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**Eliminating Weapons of
Mass Destruction:
The Persian Gulf Case**

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Pragmatic steps toward ideal objectives



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Preface

The Persian Gulf presents a difficult challenge for global efforts to control weapons of mass destruction (WMD). Two of the countries of greatest proliferation concern—Iran and Iraq—are located in the Gulf region. Any ambitions these two countries may have to build nuclear, chemical, or biological weapons are particularly troubling given Iran and Iraq's long history of rivalry and the fact that Iraq did not hesitate to use chemical weapons in its war against Iran. In addition, international disapprobation appears to have had little, if any, effect to date on ambitions to develop WMD in the region.

In the aftermath of the Gulf War in 1991, revelations regarding the extent of Iraq's attempts to develop nuclear weapons alarmed the world. Information about Iraq's capabilities emerged only gradually as Iraqi officials repeatedly hindered international efforts to fully uncover and destroy Iraq's WMD and long-range missile programs. Although more details may yet be revealed, international inspectors have determined that Iraq had pursued multiple methods for enriching uranium, launched a crash nuclear weapon program, and made substantial progress toward developing and even deploying chemical and biological weapons. The defection of an Iraqi general in 1995 made clear that Iraq had continued to withhold substantial amounts of information, deepening international concern that Iraq's ambitions to obtain arsenals of WMD remained strong.

In the case of Iran, the country's ambitions have been more of a concern than its actual capabilities. The United States, wary of the precedent set by Iraq, has argued that nuclear-related trade with Iran must be halted, despite Iran's adherence to full-scope safeguards under the nuclear Non-Proliferation Treaty. Unlike Iraq, Iran has signed the Chemical Weapons Convention, but the United States and others remain suspicious of its intentions. Additionally, Iran has an incipient capability to manufacture missiles and reportedly has made repeated attempts to import missile technology from North Korea and Russia. If Iran is successful in acquiring longer-range missiles, it would have the capability to strike Israel and other countries in the Middle East.

For both of these Persian Gulf states, attitudes toward WMD are intricately linked to internal politics, regional security concerns, and leadership aspirations in the Gulf. Efforts to address proliferation in the Persian Gulf therefore will need to take into consideration a broad array of issues.

In his study, "Eliminating Weapons of Mass Destruction: The Persian Gulf Case," Shahram Chubin looks at the role of WMD in the Persian Gulf and the obstacles to eliminating mass destruction weapons in the region. In Chubin's view, the motivations for proliferation can only be understood within the context of the broader security dynamics of the region, including relations between Iran and Iraq, and between the Arab states and Israel.

Since the perspectives of the states in the region differ widely and are influenced by many domestic, regional, and international variables, a "multilevel" approach to WMD proliferation is

recommended. While regime changes in Iran and Iraq could improve the chances for progress toward elimination, Chubin observes, a change in leadership or regime alone would not resolve the tensions in the region nor end either country's desire to obtain WMD capabilities. Tensions and conflicts in the Persian Gulf and broader Middle East region have long historical roots, and are likely to outlast the regimes currently in power. Attitudes toward WMD and arms control also will be affected by changes—or the lack of change—in the international arena. For example, a devaluation of nuclear weapons by the major powers and steps to make international structures more representative, Chubin argues, could lessen the desire of both countries to acquire WMD.

Bilateral confidence-building measures should accompany arms control efforts, Chubin notes. Moreover, “arms control will not lead but, rather, must develop in parallel to, or follow, progress in the political domain.” In addition, Chubin suggests that more progress will be made in the near-term by focusing on specific types of measures, for example, naval confidence building, rather than on attempting to craft an overarching framework addressing all regional tensions. In conclusion, Chubin stresses the need for “change on several levels,” and notes the benefit that increased interaction and normalized political relations between and among states in the region could have on efforts to eliminate WMD from the Persian Gulf.

This case study is the second in a series that examines the role of weapons of mass destruction in regional politics and security. Using a common framework of analysis, these regional studies seek to assess the utility of WMD from the perspective of the states in the regions and determine the obstacles to pursuing policies aimed at eliminating mass destruction weapons. The studies are authored by experts with extensive understanding of non-proliferation issues and, importantly, of the domestic and regional politics of the countries under review. Other studies in this series examine the regions of the Middle East, Northeast Asia, and South Asia.

This series is part of the Henry L. Stimson Center's Project on Eliminating Weapons of Mass Destruction, which seeks to encourage a national and international debate on the long-term nuclear future. The project is based on the premise that the end of the Cold War, dissolution of the Soviet Union, and grave dangers of proliferation provide both reason and opportunity to reexamine fundamental assumptions regarding the relative benefits and risks associated with weapons of mass destruction. Through research and public education efforts, the Center seeks to explore the obstacles to, and implications of, the progressive elimination of all nuclear, chemical, and biological weapons from all states, and to consider measures that might bring all states closer toward that goal. A central focus of the project's research efforts are evolving national and international perceptions of the benefits, costs, and risks associated with weapons of mass destruction. Understanding the motivations for proliferation in the post-Cold War environment is essential to this task.

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Dr. Chubin is a specialist in international security issues. He has written extensively on the security problems of non-western states, especially those of the Middle East region. He also has conducted research throughout the region.

Dr. Chubin received his doctorate from Columbia University.

List of Abbreviations

ACDA	Arms Control and Disarmament Agency (US)
ASM	Air-to-surface missile
AWACS	Airborne warning and control systems
BW	Biological weapons
BWC	Biological Weapons Convention
CBW	Chemical and biological weapons
CEP	Circular Error Probable
CIA	Central Intelligence Agency (US)
CTBT	Comprehensive Test Ban Treaty
CW	Chemical weapons
CWC	Chemical Weapons Convention
EMIS	Electro-magnetic isotope separators
GCC	Gulf Cooperation Council
HEU	Highly-enriched uranium
IAEA	International Atomic Energy Agency
MW	Megawatt
MWt	Megawatt thermal
NATO	North Atlantic Treaty Organization
NPT	Nuclear Non-Proliferation Treaty
SAM	Surface-to-air missile
SSM	Surface-to-surface missile
UNSCOM	United Nations Special Commission on Iraq
WMD	Weapons of mass destruction

Eliminating Weapons of Mass Destruction: The Persian Gulf Case

The Persian Gulf presents a particularly difficult challenge for the control of weapons of mass destruction (WMD), and the future use of WMD on a calamitous scale in the region cannot be excluded. Iraq employed chemical weapons during the first Gulf war (Iran-Iraq war of 1983-88) and threatened to use them in the second Gulf war (1991) against the US-led coalition and Israel. Numerous UN inspections conducted since Iraq's defeat in 1991 have revealed the existence of an ambitious, well-advanced, clandestine nuclear weapon program as well as an extensive biological weapon program. While constrained by international controls today, Iraq's WMD and long-range missile programs could pose a threat again in the future if the controls are lifted, particularly since the motives underlying Iraq's drive to acquire WMD have not been addressed and the leadership in the country remains unchanged. Iran, Iraq's adversary in the first Gulf war, also remains an uncertain factor in regional politics. Resentful and ambitious, Iran is recovering from the consequences of the extended war, digesting the lessons of recent conflicts, and looking to play a more important role in the region.

Because of the region's structure, maintaining a balance of power in the Persian Gulf has proven elusive. With the longest coastline and a population three times that of Saudi Arabia and twice that of Iraq, Iran dominates the region demographically and geographically, and has a tendency to be hegemonic whether by policy or by virtue of its simple existence. Iraq, which has only a tiny outlet to the Gulf's waters (some 40 km of coastline), has sought parity with its larger neighbor, while remaining openly contemptuous of its Arab brethren in the Gulf region. Even when at odds with Iran, Baghdad has inspired little trust in the smaller sheikhdoms. This is due in part to differences in ideology (Ba'athist, secular, republican versus traditional Islamic monarchists), and in part to geopolitical factors, for as was demonstrated in 1990-91, Iraq's activism in Arab politics expresses ambitions and energy that can be channeled south as well as west or east.

The Kingdom of Saudi Arabia, the largest state in the region, acts as the 'natural' protector of the smaller littoral states—Kuwait, Bahrain, Qatar, the United Arab Emirates, and Oman. Although Saudi Arabia's motives for playing this role are not exclusively altruistic and its attitude and at times its behavior are a source of some resentment to the others, Riyadh managed in May 1981 to circumvent these tensions and organize these states into a potential defense grouping known as the Gulf Cooperation Council (GCC). Both the Iran-Iraq war and the crisis of 1990-91, however, showed the limited contribution that regional cooperation on this scale can make in dealing with major security threats.

In theory, cooperation between the GCC and *either* of the two major states, Iran or Iraq, would be enough to create a stable balance. In practice, however, as the first Gulf war showed, even this is not enough—both Gulf wars required intervention by outside powers. With no indigenous balance in the region, a compensating foreign presence, led by the United States, has been substituted. The GCC states have come to rely on this presence and plan their security around it. Iran and Iraq resent and feel threatened by the role of foreign interference in the region and work to reduce it.

A discussion of weapons of mass destruction in the Persian Gulf must focus primarily on Iran and Iraq. The parallels and contrasts between these two states are important and worth noting at the outset. Iran and Iraq border on one another and have experienced war and defeat; they harbor resentments and grievances; they are ambitious regionally, which pits them against Israel; and they are hostile to the West, particularly the United States, and its presence in the Gulf. Both states are concerned above all with regime security, which takes precedence over national security. In contrast to the governments of some states in the Middle East, such as Egypt and Syria, both Iran and Iraq are run by civilians and neither regime trusts, nor has developed, a truly professional military.

In other ways, the two states are politically dissimilar. Iran has a relatively decentralized system of power and authority that allows for some play of factional politics. Islamic Iran is less driven by reliance on force and internal schisms than by revolutionary message and its impulse, the quest for legitimacy. Iran is populist and less centralized than Iraq. In its search for status and equality and in its frustration and sense of past injustices, Iran demonstrates a continuity in its political behavior. The general thrust of national policy is usually clear, but details, timing, and even the orientation of policy itself is open to bargaining and is subject to reversal. Policies are thus not set in stone or identified with, or dependent on, one person. The “Islamic republic,” and its perception of the world and quest to extend its values, is not the only or inevitable system in Iran, any more than the government is, itself, immutable. A different regime might see the world differently, be less ideologically oriented, and pursue other policies in the region and toward weapons of mass destruction.

Iraq, on the other hand, is a fractured society dominated by a Sunni minority and an authoritarian leader ruling by fear and reward. Iraq’s reliance on force, terror, and image (coercive and symbolic power) for the maintenance of domestic order also characterizes its conduct of foreign relations. Blunt, confrontational, and territorially revisionist, Saddam Hussein’s Iraq is an exaggeration of, rather than a departure from, Iraqi strategic culture. Iraq’s political culture is one of pervasive insecurity, in which reliance on superior power for survival begins at home. As one newspaper bluntly put it, “The grassroots Iraqi lives with a conviction that in the current world, the big fish swallows the little fish.”¹

Iraq’s system is more centralized and personalized than that of Iran. It bears clearly the distinctive marks of Saddam’s personality, but it does not represent a radical change from previous Iraqi and especially Ba’athist regimes. Because of a strong Iraqi belief in military preparedness and the perception that Iraq should lead the Arab world in scientific and technical advancement, there is no assurance that where mass destruction weapons are concerned, any successor would necessarily be radically different.

The scope for change in policies related to weapons of mass destruction is thus probably marginally greater in Iran, which has a wider set of options than Iraq. The latter has seen a more

¹ *Baghdad Observer*, quoted in *BBC Summary of World Broadcasts*, ME/0637/A/2, 12 December 1989.

intimate connection with, and continuity between, a repressive domestic order and a correspondingly querulous and aggressive foreign policy. While Iran's choices are those made by the regime, options in Iraq spring from the fissiparous nature of the society and the expedients used by its rulers to keep it under control.

Both states are absorbing the lessons of recent experiences and defeats; Iran is rearming and Iraq is likely to do so in the future. Each country will rearm with these historical lessons in mind and adopt policies accordingly. An inevitable component of the rearmament process for each state will be an examination of the policies of the smaller Gulf states, Israel, and the West. This process of rearmament already resembles an arms race, in which states make their procurement (and doctrinal) decisions with the decisions of others in mind. Given the distances involved, the inflow of advanced arms to the GCC states inevitably affects the calculations of Iran and Iraq, while the rearmament programs of these two countries, even if nominally aimed at each other, in turn cast a shadow over the other littoral states. Similarly, missiles and aircraft in the Gulf can be used further afield, activating Israel's security concerns and linking the Persian Gulf into a single broad theater of Middle East politics.

Consequently, the politics of the Persian Gulf consequently do not correspond to a simple model of the Gulf Arab states versus Iran or Iraq, or Iran *and* Iraq. The area is characterized by multiple axes and crosscutting cleavages and alliances. This means that the dominant conflict at any one time may be linked to, or superseded by, another conflict.

Moreover, the crisis of 1990–91, in which Iraqi missiles hit both Saudi Arabia and Israel, showed that strategic linkages connect the Persian Gulf with the broader Middle East region politically and affect actions and decisions accordingly. Thus discussions about weapons of mass destruction (WMD) in the Persian Gulf must necessarily address Israel, because proliferating states invoke Israel as a motive/justification for developing WMD and because Israel is itself concerned with and reacts to WMD capabilities in the Gulf.

Four distinct categories of conflict are possible:

- Iran–Arab (e.g., Iran–Iraq war, 1980–88)
- Intra-Arab (e.g., Iraq–Kuwait/coalition war, 1990–91)
- Arab–Israel (involving Iraqi WMD and missiles)
- Iran–Israel

Conflicts of the first three types have occurred recently and the fourth category is a source of current concern. Any discussion of WMD in the Persian Gulf must clearly touch on the wider region, especially when considering potential arms control approaches.

In the near term, the key variables affecting the proliferation of weapons of mass destruction in the region will be the lessons drawn from recent events by the current regimes in Iraq and Iran, the availability of resources and access to suppliers, and the costs and penalties incurred by

clandestine WMD programs. In the longer term, the evolution of Arab–Israeli relations, the stability (and orientation) of the GCC states, and the future of the regimes in Iran and Iraq will be important factors as well. Even without Israel, Iraq and Iran would have each other as principal justifications for pursuit of WMD capabilities. It is more difficult to envisage Iraq renouncing such weapons than Iran; for while Iraq seeks to offset its neighbor’s size with advanced or unconventional weapons, Iran can afford to dispense with them, provided there is a guarantee that Iraq is similarly disarmed.

Because the motivations for acquiring WMD are diverse, arms control measures must encompass all key categories of arms; cover the broader region, including Israel; and take into consideration that within the regimes in the region, decisions in favor of weapons are political as much as military. The kind of regime and corresponding leadership are important ingredients in the overall mix of factors increasing or decreasing the impulse toward WMD in the region.

Since the current approaches and priorities of the principal states are so divergent, the problems posed by their WMD programs need to be disaggregated and approached on different levels. Bilateral measures that build confidence and encourage political dialogue could be complemented, in time, by an emphasis on more concrete arms control. A focus on a specific area, e.g., naval confidence building, rather than on a comprehensive regional framework, appears most feasible in the short term. Priority should be given to political-security perspectives that will subsume questions of particular weapons systems and technology transfer into a larger political context. The key point is that arms control will not lead but, rather, must develop in parallel to, or follow, progress in the political domain. Political progress in turn will require a meaningful dialogue, which implies a willingness to include all states in regional confidence-building, rather than freezing out the most dangerous and encouraging them in their isolation.

The US policy toward Iran and Iraq, the principal states of concern with regard to WMD, is one of technology denial, which, however successful, is at best a stopgap measure. Ideally, a dual-containment policy that seeks to keep these two states weak would be supplemented by the encouragement of a broad-ranging dialogue on security issues. This dialogue would address the motives and expectations regarding WMD and measures such as regional inspections (security guarantees) that might increase general confidence in arms control agreements.

The Current Status of WMD in the Region

Weapons of mass destruction played a prominent part in both the Iran–Iraq war (1980–88) and the Persian Gulf War (1991). In the first conflict, both chemical weapons (CW) and missiles were used extensively to considerable effect. In the coalition war, Iraq used missiles against Israel and threatened the use of CW without ever implementing its threats. After the war, Iraq was found to have a large stockpile of CW and an advanced nuclear weapon program; later revelations showed it had developed a significant biological weapon program as well. Iran is also suspected of seeking to develop chemical and biological weapons (CBW) programs and of actively pursuing a nuclear weapon capability. Both Iran and Iraq are considered threats by their neighbors in the Persian Gulf, who fear

attempts to intimidate them. The United States and Israel are concerned that new unconventional military capabilities in the hands of these two hostile states could change the regional balance of power and make future wars more indiscriminate and costly; the United States is also concerned that fulfilment of commitments to its allies in the region could become more difficult.

