

Part III: Nonproliferation

Preventing the spread of nuclear weapons and associated technology has proven to be a partly attainable yet frustratingly elusive goal. Since the detonation of the first atomic bomb in 1945, acquiring a nuclear weapons capability has been a powerfully seductive option for states seeking greater security and the prestige and power some perceive it brings. While several states now have established nuclear weapons programs, there have also been other states in the past that have abandoned this path for political, security, and possibly moral reasons. Currently, there is great worldwide impetus to curb the further proliferation of nuclear-related technology and know-how to other states. To this end, the Commission asked its experts to examine a number of nonproliferation subjects and issues, including the Non-Proliferation Treaty (NPT), declaratory policy, and regional proliferation concerns and encouraged them to address any other nonproliferation issues the experts deemed important.

In his opening paper, Joseph Cirincione describes the timeline of nonproliferation landmarks over the past half-century, including the establishment of the NPT, the relinquishment of nuclear weapons by some countries, and the factors, such as the NPT, that led some countries to abandon nuclear programs before they reached fruition. As a suggestion for the Commission, Cirincione provides his perspectives on the connection between the spread of nuclear weapons and U.S. nuclear posture, concluding that the surest way for the U.S. to promote nonproliferation is to lead by example—that is, to reduce our own stockpile as a way to deemphasize the role of and need for nuclear weapons. In a shorter piece on the subject, Philip Zelikow provides a state-by-state analysis of how U.S. nuclear posture has affected foreign acquisition choices in the past. Zelikow surmises, as Cirincione suggests, that superpower behavior could affect the purported value and utility of nuclear weapons in the eyes of other states.

In considering the prospects for preventing nuclear proliferation, Henry Sokolski examines several emerging issues that may threaten to derail the trend towards arms reductions and nonproliferation. The most timely issue is perhaps the spreading of nuclear energy technology. Currently, several states have established programs and several others are clamoring to develop or otherwise obtain this technology. Sokolski points out the heightened chances of nuclear weapons development once a state has acquired nuclear energy technology, even for ostensibly peaceful purposes, and criticizes the limits of

the IAEA in its policing and enforcement role. Sokolski urges the Commission to balance arms reductions with solutions that discourage proliferation, specifically ways to render nuclear energy a less attractive energy alternative.

To further the nation's nonproliferation goals, the experts concluded that the United States must strengthen the NPT and use declaratory policy as a way to signal our commitment to curbing the spread of nuclear weapons. Robert Litwak highlights three NPT issues that the U.S. should address: how to strengthen our commitment to the goal of nonproliferation and disarmament; how to allow non-nuclear weapons states to develop nuclear energy technology without permitting them to develop weapons; and how to enforce compliance with NPT commitments. As another way to signal our commitment, James Goodby sees the crafting of appropriate declaratory policy as an instrument that can be used to convince others of our dedication. However, as Goodby points out in an illustrative list of potential declaratory policies, the chosen policy path must be consistent with, and complementary to, other U.S. declared national security policies.

Experts examined several geographical areas of increasing interest, including Europe and the Middle East, to provide a context for regional nonproliferation dynamics. Robert Einhorn and Rebecca Hersman focus on the role of U.S. strategic posture on proliferation in NATO and non-NATO states. In their work, Einhorn and Hersman analyze member states and non-member states through a regional lens: "old NATO"; "new NATO"; potential members including Turkey, Ukraine, et al.; and other non-NATO states. Both authors conclude that a consultative approach to the region and a credible extended deterrent pledge, among other suggestions, will help maintain the relatively stable proliferation dynamics in Europe.

In contrast to this European stability, several experts point out that the Middle East, is an unfortunately fertile place for nuclear proliferation. Robert Litwak explores the connection between U.S. force structure and proliferation in the Middle East, with a special emphasis on Iran. He describes the history of nuclear weapons in the region, where there are no declared nuclear weapons states, and offers insights into reassurance of our allies and approaches for addressing possible Iranian nuclear acquisition. In a complementary paper, Elbridge Colby points out the danger in not planning for a nuclear-armed Iran; by formulating a plan for this worst-case scenario, Colby suggests that the U.S. could make the nuclear option less attractive to Iran by exposing the limits of acquisition. To prevent a "cascade of proliferation," Colby argues that the U.S. should also strengthen its security commitments in the region to assure others that a nuclear-armed Iran can be constrained.

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The Impact of Nuclear Posture on Non-Proliferation

Joseph Cirincione

The nuclear posture and strategic decisions of nuclear-armed nations have a significant, often immediate impact on the nuclear acquisition decisions of other nations. A decision by a state to acquire nuclear weapons can trigger a similar decision in a rival state. Conversely, the commitment not to acquire or maintain nuclear weapons by one state or group of states can foster similar commitments regionally or globally.

This relationship was recognized in U.S. national intelligence assessment in the 1950s and 1960s and informed the U.S. decision to negotiate the Non-Proliferation Treaty. The new international norm established by the NPT and related agreements—that the world was moving toward the elimination of nuclear weapons—helped prevent, and in some cases reverse, the acquisition of nuclear weapons by new states.

Even as the nuclear-armed nations increased and improved their nuclear weapons in the 1970s and early 1980s the process of negotiation of new arms control treaties maintained the deterrent effect of the NPT. Nations and publics saw the arms race as a violation of the disarmament commitments and sought to bring the violating states back to the established norm. Negotiated reductions in U.S. and Russian nuclear arsenals begun in the late 1980s appeared to reaffirm this norm and substantially enhanced non-proliferation efforts, including the successful extension of the NPT in 1995 and the decisions by Ukraine, Belarus, and Kazakhstan to give up the nuclear weapons inherited from the break-up of the Soviet Union in 1991.

The United States ended the negotiated reduction process in the early 2000s, and both the United States and Russia again emphasized the importance of modernizing and maintaining nuclear weapons and expanded their

use to additional non-nuclear missions. As some nations concluded that the nuclear-weapon states had no intention of eliminating their nuclear weapons, and as India and Pakistan seemed to win acceptance as new nuclear nations, the anti-proliferation impact of the NPT waned. When new states began to develop nuclear weapon technologies, the international cooperation needed to prevent this development became harder to muster.

Re-establishing the commitment to the elimination of nuclear weapons by the United States and other nuclear-armed states coupled with practical steps towards that goal would be a powerful barrier to the spread of nuclear weapons to other states. The interim report of the Commission correctly notes: "If the U.S. by its actions indicates to other nations that we are moving seriously to decrease the importance and role of nuclear weapons, we increase our chance of getting the kind of cooperation we need to deal effectively with the dangers of proliferation." As the Commission finds:

"What we do in our own nuclear weapon program has a significant effect on (but does not guarantee) our ability to get that cooperation. In particular, this cooperation will be affected by what we do in our weapons laboratories, what we do in our deployed nuclear forces, what kind of nuclear policies we articulate, and what we do regarding arms control treaties (e.g., START and CTBT)."

The historical record supports this conclusion.

Historic Linkage Between U.S. Nuclear Posture and Proliferation

Non-proliferation has been a declared part of U.S. national security strategy since 1945. From the beginning, officials recognized the linkage between U.S. nuclear posture and proliferation and detailed this linkage in successive official assessments.

In 1958, when only three countries had nuclear weapons, a now declassified National Intelligence Estimate (NIE), the first exclusively devoted to proliferation, noted:

"A U.S.-USSR agreement provisionally banning or limiting nuclear tests would have a restraining effect on independent production of nuclear weapons by fourth countries. However, the inhibiting effects of a test moratorium would be transitory unless further progress in disarmament—aimed at effective controls and reduction of stockpiles—were evident."¹

Specifically, the agencies concluded:

"In the interest of encouraging progress in disarmament among the major powers, there is popular support throughout most of the world for a ban on tests. Hence, a U.S.-USSR agreement provisionally banning or limiting tests would bring into play strong public pressures against testing by fourth countries, even though such countries might not initially be parties to the agreement."²

The test ban might not stop some countries from testing, such as France, said the report, "Nevertheless, popular pressure, among other reasons, would probably force the Government to postpone further tests." In the longer run, France would likely restrict its right to make weapons "only as part of an arrangement which required reduction of the stockpiles of the major nuclear powers."

Similarly, international agreements would help deter Japan from acquiring weapons, even if it were close to nuclear capability, as "not only the public but the government as well would welcome any agreement which promised to be effective...although they would be reluctant to accept restriction greater than those accepted by other fourth countries, notably Communist China."³

International agreements had their limits, the NIE noted, "The Chinese Communists probably would not be deterred from nuclear weapons production by a limited disarmament agreement, except insofar as they might be prevented by Soviet adherence and Soviet withholding of assistance from China for development of a weapons program."⁴

Subsequent NIEs reaffirmed this linkage. The first assessment done during John F. Kennedy's presidency, in September 1961, reviewed the capabilities of 14 countries believed capable of developing an operational nuclear weapon but noted that having the capability "does not answer the question whether they will actually do so."⁵ The decision to go ahead with a program "will depend on a complex of considerations both domestic and international."⁶

Domestic considerations in addition to technical capabilities include cost, security requirements, the desire to increase prestige, and domestic opposition to a program. International factors include the nature of relations with other states and the international security climate. Significantly, the estimate found:

"The prospect of an agreement among the major powers for a nuclear test ban, for example, especially if it were viewed as a forerunner to broader disarmament steps, would undoubtedly strengthen force opposed to the spread of nuclear capabilities. Growing pessimism as to the likelihood of any realistic disarmament agreement could in some cases (e.g., Sweden, India) tend to undermine opposition to the acquisition of a national nuclear capability."⁷

These early NIEs were as concerned with the nuclear weapon decisions of U.S. friends and allies as they were about potential adversaries. They

remind us that the proliferation problem has never been confined to hostile states. The considerations many allies had then apply to considerations U.S. allies have today.

The 1961 NIE examined each specific case, judged France and Israel as likely to develop weapons (France had tested in 1960, Israel would have a bomb by 1968), and found other likely cases were significantly dependent on international disarmament efforts.

Specifically, Sweden would be technically capable of making a nuclear weapon by 1963.

*"If at that time the international climate appeared to be calm, especially if positive steps toward disarmament had been agreed upon by the major powers—or there were reasonable hopes that one would materialize—it is unlikely that the Swedes would decide to undertake a nuclear weapons program. In the absence of such reassuring factors and especially if other countries had already decided to produce nuclear weapons, the pressure to initiate a nuclear weapons program would probably grow sharply."*⁸

India, the estimate said, would be under great pressure to develop a nuclear weapon if China exploded a nuclear device, "even so, we believe India would not decide to devote its nuclear facilities to a weapons program unless its leaders were firmly convinced that no broad disarmament agreements were possible..."⁹

Overall, the agencies judged seven nations capable of developing nuclear weapons as unlikely to do so in the next few years, but warned, "These attitudes and views could change in the coming years with changing circumstances, e.g., if it became increasingly clear that progress on international disarmament was unlikely..."¹⁰

Gilpatric Committee Concludes Weapon States Must Lead by Example

In January 1965, President Johnson's Gilpatric Committee on Nuclear Proliferation report concurred with the sentiment of the earlier NIEs: "It is unlikely that others can be induced to abstain indefinitely from acquiring nuclear weapons if the Soviet Union and the United States continue in a nuclear arms race."¹¹

The first page of the report recommended:

"The Committee is now unanimous in its view that preventing the further spread of nuclear weapons is clearly in the national interest...[T]he United States must, as a matter of great urgency, substantially increase the scope and intensity of our efforts if we are to have any hope of success. Necessarily, these efforts must be of three kinds:

- (a) negotiation of formal multilateral agreements;
- (b) the application of influence on individual nations considering nuclear weapons acquisition, by ourselves and in conjunction with others; and
- (c) example by our own policies and actions."¹²

The Committee detailed necessary steps, including tougher export controls, stricter safeguards on civilian nuclear programs and increased budgets for the IAEA, and acknowledged the importance of the participation by the Soviet Union in efforts to stop proliferation.

It warned: "Lessened emphasis by the United States and the Soviet Union on nuclear weapons, and agreements on broader arms control measures must be recognized as important components in the overall program to prevent nuclear proliferation."¹³

Its number one recommendation stressed the importance of multilateral agreements:

"Measures to prevent particular countries from acquiring nuclear weapons are unlikely to succeed unless they are taken in support of a broad international prohibition applicable to many countries."¹⁴

These agreements should include a global non-proliferation agreement (President Johnson concluded the Non-Proliferation Treaty in 1968 and President Richard Nixon secured its ratification in 1970); nuclear free zones, particularly in Latin America and Africa (both have such treaties in effect today); and a comprehensive test ban (concluded in 1996, but yet to enter into force).

After specific recommendation for policies towards individual nations and increased safeguards, the Committee concluded:

"If we are to minimize the incentives for others to acquire nuclear weapons, it is important that we avoid giving an exaggerated impression of their importance and utility and that we stress the current and future important role of conventional armaments."¹⁵

Disarmament Part of a Web of Restraints

While progress toward disarmament is an important factor, no assessment ever found that it was the only factor. NIEs usually included a web of issues influencing individual national decisions on nuclear weapon programs. A December 1975 estimate summarized:

"Threshold-crossers' decisions will be strongly affected by what happens in the whole complex web of international relations—North-South disputes, East-West relations, economic, technological and military developments."¹⁶

As noted above, the main reasons that states acquire nuclear weapons are: security, prestige, domestic politics, and to a lesser degree, technology and economics. The reasons states do not develop nuclear weapons can be grouped into the same set of factors: security, prestige, domestic politics, technology, and economics.

Each driver for acquiring nuclear weapons has a matching barrier. That is, states decide not to build nuclear weapons—or, in some cases, give up weapons they have acquired or programs that they have started—because they decide that the security benefits are greater without nuclear weapons, that prestige is enhanced by non-nuclear-weapon status, because domestic politics convince leaders not to pursue these programs, or because the technological and economic barriers are too significant to overcome.

An effective non-proliferation policy will minimize the drivers and maximize the barriers. A recent example of this approach is found in the 2007 NIE on Iran. The assessment concluded, “Tehran’s decisions are guided by a cost-benefit approach rather than a rush to a weapon irrespective of the political, economic, and military costs.” It found that “some combination of threats of intensified international scrutiny and pressures, along with opportunities for Iran to achieve its security, prestige, and goals for regional influence in other ways,” might convince Tehran to halt its nuclear program.¹⁷

The United States on its own or through its alliances could influence some of these factors in the case of Iran or other states. But the global non-proliferation regime has proved a formidable barrier. Since the signing of the NPT, many more countries have given up nuclear weapon programs than have begun them.

In the 1960’s, 23 states had nuclear weapons, were conducting weapons-related research, or were actively discussing the pursuit of nuclear weapons. Today, only 10 states have nuclear weapons or are believed to be seeking them.¹⁸ Before the NPT entered into force, only six nations abandoned indigenous nuclear weapon programs that were under way or under consideration: Egypt, Italy, Japan, Norway, Sweden, and West Germany. Since then, Argentina, Australia, Belarus, Brazil, Canada, Iraq, Kazakhstan, Libya, Romania, South Africa, South Korea, Spain, Switzerland, Taiwan, Ukraine, and Yugoslavia have all abandoned nuclear weapon programs or nuclear weapons (or both). Now North Korea, Iran, and Pakistan are the only three states in the world that began acquiring nuclear capabilities after the NPT entered into force and have not ceased their efforts.

This regime will crumble if the consensus built on disarmament and non-proliferation commitments is not restored.

Conclusion

History has borne out U.S. assessments of the essential connection between controlling existing arsenals and preventing new ones. These previous national estimates can assist today's officials in efforts to apply the same logic to current threats.

The Commission's interim report recognizes this connection but does not include a finding on this issue. The report notes in its narrative, "The fact that other states possess nuclear weapons continues to affect decisions about the needed U.S. strategic posture." The reverse is also true: The fact that the U.S. and other states possess nuclear weapons continues to affect other states' decisions about nuclear strategies.

The interim report's Finding 10, that "Other nations are unlikely to eliminate their nuclear weapons just because the United States does so," is true, but they are also unlikely to eliminate their weapons if the United States does not. A negotiated process of nuclear reductions and restraints has proven to be an essential element for convincing states to limit or eliminate their weapons and weapon programs.

The Commission should find that the commitment by the United States and other nuclear-armed nations to eliminate nuclear weapons and to take practical, immediate steps towards that goal will improve U.S. security and substantially enhance prospects for preventing the acquisition of nuclear weapons by new states and by terrorist groups.

1 Director of Central Intelligence, "National Intelligence Estimate 100-2-58," 1 July 1958 (Approved for release July 2004), p. 2.

2 *ibid.*, p. 17.

