Permanent Subcommittee on Investigations of the Senate Committee on Government Affairs by DCI, John Deutch" on March 20, 1996, in Federation of American Scientists, *Arms Sales Monitor* (On line edition at htttp://www.fas.org/irp/cia/product/dci-testimony-032096.html. Also see DoD, *Proliferation: Threat and Response*, pp. 7, 8, of 20.

12. Israel is, of course, a major recipient of advanced U.S. weapons systems and technologies that allow it to develop a highly modern and successful indigenous military industry. In addition to the existence of a variety of land, sea, and air based delivery systems (including the advanced Jericho-I missile and the 1,400 km range Jericho-II ballistic missile), Israel announced in September 1998 its successful testing of the sophisticated high-altitude and long-range anti-missile, the Arrow-2 missile. See *The Washington Post,* September 16, 1998, p. 37. With respect to Israel's general WMD capabilities, and in addition to the sources cited in note 6 above, see the well-documented web page of the Center for Nonproliferation Studies [www.cns.miis.edu/research/wmdme/israel.htm], and Institute for National Strategic Studies, *1998 Strategic Assessment*, Washington, DC: National Defense University,

1998, p. 181, which lists Israel, along with other Middle Eastern and Asian nations, as a problem state in the nuclear, biological, and chemical areas.

13. Recently, the residents of a Tel Aviv suburb have acted to prevent the Netenyahu government from expanding a top-secret biological institute widely believed to produce biological weapons, and "believed by many foreign diplomats to be one of the most advanced germ warfare institutions in the Middle East." Christopher Walker, "Israeli Court Blow to Germ War Plant," London *Times,* Internet Edition, September 25, 1998. See also the web page of the Center for Nonproliferation Studies, *Ibid.*, and Dana Priest, "U.S. Goes Easy on Allies in Arms Control Crusade," *The Washington Post*, April 14, 1998, p. A1. It is further alleged that Israel is developing an "ethno-bomb" whereby viruses are developed to attack genes carried only by Arabs; see Uzi Mahnaimi and Maie Calvin, "Israel Planning 'Ethnic' Bomb as Saddam Caves In," London *The Sunday Times*, Internet Edition, November 15, 1998.

14. Dana Priest quotes defense intelligence reports, including a once-secret 1990 Defense Intelligence Agency report, confirming Israel's chemical weapons capabilities. Also see Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation,* pp. 191-192.

15. For a detailed discussion of Israeli chemical weapons, see Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation,* Ch. 4, pp. 187-207.

16. See "Hussein Calls Attack on Mashall 'Reckless'," *The Jerusalem Post*, Internet Edition, October 5, 1997.

17. The most up-to-date comprehensive works on the subject are by Israeli scholars Shai Feldman, *Nuclear Weapons and Arms Control in the Middle East,* Cambridge, MA: The MIT Press, 1997, and Avner Cohen, *Israel and the Bomb,* New York: Columbia University Press, 1998.

18. The high number is based on William E. Burrows and Robert Windrem, *Critical Mass: The Dangerous Race for Superweapons in a Fragmenting World*, New York: Simon & Schuster, 1994, p. 308. Feldman relies on a *New York Times* report that estimated the Israeli nuclear arsenal to be 50-200 warheads. See Feldman, *Ibid.*, p. 43. The several Egyptian and Jordanian military strategy and national security experts that this writer interviewed in June 1998 have consistently

used the base number of 200 nuclear warheads as the most likely estimate of the size of the Israeli nuclear arsenal.

19. Avner Cohen refers to the Israeli policy as a policy of "nuclear opacity." The term "opacity" refers to a specific meaning of "ambiguity" which "is a situation in which a state's nuclear capability has not been acknowledged, but is recognized in a way that influences other nations' perceptions and actions. . ." Cohen, *Israel And the Bomb*, p. 2.