Iran

The war with Iraq revealed and accentuated the need for modernization of the Iranian military, which had lacked a systematic modernization program during the previous decade. Iran's poor relationship with the principal supplier for its air force and air-defense systems, namely, the United States, had become so strained following the Iranian revolution in 1979 that the United States embargoed the supply of all arms and spares to the country. The embargo obliged Iran to hunt for weapons on the international arms market, and to improvise and adapt to new, though not necessarily very advanced, weapons systems and sources of supply. By the end of the Iran–Iraq war, some 40 percent of the Iranian military's armor and artillery had been destroyed or lost, only a handful of its planes remained operational, and its air-defense system was much degraded.

Since the cease-fire in August 1988, Iran has sought to re-equip and modernize its forces while changing its weapons systems and sources of supply. The \$2 billion a year allocated for re-equipment over the five-year plan (1989–94) was not available, because oil revenues fell short of expectations. The conventional defense buildup thus has been slowed and is likely to prove a long and difficult process, not least because it requires shifting from Western to other sources of supply (North Korea, Poland, etc.). In practical terms, this means switching mainly to the use of former Soviet-bloc arms, a move that requires adapting language skills, maintenance, logistics, and doctrine accordingly.² The problems of time, cost, and training involved in making such a change, and the uncertainties inherent in any type of commercial relationship with Russia today, all make a rapid transition most unlikely. When a state feels its security threatened, but is unable to obtain the kinds of conventional arms it needs from a reliable supplier or on the arms market, the incentives for looking at WMD must surely increase. In short, there is little doubt that Iran is serious about developing WMD capabilities.³

Nuclear Weapons

Iran's nuclear ambitions have raised concern due to its assumed intentions, not its actual capabilities, which remain limited. As a member of the nuclear Non-Proliferation Treaty (NPT), Iran's declared nuclear facilities—at present, two research reactors—remain under International

² For more detail and citations, see Shahram Chubin, *Iran's National Security Policy: Capabilities, Intentions, and Impact* (Washington, DC: Carnegie Endowment, 1994).

³ In 1993 the Director of the US Central Intelligence Agency (CIA) reported that: "Iran's ambitious effort to develop its military and defense sectors *includes a serious, determined program to develop all categories of weapons of mass destruction*" (emphasis added). See US House of Representatives, Committee on Foreign Affairs, *US Security Policy toward Rogue Regimes*, Testimony of CIA Director James Woolsey, Hearings before Subcommittee on International Security, International Organization and Human Rights Affairs, 103rd Cong., 1st sess., 28 July 1993 (hereafter cited as *Hearings I*), 79–80.

Atomic Energy Agency (IAEA) safeguards. The reactor at Tehran University, which has been in operation since 1968, has a nominal capacity of 5 megawatts thermal (Mwt) and uses highly enriched uranium (HEU) fuel.⁴ Iran also has concluded agreements with China for the supply of a miniature neutron source reactor and an electromagnetic isotope separator.⁵ Iran has two partially completed but long-abandoned reactors in Bushehr that it now seeks to have completed by 1999 with Russian technical assistance.⁶ Iran also seeks China's assistance to build two nuclear power plants with a production capacity of 300 megawatts (MW) each.⁷ Experience to date suggests that there will be considerable slippage in these plans, in part due to Iran's financial constraints. Furthermore, both Russia and China are under considerable US pressure to curtail any technology transfers to Iran in light of suspicions that the Iranian government is engaged in a clandestine nuclear weapon program.

Iran has been accused of seeking foreign assistance for a nuclear weapon program. The pattern of Iran's attempted open and clandestine purchases appears to be at the base of the CIA's claim that it has "good information that Iran has nuclear weapons intentions."⁸ Robert Gates, then director of the CIA, accused Iran in 1992 of "shopping for nuclear weapons and weapons grade materials" and of "being active in trying to purchase nuclear materials and technology clandestinely from Russian sources."⁹ According to Gate's successor, James Woolsey, "Iran is also looking to purchase fully fabricated nuclear weapons in order to accelerate sharply its timetable."¹⁰ That timetable has been assumed to be eight to ten years without significant outside assistance and five

⁴ This fuel is under intensified IAEA control until the reactor is switched to low enriched fuel. Foreign Broadcast Information Service (FBIS), *JPRS Report: Proliferation Issues, Russian Federation: Foreign Intelligence Service Report, A New Challenge After the Cold War: Proliferation of Weapons of Mass Destruction*, JPRS-TND-93-007, 5 March 1993 (hereafter cited as *FIS report*).

⁵ An "electromagnetic isotope separator" is also known as EMIS or calutron (calutrons can be used to enrich uranium). According to a later report, China said it transferred the miniature neutron source reactor and the separator in November 1991. See "China Goes Ahead With Nuclear Plants In Iran," UPI, 21 November 1994, from Executive News Service, 21 November 1994.

⁶ See Oleg Kuzmin, Moscow Radio, ITAR-TASS, 22 September 1994 in BBC/ME/2111 MED/9-10, 27 September 1994. In January 1995 Russia agreed to complete the unfinished 1,300 MW reactor at Bushehr within four years at the cost of \$800 million. It is envisaged that, subsequently, Russia might help in the completion of a second partially constructed plant at the same location. See UPI, 8 January 1995, and other reports cited in "Nuclear Developments," *Nonproliferation Review* 2, no. 3 (Spring/Summer 1995), 111. Russia rejected US accusations of irresponsibility and requests to cancel the agreement in May 1995, noting that Iran is a member in good standing of the NPT and that its installations are under safeguards. The United States' principal concern about the agreement was the inclusion of a provision for the training of Iranian technicians and reports of a secret agreement for the provision of a gas centrifuge facility (which Russia subsequently said it would not provide). See the compilation of reports cited in the section, "Iran with Russia," in "Nuclear Developments," *Nonproliferation Review* 3, no. 1(Fall 1995), 97-100.

⁷ In January 1996, Iran claimed that the deal was still under discussion, although a Chinese official said it had been stopped. See Reuter, 8 January 1996 and Islamic Republic News Agency (IRNA), 9 January 1996, as cited in "Nuclear Developments," *Nonproliferation Review* 3, no. 3 (Spring/Summer 1996), 113.

⁸ Statement by Gordon Oehler (CIA specialist on proliferation), in Hearings I, 29.

⁹ Robert Gates, speech before the Comstock Club, Sacramento, California, 15 December 1992 (mimeo).

¹⁰ James Woolsey, "Challenges to Peace," speech before the Washington Institute for Near East Policy, 23 September 1994 (mimeo).

or less if Iran were to receive external assistance. While Iran's nuclear weapon program is acknowledged to be at a "relatively rudimentary stage," there is concern that this program could be accelerated rapidly. Woolsey cautioned that "Iraq and Iran . . . have the basic technology to eventually develop such [nuclear] weapons."¹¹

Iran has three atomic research centers located in Esfahan, Karaj, and Tehran. There is evidence that Iran has undertaken a preliminary military-applied nuclear research program.¹² Generally the greatest obstacle to the development of nuclear weapons is the acquisition of sufficient quantities of weapons-grade fissile materials (HEU or plutonium); this presents the largest technological and financial burden to would-be proliferators.¹³ In addition to the calutron, Iran appears to be interested in enriching uranium through laser isotope separation, gaseous diffusion, and centrifuge.¹⁴ Iran's research effort is aimed at developing the capability to rapidly put into place a nuclear weapon program once it gains access to fissile material, whether through its "civil" power reactors or covertly through purchases from Russia or the other successor states of the USSR. Without a more substantial nuclear infrastructure, Iran will be unable to divert materials into a weapon program and will be obliged to focus on purchases in the grey market that may be developing. A substantial one-time input from abroad would speed up Iran's efforts but would hardly constitute the kind of reliable or sustainable supply on which to base a program. At the same time, Iran's ability to build up its civilian nuclear program will depend on financial resources and the willingness of suppliers to provide assistance.¹⁵ Iran's civilian program is unlikely to grow dramatically or quickly and will be subject to international safeguards and controls.

Absent a more substantial indigenous nuclear infrastructure, Iran can only prepare for a weapons program through research. It thus falls into the category of "latent proliferator," a term used

¹¹ Woolsey, Hearings I. It is assumed Iran would not be able to produce a nuclear weapon on its own for at least seven years—the amount of time it will take for Russia to complete the reactor at Bushehr plus the minimum it would take for Iran to generate a bomb's worth of plutonium from the reactor's spent fuel and fabricate it into a warhead. See US Congress, Senate Select Committee on Intelligence, *Global Threat Assessment*, Testimony of CIA Director James Woolsey, 10 January 1995. Defense Secretary William Perry estimated in 1995 that the timetable was seven to fifteen years (Clyde Haberman, "US and Israel See Iranians 'Many Years' from A-Bomb," *New York Times*, 10 January 1995, A-3). Perry's estimate differs from Israeli and American officials who contended that it would take Iran only five years to build a nuclear weapon (Chris Hedges, "Iran May Be Able to Build an Atomic Bomb in 5 Years, U.S. and Israeli Officials Fear," *New York Times*, 5 January 1995, A-10).

¹² See the *FIS Report* for information concerning the military-applied research program.

¹³ See Roger Herdman, *Technologies Underlying Weapons of Mass Destruction*, Background Paper, Office of Technology Assessment, United States Congress (Washington, DC: USGPO 1993), 155. (Hereafter cited as *Technologies*.)

¹⁴ See *Technologies*, 148, 182. For information on US suspicions that Iran is interested in centrifuges, see Mark Hibbs, *Nucleonics Week*, 22 February 1996, 4–5, as cited in "Nuclear Developments," *Nonproliferation Review* 3, no. 3 (Spring/Summer 1996), 124.

¹⁵ The 1992–93 foreign exchange budget allocation for Iran's Atomic Energy Organization was reportedly \$80 million. See Sohrab Shahabi, "Arms Control and Non-Proliferation Policies," *Iranian Journal of International Affairs* 6, nos. 1 and 2 (Spring/Summer 1994): 280.

to describe a state that, without actually possessing nuclear weapons, moves “substantially closer” to having them. There are two types of “latent proliferators.” Either or both of the categories outlined below fit Iran’s current situation:

A country that has no major nuclear power facilities but does have a significant research program and is constructing one or more power reactors and is secretly designing nuclear explosives and the facilities required to extract plutonium from the forthcoming reactors, to have the option of using it in nuclear weapons.

A nation, whether or not it has any major nuclear facilities, now knows in detail what it would do if it decided to build nuclear weapons. This is now a possibility in any country that has the appropriately skilled technical people.¹⁶

Iran is thus a potential, rather than an actual, nuclear weapon state, and the principal concern today is still with Iran’s intentions rather than with its existing capabilities.¹⁷

Chemical and Biological Weapons

One of the lessons related to WMD that was painfully absorbed by Iran from the war with Iraq was given authoritative expression shortly thereafter by Hashemi Rafsanjani, then acting commander-in-chief and speaker of the Parliament:

With regard to chemical, bacteriological and radiological weapons training, it was made very clear during the war that these weapons are very decisive. It was also made very clear that the moral teachings of the world are not very effective when war reaches a serious stage; the world does not respect its own resolutions, and closes its eyes to the violations and all the aggressions which are committed on the battlefield We should fully equip ourselves in the defensive and offensive use of chemical, bacteriological and radiological weapons.¹⁸

Less than two weeks later, Rafsanjani was further quoted on the subject:

Chemical and biological weapons are poor man’s atomic bombs and can easily be produced. We should at least consider them for our defense. Although the use of such

¹⁶ Ted Greenwood, Harold Fieveson, and Theodore Taylor, *Nuclear Proliferation: Motivations, Capabilities and Strategies for Control*, Council on Foreign Relations 1980’s Project (New York: McGraw Hill, 1977), 148–149.

¹⁷ For an analysis of Iran’s view of nuclear weapons and the likely impact of nuclear weapons on its behavior, see Shahram Chubin, “Does Iran Want Nuclear Weapons?” *Survival* 37, no. 1 (Spring 1995), 86–104. For background on Iran’s nuclear infrastructure, see Michael Eisenstadt, “Deja Vu All Over Again? An Assessment of Iran’s Military Buildup,” in *Iran’s Strategic Intentions and Capabilities*, ed. Patrick Clawson, McNair Paper 29 (Washington, DC: National Defense University, Institute for National Strategic Studies, 1994), 93–151, particularly 101–118. See also Anthony Cordesman, *Weapons of Mass Destruction in the Middle East* (London: Brassey’s, 1992), 103–106.

¹⁸ Hashemi Rafsanjani, then acting commander-in-chief and speaker of Parliament (Majiles), Tehran Radio Domestic Service, 6 October 1988, as quoted in FBIS-NES, 7 October 1988, 52.

weapons is inhuman, the war taught us that international laws are only scraps of paper.¹⁹

US officials assert that Iran has a chemical weapon program that is “relatively crude” but “extensive and improving” and suspect it of “working toward a biological warfare capability.”²⁰ In 1992, then CIA Director Gates said Iran was believed to be “pursuing collaborative arrangements with other would-be special weapons developers in the region”—presumably Syria.²¹ Gates warned that Iran was believed to have “produced at least several hundred tons of blister, choking, and blood agents and possibly as much as 2000 tons at a steadily increasing rate since 1984.”²² According to one report, Iran has a pesticide plant that could be used to produce precursor chemicals for nerve and blister agents, is already capable of industrial production of mustard gas and sarin, and is conducting research in the area of synthesizing chemical agents.²³ Another source suggests that Iran can also produce cyanide, phosgene, and possibly a nerve agent.²⁴

Although Iran was an original signatory of the Chemical Weapons Convention (CWC) in January 1993, Iran still sees a need to continue CW research. In the words of the Chief of the Iranian Armed Forces Command, Hoseyn Firuzabadi, this research is necessary “to avert the use of chemical weapons and [to] neutraliz[e] their effects.” During the second Gulf war, Firuzabadi claimed that “the US fleets in the Persian Gulf are equipped with chemical weapons,” and that, therefore, Iran reserved “the right for ourselves to get [the] technological knowhow necessary to confront the chemical agents our enemies might use against us.”²⁵

Iran does not yet appear to have an offensive biological weapon (BW) capability although it has conducted research through a military-applied biological program for several years and may have approved an initial program of development and procurement for BW. Small stocks of biological agents may already have been produced, and there have been persistent reports of attempts by Iran to purchase “equipment and biological materials suitable for the production of biological weapons,

¹⁹ IRNA, 19 October 1988, in FBIS-NES, 19 October 1988, 55–56.

²⁰ US House of Representatives, Committee on Armed Services, *Regional Threats, and Defense Options for the 1990's* (hereafter Hearings II), Testimony of Robert Gates, 27 March 1992, 317.

²¹ Testimony of Robert Gates to Congress in January 1992, quoted in “Factfile: Chemical Weapons in the Middle East,” *Arms Control Today* 22, no. 8 (October 1992), 44.

²² Gates, speech before the Comstock Club.

²³ *FIS Report*.

²⁴ “Factfile: Chemical Weapons in the Middle East,” 44. Iran is reported to have acquired 120 tons of castor beans and purifying ricin in pharmaceutical plants. Ricin is a potential chemical warfare agent. See *Technologies*, 81. For a more recent though unsubstantiated report, see James Adams, “Iran Making Chemical Arsenal,” *The Sunday Times* (London), 5 February 1995, 15.

²⁵ IRNA, 14 March 1991, in FBIS-NES-91-051, 15 March 1991 and BBC/ME/1022/a/9, 16 March 1991.

mycotoxins in particular.”²⁶ An April 1996 report from the US Department of Defense says Iran began its BW program in the early 1980s and has “evolved from piecemeal acquisition of bioprocessing equipment and is now pursuing complete biological production plants that could be converted to producing biological warfare agents.”²⁷ The Arms Control and Disarmament Agency (ACDA) reported to Congress in 1996 that “The United States reiterates its previous finding that Iran probably has produced biological warfare agents and apparently has weaponized a small quantity of those agents.”²⁸ The steps from BW research to an operational weapons capability, however, are multiple and by no means easily made.²⁹

While it does appear that Iran is actively pursuing CBW, it is not clear how far Iranian thinking has evolved on these weapons, beyond the quest for their acquisition for deterrent purposes. It is uncertain, for example, whether CBW have been incorporated into the military—whether they have been weaponized and integrated into military doctrine. Iran’s main chemical munitions are 155 mm artillery shells, 120 mm mines, and bombs. According to an assessment by the US Department of Defense, Iran “has weaponized some of [its] chemical agents—a weapons stockpile to support ground combat operations.” The report adds that “Iran could attempt to deliver chemical bombs against targets such as airfields, ports, or oil installations across the Persian Gulf.”³⁰

Iran’s military exercises include training for the possible use of CW and focus usually, but not exclusively, on defensive measures. A few examples of such exercises include the following:

²⁶ *FIS Report*. For other estimates see Eisenstadt, “Deja Vu . . .,” 109–111, and Cordesman, *Weapons of Mass Destruction . . .*, 82–84. For an overview of states generally suspected of CBW programs, see Roger Herdman, *Proliferation of Weapons of Mass Destruction: Assessing the Risks*, US Congress, Office of Technology Assessment (Washington, DC: USGPO, 1993), 80–82. (Hereafter cited as *Proliferation*).