3 *ibid.*

4 *ibid.*

5 Director of Central Intelligence, "National Intelligence Estimate Number 4-3-61," 21 September 1961, p. 5.

6 *ibid.*, p. 5.

7 *ibid.*, p. 5.

8 *ibid.*, p. 8.

9 *ibid.*, p. 9.

10 *ibid.*, p. 9.

11 President's Task Force on Preventing the Spread of Nuclear Weapons (Gilpatric Report), 21 January 1965, Washington, DC, p. 7.

12 *ibid.*, p. 2.

13 *ibid.*, p. 5.

14 *ibid.*, p. 7.

15 *ibid.*, p. 20.

16 Central Intelligence Agency, Directorate of Intelligence, Office of Political Research, "Eight Years Later: New 'Threshold States' Research Study, 'Managing Nuclear Proliferation: The Politics of Limited Choice,'" December 1975.

17 National Intelligence Council, "Iran: Nuclear Intentions and Capabilities," November 2007, Washington, DC, p. 7.

18 The 10 countries known to have nuclear weapons or believed to be seeking them are, in order of acquisition: United States, Russia, United Kingdom, France, China, Israel, India, Pakistan, North Korea, and Iran.

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Nuclear Abolition and the Next Arms Race

Henry Sokolski

A decade ago, an analysis of the challenges of transitioning to a world without nuclear weapons would be dismissed as purely academic. No longer. Making total disarmament the touchstone of U.S. nuclear policy is now actively promoted by George Shultz, William Perry, Henry Kissinger and Sam Nunn—four of the most respected American names in security policy.¹ Most of their proposals for reducing nuclear threats, moreover, received the backing of both presidential candidates in 2008 and, now, with President Obama's arms control pronouncements in April in Prague, they have become U.S. policy.² These recommendations include getting the U.S. and Russia to make significant nuclear weapons reductions; providing developing states with "reliable supplies of nuclear fuel, reserves of enriched uranium, infrastructure assistance, financing, and spent fuel management" for peaceful nuclear power; and ratifying a verified Fissile Material Cut-off Treaty (FMCT) and a Comprehensive Test Ban Treaty (CTBT).

This newfound enthusiasm for nuclear weapons reductions has been heralded as a clear break from the past. Politically, this may be so. Technically, however, the U.S. and Russian military establishments have steadily reduced the numbers of operational, tactical, and strategic nuclear weapons since the late 1960s sevenfold (i.e., from 77,000 warheads to less than 11,000). By 2012, this total is expected to decline by yet another 50 percent. When policymakers call for more nuclear weapons reductions and increased nuclear restraint, then, they are hardly pushing against historical or technological trends. Unfortunately, this desired harmony with history and science is far less evident when it comes to the specific proposals being

made to reduce future nuclear threats. Here, it is unclear if the proposal will reduce or increase the nuclear threats we face.

Consider the suggestion made in the 2008 Nunn-Shultz-Perry-Kissinger *Wall Street Journal* op-ed (a follow-up piece to one they had written a year earlier) that advocated spreading “civilian” nuclear power technology and large reactors to states that promise to forgo nuclear fuel making—a spread that would bring countries within weeks or months of acquiring nuclear weapons. The U.S. and most other states currently claim that all nations have an “inalienable” right to make nuclear fuel.³ As a result, any state that promises to forgo exercising this right today could legally—once it has mastered how to make weapons-usable plutonium or uranium—change its mind and chemically separate weapons-grade material from its reactor’s spent fuel or enrich the fresh fuel it has on hand without breaking any currently enforced legal requirement. In essence, this is what North Korea did despite pledging in a 1992 North-South denuclearization agreement not to reprocess spent fuel or enrich uranium.⁴

Also, nuclear fuel-making efforts can be hidden. A small covert plutonium chemical separation line, for example, might be built in a matter of months and, after a week of operation, produce a crude bomb’s worth of weapons-usable plutonium per day. And there are ways that fresh and spent nuclear reactor fuel might be diverted to accelerate a bomb-making program without necessarily setting off any inspection alarms.⁵ All of this suggests that giving states everything they need to build and operate a large reactor, in exchange for pledges not to divert the technology or reactor fuel to make bombs, risks increasing the nuclear threats we already face.

Two other nuclear threat reduction proposals now championed by arms control proponents include agreeing to a verified FMCT and CTBT. Proponents insist that such agreements are sufficiently verifiable to prevent violators from securing any significant military advantage. Such contentions are debatable.⁶ In the case of a CTBT, critics claim that useful small test explosions could be conducted to validate advanced nuclear weapons designs without necessarily giving off a clear seismic signal and that without such a signal, other nuclear test monitoring improvements fall far short of sufficiency. Worse, they suggest that other nations might gain strategic advantage over the U.S. either by cheating or by interpreting what the ban permits more liberally than the U.S. does. Finally, they note that U.S. ratification is unlikely to bring the treaty into force.⁷

As for verifying a FMCT, a key concern is that it will still allow nuclear weapons states to make nuclear fuel for civilian purposes and that there is no way to reliably detect military diversions from such activities early enough to prevent bomb making. A reasonable rejoinder to this concern is that members of such a treaty would be allowed to keep their existing

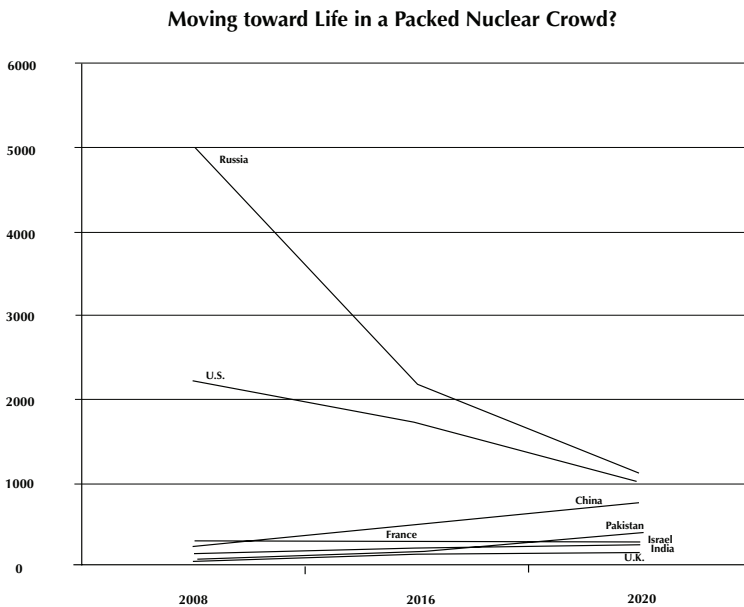
nuclear weapons stockpiles and so would lack much of a motive to use their civilian nuclear fuel-making plants to cheat. Nonweapons states, such as Iran, however, might well point to such inspections of nuclear fuel-making plants and ask why such casual monitoring cannot be relied upon to prevent military diversions from whatever fuel-making plants they might operate or acquire. Without a good answer to this question, critics note that pushing a FMCT could possibly resolve the headache of growing nuclear arsenals in Pakistan, India, North Korea, and China only to create a much larger set of nuclear proliferation dilemmas in the Middle and Far East.⁸ In addition, there are serious political obstacles to bringing such a treaty into force: Egypt and Pakistan would be loath to join until Israel gave up its nuclear weapons or India no longer presented a major military threat. For these reasons, even nominal supporters of the FMCT have suggested that it may make more sense to promote easier, voluntary fissile material control initiatives.⁹ Critics, meanwhile, argue that any FMCT verification effort be narrowed to cover only states known to have nuclear weapons.¹⁰

A Packed Nuclear Crowd?

So far, these verification battles have been waged on the margins of public policy. Each is likely to receive more attention when and if these specific proposals are implemented. Some believe that Washington should unilaterally reduce its operationally deployed nuclear weapons to 1,000 or even 500.¹¹ What these optimistic analyses rarely consider, however, is Russia's increasing reliance on nuclear weapons for its own security and the nuclear weapons production capacities that continue to grow in Pakistan, India, China, and Israel.¹² They miss how easy it would be for Russia, China, or the U.S. to enlarge their existing nuclear arsenals quickly by exploiting their existing surplus military stockpiles of plutonium and uranium. Nor have they focused on how rapidly Japan or India might acquire nuclear weapons or ramp up the size of their existing nuclear arsenal by dipping into their growing "civilian" stockpiles of weapons-usable plutonium. With such large and growing stockpiles of nuclear-weapons-usable materials, achieving true nuclear arms restraint will become more difficult no matter what the actual number of operationally deployed nuclear weapons might be. Indeed, in 10 to 15 years, the expansion of Chinese, Indian, Pakistani, and Israeli nuclear capabilities could also make further U.S. and allied nuclear weapons reductions politically more difficult and could well encourage other countries to hedge their security bets by developing nuclear weapons options of their own.

The conventional wisdom, of course, is that these dangers are best addressed by getting the U.S. and Russia mutually to reduce their nuclear weapons capabilities.¹³ Yet, just as strong is the argument that at some point,

the chances for strategic miscalculation and war could increase if China, Pakistan, India, and Israel continue to augment their nuclear capabilities and the U.S. and Russia reduce theirs. Certainly, as the qualitative and quantitative differences between nuclear weapons states decline and are measured in hundreds rather than thousands of bombs and each state has long-range rockets and cruise missiles needed to put them on target, security alliance relations and rivalries could become much more sensitive to a variety of security developments.¹⁴ Assuming the cuts are made in U.S. and Russian stockpiles, the packing of the current nuclear crowd is not farfetched.



Fissile for Peace and War

Compounding this worrisome prospect are large amounts of weapons-usable materials in military and growing civilian stockpiles that could be quickly militarized to create or expand existing nuclear bomb arsenals.

Russia, for example, has at least 700 tons of weapons-grade uranium and over 100 tons of separated plutonium in excess of its military requirements, while the U.S. has roughly 50 tons of separated plutonium and roughly 160 tons of highly enriched uranium in excess of its military needs. As noted before, China's surpluses of highly enriched uranium and separated plutonium are already estimated to be large enough to allow Beijing to triple the number of weapons it currently has deployed.¹⁵

In addition, stockpiles of civilian materials that could be drawn upon to make additional bombs are large or growing. China, for example, is planning to complete two "commercial" reprocessing plants by 2025 that will

be able to produce each year enough material to make at least 1,000 crude nuclear weapons.¹⁶ Meanwhile, Japan, a nonnuclear weapons competitor of Beijing, already has roughly 45 tons of separated plutonium (much of which is stored in France), 6.7 tons of which is stockpiled on its own soil—enough to make roughly 1,500 crude nuclear weapons. Japan also will soon be separating enough plutonium at its newest commercial reprocessing plant to make between 1,000 and 2,000 crude-weapons-worth of plutonium a year. Nearly all of this plutonium will be in surplus of Japan's civilian requirements and will be stored in the country.¹⁷

As for India and Pakistan, they have no declared military surpluses. India, however, has stockpiled roughly 11 tons of unsafeguarded "civilian" reactor-grade plutonium—enough to make well over 2,000 crude fission weapons—and can easily generate over 1,200 kilograms of unsafeguarded plutonium annually. Pakistan has no such reserve but, like India, is planning to expand its "civilian" nuclear generating capacity roughly twenty-fold in the next two decades and is stockpiling weapons-grade uranium. Both countries are increasing their nuclear fuel-making capacity (uranium enrichment and plutonium reprocessing) significantly.¹⁸

Atoms for Peace?

Finally, several new nuclear weapons contenders are also likely to emerge in the next two to three decades. Among these might be Japan, North Korea, South Korea, Taiwan, Iran, Algeria, Brazil (which is developing a nuclear submarine and the uranium to fuel it), Argentina, Saudi Arabia (courtesy of weapons leased to it by Pakistan or China), Egypt, Syria, and Turkey. All of these states have either voiced a desire to acquire nuclear weapons or tried to do so previously and have one or more of the following: a nuclear power program, a large research reactor, or plans to build a large power reactor by 2030.

With a large reactor program inevitably comes a large number of foreign nuclear experts (who are exceedingly difficult to track and identify) and extensive training, which is certain to include nuclear fuel making.¹⁹ Thus, it will be much more difficult to know when and if a state is acquiring nuclear weapons (covertly or overtly) and far more dangerous nuclear technology and materials will be available to terrorists than would otherwise be. Bottom line: As more states bring large reactors on line more will become nuclear-weapons-ready—i.e., they could come within months of acquiring nuclear weapons if they chose to do so.²⁰ As for nuclear safeguards keeping apace, neither the IAEA's nuclear inspection system (even under the most optimal conditions) nor technical trends in nuclear fuel making (e.g., SILEX laser enrichment, centrifuges, new South African APS enrichment techniques, filtering technology, and crude radiochemistry plants, which are making

successful, small, affordable, covert fuel manufacturing even more likely)²¹ afford much cause for optimism.

This brave, new, nuclear world will stir existing security alliance relations more than it will settle them. In the case of states such as Japan, South Korea, and Turkey, it could prompt key allies to go ballistic or nuclear on their own.²²

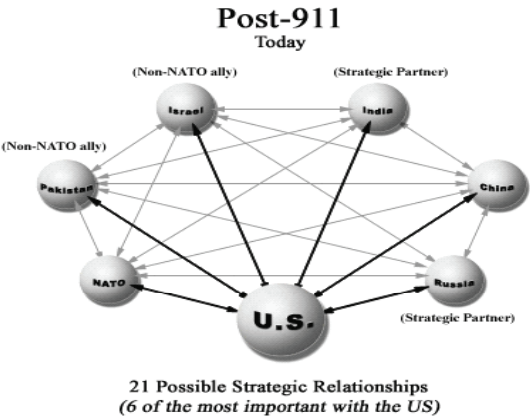
Nuclear 1914

At a minimum, such developments will be a departure from whatever stability existed during the Cold War. After World War II, there was a clear subordination of nations to one or another of the two superpowers' strong alliance systems—the U.S.-led free world and the Russian-Chinese-led Communist Bloc. The net effect was relative peace with only small, nonindustrial wars. This alliance tension and system, however, no longer exists. Instead, we now have one superpower, the United States, that is capable of overthrowing small nations unilaterally with conventional arms alone, associated with a relatively weak alliance system (NATO) that includes two European nuclear powers (France and the U.K.). NATO is increasingly integrating their nuclear targeting policies. The U.S. also has retained its security allies in Asia (Japan, Australia, and South Korea) but has seen the emergence of an increasing number of nuclear-weapon-armed or-ready states.

So far, the U.S. has tried to cope with independent nuclear powers by making them “strategic partners” (e.g., India and Russia), NATO nuclear allies (France and the U.K.), “non-NATO allies” (e.g., Israel and Pakistan), and strategic stakeholders (China); or by fudging if a nation actually has attained full nuclear status (e.g., North Korean or Iran, which, we insist, will either not get nuclear weapons or will give them up). In this world, every nuclear power center (our European nuclear NATO allies), the U.S., Russia, China, Israel, India, and Pakistan could have significant diplomatic security relations or ties with one another but none of these ties is viewed by Washington (and, one hopes, by no one else) as being as important as the ties between Washington and each of these nuclear-armed entities (see chart):

There are limits, however, to what this approach can accomplish. Such a weak alliance system, with its expanding set of loose affiliations, risks becoming analogous to the international system that failed to contain offensive actions prior to World War I. Unlike 1914, there is no power today that can rival the projection of U.S. conventional forces anywhere on the globe. But in a world with an increasing number of nuclear-armed or nuclear-ready states, this may not matter as much as we think. In such a world, the actions of just one or two states or groups that might threaten to disrupt or overthrow a

Current Proliferation Seems Manageable
(With DPRK Disarming and Iran Nonnuclear)



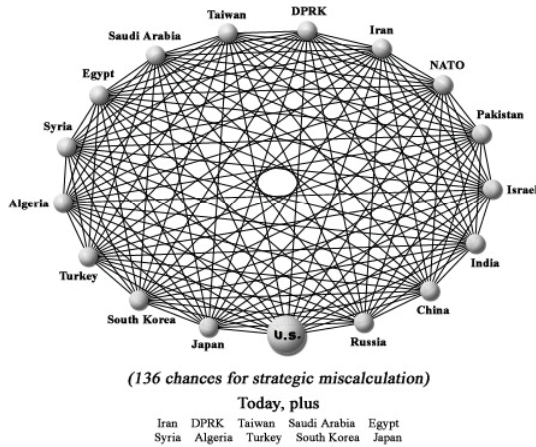
Note: NATO is artificially defined as the nuclear forces of the U.K. and France as these governments closely coordinate their targeting policies with each other and with the U.S.

nuclear weapons state could check U.S. influence or ignite a war Washington could have difficulty containing. No amount of military science or tactics could assure that the U.S. could disarm or neutralize such threatening or unstable nuclear states.²³ Nor could diplomats or our intelligence services be relied upon to keep up to date on what each of these governments would be likely to do in such a crisis (see graphic).