20. See *Ibid.*, "Epilogue," especially p. 342.

21. Essentially the difference between the two sects is historical and involves the question of succession following the death of the Prophet Mohammad. Sunnis accept the custom, sunna, of selecting the most religiously qualified person to assume the mantle of the leadership—referred to as the institution of the *caliphate*—of the community, nation. Shi'a, on the other hand, believe that the leadership of the community—the institution is referred to as the *imamate*—belongs exclusively to the descendant of the prophet through his daughter Fatima and her husband and the Prophet's cousin Ali. The initial "political" division between the two sects eventually led to important theological differences such as the Shi'a belief that the true Imam is the bearer of a part of the divine being. See the discussion of the terms Shi'a and Sunna in the H.A.R. Gibb and J.H. Karamers, eds., *Shorter Encyclopaedia of Islam,* Leiden: Holland, E. J. Brill, 1961.

22. See Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation,* p. 237.

23. See Paula A. DeSutter, *Denial and Jeopardy: Deterring Iranian Use of NBC Weapons*, Washington, DC: National Defense University, 1997, p. 43.

24. Iran's U.N. Ambassador Rajai Khorasani indicated that Iran's use of chemical weapons would be to retaliate against Iraq's use of these weapons. *New York Times*, April 3, 1984, p. A 12. For additional statements by Iranian officials confirming Iran's acquisition of CW agents, see Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation*, pp. 243-244. Also, DeSutter provides ample evidence of contradictory statements by Iranian officials as to Iran's possession of NBC weapons but concluded that statements denying Iran's pursuing NBC capabilities are "blatantly contrary to available evidence." *Ibid.*, pp. 43-46.

25. See Tim Weiner, "Iran Said to Test Missile Able to Hit Israel and Saudis," *New York Times,* Internet Edition, July 23, 1998.

26. Under the Shah, Iran had begun construction of two 1,300 megawatt power reactors at Bushehr. The Islamic Republic is seeking to complete work begun on the Bushehr reactors. Iran is also seeking to build other smaller power reactors at Ahvaz, Darkhovin, and Gorgan. It should also be noted that Iran had ratified the NPT and signed the CTB treaty. See Feldman, *Nuclear Weapons and Arms Control in the Middle East,* pp. 47-53.

27. DoD, *Proliferation: Threat and Response,* p. 4 of 20.

28. DeSutter, *Denial And Jeopardy: Deterring Iranian Use of NBC Weapons*, pp. 50-51. According to *The Jerusalem Post*, two U.S. House members have recently claimed that Iran has actually obtained nuclear weapons and the ballistic missiles command and control system to launch them. These assertions are not concurred with by either the Pentagon or the State Department. See Steve Rodan, "Two US Congressmen Say Iran Has Nukes,"*The Jerusalem Post,* Internet Edition, April 15, 1998.

29. Anthony H. Cordesman, *Iran and Iraq: The Threat from the Northern Gulf*, Boulder, CO: Westview Press, 1994, p. 89.

30. DoD, *Proliferation: Threat and Response*, p. 5 of 20.

31. It should be noted that virtually all reliable information about WMD proliferation comes from Western sources. In the Arab world, there is virtually nothing written by a country's nationals about their own state's WMD capabilities, military plans, or strategy. These topics are always shrouded with utmost secrecy. This writer interviewed in June 1998 an Arab scholar of international affairs (requested to remain anonymous) who indicated he no longer participates in international conferences on Middle East security topics as his past participation resulted in extensive interrogation and reprimands by his country's security services. These issues, he was told, "are the business of officials and military experts, not academics."

32. DoD, *Proliferation: Threat and Response,* p. 7 of 20.

33. Cordesman, *Iran and Iraq: The Threat from the Northern Gulf,* pp. 232-234.

34. The resignation from UNSCOM of U.S. inspector Scott Ritter in August 1998 brought to light his claim that the inspection regime has not been intrusive enough, and that Iraq is far from being free of WMD. A subsequent unclassified CIA assessment concluded that, if the U.N. halted its inspection, Iraq could resume with relative ease its production of chemical and biological weapons and that "it could be developing

nuclear weapons right now and the U.S. would not know about it." See John Donnelly, "CIA: Iraq Could Restart Doomsday Line 'Overnight'," *Defense Week,* September 8, 1998, p. 1. There have been recent claims that Iraq is "hiding components for three nuclear weapons." *London Times*, September 10, 1998, reprinted in *Early Bird*, September 10, 1998, pp. 3-4.