²⁷ See the section on Iran in: US Office of the Secretary of Defense, “The Middle East and North Africa,” *Proliferation: Threat and Response*, [World Wide Web page] April 1996; <http://www.dtic.mil/defense/links/pubs/prolif/me_na.html>. (Hereafter referred to as *Proliferation: Threat and Response*.)

²⁸ See section E, U.S. Arms Control and Disarmament Agency, “Other Nations’ (Including Successors to the Soviet Union) Compliance with Multilateral Agreements,” *Adherence to and Compliance with Arms Control Agreements* [WWW page] 1996; <<http://www.acda.gov/reports/complian.htm>>.

²⁹ For a useful schematic characterization of the process from research and development to operational capability, see *Technologies*, 83.

³⁰ *Proliferation: Threat and Response*. In 1992, then CIA Director Gates said that although several Middle Eastern states are thought to be working on CW, “most countries have not yet equipped their military, [or] their delivery systems to carry weapons of mass destruction.” (Gates, quoted in “Factfile: Chemical Weapons in the Middle East,” 44). That same year, however, Gates cautioned that Iran was expected “to develop chemical weapons for its Scud missiles within a few years” (see Gates, Hearings II, 317). Gates told one audience that Tehran’s “aggressive [CW] program, combined with Iran’s purchase of North Korean Scuds and the development of their own indigenous missile program poses a special threat to the entire region.” (Gates, speech before the Comstock Club.)

- In 1994, joint amphibious exercises, Kheybar-73, involved troops that “carried out special operations to neutralize enemy chemical attacks.”³¹
- Earlier in 1994, the Fajr (Dawn) joint forces amphibious exercise in the Persian Gulf included “the carrying out of anti-chemical weapons operations by the frigates and attacking forces.” The same exercises involved “nuclear, chemical and biological units.”³²
- Exercises for liberating captured towns included activities in which operational forces defended themselves against chemical attacks.
- Regional amphibious exercises in Persian Gulf waters included chemical attack operations by the putative enemy, and “defensive chemical, bacteriological and radiation [warfare] operations.”³³

The benefit of such regular exercises (and passive defense measures) is to reduce the surprise and terror elements that were so effective in Iraq’s first use of CW in the Iran–Iraq war.

Despite Iran’s efforts, its CBW programs remain rudimentary and crude in comparison to those of Iraq (see below). Iran’s programs have a limited production capacity and are unsophisticated, focusing on the less lethal agents and on a narrow range of munition types.³⁴ Given Iran’s desire to develop CBW as a deterrent, its achievements so far reflect a deficiency in organization and capability rather than a flagging commitment.

Missiles

Iran launched a crash program to acquire missiles (especially surface-to-surface missiles, [SSMs]) during its war with Iraq, when it was denied access to spare parts for its US-supplied aircraft. Iran started the program in the mid–1980s with imports of Scud-Bs from Syria and Libya and, later, North Korea. By the end of the war it had become an article of faith for Tehran that it should seek self-sufficiency in missile programs. It still has some distance to go, however, to achieve this goal.

After a decade of effort, Iran’s missile capabilities remain decidedly limited. Its inventory consists of some 200 to 300 imported Scud-B and Scud-C missiles (with ranges of some 300 km and 500 km, respectively). Despite acquisition of the basic industrial requirements to produce this “old” technology, Iran has not yet acquired the capacity for wholly indigenous production. Apparently it has encountered problems on all levels—organizational, financial, technical, and with regard to

³¹ Voice of the Islamic Republic of Iran (IRI), 14 September 1994, in BBC/ME/2102 MED/13, 16 September 1994.

³² See respectively Voice of IRI, 12 July 1994, in BBC/ME/2047 MED/12, 14 July 1994 and Voice of IRI, 10 July 1994, in BBC/ME/2045 MED/2, 12 July 1994.

³³ See respectively Vision of IRI, 26 May 1994, in BBC/ME/2008 MED/10, 28 May 1994, and Voice of IRI, 19 January 1994, in BBC/ME/1901 MED/5, 21 January 1994.

³⁴ The conclusion draws on Eisenstadt, “Deja Vu . . .,” 111.

personnel.³⁵ Iran's inventory also includes the Chinese anti-ship Silkworm missile (HY-2), with a range of 80 km, and accompanying mobile launchers. Iran may be trying to extend the range of this first generation cruise missile technology and adapt it for indigenous production. There are unconfirmed reports of Iranian interest in and purchase of the Ukrainian Sunburn cruise missile, which has a probable range double that of the Silkworm.³⁶ Iran also has been developing a family of simple battlefield missiles: the Oghab (40 km), Tondar (40 km), Nezaat (90 km), Shahin-2 (100–130 km), Iran-130 (130 km), and the Mushak (160 km). Iran also claims to be developing a missile with a range of up to 200 km, which is probably a modified version of one of these missiles.³⁷

As a Russian intelligence report concluded, however, it is unclear whether Iran's missile production capability translates into weapons for subunits of the armed forces.³⁸ What is much clearer is that Iran's earlier boasts about success in domestic arms production and innovation have given way to more sober estimates of the country's potential capabilities. As one senior Iranian military officer noted in 1994:

We are mainly concentrating our efforts on the maintenance of our equipment. Our second priority has been the repair and reconditioning of this equipment and ultimately we aim to manufacture this [equipment] .³⁹

³⁵ See *FIS Report*, and Seth Carus, "Proliferation and Security in Southwest Asia," *Washington Quarterly* 17, no. 2 (Spring 1994): 133–135.

³⁶ Ukraine denied in 1993 that it had supplied Sunburn missiles to Iran (see *Demokratychna Ukrayina* (Kiev), 18 May 1993, 2, as cited in JPRS-TND-93-015, 24 May 1993, 27). For other reports of the sale of Sunburns to Iran, see Duncan Lennox and Barbara Starr, "Briefing: Cruise Missiles," *Jane's Defence Weekly*, 1 June 1996, 19–21.

³⁷ For information on Iran's missile development efforts, see James Kraska, *Defense News*, 4 October 1993, 25–26. For reports on Iran's missile inventory see Joseph Bermudez, Jr. in Hearings I, esp. 108–110; "Factfile: Select Theater Ballistic Missile Programs," *Arms Control Today* 24, no. 7 (September 1994), 34; Eisenstadt "Deja Vu . . ." 113. Cordesman, *Weapons of Mass Destruction*, 36–46, 53–54. (Cordesman notes that Iran was unable to fire one Iranian-made Scud during the war with Iraq). See also Shlomo Gazit et al, *The Middle East Military Balance 1992–1993* (Tel Aviv, Israel: The Jerusalem Post, 1993), 240–249. For more details on Iran's missile program, see the Centre for Defence and International Security Studies at Lancaster University, "National Briefing" on Iran [WWW page]; <<http://www.cdiss.org/country2.htm>> (hereafter referred to as "National Briefing"). See also "Missile Developments: Iran," *Nonproliferation Review* 4, no. 1 (Fall 1996), 161–162.

³⁸ See *FIS Report*. Iranian military exercises include training with antiship missiles. For exercises involving air-to-surface missiles (ASMs) see the report on the "Thar Allah" six-day missile exercise near the Sea of Oman and Hormuz straits, which were "intended to facilitate coordination between the different components of surface-to-sea missile operations" against a naval adversary (presumably including the Silkworm missile, which saw service in the "tanker war" during the war against Iraq). See Voice of IRI, Network 1, 13 January 1994, in ME/1896 MED/1, 15 January 1994. For another "shore-to-sea" missile exercise, see Voice of IRI, 29 April 1994, in BBC/ME/1986 MED/14, 2 May 1994. There are reports suggesting that ground forces also train with surface-to-surface missiles. See Voice of IRI, 20 September 1994, in BBC/ME/2107/MED/1, 22 September 1994 and 25 September 1994, in BBC/ME/2111MED/11, 27 September 1994.

³⁹ Recorded interview of Ground Forces Commander Brigadier General Abdollah Najafi, Voice of IRI, 27 September 1994, in BBC/ME/2112 MED/6, 28 September 1994.

Iran's ability to manufacture or indigenously produce missiles remains limited; its capacity to modify imported Scud technology is somewhat better, but still not very impressive. Iran is *moving toward* a capability in which it can reverse-engineer Scud-level missiles, introduce design changes, and make solid-propellant short-range missiles.⁴⁰ This puts it somewhere near Egypt, ahead of Saudi Arabia, and far behind Israel in terms of technological sophistication.

Thus, as with its nuclear, biological, and chemical weapons efforts, Iran's intentions in regard to its missile program are more worrisome than its current capabilities. Of particular concern is the possibility that Iran might acquire the 1000 km range (1000 kilo payload) Nodong-1 missile being developed by North Korea. The Nodong missile is capable of carrying chemical, biological, and nuclear warheads, and would put Israel within range of Iranian missiles. Moreover, the Nodong-2 follow-on missile might have double the range and, if acquired by Iran, would increase its coverage of the entire Middle Eastern area.⁴¹

There appears to be little doubt in the minds of US intelligence analysts that Iran's concentration on missiles is intended to serve as means of delivery for its WMD. Although Iran's interest in missiles *may* stem primarily from its desire to acquire a means of delivery for WMD, the role of missiles in conventional war is just as important. In the absence of access to a reliable source of supplies for aircraft at affordable prices, Iran's interest in developing its missile capabilities in all probability will continue, independent from the evolution of WMD in the region.

Iraq

The prolonged war with Iran during the 1980s exacted a high price from the Iraqi population and underscored in the minds of the Iraqi leadership the importance of military preparedness. Investigations conducted under the auspices of the UN Special Commission after the 1991 Persian Gulf War have revealed that Iraq was conducting an extensive clandestine effort to develop the full range of WMD.

⁴⁰ A 1994 military exercise named "Thamin al-A'immah," in which shore-based anti-ship missile operations took place, reportedly used indigenous rocket fuel for the first time. See Voice of IRI, 29 April 1994 in BBC/ME/1986MED/14, 2 May 1994. The exercises involved firing land-based (coastal) missiles against the enemy fleet. The Office of Technology Assessment characterizes these capabilities as *incipient* (i.e. an ability to make some modifications) and *intermediate* (an ability to introduce changes and make solid-propellant, short-range missiles). See *Proliferation*, 67–68. For an assessment of Iran's missile production capabilities, see "National Briefing."

⁴¹ According to the Centre for Defence and International Security Studies (CDISS) at Lancaster University (UK), "it is known that Iran has provided extensive financial assistance for North Korea's Nodong programme and it is believed that Iran has negotiated agreements to receive some 150 Nodong-1s, together with production facilities, once development is completed. See CDISS, "North Korea To Test Nodong Missile," *Missile News* [WWW page], 16 October 1996; <<http://www.cdiss.org/96oct1.htm>>. In mid-1995 it was reported that North Korea delivered Nodong-1 missiles to Iran (see Duncan Lennox, "Ballistic Missiles," *Jane's Defence Weekly*, 17 April 1996, 40, 43–44), but an Iranian official denied the purchase. See "Iranian Denial Of Purchase DPRK Missiles Cited," Xinhua (Beijing), 31 December 1995, as cited in FBIS-CHI-96-001, 31 December 1995.

In theory, UN Security Council Resolution 687 (3 April 1991) should have reduced the threat posed by WMD in Iraq. That unusually strong and intrusive resolution required Iraq to give up all its CBW, all stocks of agents and related subcomponents, as well as all related research, development, support, and manufacturing facilities. Iraq additionally was required to give up all ballistic missiles with a range greater than 150 km and related major parts, as well as repair and production facilities. Iraq agreed not to develop nuclear weapons, nuclear weapons-usable material, or any subsystems or components; nor to conduct or acquire any research, development, support, or manufacturing facilities related to nuclear weapons. It also was required to declare the locations, amounts, and types of all banned items, and to submit to unrestricted UN inspections and supervision of the elimination of the banned items. The resolution also stipulated that Iraq must accept future on-going monitoring and verification of its compliance with UN conditions.

In practice, however, Iraq has resisted, blocked, and delayed inspections, hidden facilities, declared false sites and numbers, and sought to avoid giving a full accounting of its foreign sources of supply. Thus, there remain doubts about the extent of Iraq's capabilities and concerns about how quickly it could reconstitute its programs once sanctions are lifted or if monitoring is eased. As a result, US officials still see Iraq as a serious potential danger, despite the restrictions currently placed on it.⁴²

Despite Iraq's attempts at deception and prevarication, by 1995 two things were clear. First, Iraq had accepted monitoring and had been driven by sanctions to be more cooperative and to reveal—albeit under duress—more information about its programs. Second, Iraq, at the first opportunity, can be expected to resume its WMD programs, probably as a matter of high priority.⁴³

Nuclear Weapons

In considering Iraq's current nuclear weapon potential, it is important to examine how Iraq initially conceived and implemented its nuclear weapon program. The program was massive, costing some \$10 billion and comprising a dozen plants with some 7,000 scientists and engineers and 20,000

⁴² In 1993, a senior US official identified Iraq, together with Iran, and North Korea, as the countries where the US sees the "greatest proliferation threats." Statement by Lynn Davis, Under Secretary of State for International Security Affairs, *Current News: Background Briefing*, 10 December 1993, US Mission to the UN, Department of Public Affairs, Geneva. A 1996 assessment of the potential danger posed by Iraq can be found in *Proliferation: Threat and Response*.

⁴³ US National Security Advisor Anthony Lake made the point in 1994 that, "There is plenty of evidence to suggest that the only reason the Iraqi regime is beginning to cooperate with UNSCOM [United Nations Special Commission on Iraq] is to secure the lifting of oil sanctions. Once the oil starts flowing again, Washington must assume that Saddam will renege on long-term monitoring and begin rebuilding his weapons of mass destruction." ACDA has come to the same conclusion: "Iraq almost certainly intends to continue nuclear weapons related activities and to build a nuclear weapon as soon as domestic and international circumstances permit." See, respectively, Anthony Lake, "Confronting the Backlash States," *Foreign Affairs* 73, no. 2 (March/April 1994), 50–51; and "Threat Control Through Arms Control," Report to Congress, US Arms Control and Disarmament Agency (Washington, DC, July 1995), 73. See also *Proliferation: Threat and Response*.

employees.⁴⁴ Iraq chose to simultaneously pursue several routes to producing fissile materials. After the Israeli air strike on its Osirak reactor in 1981, Iraq's efforts focused on enriched uranium instead of plutonium, although its interest in plutonium remained as a lower priority.⁴⁵ Iraqi scientists attempted to develop a variety of methods for enriching uranium, including gaseous diffusion (which it dropped after six years of effort), centrifuge, electromagnetic isotope separation (EMIS/calutron), chemical enrichment, and Helikon aerodynamic enrichment processes. Iraq built complex research and production facilities, including twin sites for EMIS. Even before Iraq was discovered to have a massive nuclear weapon program in 1991, there was concern that it might have diverted for weapons use the 12.3 kg of 93 percent HEU originally supplied by France for its 40 MWt Osirak reactor or the 13.6 kg of 80 percent enriched fuel supplied by the Soviet Union for a smaller, Soviet-built research reactor.⁴⁶

Iraq invested considerable effort in concealing and suppressing the signatures of its nuclear weapon program. It demonstrated that with enough effort and resources, a country could hide from international view the size and specifications of its nuclear weapon program and pursue a clandestine program within the NPT by circumventing the treaty's relatively lax safeguards system.⁴⁷ Iraq was working to build a small arsenal, not a single weapon. Iraq apparently intensified its efforts to obtain nuclear weapons right before the Gulf War, as it established a crash program and was planning to divert its safeguarded HEU to its military program. Saddam was thus in a position in 1991 to have a bomb within three years, if not less.⁴⁸

⁴⁴ For details on Iraq's nuclear program, see Peter Zimmerman, "Iraq's Nuclear Achievements: Components, Sources and Stature," *Congressional Research Service Report*, 93-323, 18 February 1993, and *Technologies*, especially 149-162. See also US House of Representatives, Committee on Foreign Affairs, *US Policy Toward Iraq Three Years After the Gulf War*, "Hearings before Subcommittee on Europe and the Middle East, 103rd Cong., 2nd sess., 23 February 1994; "Threat Control Through Arms Control"; and Leonard Spector, Mark McDonough, and Evan Medeiros, *Tracking Nuclear Proliferation: A Guide in Maps and Charts 1995* (Washington, DC: Carnegie Endowment, 1995). (Hereafter referred to as *Tracking Nuclear Proliferation*.)