Combine these proliferation trends with the others noted above and one could easily create the perfect nuclear storm: small differences between nuclear competitors that would put all actors on edge; an overhang of nuclear materials that could be called upon to break out or significantly ramp up existing nuclear deployments; and a variety of potential new nuclear actors developing weapons options in the wings. In such a setting, the military and nuclear rivalries between states could easily be much more intense than before. Certainly each nuclear state's military would place an even higher premium than before on being able to weaponize its military and civilian surpluses quickly, to deploy forces that are survivable, and to have forces that can get to their targets and destroy them with highly levels of probability. The advanced military states will also be even more inclined to develop and deploy enhanced air and missile defenses and long-range, precision guidance munitions, and a variety of preventative and preemptive war options.

With More Nuclear -Ready States: Ramp Up to a Nuclear 1914?

Possible Proliferated Future



Certainly, in such a world, relations between states could become far less stable. Relatively small developments—e.g., Russian support for sympathetic near-abroad provinces; Pakistani-inspired terrorist strikes in India, such as those experienced recently in Mumbai; new Indian flanking activities in Iran near Pakistan; Chinese weapons developments or moves regarding Taiwan; state-sponsored assassination attempts of key figures in the Middle East or South West Asia, etc.—could easily prompt nuclear weapons deployments with “strategic” consequences (arms races, strategic miscues, and even nuclear war). As Herman Kahn once noted, in such a world “every quarrel or difference of opinion may lead to violence of a kind quite different from what is possible today.”²⁴ In short, we may soon see a future that neither the proponents of nuclear abolition, nor their critics, would ever want. None of this, however, is inevitable.

Making Something of Zero

The U.S. government is now committed to moving closer to zero nuclear weapons. The challenge, however, is not whether the U.S. can reduce the numbers of nuclear weapons it has deployed or stored. It has been reducing these numbers steadily since 1964. Instead, the question now is how the U.S. might reduce these numbers without simultaneously increasing other states’

interest in acquiring nuclear weapons capabilities of their own. Here, it would be helpful to keep four principles in mind:

First, it's critical to avoid making the wrong sorts of military reductions or additions. At a minimum, any push for further nuclear reductions must be as proportionate as possible. To maintain or extend the security alliances that are currently neutralizing states' demands to go nuclear, the U.S. must not only roughly preserve or improve the relative correlation of forces between it and its key nuclear competitors, China and Russia, but do all it can to keep states that might compete in the nuclear arena with these competitors from doing so.

If Washington decides to reduce the operational deployment of additional U.S. nuclear weapons, then it must see to it that additional nuclear restraints—either nuclear deployment reductions or further weapons-usable fuel stockpile or production limits—are imposed on not only Russia, but China, India, and Pakistan as well. As a practical matter, this means other nuclear-weapons-ready states, e.g., Israel, Japan, and Brazil, also should be urged to curtail or end their production of nuclear-weapons-usable materials.

Here, it also would be important for the U.S. to make sure that implementation of its newly struck civilian nuclear cooperative agreement with India does not end up helping New Delhi make more nuclear weapons than it was producing before the deal was finalized late in 2008. Under the NPT, nuclear weapons states are forbidden to help states that did not have nuclear weapons before 1967 acquire them. Also, under the Hyde Act, the executive is required to report to Congress just how much nuclear fuel India is importing, how much of this fuel India is using to run its civilian reactors, how much uranium fuel India is producing domestically, and the extent to which India is expanding its unsafeguarded plutonium stockpiles. If the latter is growing faster per year than it was prior to the U.S.-Indian nuclear cooperative agreement, the U.S. would be implicated in violating the NPT along with Russia and France. If so, the U.S. would be bound to ask these other states to suspend supplying the nuclear fuel they might be selling to India.²⁵

As for trying to maintain the relative correlation of forces between nuclear-armed states through military means, considerable care will be required. Missile defenses, for example, could help compensate for eliminated U.S. nuclear weapons systems. Instead of "neutralizing" a possible opponent's nuclear missile by targeting it with a nuclear weapon, it could be possible to do so in a nonnuclear fashion assuming missile defenses become effective and affordable enough. Yet, even if such defenses do grow inexpensive and effective, it would not necessarily improve matters to deploy them in equal amounts everywhere and anywhere.

Consider the case of India and Pakistan. Because Pakistan has not yet fully renounced first use and India will always have conventional superiority

over Islamabad, Pakistan would actually have good cause to feel less secure than it already does if equal levels of missile defense capabilities were given to both sides. Similarly, Pakistan would have far more to fear than to gain if the U.S. offers to afford India and Pakistan equal amounts of advanced conventional capabilities since these might conceivably enable New Delhi to knockout Islamabad's nuclear forces without using nuclear weapons. How the U.S. and others enhance each of these states' military capabilities, then, matters at least as much as what each is offered.²⁶

Yet another nuclear weapons substitution option now being discussed is to employ long-range precision strike systems in place of eliminated nuclear systems. These systems' effectiveness against hardened or hidden targets is unclear, however. There also may be concerns about how they could be used without unintentionally triggering a nuclear response. What might the numbers and the effectiveness of such nonnuclear systems have to be to substitute for eliminated nuclear weapons systems?

Second, there must be a clear cost for violating existing nuclear control agreements and understandings. The U.S. and other likeminded states have yet to clearly establish that nuclear proliferation does not pay. To the contrary, the cost for the worst nuclear violators—Iran and North Korea—has either been light or nonexistent. It is highly unlikely that North Korea will give up all of its nuclear weapons. It also may be too late to prevent Iran from acquiring nuclear bombs. The prize now is to make sure that North Korea's and Iran's nuclear misbehavior does not become a model for others. Certainly, allowing Tehran to continue to make nuclear fuel under more "intrusive" inspections (even though there is no reliable way to safeguard such activity from being diverted to make bombs) would be self-defeating.

Given that China and Russia cannot be counted on to join the U.S., France, and others to significantly tighten trade sanctions against Tehran, the only choice Washington and its allies have is either to back down or to try to isolate and further stigmatize Iran's nuclear behavior as best they can without additional support from the United Nations Security Council. This would require conducting the type of Cold War the U.S. and its key allies waged against the Warsaw Pact, the apartheid government in South Africa, and Libya.

The U.S. and other like-minded states should try to establish "country-neutral" sanctions in domestic and international law. These sanctions should be directed against states that cannot be found to be in full compliance with their nuclear safeguards obligations, who violate them, or who would withdraw from the NPT before coming back into full compliance. Rather than placing the burden on the IAEA Board of Governors, the Nuclear Suppliers Group, or the UN Security Council to agree on the sanctions for such transgressions, a minimal, predetermined list should be automatically imposed.

Third, it is critical to distinguish between nuclear activities and materials that the IAEA can reliably safeguard against military diversions and those that it cannot. The NPT is clear that all peaceful nuclear activities and materials must be safeguarded—that is, inspected in such a way as to prevent them from being diverted to make nuclear weapons. Most NPT states have fallen into the habit of thinking that if they merely declare their nuclear holdings and allow international inspections, they have met this requirement.

This is a prescription for mischief. After the nuclear inspections gaffes in Iraq, Iran, Syria, and North Korea, we now know that the IAEA cannot reliably detect covert nuclear activities. We also know that the IAEA and EURATOM annually lose track of many bombs' worth of usable plutonium and uranium at declared nuclear fuel-making plants. We also know that the IAEA cannot assure continuity of inspections for spent and fresh fuel rods at more than half of the sites that it inspects. Finally, we know that declared plutonium and enriched uranium can be made into bombs and their related production plants diverted so quickly (in some cases, within hours or days) that no inspection system can afford untimely warning of a bomb-making effort.

All of these points fly directly in the face of the kind of warning nuclear safeguards must provide. Any true safeguard against military nuclear diversions must reliably detect them early enough to allow outside powers to intervene to block a bomb from being built. Anything less is only monitoring that might, at best, detect military diversions after they occur. Given the inherent limits to the kind of warning IAEA nuclear inspections can provide, the IAEA needs to concede that it cannot safeguard all that it inspects.

Such candor would be most useful. It would immediately raise first-order questions about the advisability of producing or stockpiling plutonium, highly enriched uranium, and plutonium-based reactor fuels in any but the nuclear weapons states. At the very least, it would suggest that nonweapons states ought not to acquire these materials or facilities beyond what they already have. Where would one raise these points? A good place to start would be the NPT Review conference that will be held in May of 2010. In advance of the conference, the U.S. and other likeminded nations independently might assess whether or not the IAEA can meet its own inspection goals; under what circumstances (if any) these goals can be met; and, finally, whether these goals are good enough. This work would cost very little and could be undertaken immediately without legislation or any new international agreements.

Fourth, if we want to develop safe, economically competitive forms of energy, we should discourage using additional government financial incentives to promote new civilian nuclear projects. Supporters of nuclear power insist that its expansion is critical to prevent global warming. The proof is to be had in determining

what new nuclear power plants will cost in comparison to their alternatives while factoring in the price of carbon. Creating more government financial incentives specifically geared to build more nuclear plants and their associated fuel-making facilities will only make this more difficult to do. Not only do such subsidies mask the true costs of nuclear power, they tilt the market against their alternatives. This is troubling since the most dangerous forms of civilian nuclear energy—nuclear fuel making in most nonweapons states and large power reactor projects in war-torn regions like the Middle East—turn out to be poor investments as compared to much safer alternatives.²⁷

There are three ways around these problems. The first would be to get as many governments as possible to offer proposed civilian energy projects that would compete openly against possible, nonnuclear alternatives. This is hardly a radical proposal. France, the U.S., and the IAEA have all quietly noted that nuclear power programs only make sense for nations that have a large electrical grid, a major nuclear regulatory and science infrastructure, and proper financing. U.S. officials have emphasized how uneconomical Iran's nuclear program is in the near- and mid-term as compared to developing Iran's existing natural gas resources. In the U.S., private banks refuse to invest to build new nuclear power plants unless they secure federal loan guarantees and new, additional subsidies. After an extensive analysis in 2006, the British government found, in contrast, that if carbon emissions are properly priced (or taxed), British nuclear power operators should be able to cover nearly all of their own costs without government support.²⁸

Economic judgments and criteria, in short, are already being relied upon to judge the merits of proposed nuclear projects. The U.S. and most other nations, however, should go further. Most advanced nations, including the U.S., claim to back the principles contained in the Energy Charter Treaty and the Global Charter on Sustainable Energy Development. These international agreements are designed to encourage all states to open their energy sectors to international bidding and to assure that as many subsidies and externalities are internalized and reflected in the price of any energy option.²⁹ The U.S. claims it is serious about reducing carbon emissions in the quickest, least costly manner. If so, it also would make sense to reference and enforce the principles of the Energy Charter Treaty and the Global Charter on Sustainable Energy as a part of the follow-on to the Kyoto Protocol.

As a second and complementary effort, the United States should work with developing states to create non-nuclear alternatives to address their energy and environmental needs. In the case of the U.S., this would merely entail following existing law. Title V of the Nuclear Nonproliferation Act of 1978 requires the Executive Branch to do analyses of key countries' energy needs and identify how these needs might be addressed with non-fossil, non-nuclear energy sources. Title V also requires the executive branch to

consider the creation of an energy-focused "Peace Corps" to help developing nations explore these alternative options. To date, no president has chosen to implement this law. The U.S. Congress has indicated that it would like to change this by requiring Title V country energy analyses (and outside, non-governmental assessments of these analyses) to be done as a precondition for the U.S. initialing of any new, additional nuclear cooperative agreements. Here, the U.S. can lead by example.³⁰

Finally, although it may not be immediately possible to get all nations to agree about what is "peaceful" and protected under the NPT, it would be useful to try by insisting that such projects ought to be safeguardable and beneficial. But it will be impossible to persuade even one state of this proposition if the U.S. continues to insist that all states have an inalienable right to the most dangerous nuclear materials, equipment, and technology so long as they have some conceivable civilian application and are declared and inspected. The U.S. should stop making this case and instead build on the argument it already has made that there is no duty for any nuclear supplier state to supply dangerous technologies or materials under the NPT. In specific, the U.S. should explain that what is peaceful and protected under the NPT can only be determined on the basis of a number of factors, including whether or not the material, equipment, or technology can be reliably safeguarded against possible military diversions and if the project that they are dedicated to is economically justifiable.

Certainly, there is nothing in the NPT that requires member states to read the treaty as if they must encourage countries to come to the very brink of acquiring bombs by developing dangerous, money-losing nuclear ventures. In fact, one would hope that most states would conclude that the NPT was designed to produce just the opposite result. Ultimately, however, the credibility of this point will turn on just how economically competitive civilian nuclear projects are when weighed against their alternatives. The U.S. and those other states eager to prevent nuclear proliferation should do all they can to find out.

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2. See White House, Office of the Press Secretary, "Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic," April 5, 2009, available at http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/.
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 5. See, e.g., Henry S. Rowen, "This 'Nuclear-Free' Plan Would Effect the Opposite," *Wall Street Journal*, January 17, 2008, p. A-15. For additional technical background, see David Kay, "Denial and Deception Practices of WMD Proliferators: Iraq and Beyond," in Brad Roberts, ed., *Weapons Proliferation in the 1990s* (Cambridge, MA: MIT Press, 1995); Victor Gilinsky, et al., *A Fresh Examination of the Proliferation Dangers of Light Water Reactors* (Washington, D.C.: NPEC, 2004), at <http://www.npec-web.org/Essays/20041022-GilinskyEtAl-LWR.pdf>; and see Andrew Leask, Russell Leslie, and John Carlson, "Safeguards As a Design Criteria—Guidance for Regulators," Canberra, Australia: Australian Safeguards and Non-proliferation Office, September 2004, pp. 4-9, available at http://www.asno.dfat.gov.au/publications/safeguards_design_criteria.pdf.
 6. See, e.g., George Perkovich and James Acton, *Abolishing Nuclear Weapons* (London: IISS, 2008) and Henry Sokolski and Gary Schmitt, "Advice to the Nuclear Abolitionists," *Weekly Standard*, May 12, 2007 (go to <http://www.weeklystandard.com/Content/Public/Articles/000/000/015/068ekbiw.asp>).
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 14. Some might argue that the number of deployed nuclear weapons is only one metric, that a force's readiness, survivability, accuracy, ability to penetrate defenses, and to hit targets in a timely fashion all go into calculating just how "superior" one force is compared to another. Still, ballistic missile-delivered fission warheads against cities in wealthy states in Europe, Asia, or America might be very potent even if they were militarily crude. Also, as American and Russian numbers decline and command systems become less vulnerable due to distribution and tunneling, there may well be a shift to targeting population rather than weapons or command centers. If so, relative numbers would constitute a significant metric.
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 16. Areva Press Release, "Areva and CGNPC Sign Biggest Contract Ever," November 26, 2007, at <http://www.areva-np.com/scripts/press/publicgen/content/templates/show.asp?P=875&L=U.S.>; and World Nuclear Association, "Nuclear Power in China," October 2008, at <http://www.world-nuclear.org/info/inf63.html>. China operates a pilot reprocessing plant capable of processing 50 tons of spent fuel annually. There are plans to expand this plant to process 100 tons. This would enable China to make up to 250 crude bombs' worth of plutonium a year. China also is planning on completing a large commercial scale plant in 2020 based on indigenous technology located in far western China. Finally, China has contracted with Areva to compete a plant by 2025 capable of processing 800 tons of spent fuel annually that is nearly identical in capacity and design to that Areva help Japan complete at Rokkasho, i.e., large enough to make between 1,000 and 2,000 bombs per year assuming operation a full capacity and a bomb's worth being defined as requiring 4 kilograms of plutonium.
 17. See Masafumi Takuba, "Wake Up, Stop Dreaming: Reassessing Japan's Reprocessing Program," *Nonproliferation Review*, March 2008, p 71.
 18. See, e.g., Zia Mian, A.H. Nayyar, R. Rajaraman, and M.V. Ramana, "Plutonium Production in India and the U.S.-India Nuclear Deal," in Henry Sokolski, ed., *Gauging U.S.-Indian Strategic Cooperation* (Carlisle, PA: Strategic Studies Institute, 2007), pp. 99-128, at <http://www.npec-web.org/Books/20070300-NPEC-GaugingUS-IndiaStratCoop.pdf>; and Zia Mian, A.H. Nayyar, R. Rajaraman and M.V. Ramana, "Fissile Materials in South Asia" in Henry Sokolski, *Pakistan's Nuclear Future: Worries Beyond War* (Carlisle, PA: Strategic Studies Institute, 2008), pp. 129-67, at <http://www.npec-web.org/Books/20080116-PakistanNuclearFuture.pdf>.
 19. See, e.g., Elaine Sciolino, "Nuclear Aid by Russian to Iranians Suspected," *New York Times*, October 10, 2008, available online at <http://www.nytimes.com/2008/10/10/world/10nuke.html>; and John Larkin and Jay Solomon, "As Ties Between India and Iran Rise, U.S. Grows Edgy," *Wall Street Journal*, March 24, 2005. Also see "Russia, Iran May Set Up JV [Joint Venture] to Operate Bushehr NPP in 3 Months," *RIA Novosti*, February 14, 2008, at <http://en.rian.ru/business/20080214/99244034.html>; and "[Russian] Nuclear Staff in Iran Doubles," *Reuters*, February 19, 2008, at http://www.sptimes.ru/index.php?story_id=25086&action_id=2.
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 25. See the Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006, "Implementation and Compliance Report," available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:h5682enr.txt.pdf.
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 30. See Letter from Congressmen Brad Sherman, Edward Markey and Ileana Ros-Lehtinen to Secretary of State Hillary Clinton, April 6, 2009, available at <http://bradshearn.house.gov/pdf/NuclearCooperationPresObama040609.pdf>; S1138 Nuclear Safeguards and Supply Act of 2007, available at <http://www.govtrack.us/congress/billtext.xpd?bill=s110-1138>; and the key nuclear recommendations of the Congressionally appointed bipartisan Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism available at <http://www.npec-web.org/Frameset.asp?PageType=Single&PDFFile=20081200-WmdCommission-AdoptedNpecRecommendations&PDFFolder=Reports>.