35. DoD, *Proliferation: Threat and Response,* p. 17 of 20.

36. See the section on Syria in Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation*, pp. 208-221.

37. I obtained this information from an reliable source during a brief visit to Damascus in June 1998. The source indicated that it is quite possible to witness in the outskirts of Damascus the Syrian military train on preparing the missiles for launch going through the complete exercise in about 30 minutes before moving the missiles back on rails into their underground silos. Apparently this is a deliberate degree of transparency to make credible Syria's WMD capability. This is further buttressed by the fact that Syria is not a signatory to the Chemical Weapons Convention.

38. DoD, *Proliferation: Threat and Response,* p. 18 of 20.

39. M. Zuhair Diab, "Syria's Chemical And Biological Weapons: Assessing Capabilities And Motivations," *The Nonproliferation Review*, Fall 1997, p. 106.

40. DoD, *Proliferation: Threat And Response,* p. 15 of 20. Unless otherwise indicated, I shall rely on this source for the facts regarding Libya's WMD program.

41. See Feldman, *Nuclear Weapons and Arms Control in the Middle East,* pp. 63-65.

42. *Ibid*.

43. Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation*, pp. 267-326.

44. *Ibid*. The authors note that neither the origin or the extent of the damage caused by the fire are known for certain.

45. DoD, *Proliferation: Threat and Response*, p. 16 of 20. For additional detailed discussion of the Rabta, Tarhunah, and Sebha chemical plants, see Joshua Sinai, "Libya's Pursuit of Weapons of Mass Destruction," *The Nonproliferation Review*, Spring-Summer 1997, pp.

92-100. Sinai's conclusions are largely similar to the ones presented here.

46. See Feldman, *Nuclear Weapons and Arms Control in the Middle East,* pp. 58-62.

47. See Burck and Flowerree, *International Handbook on Chemical Weapons Proliferation*, pp. 222-236.

48. *Ibid*.

49. Cairo MENA, Middle East New Agency, in Arabic 115 GMT, April 28, 1997, in *Foreign Broadcast Information Service*, *FBIS*, April 28, 1997.

50. See Jim Mann, "U.S. Caught Napping by Sino-Soviet Missile Deal," *Los Angeles Times*, May 4, 1988, p. 1, 8, quoted in Federation of American Scientists, Intelligence Resource Program, "Saudi Arabia," (Internet Edition) downloaded September 14, 1998.

51. This information was obtained from the Intelligence Resource Program of the Federation of American Scientists at http://www.fas.org/ip/threat/missile/saudi.htm downloaded September 14, 1998. The writer has over the past several years discussed the hypothetical question of Saudi Arabia possessing chemical weapons capabilities with a small number of senior Saudi military officers. In every case, and as expected, the existence of such capability was neither confirmed nor denied.

52. John M. Deutch, "Testimony before the Permanent Subcommittee on Investigations of the Senate Committee on Government Affairs" on 3/20/96 in Federation of American Scientists, *Arms Sales Monitor*, On Line Edition at http://www.fas.org/irp/cia/product/dci_testimony_032096.htm downloaded September 14, 1998.

53. See *The Washington Post*, September 1, 1998, p. A14, and September 6, 1996, p. C6, for related stories on the Sudan plant.

54. See *Sudan Democratic Gazette,* London W14 0ND, UK, January 1996, October 1997, and January and April 1998 issues for related stories.