⁴⁵ See the section on Iraq's nuclear program in *Proliferation: Threat and Response*.

⁴⁶ Reports that Iraq diverted its HEU for weapons use are mentioned in Mark Hibbs and Neal Sandler, "Experts Question Accuracy of Iraq Nuclear Weapons Report," *Nucleonics Week*, 6 April 1989, 2. Information on Iraq's research reactors and HEU fuel can be found in *Technologies*, 151, and Leonard S. Spector, *Going Nuclear* (Cambridge, Mass.: Ballinger Publishing Co., 1987), 168.

⁴⁷ The lessons learned from the Iraqi case led to a major effort to improve the IAEA safeguards system. See Bruno Pellaud and Richard Hooper, "IAEA Safeguards in the 1990's: Building from Experience," *Atoms for Peace* 37, no. 1, 14-20.

⁴⁸ A direct crash program refers to a program aimed at taking the most direct route to a nuclear weapons capability, which is unconstrained by financial considerations, and where there is little effort to disguise or cover the intent of the program behind a "peaceful" power program. See *Technologies*, 150-151, for an assessment of the time frame in which Iraq could have obtained a nuclear weapon. For reference to the crash program, which Iraq admitted to in August 1995, see *Proliferation: Threat and Response*, and the 20 November 1996 "Errata and Essential Updates" to *Tracking Nuclear Proliferation*.

The Iraqi case was a reminder that proliferators do not choose the same paths or have equal resources. Iraq's program was redundant and well-funded, and much more expensive than a focused baseline plutonium-based program. Some proliferators may try direct crash weapons programs on a shoestring; others, like Iraq, may pursue ingenious, clandestine, expensive, and multi-route paths reflecting greater means and grander ambitions. The "lesson of Iraq" as a proliferator has weighed heavily on the minds of US policy makers. They appear to see the Iraqi model of proliferation—cheating and gaining access to nuclear technology within the NPT system, while developing in parallel undeclared weapons facilities—as a precedent. They are especially anxious, as a result, not to underestimate *Iran's* nuclear-related efforts and to deal with them before they have developed very far.

An important question is whether Iraq, under the current sanctions and the on-going monitoring system, will be in a position to resume activity on nuclear weapons. Baghdad is reported to have contacted Russia for possible future assistance in completing a nuclear power plant started in 1990.⁴⁹ Iraq is widely believed to retain most of the pool of 7,000 scientists and engineers that constituted the backbone of its earlier effort.⁵⁰ Its past programs, moreover, were not totally wasted efforts; Iraq's scientists have surely narrowed down the "dead ends" that could waste time and resources for a future program.

In 1992, the CIA estimated that, of all of Iraq's WMD programs, the "nuclear weapons program would need the most time to recover because much of the infrastructure for the production of fissile material would need to be reconstructed." The time necessary for reconstitution of the program would be measured "in a few rather than many years." Later that year, the estimate was sharpened to "five to seven years if UN inspections and sanctions were to cease."⁵¹ With foreign assistance, Iraq could rebuild its nuclear weapon program even more quickly. As a prime proliferation suspect, however, Iraq's activities will be intensively monitored, and maintaining any effective secrecy would be difficult and expensive.

Chemical and Biological Weapons

The task of assessing Iraq's current chemical and biological capabilities is complicated, in part because most of the equipment needed to produce CW, and virtually all the equipment underlying production of biological agents, has civilian applications. Production of CW agents can be detected through samples taken during on-site inspections, however, and the inspections to which Iraq will continue to be subject under Resolution 687 are intrusive. Because sizeable stocks of CW

⁴⁹ *Intelligence Newsletter*, 28 October 1993, 6–7, quoted in *Nonproliferation Review* 1, no.3 (Spring/Summer 1994), 145.

⁵⁰ See *Proliferation: Threat and Response*.

⁵¹ See Gates' testimony to the Senate Governmental Affairs Committee in January 1992, Hearings II; and Gates, speech before the Comstock Club. In 1996 the US Department of Defense estimated that with its "pool of expertise" retained from its earlier nuclear weapons efforts, "together with significant foreign assistance and supplies, Iraq could probably rebuild its nuclear weapons program and manufacture a device in about five to seven years." See *Proliferation: Threat and Response*.

are needed for effective use, the chances of detecting them are relatively better than for biological weapons. Detection of the production of BW agents is more difficult for a number of reasons.⁵² First, clandestine production sites need not be large or distinctive. Second, because research on BW agents and the development, production, and storage of these agents are permitted for defensive and peaceful purposes, offensive work can be conducted under the guise of defensive preparations. Furthermore, BW agents are easier to produce than nuclear or chemical weapons, because the infrastructure is cheaper and the necessary technology and know-how are more widely available. Finally, weight-for-weight, BW agents are hundreds to thousands of times more potent than the most lethal CW agents, thus they require much smaller stocks, which makes hiding them easier. Given these difficulties of detecting CBW activities and the repeated lack of cooperation on Iraq's part, it is not clear whether all of Iraq's clandestine efforts have been revealed, even after more than five years of inspections.⁵³

UN inspectors in Iraq found a considerable chemical weapons arsenal. Reportedly, Iraq's chemical weapon production complex was substantial enough to be that of an industrial state.⁵⁴ Iraq's CW program consisted of efforts to develop several agents: in 1981 it began producing mustard gas, in 1984 it began producing nerve agents tabun and sarin, and in 1985 it began developing the nerve agent VX. Contrary to earlier declarations, Iraq admitted in late 1995 that it had produced VX on an industrial scale.⁵⁵ Weaponization of chemical agents was also undertaken. Iraq had developed a binary sarin for aerial bombs, artillery shells, and 122 mm rockets. In addition, Iraq conducted flight tests of the Al-Husayn (modified Scud) with a chemical warhead in April 1990.⁵⁶

Following the August 1995 defection of Lieutenant General Hussein Kamel Hassan, who had overseen Iraq's weapons acquisition, Iraq turned over substantial new information concerning its biological weapon program to the UN inspection team. The documents describe a very aggressive and fully mature BW program that included bombs, artillery shells, and missiles that had been filled with anthrax, botulinum, and aflatoxin, a cancer-causing agent. In addition to developing the biological agents that had been loaded into delivery vehicles, Iraq was conducting research on a fungus-based mycotoxin, plant pathogens, and bacteria that attack wheat crops and produce viruses.

⁵² This summary of the relative difficulties of detecting clandestine chemical and biological weapon production relies heavily on *Technologies*, especially Chapter 3 and Introduction, 6–10.

⁵³ In 1996, UNSCOM Chairman Rolf Ekéus wrote that the commission was still seeking to clarify a number of issues regarding Iraq's CBW programs. See Rolf Ekéus, "Beware Iraq's Biowar Legacy," *Jane's International Defence Review* 29 (6/1996), 104.

⁵⁴ See the report in BBC/ME/1173/a/1–4, 10 September 1991.

⁵⁵ For more details, see the section on UNSCOM activities in Thomas Stock, Maria Haug, and Patricia Radler, "Chemical and Biological Weapon Developments and Arms Control," *SIPRI Yearbook 1996: Armaments, Disarmament and International Security* (New York: Oxford University Press, 1996), 697. Details on Iraq's chemical stocks as known in 1992 are provided in "Factfile: Chemical Weapons in the Middle East," 44–45.

⁵⁶ Testimony by Gordon Oehler, head of the CIA's non-proliferation center, as cited in Barbara Starr, "Iraq Reveals a Startling Range of Toxin Agents," *Jane's Defence Weekly* 24, no.19 (11 November 1995), 4. See also Ekéus, "Beware Iraq's Biowar Legacy."

While UNSCOM had suspected that Iraq was hiding information concerning its biological weapon program, the inspectors were surprised by the revelations concerning the scope of the program and undertook further investigations to try to determine whether the program had ended and whether all of the biological agents had been destroyed.⁵⁷

Missiles

In the Iran–Iraq war, Iraq was better stocked with missiles and more capable of modifying and extending the range of its Scuds than was Iran. On the eve of the second Gulf war, Iraq had several hundred warheads for its Scud-B missiles (300 km range with a Circular Error Probable [CEP] of 1 km) plus two variants, the Al-Husayn (600 km with a 3 km CEP), and the Al-Hijarah (600 km with unknown CEP), also known as the Al-Abbas. All were capable of carrying conventional or chemical warheads and could reach Tel Aviv, Haifa, and Dimona, which is located in the Negev desert and is reportedly the principal center of Israel’s nuclear program. Based on its experience of modifying Scuds, Iraq had built and launched a prototype crude space launch vehicle, named Al-Abid, and claimed to have developed a 2000 km range ballistic missile named Tammuz. A supergun, “Project Babylon,” with a range of hundreds of miles, was being designed to fire guided rockets with conventional, chemical, or possibly nuclear warheads. A 350 mm research prototype of the supergun had been completed and test-fired from a site 120 miles north of Baghdad.⁵⁸

Iraq’s missile programs had given it a head start compared to its Gulf neighbors and it was well on its way to moving from an incipient capacity to modify existing Scuds to a more advanced, intermediate capability, reflecting an ability to reverse engineer, introduce changes, and make solid-propellant fuel for short-range missiles. It is not clear, however, whether in January 1991 Iraq could have manufactured even a Scud-type missile completely on its own. Although it possessed a missile manufacturing center, Iraq was importing many components and receiving foreign technical assistance for its missile and other weapons programs (e.g. the co-development of the Condor missile program with Argentina and Egypt). It is likely, therefore, that Iraq still required foreign assistance to fabricate precision missile components (fuel-injection plates, turbo pumps, and guidance systems).

Iraq has been reluctant to permit enforcement of limits on its missile capabilities and has resisted permanent monitoring of missile test sites to enforce the 90 mile (150 km) range limit permitted by UN Security Council Resolution 687. Iraq has rebuilt some 80 percent of its military industries, and reportedly has converted some of these to produce weapons not specifically banned by the resolution, including certain shorter-range missiles.⁵⁹ Because the resolution does not ban

⁵⁷ Reuter News Service, “What the New Iraqi Disclosures Reveal,” 25 August 1995. See also the articles by Ekéus and Starr.

⁵⁸ This summary relies heavily on *Technologies*, 220–226, and *Conduct of the Persian Gulf War: Final Report to Congress*, (Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act for 1991, Public Law 102–2), (Washington D.C.: USGPO, April 1992), 11–16.

⁵⁹ See Paul Lewis, “Anticipating Raid, Baghdad Disperses Machines and Files,” *International Herald Tribune*, 15 July 1993, and *Wall Street Journal*, 15 November 1993, quoted in *Nonproliferation Review* 1, no. 3 (Spring/Summer 1994), 164.

shorter-range missiles, there is room for research and development, and thus possible deception about their intended range.

From the beginning of the UN inspections, US intelligence sources have insisted that the Iraqis could “soon restore their capability to produce Scud-type missiles, though they may need help from abroad,” and that “Iraq also retains ballistic missiles and missile launchers that it has not declared to the UN as required by UN Resolution 687.”⁶⁰ In 1994, the CIA asserted that Iraq was “still hiding Scud missiles,” with some sources putting the number at 200.⁶¹ Two years later, the United States believed that Iraq still had “hidden a small number of mobile launchers and several dozen Scud-type missiles.”⁶² While UN controls have managed to limit Iraq’s missile development capability, they cannot eliminate the knowledge and experience that Iraq gained in the 1980s, which could be used again in the future.

Saudi Arabia and the GCC

Like Iran and Iraq, Saudi Arabia is a member of the NPT and the Biological Weapons Convention (BWC). In addition, it has both signed and ratified the CWC. It has no known nuclear installations or nuclear program and does not appear to have any chemical or biological weapon capability. It has been accused frequently of having financed an “Islamic bomb,” however, usually in the context of Pakistan’s nuclear program. After Israel destroyed Iraq’s Osirak nuclear reactor, the Saudi leadership reportedly offered to finance its replacement.⁶³ Recently there have been reports that Saudi Arabia funded Iraq’s nuclear weapon program (with up to \$5 billion) in the expectation that Saudi Arabia would share in the fruits of the program. Riyadh accordingly set up a small nuclear research institute of its own in the kingdom. This program presumably ended in 1991.⁶⁴

Saudi Arabia started negotiations with China in 1985 to purchase 30 to 50 liquid fueled DF-3A (CSS-2) missiles (together with their launchers). The missiles are single-stage, weigh 65,000 kg, and are relatively inaccurate (CEP of 2–4 km). They have two outstanding characteristics, however. First, they have a range of 3000 km, making them the longest range by far of any missiles sold in

⁶⁰ Gates, testimony in Hearings II, and Gates, speech before the Comstock Club.

⁶¹ Woolsey, speech before the Washington Institute for Near East Policy, and “Factfile: Select Theater Ballistic Missile Programs,” 34.

⁶² See the section on Iraq’s ballistic missiles in *Proliferation: Threat and Response*. UNSCOM chairman Rolf Ekéus also expressed in 1996 his concern that not all missiles and mobile launchers in Iraq had been accounted for. UNSCOM, “Press Briefing by Executive Chairman of Special Commission,” UN Headquarters, 4 September 1996, 3. Another account of Iraq’s missile program can be found in David Isby, “The Residual Iraqi ‘Scud’ Force,” *Jane’s Intelligence Review* 7, no. 3 (March 1995), 115–117.

⁶³ The Saudi News Agency quoted Information Minister Yamani as relaying this decision by King Khalid, which was communicated to the French authorities. See *New York Times*, 16 July 1981, in “Chronology,” *Middle East Journal* 35, no. 4 (Autumn 1981), 600.

⁶⁴ See Marie Colvin, “Britain’s Gulf War Ally Helped Saddam Build a Nuclear Bomb,” *Sunday Times* (London), 24 July 1994, 1–2; Marie Colvin, “CIA Starts Inquiry on Nuclear Plot by Saudis,” *Sunday Times*, 31 July 1994, 4. See also Reuters, “Saudi Says Riyadh Aided Iraqi Atom Plan,” *International Herald Tribune*, 25 July 1994, 1.

developing countries, and bringing any target in Iran or Israel within reach (Baghdad is only 300 km away from Saudi territory). Second, they were expensive—the total package of launchers and missiles cost Saudi Arabia \$2 billion. If the missiles account for half of the total cost of the arms package, each missile would cost \$20 million, in contrast to the \$1 million cost of the Scud-B or SS-21. Each missile, therefore, approaches the cost of an airplane.⁶⁵

The missiles are mobile, although they were initially deployed to fixed sites, and do not appear to be armed with WMD. They are currently deployed in two battalions south and southwest of Riyadh, and are reportedly guarded by surface-to-air missiles.⁶⁶ Saudi Arabia may also protect the missiles by storing them in bunkers of Chinese design. Since the missiles were delivered in 1987, the Saudis have expanded the DF-3A missile support facilities. The missiles were on operational standby during Desert Storm.⁶⁷ Both Saudi Arabia and China have provided the United States with assurances that the missiles will remain conventional. The Saudi government has reportedly provided a written statement that “nuclear and chemical weapons would not be obtained or used with the missiles.”⁶⁸

Armed only with conventional warheads, however, the missiles are not very effective. Even with a special large conventional warhead of 3,500 to 4,000 pounds, the DF-3A’s destructive power would be less than that of a single sortie by a modern strike fighter. Given its inaccuracy, the missile functions as an area weapon and is unsuited to discriminating application against specific military targets. Furthermore, the missiles require a large amount of technical support and ground equipment and take hours to prepare for launch. As a result, the Saudis cannot fire the missiles without Chinese technical support, and Chinese technicians are said to deploy and operate the missiles under Saudi supervision.⁶⁹

The Role of WMD in the National Policies of the Persian Gulf States

Current WMD capabilities among the Persian Gulf nations, combined with the use of chemical weapons and missiles in the Iran–Iraq war and the threats of CW use made in the 1991 Gulf War, suggest that future use of such weapons in the region cannot be discounted.

Iran: The View from Tehran

Even without the bitter experience of what it calls an “imposed” war with Iraq, Iran might have been predisposed to examine the utility of WMD as practical weapons. Revolutionary aims and

⁶⁵ Stanford, *Assessing Ballistic Missile Proliferation*, quoted in *Technologies*, 228.

⁶⁶ Cordesman, *Weapons of Mass Destruction*, 115.

⁶⁷ See W. Seth Carus, *Ballistic Missiles in Modern Conflict* (New York: Praeger, 1991), 42.

⁶⁸ See Cordesman, *Weapons of Mass Destruction*, 115.

⁶⁹ Cordesman, *Weapons of Mass Destruction*, 115–116. See also Robert Shuey et al, “Missile Proliferation Survey of Emerging Forces,” *Congressional Research Service, Report for Congress*, 9 February 1989.

historic grievances would have encouraged a search for instruments that would give the Islamic republic autonomous capabilities. The principal events directly affecting how Iran looks at defense and at WMD in particular, however, are the war with Iraq and its aftermath, including the related war between Iraq and Kuwait.