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Can U.S. Strategic Posture Influence Foreign Choices about Nuclear Weapons?

Philip D. Zelikow

A cluster of original decisions by the United States, made mainly in 1941-1946, did influence foreign behavior by confirming that the world would enter an age of nuclear weapons. The later, parallel U.S. and Soviet decisions to proceed with development of thermonuclear weapons flowed from the original decisions, as did the British development of such weapons.

It is hard to identify any particular choice in U.S. strategic posture that could then have altered the course of French and Chinese decisions, or India's move reacting to China.

In very different ways, the clandestine Israeli, South African, and Pakistani programs had nothing to do with U.S. strategic posture. Their only relation was, perhaps, in a negative sense. There was no U.S. strategic posture that seemed reassuring, or even relevant, to the Israeli, South African, and Pakistani governments at the time.

Thus the flip side. Where U.S. strategic posture has been relevant to regional security choices, it has had a marked effect—invariably positive so far.

- U.S. nuclear weapons developments and extensive deployments of these weapons definitely contributed to choices against nuclear weapons by governments in the Federal Republic of Germany, Japan, South Korea, and Taiwan. U.S. nuclear posture may also have helped to tilt the balance in countries like Turkey, while other kinds of U.S. security assurances may have helped persuade countries like Saudi Arabia to forgo nuclear weapons (which they would probably purchase), at least so far.

- Beyond U.S. nuclear weapons developments and deployments, U.S. determination to counter proliferation with offensive action if necessary indirectly contributed to forced termination of nuclear weapons programs in Iraq (at least in 1991) and Libya (2004). It may have had a positive effect on Israeli calculations in that country's preventive strike on Syria in 2007. This U.S. posture has also helped limit the damage from the failure to stop the North Korean weapons program.

On the other hand, reflection on the available information about these more recent clandestine nuclear programs—in North Korea, Iraq, Libya, and Iran—certainly reveal concern about U.S. conventional military capabilities. Rhetoric aside, there is no evidence that U.S. nuclear posture played—or plays—a notable part in the choices of these countries, one way or the other.

The strength of U.S. counterproliferation policy, backed by conventional forces, has had some evident deterrent effect. The effect is only as strong as the supporting conventional forces and the apparent will to use them.

About five years ago, a number of scholars were gathered to survey nuclear weapons choices made by a number of states. Their conclusion is similar and is worth quoting at length:

U.S. nuclear gluttony—the allegation that the United States has not sufficiently reduced its vast stockpiles of nuclear weapons and therefore failed to live up to its NPT ‘bargain’—is also judged to have little immediate relevance in the complex decisionmaking surrounding those choices. Most of the nuclear decisions in our case studies are driven primarily by regional security considerations in which the characteristics of U.S. nuclear capabilities play at most a minor role. To the extent that U.S. nuclear capabilities are a factor—either because a country depends on a U.S. nuclear umbrella or fears U.S. nuclear coercion or attack—it is very unlikely that the country's behavior will be affected by any distinction it may perceive between older and newer U.S. nuclear designs (or by the size of the U.S. nuclear arsenal). In reality, the behavior of most countries will be influenced not by their perceptions of the specific qualities of the U.S. nuclear arsenal (old or new, large or small) but by their judgment of the willingness of the United States to bring its unprecedented *conventional* military superiority to bear—either on their behalf or in opposition to them.¹

OK. So there is no evident correlation between superpower nuclear force posture and nonproliferation, except for the positive one that correlates nuclear reassurance with some nonproliferation choices.

But what about a different question: Might superpower force posture play a part in decisions to give up weapons among countries that already have them?

1. Kurt M. Campbell & Robert J. Einhorn, “Concluding Observations,” in Campbell, Einhorn, Mitchell B. Reiss, eds., *The Nuclear Tipping Point* (Washington, DC: Brookings, 2004), p. 323.

To this question the answer is more nuanced.

- If the superpowers want to abolish nuclear weapons (and I think this should be their goal), it is true that they do contradict such a message if they visibly redouble their investment in nuclear weapons.
- But it is also false to believe that arsenals of important weapons are likely to be abolished on a deliberate glidepath. Battleships were not gradually reduced in order to make way for aircraft carriers. Signature weapon systems are reduced out of existence—often quite rapidly—*after* they have become superfluous.

Superpower behavior *can* influence foreign states to regard nuclear weapons as superfluous. These efforts would not need to focus much on nuclear force posture, per se. The superpower behavior (both U.S. and Russian) could be more effective by emphasizing two other tracks:

- Introduction of an effective, affirmative system for international management of critical stages in the nuclear fuel cycle. Before their work was mangled in the Baruch plan, the original Acheson-Lilienthal team of early 1946, which included the founding fathers of U.S. nuclear weapons, presciently recognized: a) that the outlaw-inspection model for eliminating nuclear weapons was likely to fail, not least because the inspectors would find their work so stultifying; and b) that an international management model for critical processes was technically feasible and would feel productive to those charged with running it.
- Providing security reassurances against conventional military threats that do not rely on nuclear weapons. Nuclear weapons were originally relied on by the United States as an offset against very large-scale industrial warfare. For our military purposes, these weapons are now superfluous, except to deter their use against us. Since nuclear proliferation has still been substantially contained, it is not too late to embark on other security policies that could help make such weapons appear to be immaterial or counterproductive in a few key regional situations.

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Nuclear Non-Proliferation Treaty (NPT)

Robert Litwak

Objective: Strengthening the NPT as an instrument of U.S. nonproliferation strategy

Interim Report guidance: “The NPT has long provided the essential legal framework for preventing proliferation. But it is not sufficient for this purpose—and was never intended to be. It must be supplemented with other tools of policy. Its effectiveness has been undermined by errors in how it has been interpreted and by failures of enforcement by the UN Security Council. The 2010 Review Conference provides an opportunity to renew international efforts to address these problems with the legal framework. The U.S. ought to begin now to set the stage by engaging with friends and allies on those issues related to desired improvements.”

Focus: Strengthening NPT rights and obligations—the Article II pledge by non-nuclear weapon states not to develop or acquire nuclear weapons, the Article VI commitment of the nuclear weapons states to disarm, and the Article IV right of non-nuclear weapon states to access to nuclear energy technology in a way that does not call their Article II commitment into question—and enforcing signatories’ compliance with NPT responsibilities.

Challenges

Issue: Strengthening the U.S. commitment to nuclear disarmament under Article VI

Context

- The interim report stated that nuclear disarmament would “require a fundamental transformation of the world political order.” But long-term abolition is a treaty commitment and many steps toward achieving that visionary objective have considerable and often bipartisan support, and can benefit U.S. security.
- Representatives of other states have told U.S. officials that the United States is not complying with its Article VI obligations, and that this affects their willingness to cooperate on issues of importance to the nonproliferation, including adherence to the Additional Protocol. The argument that U.S. weapons affected cooperation is designed to influence U.S. behavior and may not reflect the real reasons for limited cooperation.
- The U.S. case for Article VI compliance is strong, including the deep cuts in the nuclear arsenal that have occurred since the end of the Cold War through the START Treaty, the Moscow Treaty, the Presidential Nuclear Initiatives, and other actions.
- Further reductions will eventually lead to levels of arms where the verification challenges increase dramatically.
- For non-nuclear weapon states, the CTBT is perhaps the most tangible symbol of the nuclear weapon states’ Article VI commitment. The interim reports states, “The new administration may consider resubmitting the CTBT to the Senate for ratification.”

Recommendations

- Reaffirm the U.S. commitment to Article VI. The United States should take the initiative and not be defensive in the lead up to the 2010 Rev-Con. Engaging with foreign governments is central to defusing the Article VI issue. The strong U.S. case for Article VI compliance should be effectively communicated by senior officials through a public diplomacy campaign, including high-level U.S. representation at the RevCon to signal its importance.
- Initiate P-5 discussions to realize a P-5 statement of intent on Article VI, if possible. A P-5 security dialogue on Article VI would focus on the nature of the international security environment, technical challenges of verification raised by further deep reductions, and enforcement mechanisms to address the security consequences of cheating.
- The U.S. administration should fund technical and analytical studies of the verification challenges that further reductions would pose.

- Action on START is critical and can be done by 2010. This treaty, another key element of Article VI compliance, should be extended or a follow-on agreement negotiated.
- The next Nuclear Posture Review should reflect and support U.S. nonproliferation interests, including the NPT. Creating and publicizing an unclassified version to avoid the public diplomacy problems encountered with the 2001 NPR is essential.
- While views differ on the best approach to ensuring confidence that U.S. warheads remain safe, secure, and reliable, there should be a preference for exercising the option that generates the desired warhead attributes while not casting doubt on the arms control and reduction process.

Issue: Ensuring the Article IV rights of non-nuclear weapon states without facilitating proliferation

Context

- Civil nuclear energy programs, if not properly regulated (most notably, through controlling the spread of fuel cycle technology), can reduce the supply-side obstacles to nuclear weapons acquisition.
- The emerging nuclear “renaissance” is fueled by projected energy demand and climate change concerns. The challenge is to reduce the potential for additional states in the region to acquire hedge options for weaponization in the process.

Recommendations

- Affirm that the inalienable right under Article IV is conditional on compliance with Articles II and III. That is, the NPT does not permit weaponization activities under the guise of a civilian nuclear energy program.
- Reform the nuclear fuel cycle: Develop and win international approval for an effective plan for reliable supply (including front-end and back-end fuel cycle services) that affords non-nuclear weapon states access to civil nuclear energy technology without increasing the risks that weapons-grade materials will fall into the wrong hands.

Issue: Enforcing compliance of NPT responsibilities

Context

- North Korea and Iran have flagrantly violated their IAEA safeguards agreements and hindered inspections.
- Proscribed activities under the guise of Article IV may be difficult to detect in a determined proliferator.
- The flawed U.S. intelligence assessment of Iraq's WMD programs has seriously eroded trust in American competence and credibility. This perception will affect the U.S. ability win support for strong collective action in other cases.

Recommendations

- To avoid devaluing U.S. credibility, policymakers should refrain from rhetorical excesses, such as loose talk about "regime change." Coercive diplomacy is not possible when the adversary believes that the objective is regime change.
- With respect to proscribed activities and capabilities, promote the shift from national to multinational lists in support of more robust export control and interdiction efforts.
- Ensure that the IAEA has the authority, capabilities, and resources to meet current and emerging safeguards challenges. Develop "proliferation-resistant" technologies for nuclear power and associated for "next generation safeguards."
- Provide support and resources for effective implementation of UN Security Council 1540.
- Begin a new dialogue with the P-5 on enforcement, which would eventually be expanded to other key states.

Nuclear Nonproliferation Implications of U.S. Declaratory Policy

James E. Goodby

The Issue. How to integrate nonproliferation with other aspects of U.S. declared national security policy.

Discussion. "Declaratory policy" refers to public statements by senior U.S. officials regarding all aspects of the U.S. Government's aims, intentions, and plans for nuclear weapons within the overall framework of U.S. national security policy. In theory, U.S. declaratory policy assigns top priority to nonproliferation. In practice, nonproliferation competes for attention with other U.S. national security goals. Several decisions are likely to be made by the incoming administration within the next year that will become part of declaratory policy. Some will relate to conditions under which the U.S. would use nuclear weapons. Others will be concerned with the U.S. defense budget. Many will refer to U.S. relations with other nations, both friends and adversaries. The announcement of these individual decisions, even before their implementation, in some cases, will affect the assessments other nations make about U.S. nuclear nonproliferation policy. The menu of potential decisions is long and needs to be viewed in its entirety so that U.S. declaratory policy can have the maximum effect in achieving U.S. nonproliferation goals.

Goals of publicly-stated policies. Four priority and interrelated goals that the United States seeks to achieve through public statements of policy regarding nuclear weapons are:

- Deter hostile action against U.S. interests

- Respond in a controlled and calibrated fashion to any use of weapons of mass destruction against the United States, U.S. forces or interests, or allied and friendly nations
- Strengthen nuclear nonproliferation regimes and reverse nuclear proliferation
- Reduce reliance on nuclear deterrence, considering that it is decreasingly effective against today's threats and increasingly dangerous.

Categories of nonproliferation-related policies. The main points of U.S. security policy that most closely bear on nonproliferation, leaving aside bilateral issues, include:

- Conditions under which the United States might use nuclear weapons
- Intentions regarding size, characteristics, development, and conditions of deployment of nuclear weapons
- Plans and expectations for defenses against nuclear weapons
- Programs designed to combat nuclear proliferation, including nuclear-armed terrorist organizations
- Steps directed at reducing reliance on nuclear weapons
- Relationship between conventional and nuclear forces
- Civil nuclear power programs.

Illustrative alternative options for future U.S. declaratory policies. Policies designed to achieve these goals can easily conflict with each other. Integrating these policies is presidential business.

What are the purposes of U.S. nuclear weapons?

- Deter nuclear attacks on the United States by states or non-state entities.
- Reassure allies and friendly states that the United States is capable of deterring nuclear attacks on them.
- Dissuade states and non-state entities from acquiring nuclear weapons.

How might the U.S. use nuclear weapons?

- Only in response to first use by another nation or a non-state entity.
- Only as a last resort in a major war.
- Use as necessary to preempt a nuclear attack.
- Use as necessary to defeat armed aggression against an ally or friendly nation.
- Possible use as part of a response to the use of chemical or biological weapons by an adversary nation or non-state entity.

How much is enough?

- As low a number as is consistent with deterrence and commitments to allies.
- A number sufficient to dissuade adversaries from seeking military advantages.
- Zero operationally deployed nuclear weapons if all other states agree under conditions of reliable verification.

Where should nuclear weapons be deployed?

- No deployments of nuclear weapons outside the territorial limits of the United States, except on naval vessels home-ported in the United States.
- Maintain current deployments in Europe.

Should U.S. nuclear weapons be kept in a prompt launch mode?

- All or most land-based ballistic missiles maintained in a ready-to-launch status on short notice.
- All ballistic missiles, in agreement with other major nuclear weapons states, deployed in such a fashion that prompt launch is not possible, that preparations for launch would be visible, and time would be available for diplomacy and decisionmaking.

What is the function of the national nuclear weapons infrastructure?

- A responsive nuclear infrastructure that is capable of maintaining a safe, secure, and reliable nuclear weapons arsenal. Key components of the infrastructure must include (a) expert personnel engaged in a strong and stable program of stockpile stewardship, without which confidence in the U.S. nuclear deterrent will erode, and (b) an active research program exploring a range of stockpile options enabling the U.S. to respond as may be necessary to changing threats and other potential national security requirements.
- Build a new stockpile of nuclear warheads and bombs and do so without explosive testing.
- Modernize nuclear weapons and test as necessary to ensure reliability.

How to construct defenses against nuclear attack?

- Continue to deploy defenses against limited ballistic missile attacks along the lines of those defenses already deployed in the western United States and being planned for Eastern Europe.
- Suspend deployments pending a technical review and consultations with potential partners in cooperative ballistic missile defense programs.
- Develop the capabilities to enforce “no-fly zones” for ballistic missile launches in countries like Iran and North Korea.

- Accelerate deployment of sensors to monitor ships and aircraft entering U.S. territory.
- Strengthen the Proliferation Security Initiative, UN Resolution 1540 and the Global Threat Reduction Initiative.

How best to prevent and roll back nuclear proliferation, while complying with NPT obligations?