55. In addition to what has been discussed in the monograph to this point, I have also relied on Shai Feldman in constructing the various observations listed in this section. See Shai Feldman, "Missiles and CBW Proliferation: The Middle East," in American Association for the Advancement of Science, Program on Science and International

Security, *The Proliferation of Ballistic Missiles: Policy Options for the Future,* New Orleans: Proceedings from a AAAS Annual Meeting Symposium, February 19, 1990.

56. *Ibid.* The delivery systems in question have such poor accuracy that they cannot effectively target military forces. Therefore, they must be used against broad area targets like the Arab populace.

57. See The White House, *A National Security Strategy For a New Century*; also, U.S. Department of Defense, *United States Security Strategy for the Middle East,* Washington, DC: The Pentagon, May 1995.

58. Even under the intrusive and extensive U.N. inspection of Iraq's WMD capabilities since the end of the Gulf War, Iraq has managed to retain WMD capabilities by such techniques as breaking down ballistic missiles into component parts for easy concealment, the storing of anthrax and botulinum toxin in coolers for easy transportation, and so on. See *Inside The Pentagon,* September 17, 1998, p. 1.

59. Interesting to note is that Mr. Haykal was invited by the Lebanese Lawyers Syndicate to lecture on the topic of "Human Rights." Instead, Mr. Haykal chose to talk about the India-Pakistan nuclear tests presumably for their critical security implications for the Middle East region. See the full text of Mr. Haykal's lecture and Mr. Tueini's comments in Beirut *Al-Diyar*, in Arabic, June 28, 1998, p. 9. The specifics of what these two prominent journalists said is less important for the purposes of this essay than the fact that they focused on these issues in a public forum, thus drawing attention to the potentially new threats facing the Arabs as a direct consequence of WMD proliferation.

60. See Major General Husam Suwailem, "The Role of Weapons of Mass Destruction in Israel's War View," and "What is Meant by Israel's Review of its Military Doctrine?," in Abu Dhabi *Al Ittihad*, Internet Editions, in Arabic, November 15 and 29, 1997, and September 13, 1998. Also see Dr. Muhammad Dhaif, "The Israeli Nuclear Option: Will It Remain A Subdued Option In The Middle East?," Abu Dhabi *Al Ittihad*, Internet Edition, in Arabic, October 12, 1998.

61. This point was constantly repeated to the author by several Arab military and strategic experts who were interviewed in June 1998. In the words of one prominent expert,

> The average Egyptian citizen is asking the Government, what are you waiting for before you develop weapons of mass destruction capabilities . . . The Israelis have them, and, as

> Netenyahu constantly demonstrates, he cannot be trusted . . . if India and Pakistan can develop them without serious international penalties, then why can't we? . . .

Interview with Retired Major General Ahmed Abdel Halim, Middle East Studies Center, Cairo, Egypt, June 14, 1998.

62. *Ibid*.

63. Interview with Mr. Ahmad Fouad, Head of the Military Section, *Al-Ahram*, in Cairo, Egypt, June 13, 1998.

64. Arguments made by Retired Major General Ahmed Abdel Halim, *op.cit.* General Halim intimated that the Indian nuclear program was developed with the tacit agreement of the United States, which blessed it on the basis of the logic of containing China. In other words, U.S. policy seems to favor that one nuclear regional power balances another. The exception is the Middle East since Israel is a U.S. ally. This, he said, has alarmed the Japanese. A Japanese Embassy officer stationed in Cairo with whom Abdel Halim met, shortly after the India-Pakistan tests, raised the question of the credibility of the U.S. nuclear umbrella for a country like Japan. Halim concluded that the proliferation trend, India against China; Pakistan against India; and, in the future, possibly Iran against Pakistan—all with the tacit consent of the United States—sets a dangerous precedent as technologically capable nations like Japan and Germany may decide to develop their own nuclear capabilities. In short, while the United States talks nonproliferation, its policies have the opposite effect in some instances.