The lessons drawn from Iran's first and painful encounter with modern war will dominate Iranian defense practice for some time. Iraq's aggression, in Iran's view, was launched with Western connivance. The "tanker war," Iraq's expansion of hostilities to the Gulf, was not punished, while Iran was subject to an increasingly tighter arms embargo. Iraq's use of CW in the war, amply though timidly verified by the United Nations, was not condemned unequivocally, and the UN Security Council was deafeningly silent on the matter. Iraq's extensive use of over two hundred missiles in the "war of the cities" likewise passed with little condemnation. Finally, while Western states added to Saddam's arsenal, Iran had to scramble for arms on the international arms market. Iraq's increasing use of missiles after 1985 led to a rush by Iran for missiles. An international naval task force eventually entered the Gulf to force Iran's acquiescence in a cease-fire that left Iraq holding Iranian territory. Iraq's increasingly brazen use of CW went unpunished and indeed barely remarked upon until it used them against some of its own citizens—the Kurds—in 1988. At the Paris chemical weapon conference in January 1989, no state, with the exception of Iran, identified Iraq's use of chemical weapons by name. In the view of one senior diplomat, the conference "was precooked in favor of Iraq."⁷⁰ For Iranians, the question arose whether Iraq would have hesitated to use nuclear weapons if it had them, and whether Western protestations and assurances could be believed given the West's recent record.

From its experience during eight years of war, Iran derived several clear-cut lessons:

- Prepare for the worst and emphasize deterrence.⁷¹
- Prepare against "surprises" by missiles and CW, which are best deterred by the threat of in-kind retaliation.
- Avoid any kind of foreign dependence in the arms area; cultivate self-reliance, diversify arms sources, stock supplies, and develop indigenous capabilities to produce arms.
- Do not put much stock in international organizations or fair play; selective indignation and discrimination in the application of principles is standard procedure.
- In brief, prepare for the worst militarily and diplomatically.

Iran strongly believes that the cards are stacked in favor of the stronger powers in the international community, and that these powers seek to maintain their advantages, particularly in the industrial and technological realm. This belief leads Iran to emphasize its right to acquire advanced industrial technology and develop peaceful applications from this technology. Thus Iran sees many

⁷⁰ A senior European diplomat quoted in James Markham, "At Chemical Arms Talks, Historic Legacies Undermine Moral Preaching," *International Herald Tribune*, 10 January 1989, 2.

⁷¹ For an elaboration, see Chubin, *Iran's National Security Policy*.

export control regimes and supplier clubs as blatantly discriminatory and aimed at keeping other states away from technology relevant to their economic development. This is perceived most acutely in the nuclear domain. Here Iran feels discriminated against despite its adherence to the NPT and the provisions of that treaty under Article IV ensuring access to technology for peaceful uses. As Iran's Permanent Representative to the United Nations in Geneva once observed:

It was even understood that material and technology for peaceful use would be provided to NPT members at lower prices [as suggested at the time of drafting under the so-called Italian or Fanfani Proposal]. Most NPT members have been cold-shouldered, instead, by restrictions of the London Club. Hence the reluctance to extend the NPT⁷²

A stronger version of this complaint was made by Iran's Foreign Minister: "Let me reiterate firmly that the litmus test for the success of the NPT, the CWC, and the BWC lies in the attitude of the advanced countries towards peaceful use."⁷³

Iran was active before and during the NPT Review and Extension Conference in April/May 1995 in seeking support for its opposition to an unconditional and unlimited extension of the treaty. Iran's position was that it supported a *limited* extension of the treaty provided that the nuclear weapon states:

- 1) End their reliance on nuclear deterrence and move toward genuine disarmament;
- 2) Rapidly complete a comprehensive test ban treaty (CTBT) building on the limited test ban of over thirty years ago and agree to prohibit the production, accumulation, and promotion of fissile material;
- 3) Reliably guarantee that members of the NPT would have access to nuclear technology for peaceful uses; and
- 4) Enter into an international treaty to guarantee the security of non-nuclear weapon states (i.e provide security guarantees stronger than unilateral declarations).⁷⁴

While these demands were only partially addressed at the preparatory committee meetings leading up to the Extension Conference and during the Extension Conference itself, Iran met with some

⁷² Sirous Nasser, Iranian Permanent Representative to the United Nations in Geneva, "NPT, CWC and BWC: How Effective Are They Likely to Be?," (Paper presented to United Nations Institute for Disarmament and Research,) *UNIDIR Conference*, Geneva, 15 February 1994 (mimeo), 7–8. See also the comments of Javad Zarif, the Iranian Deputy Foreign Minister, "Security Considerations in the Middle East: a Regional Perspective" *UNIDIR Conference*, Geneva, 15 February 1994 (mimeo), 3. He referred to "the legitimate prerogatives of states party to the NPT for the peaceful application of nuclear energy." Their efforts to do so "have been unjustifiably suppressed."

⁷³ Statement by Dr. Ali Akbar Velayati, Minister of Foreign Affairs of the Islamic Republic of Iran to the 1994 Session of the Conference on Disarmament, Geneva, 1 September 1994 (Press release mimeo), 5.

⁷⁴ Statement by Velayati on Iran's position to a seminar in Iran. See IRNA, 19 December 1994, in BBC/ME/2184/MED/1, 21 December 1994.

success in defining the problem of the NPT as one in which there is an imbalance of obligations that should be set right.

Iran justifies its own nuclear program with reference to the need for access and exposure to modern technology. Iran is determined to exploit atomic energy and technology in peaceful ways for its growing electricity, agricultural, and medical needs. As the head of Iran's atomic energy program stated, "If we do not use the current generation of nuclear power plants, we will not be able to use the next generation of these plants."⁷⁵ As a commentary on Tehran radio observed regarding attempts by the industrialized countries to control transfers of nuclear technology, "the developing countries do not view [export controls] . . . as a means of ensuring peace and security. Rather, they consider them a limitation to the scope of their national activities and . . . an obstacle in their own development programmes."⁷⁶ Western concern for non-proliferation is thus seen as a pretext for the denial of technology. As President Rafsanjani put it, a nuclear plant:

is not inherently a dangerous thing, especially if it is supervised [by the IAEA]. It is not something that could be dangerous but just because it is the basis of great scientific development and growth, they are opposed to us having it.⁷⁷

The United States, for its part, believes that Iran is seeking nuclear weapons and, in light of the indeterminate line separating peaceful from military uses, opposes the transfer of *any* nuclear technology to Iran. The American interpretation of Iran's intentions stems from the pattern of its technology acquisitions and research, and from ambiguous statements from Iranian officials about their right to acquire nuclear weapons as long as Israel possesses them.

Iran's belief that it must keep abreast of all technologies, including those relating to WMD, has led to similar policies in the areas of chemical, biological, and nuclear *industry*. Iran may view these categories of *weapons*, however, somewhat differently. Since Iranian officials deny any intention of acquiring nuclear weapons, insisting that they are neither usable nor moral weapons,⁷⁸ it is impossible to be sure whether nuclear weapons are in fact viewed any differently from other categories of mass destruction weapons. Inferences can be made based on the logic of the Iranian

⁷⁵ Vice President Reza Amrollahi, IRNA (Tehran), 6 November 1991, in BBC/ME/1224/a/12-13, 8 November 1991.

⁷⁶ Commentary, Voice of IRI, Tehran, 11 August 1993, in ME/1767/a/9, 14 August 1993.

⁷⁷ See Hashemi Rafsanjani's comments to a prayer meeting reported by Iranian TV, *Vision of the Islamic Republic*, Network 1, 28 January 1995, in BBC/ME/2215MED/1, 31 January 1995. For information on a visit by IAEA officials to Iran, see also the report of the *Voice of the Islamic Republic*, Tehran, 13 February 1992, in BBC/ME/1305/a/6-7, 15 February 1992.

⁷⁸ Many such comments have been made. For example, President Rafsanjani has stated, "We do not intend to seek nuclear weapons . . . No one should possess nuclear weapons." (News Conference, *Vision of IRI*, 7 June 1994, in BBC/ME/2018 MED/9-10, 9 June 1994.) Leader and Commander-in-Chief Khamenei has commented, "We do not seek to obtain and use banned weapons, because we respect our principles and our faith." (*Voice of IRI*, 8 February 1994, in BBC/ME/1918 MED/3, 10 February 1994.)

geopolitical situation and its leadership's goals, but not much more. Thus, while Iran may see CBW as deterrents with little value in terms of military utility or prestige, it may view nuclear weapons as all-purpose weapons—primarily as deterrents, but also as weapons that enhance Iran's global status. Iran also may see nuclear weapons as substitutes for inadequate conventional arms, and as a means to project influence in regional politics and to buttress the legitimacy of the regime at home.

Several factors may play a role in pushing Iran toward the acquisition of nuclear weapons. Iran may hope to deter US intervention in the Persian Gulf, a prime security motive today. Iran also may have regional goals that it feels nuclear weapons could help to achieve, including challenging Israel's monopoly on nuclear possession, deterrence of Iraq, and providing Iran with leverage on regional and Islamic politics.⁷⁹ Even in the absence of a pressing security threat, the memory of the war with Iraq, in which Iran stood alone, may dictate the acquisition of a suitable all-purpose deterrent. The latter incentive might be all the stronger if Iran were unable to find a reliable source of supply for conventional arms, or felt deprived of its legitimate defense capability in comparison to its over-armed neighbors.

As a revolutionary state intent on spreading its values and increasing its influence, Iran may consider nuclear weapons the weapons of choice. Both as a deterrent against its enemies and as a means of amplifying its voice internationally, nuclear weapons may appear tailor-made for the regime. It will be difficult to dispel this view until the Iranian regime feels less beleaguered, less impelled to extend its values, or finds the costs of going in this direction too high relative to the gains. None of these developments is inherently improbable. A change of regime, or shift within the current regime, could see a rapid reversal of attitudes toward WMD. But since the incentives to acquire nuclear weapons are not driven by security considerations in the narrow sense, they are not primarily dependent on regional politics or on what other states can do to reassure Iran. Rather, the regime is motivated more by its view of the world and Iran's role, as opposed to the country's geopolitical context or domestic political structure.

It is also fairly clear that Iran considers nuclear technology to be special and prestigious. Iran argues that it needs nuclear energy to supply some 20 percent of its energy needs. This argument is not plausible on economic grounds alone, however, as Iran possesses both oil and gas reserves and is located in an earthquake zone. Iran's emphasis on nuclear energy thus may be an investment in a long-term option for nuclear weapons. A clerical regime that has little to show for sixteen years in power would relish entering the ranks of nuclear weapon states as much for the domestic political benefits of such a breakthrough as anything else. Nuclear technology would thus substitute for the lack of achievements in other areas.

Regarding Iran's policy on CBW, it has been suggested that Iran sees these "special weapons" as a "force multiplier" to compensate for conventional deficiencies, to coerce the smaller Gulf states,

⁷⁹For an elaboration of this analysis see Shahram Chubin, "Does Iran Want Nuclear Weapons?"

and to deter future outside power intervention.⁸⁰ More likely, CBW are seen as prudent hedges against the possibility of another state employing similar weapons in a future conflict and as retaliatory weapons intended for deterrence. The coalition war against Iraq underlined the proposition demonstrated in the Iran–Iraq war: where there is no retaliatory capacity on the other side, the temptation for use increases; conversely, where there is such a capability, the risk of a riposte reduces the incentive.

If CBW are intended as deterrents, Iran would have reason to be skeptical of efforts to limit them unless it could be assured that arms control would be fully effective. Iran, in any case, is not an enthusiastic supporter of any attempts to limit activity in these fields. As noted, the overlap between commercial and military applications of these technologies is indistinct and ambiguous. Although a signatory of the CWC, Iran has sought to limit the intrusiveness of the inspection regime being set up to monitor compliance with the CWC. It argues that arms control should not become a pretext under which the developing states are denied technology. Iran has urged the Non-aligned Movement to rally around the proposition that “the industries of the third world countries should not be threatened under the pretext of chemical weapons disarmament.”⁸¹

Concurrently with its efforts to develop WMD programs, Iran has pursued a missile program. Iran first acquired missiles out of necessity during the middle of the war with Iraq, when the United States blocked Iran’s access to spare parts for its US-made aircraft. Because of an insufficient number of missiles and a lack of familiarity with the equipment, Iran was unable to use the missiles to make a decisive difference to the outcome of the war. Nevertheless, Iran clearly had certain missile advantages. The antiship missiles, such as the “Silkworm,” seemed to worry the US Navy and inhibit its operations.⁸² The missiles Iran was able to launch into Iraq during the “war of the cities” also saved Iran from the political embarrassment of total helplessness in the absence of any significant operational aircraft. Although missiles could not substitute for an air force, Iranian leaders could at least show their citizens that Iran could retaliate when Iraqi missiles rained down on Tehran.

As the Iranian military rebuilt after the war with Iraq, missiles remained an attractive option. First, they were available from proven suppliers—China and North Korea. Second, domestic production was considered feasible much sooner than would be the case for aircraft. Third, although missiles may appear expensive because they are not re-usable, they have other advantages: they require less infrastructure and backup, and entail no pilot training and no long logistical tail of spare parts. They are politically reliable, whereas a modern air force may not be. They are relatively certain of penetration and inspire a degree of terror in their intended target. In addition, they are mobile and

⁸⁰ Gates, testimony in Hearings II, 319.

⁸¹ See Voice of IRI, 9 September 1991, in ME/1174/a/5, 11 September 1991, and Nasser, “NPT, CWC and BWC: How Effective Are They Likely to Be?” He refers to pharmaceuticals, all forms of medicine and medications and “the important areas of vaccine and serum production.”

⁸² Commission on Integrated Long-term Strategy, *The Future Security Environment*, (Washington, DC: USGPO, October 1988), 50.

may be less susceptible than an air force to pre-emption. In many ways, missiles decouple military capability from military performance, making even an unskilled and poorly armed force capable of inflicting considerable damage.

Western analysts have argued that, given their inaccuracies, missiles are not the optimum means of delivery for conventional (high explosive) warheads. Many observers therefore have inferred that the warhead of choice for missiles is biological or chemical.⁸³ This need not be the case. Iran sought missiles in part for the reason noted above: to substitute for an aging air force whose re-development was proving costly and time-consuming. The difficulties in maintaining a functional air force led Iran to favor developing a missile program, which is relatively easy to maintain and which is likely to communicate a message of readiness to the state it is intended to deter, or against which missiles might be used. Iran's interest in missiles may be to intimidate its smaller neighbors in the Gulf, or to balance the massive conventional arms supplies of its neighbors. Perhaps the "terror" connotations of a missile force make intimidation credible, but brandishing missiles is not inherently easier or more effective than threatening preemptive attack by air strikes. A preemptive attack *against* Iran is a real possibility, as the GCC states have access to more advanced aircraft than Iran has. (In 1984 the Saudi air force destroyed two Iranian aircraft without a response from Tehran.) Since 1991, the GCC states have had access to even more advanced weapons, including F-15s.

Iran will continue to treat missiles separately from biological, chemical, and nuclear weapons. As they are accessible, indigenously produced, and recently improved, missiles will be touted as signs of technical advances for the domestic audience. With their appearance of modernity and their attraction of simplicity, they give their possessor a sense of having an equalizer. Missiles will not be speedily or readily renounced. Nor, in Iran's case, are they necessarily or primarily intended for use with WMD warheads.

Iraq: The View from Baghdad

Iraq is an extreme case of a state that equates military industrialization and arms industries with economic modernization. The siege mentality of the Iraqi Takriti clan,⁸⁴ together with Ba'ath ideology and the hardships associated with the war with Iran (especially between 1982–87), reinforced a predisposition to leave nothing in the future to chance. Iraq ended the war with more

⁸³ Missiles that are inaccurate will tend to have little military utility when armed with conventional warheads. It is therefore assumed that the only useful role such delivery vehicles can have is to carry WMD, which as area weapons, do not require accuracy. It is also assumed that these missiles armed with WMD would be intended more for use as terror weapons than for strictly military applications. The fact that most of the states seeking missile capabilities are also suspected of building up their CBW capabilities suggests that there is some link between these sets of programs. This subject is covered in Janne E. Nolan, *Trappings of Power: Ballistic Missiles in the Third World* (Washington, DC: Brookings Institution, 1991), 8–11, and in Cordesman, *Weapons of Mass Destruction*.