- Adopt and implement the Shultz, Kissinger, Perry, Nunn initiatives.
- Give priority to first steps, such as ratifying the Comprehensive Nuclear Test Ban Treaty.
- Use the May 2009 Preparatory Meeting and the May 2010 NPT Review Conference to reaffirm U.S. obligations under Article 4 and 6 of the NPT.
- Offer security assurances to nations that forgo nuclear weapons programs.
- Focus only on rogue states, using force if necessary.

How best to strike a balance between conventional and nuclear forces?

- Maintain a sharp distinction between the two.
- Merge conventional and nuclear forces, at least conceptually, into one strike force, as in the Bush administration's triad.
- Develop a conventionally armed ballistic missile force, as is being done on a small scale in the Global Strike Force.
- Strengthen conventional forces to serve as a credible substitute for extended nuclear deterrence.

How to manage civil nuclear power programs to reduce proliferation risks?

- Curtail cooperation with other countries.
- Internationalize the nuclear fuel cycle.
- Develop new technologies to reduce risks of proliferation.
- Rely on lease-take back arrangements.

Injecting nonproliferation interests into declaratory policies. Although there are nonproliferation implications in each of the declaratory policy options in this illustrative list, proponents of various policies will not necessarily weigh those considerations very highly. That problem could be ameliorated if policy makers were required to take into account the following questions as part of a "nonproliferation impact statement."

- Does it appear to increase or reduce the salience of nuclear weapons in international security affairs?
- Does it emphasize or blur the distinction between the nuclear "haves" and "have nots"?
- Does it strengthen or weaken the position of pro-nuclear weapons advocates in other nations?

- Is it consistent with or incompatible with the overall anti-proliferation stance of the United States?
- Can it be effectively defended in terms of U.S. obligations under the Nonproliferation Treaty?
- Does it appear to be asking for special treatment for the United States and its friends or is it even-handed with respect to all nations in compliance with the NPT?

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Implications of U.S. Strategic Posture for Proliferation Dynamics in NATO and Non-NATO Europe

Robert Einhorn and Rebecca Hersman

This paper assesses the possible effects of U.S. strategic posture on the following U.S. nonproliferation objectives in Europe over the next 20–25 years:

- *Reassuring* allies and friends they can depend on us for their security and do not require their own nuclear weapons
- *Dissuading* others—both state and non-state—from trying or be tempted to acquire nuclear weapons or nuclear weapons capability
- *Preventing* others—both state and non-state— from acquiring nuclear weapons
- *Reversing*/rolling back nuclear proliferation
- *Enhancing* international support for measures to strengthen the non-proliferation regime and prevent nuclear proliferation

Relevance of These Objectives to NATO and Non-NATO Europe

The NATO alliance is the United States' longest standing formal alliance and the most explicit U.S. commitment to nuclear-based extended deterrence (nuclear umbrella). As such, the principal nexus between U.S. strategic posture and nonproliferation lies in the area of "reassurance," namely our ability to continue to convince our friends and allies that they can depend upon us for their security and do not require their own nuclear weapons. Indeed, U.S. nuclear-based security assurances provided in the NATO context are

the main reason why many U.S. allies that were capable of acquiring nuclear weapons chose not to do so. However, while reassurance remains an important objective, NATO countries, along with some other non-NATO European countries, may not always share similar views as to the need for and nature of reassurance.

The alliance is also home to a number of key partners in building international support for efforts to prevent nuclear proliferation and strengthen the nonproliferation regime. Many parties to the Nonproliferation Treaty (NPT) regard the Treaty as a bargain in which the non-nuclear weapon states (NNWS) agree to renounce nuclear weapons in exchange for a commitment by the nuclear powers (in Article 6) to reduce and ultimately eliminate their nuclear arsenals. NNWS, especially non-aligned countries, claim that the nuclear powers have not done enough to fulfill that commitment and argue that, unless more rapid progress is made in reducing nuclear weapons and their role in international relations, it will not be possible to take further steps to strengthen barriers to proliferation (e.g., adherence to the IAEA Additional Protocol, constraints on the spread of enrichment and reprocessing capabilities). Although U.S. allies and friends in Europe are not as critical of the nuclear powers' record as the non-aligned, they nonetheless believe that additional steps to implement Article 6 (including deeper reductions in U.S. and Russian nuclear forces and entry into force of the Comprehensive Test Ban Treaty) would significantly strengthen the hand of those seeking to tighten measures that are critical to dissuading, preventing and reversing proliferation among state and non-state actors elsewhere around the world.

Today, the non-proliferation objectives of dissuading, preventing and reversing proliferation are less directly relevant to alliance members. With the possible exception of Turkey, we have no countries known or suspected to be seeking nuclear weapons either within NATO or even within a broader European context, and therefore no real targets for these other objectives. That is not to say that such objectives have not been relevant in the past or will not be in the future. During the Cold War, upwards of seven European countries (Norway, Sweden, Yugoslavia, Romania, Italy, Switzerland and possibly Spain and Germany), including at least two then NATO allies (Norway and Italy), sought to develop nuclear weapons capabilities or at least thought seriously about the option of acquiring them. Later, during the 1990s, three states (Belarus, Kazakhstan and Ukraine) inherited Soviet nuclear weapons capabilities resident on their territories, which they ultimately chose to relinquish. That said, in the future, a significant loss of confidence in U.S. extended deterrence coupled with a deteriorating threat environment (perhaps via a more regionally assertive Russia or a nuclear-armed Iran) could trigger a reassessment of the need to possess national nuclear deterrent forces in Europe. This could happen both within the alliance, or more likely among

some European nations along NATO's fringe. At that point, a role for U.S. military capabilities/strategic posture in dissuading, preventing and reversing proliferation could resurface.

The Impact of Different Concepts and Components of Strategic Posture on Reassurance

Given the importance of reassurance in the European/NATO context, it is essential that the U.S. optimize its strategic posture to provide effective reassurance to its allies; ensure operational effectiveness and alliance cohesion; and maximize nonproliferation outcomes. Some of these concepts and components include the type and characteristics of U.S. nuclear weapons; the size of our overall nuclear stockpile; the nature of deployment and delivery (CONUS-based or forward deployed; types of delivery platforms); and the role of missile defenses and conventional strategic forces in the overall U.S. strategic posture. Most analysts believe that effective assurance in NATO depends far more upon notions of "political will," namely the United States' willingness to use nuclear weapons if necessary in defense of a NATO ally, than upon detailed assessments of operational proficiency and warhead specifications. In fact, there is some anxiety that U.S. nuclear modernization is focused less on improving safety and reliability and more upon increasing their utility. Most European countries seem comfortable with significant reductions in strategic stockpiles, but differ as to where those numbers should ultimately fall. Many European countries are increasingly comfortable with and supportive of missile defenses as an important component of the overall strategic posture, although a number of European governments would like to pursue missile defenses in a way that does not antagonize the Russians. Moreover, many European countries view conventional strategic weapons with skepticism; both in terms of the risks associated with misinterpretation of a conventional ballistic missile launch as well as in terms of the far lower deterrence value of such capabilities vis à vis potential adversaries.

Divergent Views on Strategic Posture Across Europe and the Alliance

The twenty-six countries which comprise the NATO alliance (not to mention the non-NATO European countries on the periphery of the alliance, several of which want to join NATO) by no means constitute a unitary actor. In fact, domestic political attitudes toward U.S. strategic capabilities, threat perceptions, propensities for proliferation, requirements for assurance, and status as international nonproliferation partners differ substantially.

“Old NATO”

Most of the pre-1999 expansion members of NATO hold deeply internalized commitments to nonproliferation; and in some cases even sympathize with nonaligned positions on the U.S. need to fulfill article VI. All of them have ratified the CTBT and would like to see the U.S. ratify and help bring the Treaty into force. They believe the credibility of U.S. extended deterrence would not be adversely affected by further significant reductions in U.S. nuclear forces, although they would be much more comfortable if the Russians were making comparable reductions. They therefore favor continued U.S.-Russian bilateral arms control efforts, including a replacement for START, which they believe should be legally binding and contain verification measures to promote greater predictability and stability in the strategic relationship. Aside from supporting such measures on their own merits, the old NATO countries maintain that they would provide leverage to persuade NPT parties to accept additional steps to shore up and strengthen the nonproliferation regime.

This view is enhanced by perceptions of threat within old NATO which emanate from terrorism and out of area concerns rather than from within the region. The resurgence of Russia worries old NATO countries, especially after the Russia-Georgia conflict and Russian efforts to use energy supplies to Europe for political purposes. But they do not see the current challenge from Russia as a return to the Cold War, with Cold War levels of military threat.

Old Europe includes two nuclear powers, France and the U.K. Both share the view that the U.S. can substantially reduce its nuclear forces without harming extended deterrence, and both have reduced their own forces to below 300 nuclear weapons. However, the two don't see eye-to-eye on all nuclear issues. The U.K. has officially embraced the goal of moving toward a world without nuclear weapons, while the French are concerned that adopting the goal and the rhetoric of elimination could de-legitimize nuclear weapons and undercut efforts to modernize their deterrent.

Some old NATO countries are rather schizophrenic about the role of nuclear weapons in Europe—a number of political/military elites value the prestige/reassurance associated with forward deployed weapons; sharing the nuclear mission, role in nuclear planning group, etc., but their populations (and significant elements within their political leadership) hold a significant ambivalence about the role of U.S. nuclear weapons in their security. Many favor the removal of U.S. nuclear weapons from their territory and believe that extended deterrence can be maintained with CONUS-based or other offshore nuclear capabilities.

“New NATO”

“New NATO” includes the 10 former Soviet bloc countries that have joined NATO since 1999—Poland, Hungary, Czech Republic, Estonia, Latvia, Lithuania, Slovakia, Slovenia, Romania, Bulgaria. New NATO countries have a significantly stronger perception of regional (i.e., Russian) threat than old NATO, especially in light of Georgia, although they too seem more concerned about the political challenge of coercion and intimidation from Moscow rather than the prospect of military confrontation. These countries may not have the same level of internalized commitment to non-proliferation as is found among the “old NATO” alliance members. They believe lower levels of U.S. nuclear forces are compatible with extended deterrence but they would probably strongly favor reciprocal Russian reductions. To new NATO countries, the INF and CFE treaties are probably more immediately relevant to their interests than START.

It appears that tangible expressions of U.S. support are more important to these countries than to old NATO. Defense cooperation in the conventional area (e.g., air defense in Poland) as well as political statements of reassurance may be just as important, or even more important, than the quantitative or qualitative characteristics of U.S. nuclear forces. They are probably more supportive of the continued stationing of U.S. nuclear forces in Europe than old NATO, although many of them would face considerable domestic resistance to stationing nuclear weapons on their territory. This desire for tangible expressions may derive in part from their concerns about the willingness of the United States, and especially other alliance members, to “deliver” on its alliance commitment. As a result, over time these countries may desire a stronger role in nuclear mission, operations and planning, which could further complicate alliance relations with Russia.

Turkey

Sitting astride Europe and the Middle East, Turkey is the greatest proliferation risk with the NATO alliance and within the European context more generally. This NATO ally faces growing instability and potential proliferation in its neighborhood. Turkey is deeply affected/conflicted not only by European security conditions but even more so by those in the Middle East. As a result, we cannot separate Turkey from proliferation dynamics in the Middle East—especially vis a vis Iran but also Syria. Turks tend to see Iran as a competitor for regional influence, not as a direct military threat. They believe Iran’s acquisition of nuclear weapons would bring instability to the region and therefore oppose it, but apparently don’t feel the kind of direct threat that the Gulf Arabs and Israel feel. Turkey depends on Iran for much of its energy supplies and trade and wants to maintain good relations with Tehran. Turkey’s most immediate security concern is not Iran but the PKK.

Indeed, the key test of U.S. reliability, as far as Turkey is concerned, is how active we are prepared to be (e.g., intelligence support) in helping Turkey deal with the PKK threat coming from Iraq.

Turkey still wants membership in the EU and feels frustrated and resentful toward Europeans that oppose its entry. Europe's ambivalence toward Turkey has contributed to a sense of alienation in Turkey and to a greater Turkish orientation toward the Middle East. It still attaches great importance to its NATO membership, but harbors doubts that NATO's Article 5 commitment would be triggered on Turkey's behalf. Turks often cite NATO's delay in meeting Turkey's request for air defense support at the time of the first Gulf War as evidence that it cannot rely fully on NATO. Similarly, some Turkish military and political elites are wary about an overreliance on the United States for Turkey's security. This concern is exacerbated by deep public antipathy for the U.S. in general and for the U.S. military—both conventional and nuclear—in particular.

This ambiguity is reflected in Turkish attitudes about U.S. nuclear weapons in the region—making it difficult to assess Turkey's attitude toward removing U.S. nuclear weapons from Turkey or from Europe altogether. Turkish elites probably favor the retention of U.S. nuclear weapons on their soil, especially given Iran's nuclear program and possibly Syria's as well, and may see U.S. deployment as an alternative to Turkey acquiring its own deterrent. The Turkish population as a whole, however, may well prefer to have U.S. nuclear weapons withdrawn. Former senior Turkish officials, including those who see no need for retaining U.S. nuclear weapons in Turkey, are emphatic that, whatever the U.S. and NATO may decide to do, it is critical that Turkey be fully consulted. They remember bitterly when, as a means of resolving the Cuban missile crisis, the U.S. agreed to withdraw Jupiter missiles from Turkey without even mentioning it in advance to the Turkish Government.

Some analysts believe that Turkey is already positioning for possible future nuclear weapons options. Some Turks speak openly of the need to acquire a nuclear deterrent if Iran and others in the region go nuclear. But those are usually people with no authority and little knowledge of the technical demands of acquiring nuclear weapons. Turkey today lacks the infrastructure to produce fissile materials, and it would take considerable time and effort to acquire it. Turkey is only now accepting bids for its first nuclear power reactor. Turkey's nuclear intentions certainly must be watched closely, and special efforts must be made to reassure Ankara. But there are no indications that Turkey has decided to embark on a military nuclear program.

“NATO Wannabe’s” and other non-NATO European states

Albania, Croatia, Macedonia, Georgia and Ukraine are all actively seeking membership in the NATO alliance. Could/would failure to incorporate these countries into NATO trigger increased interest/intent for an independent nuclear option? Ukraine seems to be most credible candidate for reconsideration of a nuclear option in the event that its NATO aspirations are not met. While such a possibility does not appear likely or imminent, Ukraine is the second most serious proliferation risk (after Turkey) in Europe. The technical and political hurdles for the remaining “NATO Wannabe’s” would appear to be daunting—making such an outcome highly unlikely. Moreover, while granting Ukraine (and Georgia) NATO membership would almost certainly reduce any interest they may have in acquiring nuclear weapons, it could also lead to greater Russian belligerence toward them and to less Russian cooperation with us in addressing a range of proliferation threats, including Iran. When considering the impact of U.S. strategic posture on these countries, our broad political and military posture (including defense cooperation and political statements) will be more relevant to those countries’ incentives for going nuclear—whether these steps are taken within the NATO context or through direct bilateral cooperation—than whatever we may do with regard to our nuclear weapons policy.

As for the rest of non-NATO Europe, only Serbia stands out as a proliferation risk of any serious consideration. While not a significant risk at this time, it is possible that an isolated Serbia could consider reigniting its nuclear ambitions. Starting in the late 1940s the Belgrade government (then Yugoslavia) pursued a nuclear weapons program on an intermittent basis until 1987. While that program failed to make significant technical progress despite its longevity, Belgrade could reconsider the option if it feels isolated or threatened by NATO and/or ethnic conflict on its borders reemerges.

Conclusions

- Proliferation dynamics in Europe are relatively stable, especially when compared with the Middle East. No countries are known to be pursuing deterrent capabilities of their own.
- Nonetheless there are worrisome developments, especially resurgence of Russia and prospect of a nuclear-armed Iran and possibly additional proliferation in the Middle East.
- The interests and perceptions as to the role of nuclear weapons and the impact of U.S. strategic posture on proliferation intentions can vary significantly across the NATO alliance and adjacent European coun-

tries. The United States will need to have a general posture that seeks to serve our objectives as well as country-specific elements that can address the particular reassurance needs of individual countries.