65. *Ibid.*

66. Interview with Dr. Hala Mustafa, Al Ahram Center for Strategic Studies, Cairo, Egypt, June 14, 1998. Dr. Mustafa did not consider Iran as part of the competition equation. Her reasoning was that Iran is likely to continue to be in a "confrontational" relationship with Egypt. This will be the case, especially if Iran is to play the "Islamic card" to cause internal political problems for the Egyptian leadership, and if it continues to oppose an Egyptian role in the Gulf region.

67. Interview with Dr. Ahmad Yousef, Arab Institute of Research and Studies, an Arab League organization, Cairo, Egypt, June 15, 1998.

68. *Ibid.* Amin Houeidi's syndicated columns appear in a number of Arab newspapers, including the leading Egyptian daily, *Al-Ahram*. He justifies the chemical option on the strength of the argument that Egypt can not afford to invest in a costly nuclear program.

69. Interview with General Halim, *op.cit.*

70. Interview with Dr. Kamel Abu Jaber, President, Jordan Institute of Diplomacy, Amman, Jordan, June 21, 1998.

71. In my discussions with an expert on Hizballah of Lebanon, the point was made that this is a highly sophisticated and well-organized group. When I asked if Hizballah possesses CB weapons and whether it might use them against Israel, my interlocutor did not dismiss this possibility. To be sure, neither could he confirm the possibility. What seems certain is that the military wing of Hizballah has taken into account the possibility of an Israeli tactical use of WMD against them and have considered countermeasures. Interview with Dr. Nizar Hamzeh, Chairman, Political Science and Public Administration Department, American University of Beirut, Beirut, Lebanon, June 6, 1998.

72. Interview with Dr. Ahmad Yousef, *op.cit*.

73. See Abu Dhabi *Al-Ittihad,* Internet Edition, in Arabic, September 27, 1998.

74. Interview with Dr. Ayman Khalil, Director of the Center for Research on Arms Control and Security, Amman, Jordan, June 24, 1998. Dr. Khalil is a British-trained nuclear physicist who told me that radiation is carried into Jordan through wind, in which case the level depends on many variables including the nature of activity in the reactor. However, he was very concerned about underground leakages as a result of a series of earth tremors that took place in the Sinai in 1995 (several Egyptians I spoke to claimed that the tremors were in reality Israeli underground nuclear testing), of Israeli underground testing of conventional ordnance, and the age of the reactor which is not subject to any international safeguards and controls. Dr. Ayman indicated that the specific data collected is passed on the Jordanian authorities and is classified. Nevertheless, he can share general conclusions with the Arab League, scientists, and colleagues.

75. Dr. Khalil, *Ibid.*, was critical of existing international agreements and of what he referred to as U.S. double-standards. Following the India tests, the United States was very critical of India and imposed sanctions on it, although India was not a signatory to the NPT or the CTBT and was within its legal rights to conduct tests in its own territory. In September 1997, Dr. Khalil claimed the United States conducted an underground nuclear test of its own in Nevada. That test, based on highly advanced technology, was a “sub-critical test” experiment, which does not release nuclear energy and thus, strictly

speaking, does not violate the letter of the CTBT. Still, the United States violated the spirit of the CTBT.

76. Nuclear technician Venunu, who confirmed to *The Times* of London the existence of Israeli nuclear bombs, was later kidnaped by Israeli agents in Italy and returned to Israel where he is serving a life-sentence. During a workshop at the U.S. Institute of Peace in April 1997, colleagues joked with Israeli scholar Dr. Avner Cohen, whose book on *Israel And The Bomb* was then several months from being published, that this might be a case of "publish and perish!"

77. These summary arguments are based on my interviews with Retired Major General David Ivry, Principal Assistant of the Minister of Defense for Strategic Affairs, and other high-ranking officers, Ministry of Defense, Tel Aviv, Israel, June 18, 1997. Interesting to note is that all the Israelis I interviewed rejected the notion of a Pakistani "Islamic" bomb and viewed Pakistan's nuclear program as a deterrent to India's program. Also, they argued that no relationship exists between the stalled peace process and the regional WMD proliferation impetus.