⁸⁴ Saddam Hussein's regime leadership comes largely from the area of Takrit. The power base of the regime and its confidants has been shrinking since the crisis of 1991, becoming increasingly narrower and more concentrated around Saddam's family, which itself shows signs of splintering. This has reinforced the sense of siege always felt by the clan, which is of the Sunni minority. For more details, see Francoise Chipaux, "La Galaxie Saddam Hussein," *Le Monde* (Horizons: Enquete), 1 September 1995, 10.

troops at the front than Iran, which had three times its population. Iraq outgunned Iran in every area: aircraft 7:1, tanks 2:1, artillery pieces 3:1, and missiles, probably 10:1. Not content with these advantages, Saddam's Iraq continued to pour resources into military industrialization under the authority of Saddam's son-in-law Kemal Hussein. Much of the debt run up by Iraq between 1988–90 is attributable to the continued expenditure of resources for ambitious military programs that appeared to the outsider to lack urgency after the cease-fire with Iran. This resource drain then necessitated the next step, the seizure of more resources, namely, Kuwait.

Like Iran, Iraq drew lessons regarding the utility of WMD from its recent military conflicts. The coalition war of 1991 demonstrated that against an adversary with access to equivalent arms, the threat of CW (or horizontal escalation) could not deter a conventional attack and that use of such weapons might unleash a devastating response on any level chosen by the target states or their allies, which had as many if not more choices than Iraq. Iraq would—in short—have to consider “escalation dominance” before use. The two Gulf wars would appear to underscore the following propositions:

- Chemical weapons deter other chemical weapons. Thus, against a foe with equivalent capabilities, chemical weapons merely cancel each other out, leaving other levels of force at play. Therefore, chemical weapons can be pressed into service against a similarly-equipped and conventionally superior foe only at the risk of inviting reprisals.
- Chemical weapons cannot be much use against nuclear weapons. Attempting to blur the threshold by threatening a chemical weapons response to nuclear weapons use lacks credibility for the following reasons: first, the conditions under which a state like Israel is likely to consider using nuclear weapons will be so extreme as to make the fear of a chemical response relatively tolerable. Second, however terrifying and indiscriminate, chemical weapons are not comparable to nuclear weapons in destructive power and hence as a deterrent.
- Attempting to use chemical weapons as an umbrella for conventional aggression (to deter Israeli involvement or to respond to a particular act of aggression) would appear to be risky. To make such a doctrine credible, Iraq would have to consider how it would emerge from such a scenario.
- Finally, even as a terror weapon, chemical weapons are of possible utility only if used with surprise and if the target is not able to respond in kind. (The Iranians, for one, will not be caught unprepared a second time.)

If these are the broad implications of recent events, what specific lessons about the effectiveness of chemical and other classes of weapons in specific scenarios might Iraq have learned from its experience? These might plausibly include:

- Chemical weapons by themselves cannot substitute for either conventional or nuclear weapons when there is a lack of parity on these other levels of arms.
- Only nuclear weapons will deter a future humiliation like the one suffered in 1991.
- Nuclear weapons may be the only way to deter an Israeli attack.

- Nuclear weapons may impress non-nuclear weapon states, but against nuclear weapon states they have limited use. In this case, they have value principally for deterrence of threats against core interests.

By late 1994, Iraqi commentaries had indeed undergone a reversal. It was now argued that only an Arab *nuclear* capability would deter the use of WMD by Israel. US policy on proliferation, in this view, was thus “prompted by the fact that the possession of nuclear weapons and materials by [Arab] countries would force the United States to deal with them as equals because these states would use their nuclear capabilities should the big powers threaten them with the use of mass destruction weapons.”⁸⁵

After the cease-fire with Iran, Iraq may have continued to pursue expensive military industrialization programs because of the Iraqi leadership’s genuine belief in the relationship between military industries and science. To take but one example, when Israel demolished Iraq’s Osirak reactor in June 1981, the official paper *Al Thawra* wrote that Israel’s action confirmed that Iraq’s scientific progress worried “the Zionists” and proved “the importance of the Iraqi revolution in the pan-Arab struggle.”⁸⁶ Similarly, when Iraq experimented with missiles, it announced its grandiose feats with declarations that reflected a pride in Iraq’s mastery of new areas of science, with which missile technology was equated. Noting foreign apprehensions, one newspaper referred to the missile experiment as a “big accomplishment realized by Iraqi scientists and engineers”; another referred to “the Iraqi technological accomplishment.”⁸⁷ The official announcement by Kemal Hussein was suffused with pride, referring to “Iraq’s construction” and “scientific accomplishment,” that had been achieved “without any foreign assistance.”⁸⁸

Like Iran, Iraq’s attitude toward missiles and nuclear weapon technology is likely to be conditioned by the regime’s view of these weapons as militarily or politically useful and as technologically necessary. Both missiles and nuclear weapons serve as sources of status and domestic prestige, and a case can be made for them as a part of the general industrialization process that the country must undergo. Industrialization and status are less plausible as justifications for Iraq’s CBW programs, however; these programs are likely to be influenced less by such considerations and more by military power factors.⁸⁹ Nevertheless, Iraq is sensitive to attempts to limit transfers of these technologies, or to devise intrusive inspections that might be disadvantageous to the country’s industrial development.

⁸⁵ Salal al-Muktar, Chief Editor of *Al Jumuriyah*, Iraq News Agency (INA), 25 September 1994, in BBC/ME/2111 MED/8, 27 September 1994.

⁸⁶ Quoted in FBIS, 9 June 1981, as listed in “Chronology,” *Middle East Journal* 35, no. 4 (Autumn 1981), 605.

⁸⁷ The newspapers referred to were respectively *Al-Jumhuriyah* (Baghdad) and the *Baghdad Observer*. See Iraq News Agency (INA) in English, 10 December 1989, in BBC/ME/0637/a/2, 12 December 1989.

⁸⁸ For his comments see “Baghdad affirme avoir lance sa première fusée,” *Le Monde*, 9 December 1989. These phrases were italicized in the newspaper reflecting the emphasis given them by the Iraqis.

⁸⁹ *Proliferation*, 100.

Whether Iraq makes a moral distinction between conventional weapons and weapons of mass destruction is not at all clear. Judging from past behavior, Iraq, unlike Iran, seems less likely to make such a distinction a priori; rather, it is more likely to make this distinction only when forced to by practical considerations such as the balance of overall power and Iraq's own vulnerability. Such an interpretation is consistent with its use of CW to date. Baghdad used these weapons tactically against the numerically stronger Iranians throughout the first Gulf war (1983–88) with some success in terms of inflicting casualties and spreading terror. In 1988, Saddam Hussein also used these weapons against Iraq's own Kurdish population to punish their dissidence and as a deliberate act of terror. Considerations of military power would explain the decision to use CW with impunity against some targets and the hesitation in doing so against others who could retaliate in kind, such as a more capable foe in the second Gulf war. The effort that Saddam has devoted to retain these capabilities for the future, in face of strong UN pressures, is also consistent with military motives.

Iraq's interest in WMD, in particular nuclear weapons, stems in part from both its geopolitical location and its political goals. Concern about Iran's superior size both demographically and in terms of strategic depth has led Iraq to search for a strategic equalizer. Iraq thought it had attained this with CW in the 1980–88 war. Similarly, in its bid for Arab and regional leadership, the Iraqi leadership was determined to confront Israel. For both these reasons—strategic inferiority and regional ambition—Iraq thought it was necessary to find something more than a “relative deterrent.” Iraq therefore sought a “qualitative” edge to compensate for the strategic asymmetries with Iran. Iraq could compensate for its situation with Israel only by matching Israel's capabilities on every level, while maintaining two advantages: a larger standing army and leadership of an Arab coalition. Whereas Iraq's adjacency to Iran was involuntary and inescapable, Iraq's leaders chose to range Iraq against Israel. The answer to both “threats” was to seek technology to compensate for existing asymmetries.⁹⁰ Iraq's Foreign Minister Tariq Aziz observed:

Israel—this we know—has also nuclear weapons. And therefore, in our military buildup, we must ensure deterrence on our side on both [the Iranian and the Israeli] fronts . . . in order to safeguard our existence. In both fronts there is a territorial conflict. With Iran, the conflict focuses on the sea routes in the Shatt al-Arab, and with Israel on the occupied territories. We also have problems with Kuwait⁹¹

To emphasize the constraints now operating on Iraq, the press has pointed to Iran's nuclear ambitions and to the joint threat that this, together with the “colonialist-NATO-Zionists,” poses to the “Arab

⁹⁰ For illustrative thinking, see Hazim T. Mushtak, “Arms Control and Proliferation of High Technology Weapons in the Middle East and South Asia,” *Arms Control and Weapons Technology in the Middle East and South Asia*, ed. Geoffrey Kemp and Shelley Stahl (New York, NY: St Martins Press, 1992), Chapter 9.

⁹¹ Tariq Aziz quoted by Tamir, “My Talks with Members of the Iraqi Leadership,” *Yediot Aharnot*, 15 February 1991, as quoted in Shlomo Aronson, *The Politics and Strategy of Nuclear Weapons in the Middle East: Opacity, Theory and Reality 1960–1991* (Albany, NY: State University of New York Press, 1992), 215.

homeland in general and Iraq in particular”⁹² The fear of a two-front war in which Iraq would face Iran’s superior numbers and Israel’s superior technology, though largely of the Iraqi regime’s own making, is still a palpable one in Iraq. Reliance on a technical fix—on “a qualitative edge”—leads inexorably (as Israel demonstrates in an analogous case) to nuclear weapons—the mother of all equalizers. By furnishing the state with an apparent equalizer, nuclear weapons may also make political adjustment harder, reducing reliance on diplomacy or compromise—at least until the limitations of nuclear weapons become apparent.

In addition to perceived “legitimate” defense needs, there are other incentives for Iraq to acquire nuclear weapons. One is Iraq’s quest for Arab leadership, a long-standing but particularly intense objective under Saddam Hussein. Saddam reflects and caricatures Iraqi political culture in his reliance on terror, the cult of personality, and clan politics. In his disdain for debate or pluralism, and his total identification of Iraq’s interests with that of his regime, Saddam has projected his domestic *modus operandi*—intimidation, coercion, bribery, and terror—onto foreign policy. Callous, impulsive, and untutored, Saddam relies on intuition and ambition. Iraq’s fractured society calls for a strong center or a general consensus. Saddam personifies the continuing temptation for dictators in such situations (Hafez Assad of Syria is in a roughly comparable situation) to seek legitimacy and an outlet for domestic fragility in the wider canvas of regional politics. Saddam hopes to compensate for the fact that a minority Arab Sunni regime dominates the more numerous Shi’a as well as the Kurds. (In Syria, a minority Alawite leadership faces a similar situation.)

This substitution of regional activism for domestic legitimacy leads the Iraqi regime not only into conflict with Israel but into competition with other Arab states for regional hegemony. For Iraq, nuclear weapons can both coerce neighbors and act as a deterrent to protect it against Israeli interference. Nuclear weapons also can be used to confront Israel and entrench the regime in Baghdad, acting as the ultimate symbol of success in a state in which power has its own legitimacy. Nuclear weapons were to act as Saddam’s apotheosis and his gift to modern Iraq.

While neither Iraq’s goals and claims vis-à-vis Iran, the Gulf states, and Israel are confined to Saddam, nor the means employed necessarily specific to his Takriti clan, there is little reason to suppose that his successors would be worse. There is, however, some basis to expect that the bitter lessons of the past decade might be more constructively discerned and implemented by another leader, even an Iraqi nationalist who felt less personally responsible for the country’s plight. A politically more representative regime, for example, would be likely to experience fewer domestic pressures and thus might be less likely to seek compensatory legitimacy externally.

⁹² For references to Iran’s nuclear ambitions and programs see: Radio Baghdad, 19 November 1991, in ME/1236/a/6, 22 November 1991, and *Al-Qadisiyah* (a military newspaper) quoted in Middle East News Agency (MENA), 29 October 1993, in ME/1838 MED/11, 2 November 1993. For references to the conspiracy between Israel, Iran, and the North Atlantic Treaty Organization (NATO), see “The Political Report,” Ba’ath Party, 12th Pan-Arab Ba’ath Party Congress, quoted in INA, 10 January 1993, in ME/1585/a/5–10, 13 January 1993.

The conception of nuclear weapons as symbols of modernity and equality is not unique to Iraq. The view that nuclear weapons could act as a strategic deterrent is surely not controversial either. Where Saddam *appears* to be different is in his belief (insofar as we can infer it from the logic of his actions and past behavior) that nuclear weapons could be used to intimidate Iraq's neighbors, thus freeing its conventional forces for operations in the region. Not content with overwhelming conventional superiority over his neighbors in the Gulf, Saddam persisted with an arms program that operated on many levels at once: conventional weapons, including a supergun for the long-range projection of missiles; many types of missiles (both indigenous and co-produced, and of varying ranges); a large air force; a version of an early warning and command and control aircraft (airborne warning and control systems—AWACS); vast stocks of artillery pieces, tanks, and tank transporters; and weapons of mass destruction. His chemical weapon program at al-Muthanna alone employed eight thousand people “in a plant the size of a car factory.”⁹³

During the war with Iran, Iraq did not hesitate to use CW. Iraq did so repeatedly and on an expanding scale, although always on its own territory and mostly on the defensive. Iraqi statements tended to dehumanize Iraq's adversaries, referring to them as insects. Iraqi officials also rejected faint Western criticisms by referring to past acts of the United States—Vietnam, Hiroshima⁹⁴—or to NATO's nuclear doctrine, which did not eschew first-use of nuclear weapons even against a *conventional* attack. The Iraqi Vice-President argued that the right to self defense included the “right to use all means.” It was reported—or leaked—that Iraq could choose several large Iranian cities for chemical weapon attack both “for punishment and deterrence.”⁹⁵ Tariq Aziz argued that Iraq had the right to choose the means for its defense but acknowledged that, “there are different views on this matter from different angles.”⁹⁶

After using CW against Iran “in self defense,” Iraq proceeded to cultivate CW as a deterrent link against other nuclear threats. In the Paris CW conference, Iraq led Egypt and others in insisting that a ban on CW must be comprehensive and paralleled by an interdiction of nuclear weapons.⁹⁷ Later in 1990, Saddam Hussein made clear his belief that the binary agent weapon would be used in retaliation against any Israeli nuclear strike: “We do not need the atomic bomb. We have the binary chemical [weapon]. Whoever threatens us with the atomic bomb, we will annihilate him with

⁹³ This figure is quoted by Mr. Jaako Ylitako, chief field officer for UNSCOM, in Mark Nicholson, “Iraq Nuclear Drive Halted, Monitoring Now in Place,” *The Financial Times*, 14 October 1994, 5.

⁹⁴ For criticisms along these lines, see especially Defense Minister Khairallah, *Washington Post*, 7 March 1984; Iraq radio, 15 September 1988, in ME/0259/a/1–2, 17 September 1988; and Culture Minister Latif N. Jasim, who called the United States the “biggest exterminator,” INA, 10 September 1988, in BBC/ME/0254/a/7, 12 September 1988. Also see Ian Mather, *The Observer*, 18 September 1988.

⁹⁵ Vice President Mohiedinne Maarouf, quoted in *Le Monde*, 11 November 1988. Nouri Nayef, Director of the Cairo Bureau of the Iraq News Agency, was quoted as saying that official Iraqi spokesmen had informed him of this (*Le Monde*, 31 March 1988).

⁹⁶ *International Herald Tribune*, 2–3 July 1988.

⁹⁷ See *Le Monde*, 10 January 1989, and Edward Mortimer, *Financial Times*, 12 January 1989.

the binary chemical”⁹⁸ As Tariq Aziz told US Senator Robert Dole, Iraq saw CW as a “relative deterrent factor against Israel.”⁹⁹

Whether Saddam distinguished between chemical and biological weapons—and between these weapons and nuclear weapons—cannot be known. His investments in each type of weapon were relatively large. It seemed that he viewed all three types as parts of a seamless progression, making little practical distinction among them. Each symbolized progress and science, but nuclear weapons were the ultimate weapon, and as such would be the most desirable and the least dispensable. Iraq’s experience since 1991 would surely reinforce this proposition, with the qualification that CBW, though less useful militarily against strong states, still hold some attractions, not least because they are more readily attainable. Chemical and biological weapons may thus serve as shortcuts, substitutes, and symbols for more usable power. These weapons will have some attractions for an Iraq that feels wrongfully punished, and that has its capabilities constrained and its natural role as regional leader subverted.

Saudi Arabia and the GCC: The View from Riyadh

The Saudi regime and the GCC states as a whole have felt vulnerable to subversion, intimidation, and coercion by their stronger neighbors, Iran and Iraq. Saudi attempts to appease Baghdad by making common cause with it against Islamic Iran and offering it billions of dollars in subventions throughout the 1980s were not enough to guarantee Baghdad’s goodwill. Saudi Arabia’s support of Desert Storm has increased Baghdad’s wrath. Relations with Iran are no better, and the Saudi leadership fears Tehran’s attempts to undermine its religious legitimacy and to create divisions among the GCC states.