- It remains essential to reinforce the credibility of the U.S. extended deterrent, especially with respect to Turkey. Reassurance to non-NATO European states will also be required, but through different means (i.e., we can't offer them a NATO-type pledge, at least until they become members).
- The credibility of the U.S. nuclear umbrella depends more on political factors (declaratory policy, strong bilateral engagement and statements of assurance, etc.) than the quantitative and qualitative characteristics of U.S. nuclear forces.
- Maintaining a credible extended deterrent in Europe is compatible with further reductions in U.S. nuclear forces, especially if they are matched by Russian reductions.
- Most Europeans have become more supportive of integrating missile defense into the U.S. and European strategic posture, although there are differences over the extent to which Russian sensitivities should be taken into account in considering the location and timing of missile defense deployments—with “old NATO” tending to be more concerned about Russian reactions than “new NATO” or NATO Wannabe's.
- Proliferation risks associated with the withdrawal of U.S. nuclear forces are greatest for Turkey, where some believe the basing of weapons is a critical component of extended deterrence and a strong factor in restraining national nuclear ambitions. Concrete evidence of Turkish intentions in this regard, however, is lacking.
- Overall attitudes toward retaining U.S. nuclear weapons in Europe are mixed within Europe, even within NATO and individual NATO countries, greatly complicating an assessment of risks and benefits associated with the benefits of U.S. nuclear weapons on U.S. soil. Some believe that, by sharing the responsibility for the safety, security, and operational requirements and political challenges associated with nuclear weapons, the health of the nuclear-based Alliance and the “coupling” of the U.S. deterrent to its allies can be maintained. Others believe that fundamental changes in the security environment, especially the end of the Soviet-Warsaw Pact threat against which NATO's nuclear posture was directed, would allow the withdrawal of U.S. nuclear forces from Europe without paying a significant price, either in terms of security or alliance unity. To avoid undercutting the extended deterrent, any decision on reducing or withdrawing U.S. nuclear weapons in Europe should only be taken after intensive consultations with key NATO

countries as well as some non-NATO countries. A factor that could affect European attitudes is whether a change in the status of U.S. nuclear weapons in Europe would be reciprocated by Russian actions—for example, the withdrawal of Russian non-strategic nuclear weapons from forward locations to a small number of secure storage sites deep within Russia.

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Proliferation Dynamics in the Middle East/Persian Gulf

Robert Litwak

Issue: How does the U.S. force structure affect nuclear nonproliferation objectives and vice versa?

Context

- The Middle East and Persian Gulf is a geographical region of primary nonproliferation concern. Unlike South Asia, the region has no declared nuclear weapons states. Israel is an undeclared, albeit acknowledged, nuclear weapon state. Its acquisition of that capability triggered nuclear flirtation by Egypt before the 1967 war but did not precipitate catalytic proliferation in the region.
- An assessment of proliferation motivations must distinguish between factors that are regime-specific (e.g., the driving force of Saddam Hussein's megalomania behind the Iraqi program) and those that are regime-generic (i.e., those that would motivate a regime of whatever political character).
- Civil nuclear energy programs, if not properly regulated (most notably, through control of fuel cycle technology), can reduce the supply-side obstacles to nuclear weapons acquisition.
- "Peaceful" nuclear programs (such as past exploratory efforts by Egypt and Algeria) have had a putative energy rationale but also likely reflect interest in a long-term hedge option for weaponization.
- Iraq, Libya, and Iran moved beyond hedging to covert weapons programs. These programs were motivated not by the need to counter/

deter an existential security threat, but by the desire to secure preponderant security status in the region.

- The emerging nuclear “renaissance” is fueled by projected energy demand and climate change concerns. The challenge is to reduce the potential for additional states in the region to acquire hedge options for weaponization in the process.
- Regional states have used force to prevent adversary states from acquiring nuclear capabilities. Cases: Israel against Iraq (Osirak, 1981) and Syria (2007); Iran and Iraq against each other’s facilities during their war in the 1980s.
- The United States has supported nonproliferation as a norm, but, in practice, it has focused on keeping nuclear weapons out of the “wrong hands.” This attitude has fueled regional criticism of a U.S. double standard. After 9/11, the Bush administration argued that threats of the new era derived from the character of U.S. adversaries—“unpredictable” rogue states and undeterrable terrorist groups. This redefinition of threat (focusing on the potential “nexus” of proliferation and terrorism) prompted a shift in strategy from an emphasis on containment and deterrence to regime change and military preemption (if not prevention).
- Two contrasting precedents were set in 2003 to roll back national programs.
 - Iraq: coercive nonproliferation through a change of regime.
 - Libya: nonproliferation through a change within a regime.
 - The demonstration effect of the Iraq war was a necessary, but not sufficient condition underlying Qaddafi’s strategic turn.
 - The crux of the deal was a tacit, but clear, security assurance that the United States would eschew regime change as an objective if Libya agreed to transparent WMD disarmament.

The New Catalyst: Iran’s Nuclear Program

- Iran’s program is determined and incremental, but not a crash program to get a weapon as quickly as possible in the face of an existential threat. To the extent that Iran perceives a regime-threatening threat, it arises from the United States, which has sent a mixed message over the U.S. objective (regime change versus behavior change).
- Iranian interest in nuclear weapons is not regime-specific as the program began under the Shah. CIA Director George Tenet stated in February 2003: “No Iranian government, regardless of its ideological leanings, is likely to willingly abandon WMD programs that are seen as guaranteeing Iran’s security.”

- Although North Korea has a more advanced nuclear weapons program, Iran is viewed as a more dynamic threat: While the defensive, inwardly focused Kim Jong Il regime presides over a failed state, Teheran's financial resources from oil and gas fuel its increasingly assertive, ideologically-driven foreign policy.
- Iran has achieved a hedge or breakout option through its uranium enrichment program.
- Iran's nuclear options: bargaining chip, hedge, or weapon?
 - Reversal: Iranian mastery of uranium enrichment technology calls into question the possibility of verifiable disarmament through negotiations. An agreement to cap Iranian U enrichment capabilities to the pilot plant at Natanz would require an intrusive inspection to ensure that proscribed activities are not occurring at undeclared sites.
 - Hedge: In the absence of an urgent threat, Iran may choose to continue a nuclear hedge strategy indefinitely. Given the possible regional reaction to an overt nuclear Iran (discussed below), a hedge strategy might suit Iran's interests. (As former Iranian President Hashemi Rafsanjani put it to the Carnegie Endowment's George Perkovich in 2005: "As long as we can enrich uranium and master the [nuclear] fuel cycle, we don't need anything else. Our neighbors will be able to draw the proper conclusions.")
 - Weaponization: According to the 2007 NIE, work stopped in 2003 but the report did not opine on whether that is because Iran has what it needs. Weaponization could be undeclared (which is possible since testing is less important with the uranium enrichment route) or declared (with a small deployed arsenal on ballistic missiles, eventually aiming for a secure second-strike capability).

U.S. Regional Allies: Perceptions of and Responses to the Iranian Nuclear Program

- The region after Iraq: Iran, now regionally ascendant in the absence of a regional counter-balancer, is viewed increasingly as a threat by its Arab neighbors. Meanwhile, the botched U.S. intervention in Iraq has eroded America's reputation, calling into question both U.S. military capabilities and political judgment.
- Strategic options for regional states
 - Balance: The traditional response of regional states, such as Saudi Arabia, has been to seek reassurance from the United States. The most plausible contingency is not a direct Iranian nuclear threat

against its neighbors, but rather, Tehran's exploitation of the shadow effect of its nuclear capability (whether a hedge or weapon) to further its interests through coercive diplomacy.

- Bandwagon: In the face of an ascendant Iran and doubts about a weakened United States looking for an exit from Iraq, regional states might deviate from past policies and seek reassurance from Iran by cutting deals in Tehran.
- Acquisition of a nuclear weapons capability to have an independent deterrent. Or cultivate relations with an alternative great power for a security guarantee (e.g., recent Russian political inroads with the Persian Gulf states).
- Key countries: The response of regional states would depend on which option Iran chooses. Overt Iranian weaponization (as opposed to hedging or undeclared weaponization) would be an unacceptable change in the status quo.
 - Israel: A closing window on preventive military action, which would set back but not end the Iranian program. An Iranian move beyond a latent hedge capability could precipitate a change in Israel's opaque policy (i.e., becoming a declared nuclear weapons state with an explicit deterrent warning to Iran).
 - Egypt: An Iranian nuclear hedge and even weaponization would not trigger an immediate Egyptian response as such a move would undercut the government's two (increasingly unpopular) policy pillars—peace with Israel and a close relationship with the United States. However, an Israeli shift toward overt nuclear weaponization in response to an Iranian bomb would compel Egypt to reconsider its non-nuclear status.
 - Saudi Arabia: Overt weaponization could prompt Riyadh to acquire a weapon from Pakistan or station Pakistani forces in the Kingdom.
 - Turkey: Iranian nuclear acquisition could precipitate an internal debate about the continuation of Turkey's non-nuclear status. Ankara would weigh the negative consequences for Turkey of a nuclear Iran against the reliability of the U.S./NATO security guarantee and the perceived costs with the United States and Europe of a decision to acquire an independent deterrent.

Implications for U.S. Force Posture and Nonproliferation Goals

Reassurance

- Reassurance of allies: Preventing U.S. allies from either acquiring independent nuclear capabilities to counter Iran or reaching some accommodation with a regionally-ascendant Tehran is contingent on Washington's ability to provide reassurance that is both militarily and politically credible.
 - For U.S. regional allies, reassurance is less a function of U.S. military capabilities than the political credibility of the U.S. alliance commitment.
 - U.S. conventional forces are central to reassurance: Forward basing of U.S. ground and maritime forces needs to be politically sustainable in the host countries and the United States.
 - Ballistic missile defense: An important element of U.S. reassurance policy with regional allies, notably Israel, given continued advances of Iran's long-range ballistic missile program.
 - Extended deterrence will dictate the size and the composition of the U.S. nuclear force. How low can the United States go if Iran acquires a small nuclear arsenal over the next 5–20 years?
 - Positive security assurances could forestall Israel from going overt, which would likely have catalytic consequences with Egypt and perhaps Saudi Arabia.

Deterrence, prevention or reversal

- Adversaries: Coercive diplomacy is not possible when the adversary believes that the objective is regime change. With Iran, the belief in Tehran that the U.S. objective is regime change is a proliferation driver, which, at minimum, promotes Iranian hedging.
 - Clarifying that U.S. objective is limited to a change in Iranian conduct is the prerequisite for an effective strategy of coercive diplomacy. It also creates a basis upon which the United States and its European Union partners can appeal for meaningful multilateral sanctions if Iranian intransigence persists.
 - Reassurance of an adversary is more difficult than deterrence: Assuring the Iranians that the U.S. objective is not regime change (as a basis for trying to negotiate a change in Iranian nuclear behavior) is more difficult than deterring the Iranians from trying to unilaterally change the regional status quo.
 - The proliferation-terrorism "nexus": U.S. declaratory policy should aim to deter the transfer of nuclear capabilities to non-state terrorist groups, which would have no moral or political compunction

against using them against the United States and its allies. What are the requirements for such a deterrent posture? In contrast to preventing acquisition, where an assurance of regime security may be central, deterring transfer may entail the explicit or ambiguous threat of regime change.

- Allies: While U.S. reassurance of allies is pivotal, dissuasion may be necessary to prevent them from acquiring fuel cycle technology as hedge.

Conclusion

- The U.S. military capabilities that make up the force structure are not per se a proliferation driver. With adversaries, U.S. declaratory policy—specifically, in the case of Iran, that the objective is to change the regime—is a motivating factor. Likewise, with U.S. regional allies, extended deterrence rests more on political reassurance (i.e., the credibility of the U.S. commitment) than on any particular capability.
- Proliferation dynamics in the Middle East and Persian Gulf have implications primarily for the deployment of U.S. conventional forces as a tangible symbol of the U.S. security commitment.

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Extended Deterrence in the Middle East: Possibilities for Deterring a Nuclear Iran, Assuring Allies, and Stemming Proliferation

Elbridge Colby

(NB: Per the original tasking, this memorandum is “a thought piece” on a highly contentious and disputable subject. It is offered as a starting point set of hypotheses in the spirit of constructive suggestions rather than with any pretensions of comprehensiveness or finality.)

What options would the United States and the world have if Iran succeeds in developing nuclear weapons or a so-called “breakout” nuclear capability?¹ Debate thus far has focused largely on the commendable goal of how to halt Iran’s ambitions. Yet the consequences of not planning for a nuclear Iran could be grave, as countries and markets may panic if a security structure to manage the situation is not in place if Iran acquires a nuclear capability, possibly leading to dangerous regional instability, a cascade of proliferation, and serious disruptions to the global economy. Indeed, planning how to address such an eventuality might contribute to forestalling an Iranian bomb entirely by showing to Iran’s leadership the limits of what they would achieve through obtaining a nuclear capability. Presenting realistic options for managing a nuclear-capable Iran may, therefore, be a productive focus for the Commission, especially given the diplomatic and political need for the Executive Branch not to be seen as contemplating such an outcome.

Objectives: The principal objectives of the United States and its allies in an environment in which Iran has achieved a nuclear capability would include deterring the Iranians from aggression and coercion against U.S. interests and allies in the Middle East and preventing, to the extent possible, a cascade

of proliferation.² (Saudi Arabia and, to a lesser extent, Egypt and Turkey have signaled that they may seek to obtain nuclear weapons should Iran do so.³) U.S. and allied objectives could be achieved by a more developed and credible U.S.-led nuclear-backed security guarantee for key states in the region.⁴ Though the U.S. should be extremely careful about extending explicit and formal security guarantees, particularly nuclear ones, it should be open to doing so, especially in concert with others.⁵

Deterrence—Can It Work against Iran? The heatedly contested question whether a nuclear Iran could be deterred cannot be definitively answered in advance, but it is likely that Iran indeed could be. At the most general level, analysis and historical experience suggest that a properly postured, sufficiently strong, and credible deterrent designed to serve defensive or status quo ends is likely to be effective against opponents exhibiting minimal rationality.⁶ Conversely, attempts to use nuclear forces to compel such protected states into submission are very unlikely to work if the opposing deterrent structure conforms to these requirements.⁷ Since World War II, the U.S. has both deterred opponents' aggression and coercion against and dampened proliferation among its allies by extending its security umbrella over them; a similar strategy might well pay dividends in the Middle East, especially against a state that is by no means a superpower.

More specifically, as the Intelligence Community has reportedly assessed, Iranian behavior suggests that the regime, however distasteful its aims and its methods, does pursue them based on calculations of costs and benefits, and therefore can profitably be made subject to deterrent threats designed to demonstrate that use or threatened use of nuclear weapons against protected allies is perceptibly incommensurate with any rational strategy.⁸ Recent statements by experienced experts support this assessment.⁹

In line with these principles, the U.S. posture against a nuclear Iran would likely best be fundamentally defensive or status quo in nature: the protection of the sovereign rights of partnering states from aggression and coercion by Iran and its associates, and in particular the protection of the free flow of oil, related products, and capital into and out of the region. The key for the U.S. and its partners would be to ensure that the deterrent structure is appropriately structured and sufficiently firm and credible, such that it would be clear that Iran would not benefit from achieving a nuclear capability and might well suffer grievously.

Current Structure: Presently, U.S. security arrangements in the region are informal and ambiguous—generally taking the form of statements, exercises, arms sales, and direct military interventions—but are perceived as broadly adequate.¹⁰ Countries in the region seek to balance their need for credible U.S. security assurances with their desire for autonomy and their political need not to appear subject to U.S. dictates. While the U.S. has not made formal

security guarantees to GCC countries, the U.S. has consistently made clear its policy that it would not permit the domination of the Middle East region by any power.¹¹ It has also worked to shore up the credibility of its commitments to the region, including through the Gulf Security Dialogue.¹²

Dealing with a Nuclear Iran: The above assessment suggests that a firmer, augmented deterrent structure (or structures) in the Middle East could effectively blunt many of the negative repercussions of Iran achieving (or nearing achievement of) a nuclear capability.¹³ The animating logic for building such a structure could profitably be an ends-oriented flexibility.¹⁴ The objective of such a structure would be to defend critical U.S. and allied interests from Iranian aggression, while offering Iran a plausible, peaceful, and respectable “way out.”¹⁵ Given this goal, the structure could take many forms, driven by the need to provide credible deterrence against Iran and its associates and assurance to allies, largely ascertained by consultations with countries in the region and key outside parties.¹⁶ The central balancing act would be, as now, both to assure allies of the reliability and strength of U.S. and associated commitments while also allowing sufficient distance from U.S. and foreign influence to make the structure politically sustainable in the region.¹⁷ Concurrently, the U.S. might also seek to help build up a regional political process designed to address and ameliorate disputes or even seek ways to extend UN Security Council positive security assurances to powers agreeing not to pursue nuclear weapons.¹⁸ Any structure should be designed to provide Iran a “dignified way out” through regional engagement as opposed to outright capitulation or regime change.