78. Interview with Dr. Gil Merom, Department of Political Science, Tel Aviv University, June 18, 1998.

79. Interview with Dr. Shai Feldman, Director, Jaffee Center for Strategic Studies, Tel Aviv University, June 19, 1998.

80. Dr. Gil Merom, *op.cit*.

81. Interview with Dr. Gerald Steinberg, Director, Program on Conflict Resolution, Department of Political Science, Bar-Ilan University, Ramat-Gan, Israel, June 17, 1998.

82. President Hosni Mubarak interview in Cairo *Al Ahram*, September 28, 1998. See also Daniel Sobelman, "Mubarak: Netanyahu does not want peace," in Israel *Ha'aretz*, Internet Edition, October 1, 1998.

83. For example, the report that the El Al cargo flight bound for Israel that crashed in Amsterdam in 1992 was carrying a chemical that can be used in the manufacture of the deadly nerve gas, sarin. See related articles in London *The Times*, Internet Edition, October 2, 1998 and *The New York Times*, Internet Edition, October 2, 1998. Another illustration would be Avner Cohen's recently published book on Israel's nuclear program, *Israel And The Bomb*.

84. James Steinberg, "U.S. Non-Proliferation Strategy: 'No Higher Priority'," in *USIA Electronic Journal*, Vol. 2, No. 3, August 1997, at

http://www.usia.gov/journals/itps/0897/ijpe/pj3stein.htm accessed October 6, 1998.

85. National Defense Panel, *Transforming Defense: National Security in the 21st Century*, Arlington, VA, December 1997, p. 42.

86. *Baltimore Sun*, October 6, 1998.

87. See Thomas W. Lippman, "Perry May Be Named To Try To Salvage Pact With N. Korea, "*The Washington Post*, October 4, 1998, p. 27.

88. Department of Defense, Office of International Security Affairs, *United States Security Strategy for the Middle East,* May 1995, p. 8. I was informed by the Office of the Assistant Secretary of Defense for International Security Affairs that a more recent document has not been published because of budgetary reasons and that the 1995 document continues to be the authoritative statement of our security strategy for the region.

89. Strictly speaking, and as U.S. Ambassador to Israel Edward Walker told me, "those that make the charge of double-standards are mixing oranges and apples. . . . For the pertinent resolutions against Iraq fall under chapter 7 of the U.N. Charter and those pertinent to Israel are of different nature." Interview with Ambassador Walker, U.S. Embassy, Tel Aviv, June 19, 1998. This fine legal distinction, however, will not go very far in altering Arab perceptions of double standards.

90. For a full discussion of U.S.-Iranian relations and the issue to "balancing the threat," see Sami G. Hajjar, "Framing A Rogue: U.S.-Iran Relations in the Gulf, "*Strategic Review*, Vol. XXV, No. 4, Fall 1997, especially pp. 23-25.

91. For a detailed discussion of this argument, see *Ibid,* p. 26-27. Also see Sami G. Hajjar, "The Looming Conflict: U.S.-Iran Relations at the Crossroads," *Middle East Insight*, November-December 1997, p. 45.

92. See Saad Eddin Ibrahim, "Future Visions of Arab Middle East," *Security Dialogue*, Vol. 27, No. 4, 1996, pp. 425-436. In this article, Professor Ibrahim examines the four competing visions of Pan-Arabism, Pan-Islam, New Middle Easternism, and Mediterraneanism. Each of these views the boundaries of the region differently implying different sets of regional security paradigms.

U.S. ARMY WAR COLLEGE

Major General Robert H. Scales, Jr.
Commandant

*****

STRATEGIC STUDIES INSTITUTE

Director
Colonel Larry M. Wortzel

Acting Director of Research
Professor Douglas C. Lovelace, Jr.

Author
Dr. Sami G. Hajjar

Director of Publications and Production
Ms. Marianne P. Cowling

Publications Assistant
Ms. Rita A. Rummel

*****

Composition
Mrs. Rita E. Burgett

Cover Artist
Mr. James E. Kistler