Since the Iran–Iraq war, and particularly since Desert Storm, the GCC states have increased their visible dependence on the United States as the guarantor of their security. The two crises in the Persian Gulf stripped the GCC states of their illusions about warding off dangers by “check book” diplomacy and revealed their true vulnerability to their stronger neighbors. While the GCC states continue to emphasize and even accelerate the build-up of their own (conventional) defense capabilities with major purchases of aircraft, tanks, and helicopters, and with increased military cooperation within the GCC, there are fewer expectations that a regional defense framework can act as anything more than a flimsy tripwire in the face of a major ground threat from Iraq. (Iran’s putative threat by sea is different.) The GCC’s reliance on the United States and other Western allies to deter another invasion was virtually total when, in October 1994, Saddam Hussein again concentrated his forces near Kuwait.

Reliance on the West for defense against predatory neighbors is, for the moment, satisfactory. The United States’ policy of “dual containment” serves the GCC states’ interests, and the foundation

⁹⁸ Saddam Hussein’s speech to the Armed Forces, 2 April 1990, in Baghdad Radio, INA, ME/0730/a/1–4, 4 April 1990. See also FBIS-NES-90-064, 3 April 1990, 36.

⁹⁹ Baghdad Radio, 12 April 1990, in BBC/ME/0739/a/1–2, 16 April 1990.

of a cooperative relationship with the United States, in particular, as well as with Britain, France, and Russia, appears dependable. This security relationship, however, cannot be a long term strategy. First, it costs too much both for the GCC and the West. Second, the arrangement depends on a continuing commitment by these distant states, and on their ability to arrive in time or to sufficiently deter the local forces—neither of which can be guaranteed in the long term. Third, the continuing reliance on outside powers, along with the encouragement of policies that exclude the major local states, prevents or retards dialogue among the GCC states, Iran, and Iraq, and must therefore be considered ill-judged if prolonged, particularly as it provokes Iran and Iraq's resentment. The GCC thus may be pursuing policies that, if continued, will contribute to a pent-up anger in the more powerful states of the region.

There is no evidence that the GCC states look upon nuclear, chemical, or biological weapons as particularly appalling or morally offensive weapons. Their approach seems to be pragmatic, seeking to justify any acquisition of these weapons by reference to the existence of capabilities elsewhere in the region. During the Iran–Iraq war, no public criticism was voiced about Iraq's employment of CW against Iranian soldiers or against the Kurdish population in Iraq. As noted above, in the January 1989 Paris conference on CW, no Arab state mentioned Iraq by name in connection with the use of CW. When Saddam Hussein threatened to “burn half of Israel” with binary chemical weapons if Iraq were attacked, the Arab states applauded. The Kuwaiti Foreign Ministry for example, said it “sides with brotherly Iraq in the right to defend its safety and security of its people *using all available means.*”¹⁰⁰

If the GCC states together are unable to assure their own security, and reliance on the West increases the enmity of Iran and Iraq, what are their other options? An Arab conventional deterrent force would lack credibility and would create its own problems,¹⁰¹ hence the failure to put life into the largely symbolic and declaratory Damascus Declaration. Appeasement of Iran and/or Iraq looks dangerous; the price may be too high, and dependence on the goodwill of Saddam Hussein or the mullahs in Iran appears even more problematic than reliance on the United States. What may be a more attractive alternative is the creation of a local non-conventional deterrent that goes some way to deterring, or at least inflicting costs on, a regional aggressor. It should be emphasized, however, that the GCC states cannot afford to alienate the United States and the West by seeking WMD openly. The costs of so doing would certainly be greater than any possible benefits.

A more durable solution might be the acquisition of a nuclear weapon *option*, meaning an indirect, attenuated nuclear weapon capability, which appears to have been what Saudi Arabia sought in its cooperation in the early 1980s with Iraq. Saudi Arabia's acquisition of the DF-3 missile is

¹⁰⁰ Kuwait, *KUNA*, quoting Kuwait News Agency, in FBIS-NES-9-069, 10 April 1990, 21 (emphasis added).

¹⁰¹ “Arab deterrent forces” tend to reflect differences among Arab states. Hence it is not clear that all of the Arab Gulf states, for example, would want an Arab force present in the Persian Gulf in preference to a US or UN force. “Arab deterrent forces” also tend to be euphemisms for the force of only one power, e.g. Syria in Lebanon, which retroactively had its occupation “blessed” and given this anodyne label.

revelatory in this regard. Negotiations to acquire the DF-3 missile started in 1985, well before the missile “war of the cities” between Iran and Iraq in March 1988. The United States was not informed of the purchase and only discovered the transaction by accident two years later.¹⁰² Saudi Arabia’s overall weakness on the ground and its efforts to compensate by building an advanced air force suggest that these long-range missiles were acquired with a strategic purpose in mind. Their value with a conventional warhead is limited, and they are of doubtful effectiveness as a deterrent against Iran and Iraq and may invite pre-emption in a conflict. With unconventional warheads (nuclear or chemical), the missiles’ deterrent value and cost-effectiveness would be considerably enhanced.¹⁰³

Saudi Arabia and the other GCC states will find it difficult to continue to acquire advanced weapon systems at the pace of recent years. The rapid acquisition rate will no longer be feasible for financial reasons and, for practical reasons, it is inadvisable, as there are limits to the arms that can be assimilated by states with small population bases. There is also a phenomenon of diminishing returns; even when money is not the limiting factor, deterrence cannot be enhanced appreciably by even greater expenditures on the military. At the same time, the GCC states, after the past decade of conflicts and crises, have become more aware of the nature of *military* (as opposed to domestic/subversive) threats to their security.

Even with a military buildup emphasizing advanced and state-of-the-art weapons systems (e.g. the Apache helicopter, Patriot surface-to-air missiles [SAMS]) and a qualitative edge over their neighbors, the GCC states cannot feel secure when Iraq mobilizes its forces and maneuvers near Iraq’s southern borders. The GCC states are more sensitive to possible Iranian harassment in the Gulf’s waters, but since Iran has not built a power projection capability of any size (it could at best put twelve hundred men and a few tanks across the Gulf)¹⁰⁴ the threat from its missiles is a greater source of anxiety. Indicative of this, the press in Saudi Arabia has abandoned its traditional reticence, and recently has begun to refer to Iran’s alleged efforts to acquire WMD.¹⁰⁵

The GCC states, led by Saudi Arabia, are not about to jeopardize their security relationship with the United States, however, by pursuing WMD. Nevertheless, these states will almost certainly seek to leave this option open and pursue it to the extent that they feel is possible without endangering ties with the United States. The future of such weapons in the GCC states thus depends on the state of relations with the United States, on the evolution of WMD in Iran and Iraq, and on developments in regional arms control.

¹⁰² See David Ottoway, “Saudis Hid Acquisition of Missiles,” *Washington Post*, 29 March 1988, A13.; Jim Mann, “US Caught Napping by Sino–Saudi Missile Deal,” *Los Angeles Times*, 4 May 1993.

¹⁰³ Cordesman, *Weapons of Mass Destruction*, 116.

¹⁰⁴ See the discussion in Chubin, *Iran’s National Security Policy*. See also *The Military Balance: 1994–95* (London, England: IISS, 1994), 128–129.

¹⁰⁵ Al Madinah, SPA (Riyadh), 4 October 1994, in BBC/ME/2119MED/9, 6 October 1994.

Obstacles to the Elimination of WMD in the Region

The elimination of WMD in the Persian Gulf is complicated by enmities, disparities in size, and uneven access to conventional arms. Asymmetries between Iran and Iraq in terms of their security requirements and between these two and the smaller states of the Gulf is a further problem. The issue of linkages with Israel is clearly another obstacle, as is the question of whether it is possible to constrain any particular category of arms without reference to others.

Iran

Iran's attitude toward arms control, whether of nuclear, chemical, or biological weapons, is ambiguous. In principle, Iran would be amenable to the elimination of CBW under proper safeguards. It is clearly concerned about the threat of their reappearance in neighboring states. Iran, however, will probably not ratify the CWC if the Arab states do not. Thus, one obstacle to elimination is the link that some Arab states (notably Egypt, Syria, and Iraq) have made between their adherence to the CWC and Israel's accession to the NPT. As long as this linkage exists in the region, Iran will not move very far toward a (unilateral) renunciation of its chemical weapon option.

For reasons already elaborated upon, Iran is equally unlikely to forgo the right to acquire missiles. Unless there is an agreed, explicit comparison of aircraft and missiles in every dimension, and an agreement by all regional states to limit both, which is not on the horizon, missiles will remain a feature of the region. Eventually, both aircraft and missiles might be limited by range and payload, but even then one cannot envisage an agreement limited only to the Middle East region; a global ban probably would be a prerequisite.

For arms control measures to be truly effective in the region, Iranian perceptions of arms control would have to change. Iran feels that the United States, in particular, has discriminated against it despite Iran's signature and ratification of the NPT and its acceptance of special inspections. Iran feels that it has been treated worse than non-signatories of the NPT, such as Israel. Moreover, it sees the United States as unilaterally reneging on and trying to rewrite the conditions in the NPT governing technology transfer. Similarly, Iran sees a public campaign against it despite the fact that it has signed the CWC and has not made any linkage between chemical and nuclear weapons. It views the United States as responsible for a press campaign that singles out Iran's conventional arms purchases, which have been both modest by regional standards and atypical, stemming from its losses during the war with Iraq. In practice, the anticipated sum of \$10 billion (\$2 billion/year 1989–1994) was not reached in the period. At the same time, Iran sees the United States selling vast amounts of arms to the Arab states and turning a blind eye to their alleged nuclear ambitions.¹⁰⁶

In its arms control proposals, Iran has insisted that Israel join the NPT and that it roll back its nuclear program as prerequisites to any discussion of a fissile material ban or other limits on regional

¹⁰⁶ See for example the commentary that accused the United States of "double standards" over the reported Saudi nuclear plans, *Voice of IRI*, 11 August 1994, in ME2073/MED/6, 13 August 1994.

states. Israel rejects this ‘global’ approach and insists on the creation of a regional nuclear-free zone (with tighter regional and reciprocal inspections). Iran also wants nuclear disarmament *before* rather than *after* a general regional political settlement, whereas Israel insists on achieving a political settlement in the region prior to solving the nuclear issue. Iran’s arms control approach thus puts the onus on Israel for lack of progress on nuclear issues. Iran insists on the acceptance of the CWC by all regional states as a condition for its ratification of the treaty. The Arab states (Egypt, Iraq, and Syria), however, link the chemical and the nuclear issues and will not sign the CWC as a result. Hence, Iran’s signature on the Convention means little; it can pose as the supporter of the CWC while taking a free ride on the Arab states’ linkage. Put differently, Iran’s approach is to have Israel join the NPT as a first step, which would then open up the CWC for general acceptance; this would be followed by the creation of a zone free of WMD. Before this last stage, Iran has suggested that there could be “formulation of complementary regional verification mechanisms for the Biological Weapons Convention.”¹⁰⁷

How serious are these proposals? Considering that Israel’s acceptance of arms control is dependent on an *a priori* political settlement, and that Iran actively *opposes* such a settlement and does not accept Israel’s right to exist as an independent state, Iran’s arms control proposals are essentially political posturing. The proposals enable Iran to pose as a supporter of arms control without any risk of being asked to deliver. Iran’s approach to arms control reflects a profound mistrust (and ignorance) of the potential—but not of the short-term propaganda/political—uses of arms control.

Regionally, changes in the potential threats to Iran might make it harder for Iran to pursue nuclear weapons, especially if such a course were seen as costly and potentially dangerous. An Iraq that was modestly armed or strongly and reliably constrained and an Israel more willing to discuss nuclear arms control, would increase the pressures on Iran to follow suit. There is little prospect of either development, however. Iraqi resentment will not pass with Saddam Hussein, and the goal of matching Israel’s nuclear weapons is not idiosyncratically the province of the Takritis. The threat of an Iraqi breakout with the regime bent on vengeance must also be considered. Similarly, as long as Israel insists that the relinquishment of nuclear weapons or any nuclear arms control, which it insists must be regional, must await a definitive political settlement and a period of several years afterwards to ensure that the settlement sticks, little progress toward nuclear arms control can be made in the near future. Thus the regional incentives to continue nuclear weapon programs will not diminish in the short term, which means that the programs may be quite advanced by the time any genuine incentive for their limitation occurs.

Regional incentives stemming from an aggressive Iraq and a nuclear-armed Israel offer suitable pretexts or useful justifications for Iran’s nuclear program. The elimination of these incentives, however, would not end Iran’s quest for a nuclear capability, because the primary reasons for Iran’s interest in nuclear weapons are global. Iran perceives itself to be in a virtual state of

¹⁰⁷ Statement by Dr. Velayati, 1 September 1994, 7.

conflict with the United States and in a position of vulnerability to US military power. Iran also is searching for status, equality, and affirmation of the revolution, and is obsessed with self-reliance and respect. Thus, while regional threats are an additional factor for Iran's pursuit of nuclear weapons, their reduction would not materially change Iran's calculus.

What might change the calculus? Global changes that made the search for nuclear weapons more costly and onerous and made nuclear weapons less useful and less valued by the great powers would be a first step. An international system that accepted Iran as an important player and integrated it into global politics as an equal and responsible member also would be useful. Finally, a global hierarchy that was more representative, and hence less dominated by the West and Western-dominated institutions, would better address Iran's concerns.

There are also significant domestic obstacles and preconditions to halting Iran's nuclear program. The very nature of the regime itself, with its resentments and ambitions and its emphasis on cunning and distrust of the professional military, makes the quest for such weapons more likely. What are the chances of an evolution in the regime toward greater moderation, or of a change of regime and its replacement by a more accommodating government? How much of Iran's current policy is popular and likely to outlast a regime change? In one form or another, the Islamic republic is likely to last.¹⁰⁸ Its priorities in foreign policy, however, are by no means irreversible or even popular; they simply represent the leadership's conception of Islamic/Iranian values and interests and its definition of what best suits the political mood of the country, thus serving the regime's interest as well. Rivalry with Saudi Arabia over Islam or denial of Israel's right to exist are not immutable or the expressions either of public opinion or of traditional Iranian policy. Where the Islamic republic has its finger on the pulse of society is in its antagonism to "Western arrogance" and the West's discriminatory treatment of other states, and in its sense of solidarity and concern for other "oppressed" and Muslim states. Islam's strong sense of social justice, Iran's perception of grievances, and Islamic Iran's ambitions to play a large international role combine to make its *general* foreign policy orientation popular and not easily discarded. This means that, whatever the government, Iran is likely to stake out independent positions on issues. But with a diminished sense of embattlement and isolation, Iran would see a reduced need to acquire nuclear weapons.

In the case of Iran, there is some scope for using positive inducements as well as sanctions to encourage cooperative behavior. Measures that punish and corner regimes leave little room for leverage, and often push states to rely further on extreme measures, leaving them with nothing to lose. Moreover, attempts to stop the flow of all "dual-use" technology to states suggest a diffuse hostility against the countries in question as much as a serious concern about proliferation. A technology-denial strategy, which only buys time, must be coupled with a political strategy to ensure

¹⁰⁸ The Islamic republic is likely to survive in one form or another despite mismanagement, widespread dissatisfaction, and a general erosion of its legitimacy. What helps the regime is the absence of an organized opposition that has any (better) claim to legitimacy. Consequently, any change will have to come from within the ranks of the regime and in the name of a better, more effective, Islamic government, rather than its total repudiation.

that time is well spent. Dual-containment is not such a strategy. There are a few areas in which Iranian and US interests converge, such as the Caucasus, Bosnia, and the flow of oil in the Persian Gulf. Iran wants stable borders and an orderly region to ensure the free flow of oil. The United States should build upon these areas of commonality. Iran's interests in the Persian Gulf should be acknowledged and its differences with its Arab neighbors recognized as only one of a series of differences in the region that should be settled peacefully. Such divisions should not be exploited to divide the region. Above all, there is room for improved public treatment of Iran in the recognition of the legitimacy of some of its claims and criticisms.

None of these approaches is new or without risk. Iran has been involved in terrorism, and overtures to Iran may be publicized and pocketed without a corresponding step forward on the part of Tehran. Iran is a quagmire in terms of US politics; it has no constituency supportive of overtures or a normalization. Within Iran, however, there is support for a return to a relationship with the United States.¹⁰⁹ The current regime is unable to contemplate such a relationship today without a loss of momentum and focus for its "revolutionary" policies. Economic pressures dictate, however, that Iran, which earns its principal income from oil (denominated in dollars), increase its trade with countries in the dollar zone rather than with its current major trading partners who have strong currencies (the deutschmark and yen). The Islamic republic is pragmatic about the means needed to assure political survival. If it sees its power base endangered, it will adapt. For now, however, it benefits domestically from American hostility, in that the regime can depict Iran's problems as the result of US machinations, and as the price Iran is willing to pay for being independent. Moreover, the regime would be vulnerable under a US/Western embrace, which would blur the focus of the regime's revolutionary message and its claim to represent the "oppressed."