A principal challenge for the U.S. and its partners would be the need to establish the credibility of the partnership, both to Iran *and* to key prospective member states, such as Saudi Arabia, that might otherwise seek their own nuclear deterrents.¹⁹ This would principally be a political and perceptual challenge rather than a purely military one, because of the decided supremacy of U.S. forces over any potential challenger(s) in the region. Both Iran and participant members of the structure would need to see not only that the U.S. and its partners would have the theoretical capability to defend and, if necessary, retaliate against Iranian aggression or coercion; they would have to see that such capabilities are likely to be exercised in the event.²⁰ This would place a premium on evidences of political commitment to the partnership by the U.S. and other key states both within and outside the region. Focuses of such credibility-building activity might appropriately include military, diplomatic, and intelligence contact among the allies; steps to build up theater ballistic missile defense to defend members; training exercises; legally or politically-binding statements of resolve; and procurement and deployment decisions.²¹ A special emphasis could profitably be placed on developing, procuring, deploying, and integrating a variety of defensive

systems, including ballistic missile defenses; deterrence by defense in addition to retaliation would be preferable. The Gulf Security Dialogue provides a promising starting point for such initiatives, as do existing exercises, training missions, and arms transfer relationships.²² A particular problem would be posed by insurgency and irregular warfare, both in how the U.S. and other allied parties could meet such challenges and in determining whether instances of insurgency or irregular warfare would appropriately require external allied intervention.²³

Participation: Given the defensive and nonproliferation purposes of the deterrent partnership, several regional countries likely should be involved: above all Saudi Arabia, the area's principal oil exporter and proliferation concern;²⁴ Kuwait, the UAE, Qatar, and Bahrain, the key Gulf states most directly threatened by Iran; and, to the extent possible, Egypt, Jordan, Turkey, and other friendly Middle Eastern states as at least supporters. Some countries, especially those not directly bordering or facing Iran, might also be included as adjunct participants, if fuller involvement proves impossible or inadvisable. Yemen might be such a case. Existing institutions could provide a base on which to build, particularly the Gulf Security Dialogue and the Gulf Cooperation Council. Any structure would have to be sensitive to the difficult tension between the countries' desire to have their security guaranteed with the need to maintain distance from an unpopular U.S. The structure should also be at least notionally open to constructive Iranian participation in a way that places the burden of rejection on the Iranian leadership.²⁵

The role of Israel will be both a critical and a severe complicating factor in any such structure.²⁶ Consultations with Israel and other regional states will be necessary to ensure that Israel is adequately assured while making sure Israel's problematic relations with the Arab states do not scuttle any initiative.²⁷

In concert with these assurance efforts, the U.S. should also continue and, to the degree viable, intensify its counterproliferation efforts in order to raise the costs and risks of obtaining a nuclear capability to key countries such as Saudi Arabia. Especially if coupled with cooperation from other key nuclear weapons powers, such a policy is likely to be substantially, though not unfailingly, effective.²⁸

More broadly, dealing with a nuclear Iran might offer an especially propitious opportunity to build a new security structure that reflects a more multipolar world and allows for more equitable burden-sharing.²⁹ Iran's nuclear posturing is a direct threat to the Gulf states and to their economies; it is therefore a serious threat to the globe's major economies, all of which have a stake in stability in the Gulf to preserve flows of natural resources and capital. This creates a natural alliance among the United States, the EU,

Japan, major developing economies, and key Gulf countries. In addition, Islamic countries such as Egypt and Pakistan and the UN Security Council could play a particularly critical legitimating role. Though the U.S. would likely bear the major military responsibilities, joint efforts would increase international buy-in and legitimacy even as they lessen financial and other costs.³⁰ Overall, the U.S. should avoid assuming responsibilities markedly disproportionate to its interests in the region; instead, it should seek to find effective ways to divide the labor with like-minded partners, while keeping a hold on the key levers (principally military) of the structure.

Military Posture: According to former CENTCOM commander General Abizaid, the U.S. is likely to be able to meet extended deterrent commitments to key states in the Gulf and Middle East region with basically marginal additions to its current military posture, and to do so in most plausible scenarios solely with conventional forces.³¹ In adding to existing capabilities, the U.S. would likely want to focus on increasing missile defense and air defense capabilities while minimizing substantial deployment and basing of forces and other highly visible aspects of U.S. power in the region.³² These principles would place premia on developing and fielding forces, logistic networks, legal arrangements, and other capabilities designed to facilitate a "light footprint" and swift insertion and removal of forces, thus placing special emphasis on maritime and long-range mobile and aerial forces.³³ Further, Iranian ballistic missile capabilities, including nuclear variants, would imperil large, static concentrations of forces, and make sustained diplomatic support from a host country more precarious.

In general, the U.S. would want to continue to develop and field advanced conventional forces and defenses that would add to the flexibility and strength of a deterrent structure. Defenses, even if not perfect, could substantially complicate Iranian programs to develop their nuclear forces and degrade their capabilities in a crisis or conflict.³⁴ Indeed, development and deployment of defenses might even contribute to forestalling Iranian progress towards acquiring a nuclear capability.³⁵

Role of Nuclear Weapons: The U.S. is likely to be able to meet plausible extended deterrent commitments to Middle Eastern states against Iranian aggression and coercion without needing to resort to nuclear weapons, especially in a multilateral structure designed to share financial and military burdens. Nonetheless, the U.S. would likely benefit from retaining strategic ambiguity regarding criteria for nuclear employment, thus preserving maximal optionality and burdening Iranian decisionmaking; naturally, such a posture would have also to assure allies of the depth of the security commitment. Such a posture might involve military exercises and other moves designed to show U.S. capability and willingness to employ nuclear forces should the need arise, while avoiding incendiary talk or maneuvers.³⁶

Options for deployment of nuclear weapons could fall along a spectrum, dependent upon military requirements and allied expectations, ranging from an East Asian-type model with nuclear weapons obscured but present to a more European/NATO model, in which the nuclear commitment is more openly evidenced through dual-capable aircraft and other mechanisms. In this spirit, the U.S. might consider a restrained but suggestive posture towards deploying nuclear weapons in the region; the Cold War provides examples of this technique.³⁷ Adverse diplomatic pressure against this show of force would likely be lightened because the U.S. would be relieved from its "negative security assurances" to Iran once the latter had achieved a nuclear capability.³⁸

Declaratory Policy: The U.S. should seek to minimize any Iranian gains from obtaining a nuclear capability by communicating clearly that the U.S. could and would meet its security commitments against a nuclear-capable Iran, and thus that Iran would not benefit from the use or threatened use of its nuclear capabilities. (This might require dialing down rhetoric on the offensive strategic value of nuclear weapons, a shift that would need to be coordinated with broader nonproliferation rhetoric.³⁹) Furthermore, the U.S. should communicate that it would hold Iran to a very high standard of liability with respect to control and security of its nuclear arms, especially concerning possible complicity in or gross negligence towards terrorist use.⁴⁰ Broadly, the U.S. would seek to "educate" Iran concerning the limited value of nuclear arms for compellence and other offensive strategic objectives. The U.S. might even consider going so far as to permit the diffusion of or even directly to offer safety and security advice to the Iranians in order to minimize the likelihood of inadvertent loss or use (while maintaining an overarching posture of disapproval for an Iranian nuclear capability). Overall, the U.S. would seek to make clear to Iran that its best interests would be served by not possessing nuclear arms, since Iran would stand to gain very little and could suffer grievously in the event of use or even carelessness. This might eventually contribute to Iran rolling back or at least scaling back its program.

Communications and Publicity: Given broad animosity to the U.S. in the region, such a structure or structures could confront widespread opposition and could catalyze hostile reactions negative to U.S. interests. This would weigh in favor of minimizing the publicity of security commitments. Conversely, however, secret commitments are sure to be less credible, may compromise support within the U.S. and other democratic societies, and may seem by their clandestinity to admit wrongfulness. Further, secrecy is likely unsustainable. In the balance, formalizing and publicizing the general purposes and character of the deterrent structure while maintaining secrecy regarding sensitive specifics would likely be the superior course. Given likely

congressional interest in such a structure, this might indeed be the only plausible course for the U.S.⁴¹

Recommendations: This assessment suggests that the Commission should consider recommending that the next President:

- Lead the United States and other interested countries in consultations about how to strengthen, refine, and, to the degree appropriate, formalize security commitments to those countries especially imperiled by Iran and those most likely to develop nuclear weapons in light of an Iranian capability, with the objectives of preventing any Iranian gains from obtaining nuclear arms, interruptions to the flow of commerce, and follow-on proliferation.⁴² While the U.S. should be prepared to strengthen and extend unilateral security commitments, it should seek to multilateralize such a structure(s) to the degree commensurate with U.S. objectives and influence.
 - Special attention should be focused on consultations with Israel, Saudi Arabia, the key GCC states, Turkey, and Egypt.
- Communicate clearly to Iran and its associates that the United States and its allies and partners are prepared to deal with a nuclear Iran and would not be coerced into compromising their core interests because of an Iranian nuclear capability. Communicate also that Iran, while it would not profit from such possession, would be held to a very strict standard of liability in cases of use, transfer, and even negligence or loss.
- Task the Intelligence Community with assessing how best to deter and contain Iran should it develop a nuclear capability, and how best to “educate” Iran towards “normal” nuclear status should management of a nuclear Iran prove to be the least costly course.
- Task the National Security Council, the Department of State, and the Department of Defense to plan for developing, in consultation with partners in the region and without, a deterrent structure or structures against Iran profiting from a nuclear capability and against further proliferation in the region.
- Task the Department of Defense to explore the operational, programmatic, and strategic requirements that deterring a nuclear Iran would require. This should include exploring possible alternative military (non-nuclear and nuclear) postures for U.S. (and allied) forces to deal with Iran, particularly with respect to its nuclear forces.⁴³ DOD should also explore possible alternative postures for U.S. nuclear forces that might be required to undergird any such deterrent structure(s). This might involve considering deployment of dual-capable aircraft beyond NATO and/or deploying nuclear weapons aboard surface combatants, should either or both of these moves prove useful.⁴⁴

- Task the NSC, State, and the IC to develop plans for focusing their non- and counter-proliferation efforts to prevent follow-on proliferation should Iran obtain a nuclear capability.
- Task the NSC, State, Defense, and the IC to develop plans for how to convey to Iran and other unfriendly nuclear aspirants safety and security techniques designed to minimize the possibility of accidental nuclear use or loss, while simultaneously preserving a strong U.S. strategic message of disapproval. Consultations with other key nonproliferation states and international organizations such as the International Atomic Energy Agency would also be necessary in this effort to ensure conformity with broader nonproliferation goals. The U.S. would need to ensure compliance with Article I of the NPT and ensure any safety and security assistance would minimize "moral hazard" concerns.⁴⁵
- Continue research, investment, procurement, and deployment of strike and defensive capabilities necessary for assurance and deterrence purposes in the Middle East.

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1. For a discussion of different scenarios for what a "nuclear Iran" might look like, see Richard Haass, "Living with a Nuclear Iran," in *Iran: Assessing U.S. Strategic Options* (2008), 115.
 2. This would include the protection of the flow of oil, capital, and other economic goods and services to and from the Gulf region. For more on the possibilities for cascades, see "Report on Discouraging a Cascade of Nuclear Weapons States," International Security Advisory Board to the U.S. Department of State (October 2007); Defense Science Board, 2007 Summer Study on Challenges to Military Operations in Support of National Interests, Report of the Panel on Nuclear Proliferation (2007).
 3. See, e.g., *Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East*. Report to the Senate Foreign Relations Committee. (February 2008), available at: http://www.fas.org/irp/congress/2008_rpt/chain.pdf. This report, based on extensive interviews with officials in the region, suggests that Saudi Arabia is "the most likely" to pursue a nuclear capability, and that Saudi Arabia's decision would be a significant determinant in Egypt's decision whether or not to follow Iran. (viii-ix) The credibility of American security guarantees is, however, the primary determinant for all three states. For Saudi Arabia, according to the report, it is the "only factor that would likely dissuade the Saudis from pursuing a nuclear weapon." (viii) For Turkey, "U.S.-Turkey relations and Turkish perceptions regarding the reliability of NATO will serve as the decisive factors in Turkey's decision regarding nuclear weapons." (xi) See also the International Institute of Strategic Studies' *Nuclear Programmes in the Middle East: In the Shadow of Iran*. (2008).
 4. For an extensive analysis of this and associated issues concerning extending the U.S. nuclear umbrella to new states, see Victor Utgoff and David Adesnik, *On Strengthening and Expanding the U.S. Nuclear Umbrella to Dissuade Nuclear Proliferation*. (2008).
 5. For a good statement of the logic appropriate for determining whether or not to extend such commitments: "Rational alliance building [means] the principle of marginal utility...That is, a state should add allies and increase alliance commitments up to the point at which the 'last' unit of commitment to the last-chosen ally yields a marginal value equal to its marginal cost and risk." Of course, "a fully rational calculation of alliance values must be farsighted [and "wide-angled"]; it must take account of consequences in the distant as well as the immediate future." Glenn Snyder, *Alliance Politics*. (1997), 45-46. See also Bruce Riedel and Gary Samore, "Managing Nuclear Proliferation in the Middle East" in *Restoring the Balance: A Middle East Strategy for the Next President* (2008), 127.
 6. For discussions of this "minimal rationality," see, *inter alia*, Thomas Schelling, *Arms and Influence*. (1966); Patrick Morgan, *Deterrence: A Conceptual Analysis*. (1977); and Herbert Simon,

Models of Man. (1957) or "Human Nature in Politics" (1985). One scholar defined the "typical meaning of the word 'rational'" for deterrence theory to be: "To describe an action as 'rational' is to say that it is consistent with the actor's values, whatever they may be." Stephen Maxwell, *Rationality in Deterrence*. (1968), 3. Or: "A decision is rational from the standpoint of the group...if it is consistent with the values governing the group, and the information that the group possesses relevant to the decision." Herbert Simon, *Administrative Behavior*. (1997), 324.

7. There is an extensive literature on the point that defensive deterrence is far more effective than offensive compellence. For the analytical distinction between "deterrence" and "compellence," see Thomas C. Schelling, *Arms and Influence*. (1966), 69 et seq. Schelling described the "typical difference" as "between a threat intended to make an adversary do something and a threat intended to keep him from starting something." See also David E. Johnson et al., *Conventional Coercion Across the Spectrum of Operations: The Utility of U.S. Military Forces in the Emerging Security Environment* (2002) at 13, fn 19. For an examination of the historical record and the conclusion that nuclear compellence is generally ineffective, see Richard Betts, *Nuclear Blackmail and Nuclear Balance* (1987).
8. Most prominently, the Intelligence Community, in its 2007 National Intelligence Estimate on Iran's nuclear program, reportedly assessed that evidence "indicates Tehran's decisions are guided by a cost-benefit approach rather than a rush to a weapon irrespective of the political, economic, and military costs." http://www.washingtonpost.com/wp-dyn/content/article/2007/12/03/AR2007120300846_pf.html According to *Washington Post* columnist David Ignatius: "In the new NIE, the analysts forcefully posit an alternative view of an Iran that is rational, susceptible to diplomatic pressure and, in that sense, can be 'deterred'...Asked if this meant the Iranian regime would be 'detractable' if it did obtain a weapon, a senior official responded, 'That is the implication.' He added: 'Diplomacy works. That's the message.'" <http://www.washingtonpost.com/wp-dyn/content/article/2007/12/04/AR2007120401669.html?nav=emailpage>. Private experts exhibit similar views. For instance, Iran expert Vali Nasr summarized: "They are pragmatic, but pragmatism does not mean that you cannot follow dangerous policies. The Soviet Union under Brezhnev was very pragmatic. It depends on what kinds of assumptions and factors you are basing your decisions on...The problem right now is not that the Iranians have some kind of an idealistic view of world revolution or Armageddon. It is that looking at their environment, they think the pragmatic decision is to push very, very hard, because they believe that they can either get away with it or that the United States is weak because of Iraq, and that they have room to maneuver. Or they perceive that the United States would want to topple them; therefore, there's no point in compromising. In other words, I don't think that they are in a kamikaze mode with the West. It is, rather, that the way they are seeing the world and then making decisions on that basis leads them to believe, much like the Soviet Union when they decided to go into Afghanistan, that this is the rational thing to do in order to maximize their interests." Available at: <http://www.cceia.org/resources/transcripts/5374.html>. For other similar views, see: http://www.foreignpolicy.com/story/cms.php?story_id=4122. Former NSC Director for Iran Andrew Erdmann believes that the Iranian regime most likely can be deterred from using nuclear weapons, but that doing so will require significant investment by the U.S. to establish political credibility with the Iranians and others in the region and to deploy the necessary offensive and defensive systems to reinforce the credibility of its extended deterrent in the region. He notes, however, that the Iranian Islamic Republic's confidence in "meddling" in the region could well increase once it has its own nuclear "umbrella," thereby increasing risks of potential unintended escalation of a confrontation with the United States over a "non-nuclear" issue. Furthermore, he believes that Iranian nuclear weapons or material could fall into "non-detractable" hands should the regime collapse, a growing risk we see today in Pakistan. Conversation with Andrew Erdmann, November 2, 2008; Barry R. Posen: A Nuclear-Armed Iran: A Difficult But Not Impossible Policy Problem. (2006), 9; 15-16, available at: http://www.tcf.org/publications/internationalaffairs/posen_nuclear-armed.pdf. For open source discussion of Iran's perspective on unconventional weapons, see Gregory F. Giles, "The Islamic Republic of Iran and Nuclear, Biological, and Chemical Weapons," in *Planning the Unthinkable*. (2000). The "rationality of the irrationality" insight would also suggest that Iran might actually be incentivized to appear at least somewhat irrational, given its inferior strategic position.

9. Discussion with General John P. Abizaid, USA, Ret. (November 21, 2008) and comments of General John Abizaid at meeting of Center for Strategic and International Studies, available at: <http://blogs.abcnews.com/politicalradar/2007/09/abizaid-we-can-.html>; David Kay, "The Iranian Fallout," *The National Interest*, September 9, 2008, available at <http://www.nationalinterest.org/Article.aspx?id=19832>; Barry Posen, "We Can Live With a Nuclear Iran," *The New York Times*, February 27, 2006, available at: <http://www.nytimes.com/2006/02/27/opinion/27posen.html>; Posen, *A Nuclear-Armed Iran*; Conversation with Barry R. Posen (November 4, 2008); Richard K. Betts, "The Osirak Fallacy," *The National Interest* (Spring 2006), available at: <http://www.columbia.edu/cu/siwps/images/newsletter3/Betts%20-%20Osirak%20Fallacy.pdf>; Samore and Riedel, 111, 126. According to Riedel and Samore, the Chinese and Russians "argue that Iran will act as a responsible nuclear power, susceptible to being managed through the usual tools of deterrence and containment." 111. Samore and Riedel conclude that, "[i]f Iran acquires nuclear weapons, it is likely to behave like a 'normal' nuclear weapons state, not recklessly using the bomb or giving it to terrorists, but trying to extract maximum leverage from its nuclear deterrent to increase its influence and defend itself from external threats." 126.
10. Discussion with General Abizaid (November 21, 2008); discussion with Department of State official (November 14, 2008); discussion with Department of Defense official (November 18, 2008). For an overview of U.S. commitments to the Gulf region, see the CRS Report *The Gulf Security Dialogue and Related Arms Sales Proposals*. (October 2008). For a recent snapshot of the U.S. posture in the region, see the statement of Admiral William J. Fallon, Commander, Central Command, before the Senate Armed Services Committee, May 3, 2007, available at <http://www.centcom.mil/en/about-centcom/posture-statement/>. Kuwait and Bahrain are major non-NATO allies, as are Egypt and Jordan in the wider region. Kuwait, Bahrain, and Qatar host U.S. bases, while the UAE hosts multilateral air exercises.
11. This dates at least from the Carter Doctrine through dual containment, Desert Shield/Storm, and onwards. For a recent overview, see Secretary Gates' speech at Manama in December 2007, available at <http://www.defenselink.mil/speeches/speech.aspx?speechid=1201>.
12. Discussion with John Hillen, formerly Assistant Secretary of State for Political-Military Affairs (November 18, 2008). Hillen describes the GSD as essentially an effort to deepen U.S.-GCC relationships and build partner capacity in order indirectly and "implicitly" to address threats to the Gulf states. For a discussion of the GSD in the context of the Iran challenge, see the October 2008 CRS report, 2-4. See also the CRS report *Iran: U.S. Concerns and Policy Responses*. (July 2007), 33-34.
13. This memorandum presents one general approach. Commissioner Dr. Morton Halperin argues for a different approach, one that separates the existing U.S. posture and alliance structure in the region from a broader regional effort to demonstrate to Iran the inadvisability of fielding a nuclear weapons capability. He counsels in favor of extending both positive and negative security assurances to counter any Iranian attempt at nuclear coercion or use. Dr. Halperin also argues that this effort should begin early and should be aimed at convincing Iran to stop at most at a "virtual" nuclear capability. This should be coupled with substantial engagement at the political level with Iran to seek to address their legitimate security concerns. (Discussion with Dr. Morton Halperin, November 20, 2008). For a general discussion of this issue, see, e.g., Judith S. Yaphe and Charles D. Lutes, *Reassessing the Implications of a Nuclear-Armed Iran*. (2005)
14. Because of the fraught political circumstances in the region, several structures, potentially in tension with one another, might be necessary as opposed to a single security structure along NATO lines.
15. This memorandum does not address the question of whether or how the United States should engage Iran on the political level. Broadly, however, the approach postulated here would require providing Iran with a plausible route out of its isolation. Beyond that, the United States could pursue a number of different approaches.
16. General Abizaid believes that the Arab states would prefer maintaining the informality of current relationships while seeing more evidence of American commitment. Discussion with General Abizaid (November 21, 2008). Ambassador Lewis Dunn suggested basing a post-Iranian nuclear strategy on the prongs of isolation, containment, and regional engagement. See Lewis A. Dunn, "After Iranian Acquisition, What? Containing the Dangers of a Proliferating Middle East," (July 2007), 13 et seq. For a policy course with both similar-

- ties and differences to that laid out in this memorandum, see Kori Schake, "Dealing with a Nuclear Iran," *Policy Review* (April & May 2007), available at <http://www.hoover.org/publications/policyreview/6848072.html>.
17. Discussion with Department of State official (November 14, 2008).
 18. Discussion with Dr. David Kay (November 17, 2008). Kay analogizes the role of such a political process to that of the European Coal and Steel Community (and subsequent iterations) in Europe. One Commission expert advisor offered the following proposal: "If all five UNSC permanent members repeated their [positive security assurances (PSAs)] and made it clear they would apply in this case, that could enhance deterrence (note that Israel is outside the scope of the PSA; that will have to be a unilateral U.S. deterrent, which could conflict with gaining support for a broader statement)."
 19. Former NSC staffer Andrew Erdmann emphasizes that establishing the political credibility—both to the Iranians and to key prospective member states such as Saudi Arabia—of the partnership would be a critical challenge. He also points to deployment of an effective theater BMD as a potential way to raise the costs and minimize the benefits for Iran of achieving a nuclear capability. For further suggestions along these lines, see Kathleen J. McInnis, "Extended Deterrence: The U.S. Credibility Gap in the Middle," *Washington Quarterly* (Summer 2005), 169-186. McInnis also emphasizes the importance of non-U.S. extra-regional involvement, and suggests the use of economic incentives to discourage proliferation in the wake of an Iranian nuclear capability breakthrough.
 20. Discussion with Barry R. Posen (November 13, 2008).
 21. Discussion with Department of Defense officials indicates that such an approach would strain existing production schedules for ballistic missile defense and other desirable capabilities. In general, the U.S. would likely need to have on have more "capabilities in being" to pursue a strategy of this kind. (Discussion with Department of Defense officials, November 14, 2008.)
 22. According to the Department of Defense, existing exercises are not aimed directly at any third country, in large part due to GCC sensitivities. In the event of Iran achieving a nuclear capability, one method of escalation could be to conduct joint exercises of a more directed nature. (Discussion with Department of Defense official, November 18, 2008.)
 23. A number of Commission expert advisors have pointed out the importance of defining what would be protected, what would be defended against, what would be deterred, and other key objectives. The U.S. would clearly want to be chary, for instance, about guaranteeing the survival of governments from internally-generated reform, even if that reform were through violence. The Gulf Security Dialogue initiative has attempted to address this irregular threat through appropriate arms sales, training, and other comparable measures. General Abizaid notes that, while Iranian IRGC and MOIS-backed subversion is a serious problem, it is not truly a "decisive...element." (Discussion with General Abizaid, November 21, 2008.) During the Cold War, NATO included irregular warfare in its defensive purview, though the issue did not arise in the European context. See, e.g., NATO document MC 14/3 (1967).
 24. Saudi Arabia is, by general agreement, the lynchpin state. (Discussion with Department of State official, November 14, 2008; SFRC report.)
 25. Discussion with David Kay (November 17, 2008). Kay likens this to the "poison pill" U.S. offer to extend Marshall Plan assistance to the Eastern Bloc countries, an offer which elicited a self-wounding Soviet rejection.
 26. Discussion with Department of State official (November 14, 2008); discussion with David Kay (November 17, 2008); discussion with General Abizaid (November 21, 2008). The sensitivities around the Israeli-Palestinian problem would counsel serious efforts at making progress towards a settlement on these issues and to pressure Israel to maintain a posture of nuclear opacity. General Abizaid suggests that Israeli military professionals believe that Iran is deterrable and therefore that Israel could "live with" a nuclear Iran.
 27. See, e.g., Haass, "Living with a Nuclear Iran," 117.
 28. Discussion with David Kay (November 17, 2008). Kay suggests encouraging other countries to provide the face for convincing Iran and other problem states of the inadvisability of "going nuclear."
 29. Future U.S. strategic commitments should likely take into account the shifting power balance that will narrow America's relative power margin. On this point, see, for instance, the

- National Intelligence Council report *Global Trends 2025: A Transformed World*, available at http://www.dni.gov/nic/PDF_2025/2025_Global_Trends_Final_Report.pdf. In leading the construction of this partnership, the U.S. should be aware of the tendency of smaller powers within such a structure to “free ride” on the larger powers and, to the extent possible, seek to control for this dynamic. For a classic analysis of the near-inevitability of this dynamic, see Mancur Olson, Jr. and Richard Zeekhauser, “An Economic Theory of Alliances,” *The Review of Economics and Statistics*, 48, 3 (August 1966), 266-279.
30. For further discussion of these advantages and other aspects, see Elizabeth Sherwood-Randall, *Alliances and American National Security*. (October 2006).
 31. Discussion with General Abizaid (November 21, 2008). According to General Abizaid, U.S. forces could readily meet any challenge from Iranian conventional forces; Arab forces would also be reasonably prepared to deal with Iranian conventional aggression. For principles useful in determining the appropriate U.S. posture for such a deterrent structure, see, e.g., U.S. Department of Defense, *Strengthening U.S. Global Defense Posture*. (September 2004), esp. 9; Andrew Krepinevich and Robert Work, *A New Global Posture for the Second Transoceanic Era*. (2007), esp. 187 et seq.; Stephen M. Walt, “Containing Rogues and Renegades: Coalition Strategies and Counterproliferation,” in *The Coming Crisis: Nuclear Proliferation, U.S. Interests, and World Order*. (2000); Victor A. Utgoff, “Extended Nuclear Deterrence and Coalitions for Defending Against Regional Challengers Armed with Weapons of Mass Destruction,” in *Post-Cold War Conflict Deterrence*. (1997); Henry Sokolski and Patrick Clawson, Eds., *Getting Ready for a Nuclear Iran*. (2005), esp. Part IV.
 32. Discussion with General Abizaid (November 21, 2008). According to General Abizaid, the existing U.S.-backed regional air defense umbrella could be improved to meet the Iranian missile challenge. See also especially Krepinevich and Work, *A New Global Posture*, 189, 191-192.
 33. See especially Krepinevich and Work, *A New Global Posture*, 214-216. Discussion with Department of Defense official (November 18, 2008). General Abizaid notes that U.S. and allied air and naval forces have thus far served as the “primary” elements against the Iranian threat, and that this dynamic would be unlikely to change if Iran achieves a nuclear capability. (Discussion with General Abizaid, November 21, 2008.)
 34. Discussions with David Kay and Barry Watts. Dr. Kay points out that “effective, or at least believable, defenses were in the past and will be in the future an important part of any effort at extended deterrence. By its very nature extended deterrence is attempting to provide deterrent protection to those that are not central to the state offering extended deterrence. The states being offered such protection will always question the extent of the commitment as well as fear/suspect that they may simply become the battlefield for larger geopolitical interests.”
 35. Discussion with David Kay. Dr. Kay writes: “[E]ffective ME/Gulf missile defense effort would be a contribution to the diplomatic effort to convince the Iranians to not proceed all the way to deployable nuclear weapons, and if that diplomatic effort fails such defenses will be an important brake on proliferation pressures in the region.”
 36. In the seminal study *Nuclear Weapons That Went to War*, a survey of the sixteen cases before 1996 in which countries deployed nuclear weapons operationally or seriously considered them for combat use, the authors concluded from the evidence that: the U.S. “must maintain a flexible doctrine and nuclear forces must be able to respond to a variety of crisis and conflict solutions”; because other countries “can learn the same lessons,” the U.S. “should be careful...to avoid setting self-imposed constraints which an adversary can exploit”; and nuclear weapons can be very effective at deterring conventional and CBW aggression and coercion because “nuclear weapons in the inventory make both adversaries and allies more cautious.” The “mere existence of the weapons may deter an enemy from use of chemical or biological weapons and they may prevent or limit some conflicts for fear of escalation.” William C. Yengst et al., *Nuclear Weapons That Went to War*. (1996), i, 24. For a contemporary discussion of these issues by one Commissioner, see Keith Payne, *The Great American Gamble: Deterrence Theory and Practice From the Cold War to the Twenty-First Century*. (2008), 420-423. For a rubric for determining requirements for nuclear forces in such an environment, see Victor A. Utgoff and Brad Roberts, *Beyond the Moscow Treaty: Alternative Perspectives on the Future Roles and Utility of Nuclear Weapons*. (2008), II-18-19, Part VIII in toto, and IX-18. Utgoff and Roberts recommend, in the face of a more proliferated environment, holding nuclear forces in reserve “for purposes of threatened preemption and retaliation against WMD-willing rogues.” VIII-6.

37. The U.S. several times deployed nuclear-capable forces to the Middle East during the Cold War, communicating an inherent nuclear capability while maintaining a restrained overt posture. The Eisenhower Administration deployed nuclear-capable forces to Lebanon in 1958. The Nixon Administration deployed nuclear-capable carrier battle groups to the Eastern Mediterranean during the 1970 Jordanian Crisis and during the 1973 War and to the Indian Ocean during the 1971 Indo-Pakistan War. The U.S. also raised the alert status of its bombers during the 1973 War to deter direct Soviet intervention into the conflict. Nuclear-capable bombers were also deployed for effect during the Korean War. The author discussed several more contemporary options for an Iranian eventuality with Department of Defense officials, but these proposals should be discussed at a classified level. (Discussion with Department of Defense officials, November 14, 2008.)
38. "Negative security assurances" refer to commitments given by the nuclear weapons states to non-nuclear weapons states that the former will not use nuclear weapons against non-nuclear weapons states not allied with nuclear-armed states. The U.S. has several times issued such assurances. A 1997 U.S. Presidential Decision Directive stated: "The United States reaffirms that it will not use nuclear weapons against non-nuclear-weapon state-parties to the Treaty on the Nonproliferation of Nuclear Weapons, except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state toward which it has a security commitment carried out, or sustained by such a non-nuclear-weapon state in association or alliance with a nuclear-weapon state."
39. Recent rhetoric has tended to emphasize the transformational impact of nuclear weapons, thus incentivizing countries seeking to negate overwhelming U.S. conventional supremacy to field nuclear forces. The U.S. should consider taking a more restrained line towards the impact of the acquisition of nuclear weapons, one that would concede their effectiveness as deterrents (especially homeland deterrents), while emphasizing their limited utility as instruments of coercion.
40. See, for instance, the speech of Secretary of Defense Robert Gates at the Carnegie Endowment for International Peace, October 28, 2008, available at <http://www.defenselink.mil/speeches/speech.aspx?speechid=1305>. See also, Elbridge A. Colby, "Expanded Deterrence," *Policy Review* (June/July 2008), 43-59; Lewis A. Dunn, "Influencing Terrorists' Acquisition and Use of Weapons of Mass Destruction—Exploring a Possible Strategy." (August 2008).
41. Reidel and Samore conclude that only formal, Senate-approved treaty guarantees to the Gulf states and other threatened Middle East powers (including Israel) would both assure countries in the region and ensure real American commitment. Reidel and Samore, 127.
42. For a similar proposal, see Riedel and Samore, 113-118.
43. Richard Haass, for instance, proposes that the U.S. issue a pledge to launch preemptive strikes against Iranian nuclear facilities in the event the U.S. concludes that Iran had alerted its nuclear forces. Haass, "Living with a Nuclear Iran," 116.
44. This would require reconciliation with U.S. arms control commitments under the Presidential Nuclear Initiatives of 1991 pledging the removal of nuclear arms from surface combatants.
45. This is not an unprecedented problem. For instance, according to Bruce Riedel, the U.S. has been assisting Pakistan in securing its nuclear arsenal. See, Bruce Riedel, "Pakistan and the Bomb," *Wall Street Journal*, May 30, 2009, available at <http://online.wsj.com/article/SB10001424052970203658504574191842820382548.html>.