Such an embrace would not be without risk for the West as well. The Iranian regime is sensitive to economic costs and vulnerable to pressure, but there are no guarantees that it will not eventually gain access to fissile material and the technology for a nuclear weapon program. There is a trade-off, moreover, between isolating the regime to retard its weapon program, and engaging it in dialogue to socialize it and entangle it into responsible behavior, just in case it does get nuclear weapons. Over time, the regime itself may evolve toward moderation; it is unlikely to become more hostile to the West than it has been. It may find sources of legitimacy other than confronting the United States and Israel and playing the "Islamic card."

Iran's quest for independence, equality, and self-expression need not lead it inexorably toward WMD. There is nothing in Iran's political/strategic culture that impels it in this direction, and its declarations about the immorality of such weapons have the ring of authenticity rather than public

¹⁰⁹ Iranian politics do not allow any public airing of this view. There are, however, several constituencies that would likely support normalization if permitted to speak freely; among these would be the military and the oil company technicians. The merchants and bazaar would also like to trade normally with the United States without paying middle men fees.

relations.¹¹⁰ If it felt less threatened by the United States, lacked urgent regional incentives to develop WMD, and was assured access to technology and conventional weapons, Iran's security needs could be met without a need for nuclear weapons. Arms control could then be used to contain and roll-back all WMD programs in Iran. Less besieged and more integrated, Iran would have fewer reasons for seeking such weapons.

Iraq

For Iraq, WMD are perceived as important for security and also are seen as symbols of equality and advancements in science and technology. Only changes in Iraq's domestic, regional, and international environments would allow for it to consider seriously the elimination of weapons of mass destruction, and it would only accept elimination in exchange for assurances that the development of science and technology in related fields would not be handicapped.

Under a different leader, Iraq might be less ambitious regionally, less prone to rely on military solutions to problems, and hence less disposed to perceive Iran and Israel as threats. Such a regime might indeed be more amenable to some form of regional arms control, but it is worth emphasizing two continuing features of Iraq's political landscape. First, Iraqi political culture will not change overnight. With its many cleavages, Iraqi society has traditionally been run by a government that uses ruthless violence to enforce obedience and order. This leadership style permeates Iraq's foreign policy toward the region to a significant degree. This political culture is, in effect, a semi-permanent or structural dimension of Iraq's behavior in the international environment. Unless the regime becomes democratic, the linkage between domestic insecurity and regional belligerence is unlikely to change overnight. Second, Iraqi differences with its neighbors and its claims vis-à-vis Kuwait did not start and may not end with Saddam Hussein's regime. Even if Iraq relinquishes its claim on Kuwait, one may doubt its permanence.

A related issue is the future of sanctions and especially the monitoring of arms constraints imposed on Iraq by the United Nations Security Council. There are no time limits to either the sanctions or the monitoring. Clearly, Iraq has been singled out for severe treatment. In time, the restrictions on Iraq will appear onerous and even discriminatory, especially to a successor regime. No Iraqi regime, in short, will accept being singularized in this way. United Nations Resolution 687 specifically refers in its preamble to the threat "which all weapons of mass destruction pose to peace and security in the area" and to the need to "work towards the establishment in the Middle East of a zone free of such weapons." It also refers to the objective of "balanced and comprehensive control of armaments in the region." Article 14 notes that this resolution represents a step toward the

¹¹⁰ "Destructive and anti-human nuclear weapons are against the culture, ideology and the political view of this honorable system and we have proved our adherence to the humanitarian principles of Islam during the eight year imposed war." See President Rafsanjani's address to foreign diplomats, Voice of IRI, Network 1, 9 February 1995, in BBC/ME/2225MED/9, 11 February 1995.

establishment “in the Middle East [of] a zone free from weapons of mass destruction and all missiles for their delivery”¹¹¹

Iraq feels that Resolution 687 is being flouted because the Security Council “deliberately ignores” the Israeli and Iranian arsenals and thus has “created a serious imbalance among regional forces and serious threats to security and stability in the region.” In practical terms, these lopsided sanctions against Iraq “leave Israel and Iran in particular ample room to enhance their arsenals of mass destruction.”¹¹² This complaint, while self-serving for Saddam’s regime, could appear to be a reasonable one coming from his successors, who may be tempted to resume the quest for WMD if they see their neighbors as threatening and themselves as disadvantaged.

If Iraq is not to be treated permanently as a pariah, either similar controls on arms will have to be extended to other states in the region, or the restraints on Iraq will have to be lifted as Iraq demonstrates greater responsibility. Controls imposed on only one state are not sustainable over the long run and are a recipe for increased bitterness and frustration in that state. The United Nations should seek to make clear that it would treat post-Saddam Iraq much more gently, and would be willing to reduce the penalties on it, as long as it demonstrates in a gradual process its willingness to re-enter the community of nations.

Reintegrating Iraq into regional politics also will be important for reducing Iraq’s sense of vulnerability. In the Persian Gulf, this means that Iraq cannot be “excluded” and should be actively engaged in a dialogue with its neighbors in a regional forum. To buttress adherence to the CWC and generate mutual confidence among themselves, the Persian Gulf states should participate in reciprocal inspections. Emphasis in the initial stages would be only on the littoral states because the nuclear factor no longer exists here. But continued progress in the Persian Gulf would presuppose some parallel success in the Arab–Israeli area. Over time these two regions could be linked in comprehensive regional arms control regimes. One area of mutual concern would be long-range delivery systems, missiles in particular. Missiles over a certain range could be banned and aircraft ranges and deployments circumscribed. Both missiles and aircraft could be subject to regional inspections.

Guidelines for establishing a comprehensive regional arms control regime might include the following:

- The regime should be limited geographically and by item (CW/BW first, then missiles, and then nuclear weapons).

¹¹¹ United Nations Security Council document S/RES/687 (1991), 8 April 1991. The resolution was adopted on 3 April 1991.

¹¹² Message from Foreign Minister Muhammad Said al-Sahhaf to UN Secretary General, broadcast by Baghdad Radio, 28 October 1992, in BBC/ME/1529/I, 4 November 1992.

- The Persian Gulf and Arab–Israeli zone should be treated separately but in parallel, with an eventual linkup.
- Regional approaches to inspections should be adopted, because it is the regional states that need to be reassured and such interactions may build trust.
- An important international dimension is also necessary. The international community could perhaps give states in the Persian Gulf region assurances regarding the transfer of technology and strong security guarantees in exchange for clearly renouncing WMD and accepting intrusive verification measures.

An Iraq that is reassured by its neighbors (initially Iran and eventually Israel), welcomed in a regional forum, and given a stake in the Gulf through improved access to its waters, would have less incentive to pose as an Arab leader and seek WMD. A more representative system of government that relies less on violence and terror might pursue a different foreign policy. But even without a move toward democracy, a satisfied Iraq without regional leadership pretensions would be easier to discourage from acquiring mass destruction weapons.

At the very least, an Iraqi regime under another leader, however nationalistic, would be easier to do business with and should be encouraged and cultivated by the West. Such a regime would reasonably expect some relief from the economic penalties imposed on its predecessor. The question of improved access to the Gulf's waters has not been definitively settled in the eyes of Iraqis and requires some accommodation by Kuwait. A more reasonable Iraq, perhaps with a more representative—if not democratic—regime, might expect either to have the current intrusive arms control monitoring regime relaxed or else generalized in the region. Softer terms for a more moderate Iraq would be necessary, and pledges to this effect should be made known now so that there are incentives to replace Saddam Hussein. Saddam is not alien to Iraqi political culture but he has cultivated its worst characteristics. With his passing, Iraq would remain a problem; neither stability nor moderation would emerge overnight. Iraq will have security concerns and demands that will need to be addressed. But a post-Saddam Iraq, divested of grievances and ambitions, has more chance of rehabilitation and reintegration into mainstream Middle East politics.

It is important to note also the reverse side of this rosy scenario. Iraq has been humiliated and militarily and economically reduced to a shadow of its former self. A Saddam Hussein bent on revenge will find his military limited (and perhaps untrustworthy), and WMD would be therefore all the more appealing. While Iraq's nuclear program has been destroyed and will need time to be rebuilt, other programs may be resumed with less difficulty. Chemical weapons require large stocks and hence may be more susceptible to detection; the same is *not* true of biological weapons, however, which pound-for-pound are far more damaging than other weapons. An ambitious and enraged Iraq, deprived of conventional weapons, could rely on biological weapons (and keep missiles hidden) while building up its other weapons of mass destruction. Detection and reliable denial of CBW technologies is difficult because of their overlap with civilian applications. Iraq's potential for damage in the region consequently remains considerable. Without Iraqi cooperation, the chances of progress in regional arms control of WMD must be put at near zero.

Saudi Arabia and the GCC

With the exception of Saudi Arabia's missiles and reports of its nuclear aspirations, none of the other GCC states are believed to be developing WMD. As long as the GCC states continue to be acutely reliant on the United States as the prime guarantor of their security and that relationship appears solid, none of these states, including Saudi Arabia, are likely to go very far toward developing WMD. Even considering such weapons as future options could endanger their relationship with the United States, thus any incentive to do so is reduced. As long as the defense relationship with the United States is dependable, the Gulf states will not jeopardize it by seeking to develop WMD.

The United States has prevailed upon the GCC states to enter into the multilateral arms control sessions of the Middle East peace process and to host meetings. Similarly, the United States has successfully encouraged these states not to link chemical and nuclear weapons in the arms control context, and to sign the CWC. The GCC states are thus formally, but not yet very actively or enthusiastically, associated with an arms control forum that may eventually become a process itself. In practice, these sessions, if attended at an appropriate level, may become a sort of seminar in which understanding for the potential of arms control is enhanced. Nevertheless, given their inability to contribute much practically to the substantive peace process, these states will be reluctant to strike out too far in front of the principals. This means that even a delinking of the chemical and nuclear weapons issues is unlikely to engender much willingness by the GCC to pursue a ban on WMD confined, for example, only to the Persian Gulf.

The GCC states will continue to be concerned about access to high technology conventional arms in order to pursue their own version of a "qualitative edge" vis-à-vis Iran and Iraq. Their diminished worries about Iraq's capabilities today cannot disguise the anxiety they feel about the possibility of a vengeful Iraq arising phoenix-like from the ashes in the future. At the same time, Iran's missiles and mischief-making casts a shadow over any sense of security generated by the closer political/military relations with the United States. For the immediate future, the US connection provides a security umbrella in exchange for which the GCC states will lend support to progress on the other Middle East track. Eventually, however, Saudi Arabia and the GCC states will be faced by the need to come to terms with the two stronger powers in the region and work out a *modus vivendi* with them on their own. Given the level of distrust, it may not be easy for the smaller states to renounce possible future development of WMD, if only as potential retaliatory weapons. On the other hand, whatever equalizing effect such weapons may be thought to have would be considerably reduced by the vulnerability of the smaller states, as virtual city-states, to even small numbers of WMD. The incentives for arms control for these states would thus be great once they recognized that proliferation of WMD would not be to their advantage but, on the contrary, would merely reinforce their disadvantage vis-à-vis Iran and Iraq.

Conclusion

Where WMD in the Persian Gulf are concerned, Iran and Iraq are of prime interest, the former for its potential and the latter for its recent record and programs. In light of its experience with Iraq from 1984–88, Iran has powerful reasons to develop chemical and biological weapons capabilities. Given a reliable system of arms control, however, Iran may be more willing to forgo these weapons than others. Iran is less likely to dispense with its missiles, because it perceives missiles as providing more self-reliance and substituting to some extent for an air force. Similarly, Islamic Iran is most unlikely to renounce its program to acquire nuclear weapons, which it sees as necessary instruments for its security and status. Since its motives for acquiring nuclear weapons are global and diffuse, as well as specifically security-related, they will be harder for the international community to address. Greater effort to meet Iran's legitimate interests, to give it a stake in the system, and to absorb and smother it in a web of interdependence, however, could facilitate arms control and lessen Iran's desire to obtain nuclear weapons. Iran's approach to arms control is tactical and is designed to cast it in a good light; its approach does not reflect serious engagement. This may change over time, with a different regime or with a different incentives package. It is least likely to change in the short term—which is the critical period—because the regime feels cornered and harassed, and both exploits and invites the West's animosity for domestic political purposes. The incentives for regional arms control are not very pronounced either.

Iraq is weaker and presents no immediate threat. On arms control, no Iraqi regime is likely to accept controls applied only to Iraq; rather, any future regime will most likely insist on parity across the board with Israel and Iran. Israel here is both *pretext* and *cause*. Iraq needs to be reassured and integrated and its capacity for mischief reduced if it is not to become a threat again. If sanctions are lifted or softened, Iraq may come to pose a major threat, especially in biological weapons, which may be the most accessible and hence the most quickly developed. Weapons of mass destruction are the logical endpoint of a quest for a qualitative edge vis-à-vis Iran and Israel. If Iraq were less inclined to confront its neighbors, it would have fewer incentives for such weapons. This implies, however, diminished or more reasonable regional goals, which seems likely only in the event of a new regime and assumes a radical discontinuity with the past. While a change in the political culture of the society will not come overnight, if encouraged by the rest of the world, a new regime that combines moderation at home with negotiation of differences regionally will facilitate progress in this area. Although the chances of such a regime emerging any time soon are somewhere between uncertain and unlikely, only such a regime could transcend the politics of fear and confrontation that have been the distinctive hallmarks of Saddam's Iraq.

The primary obstacles to limiting WMD in Iran and Iraq stem from a combination of the nature of the political leadership or regime and the circumstances prevailing in the region. Different regimes in Iran and Iraq might be less ambitious regionally and less confrontational vis-à-vis Israel, and also might define national security differently and set about its attainment in a manner less disruptive to regional stability. On the other hand, any regime in either country is likely to consider nuclear weapons exclusively in the hands of Israel, or arms control and technology-denial selectively applied,

as reasons to seek compensatory or matching weapons systems. In short, a change in regime might change Iran and Iraq's perspectives on WMD, but it would not alter the sense of resentment at policies that the regimes feel are clearly discriminatory. Arms control that seeks limits only in the Persian Gulf, and thus maintains Israel's arms superiority, or that demands adherence to restrictions only by states other than Israel, are deeply unpopular, resented, and unlikely to be acceptable to any regime in either country.

Progress toward resolution of the Arab–Israeli conflict, including the conclusion of peace treaties and territorial agreements between Israel and its immediate Arab neighbors, would reduce the incentives of Iran and Iraq to acquire WMD. An Iraq more integrated into the Persian Gulf and an Iran less resentful or more accommodated internationally would also generate fewer pressures for such weapons. These states' motives for the acquisition of WMD stem from incentives on several levels: regime, domestic, and political pressures; the existence of specific security concerns, including access to conventional weapons or the presence of stronger neighbors; regional ambitions; and the quest for status regionally and globally. There are additional complications from cross-regional political linkages and because subregions overlap and distances are short.

The GCC states, in contrast to Iran and Iraq, are not the prime movers for WMD in the region and may come to see WMD as a distinct threat to their own security. For reasons of Arab solidarity, however, it will remain an article of faith that Israel's denuclearization should take precedence over any discussion of other WMD. The expression of this demand may be tempered by the GCC states' need to rely on the United States in the short term.¹¹³ For the GCC states, the threat of WMD is more real in the immediate Persian Gulf region than in the broader Middle East. In buying and stocking arms, holding their neighbors at arms length, and eschewing any dialogue, these states, relying on distant powers for their security, have at times been less than prudent in their treatment of their larger neighbors. Over time, the GCC states need to find a means of coexisting with Iran and Iraq that includes cooperation as well as deterrence. If Iran and Iraq are to play less active “regional” roles in the Middle East, they will probably be more present in the Gulf. The smaller states will have to live with this situation, rather than simply pretend that these two large states do not exist.

The conditions for reducing the multiple incentives of the Persian Gulf states to acquire WMD can be met only by change on several levels. Political change in Iran and Iraq is one area of potentially favorable change. This may not come overnight and may not come at all, so it would be prudent to assess how far the legitimate needs of these states can be met, and whether they can be integrated and entangled into a system of mutual dependence and constraints. It would be a mistake however, to believe that only rogue regimes resent inequalities in access to arms or selective discrimination in the application of arms control. If the Middle East sees the advent of more Islamic or populist regimes, these equity issues will become more important. Greater diplomatic interaction among regional states may lay the foundation for limited arms control measures and should be

¹¹³ For example, at the 1995 NPT Review and Extension Conference, these states withdrew their insistence that Israel sign the treaty as a precondition for an unlimited extension of the NPT.

encouraged. Progress in the Arab–Israeli peace-process, which sees the substitution of a normal political relationship for an adversarial one based on worst-case assumptions, could make the linkage between these two regions, which has so far been destabilizing, work in reverse, to positive effect.