
Deterrence Today

Roles, Challenges and Responses

In collaboration with the Atomic Energy Commission (CEA)

Lewis A. Dunn

Summer 2007



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Proliferation Papers

Though it has long been a concern for security experts, proliferation has truly become an important political issue over the last decade, marked simultaneously by the nuclearization of South Asia, the strengthening of international regimes (TNP, CW, MTCR) and the discovery of fraud and trafficking, the number and gravity of which have surprised observers and analysts alike (Iraq in 1991, North Korea, Libyan and Iranian programs or the A. Q. Khan networks today).

To further the debate on complex issues that involve technical, regional, and strategic aspects, Ifri's Security Studies Department organizes each year, in collaboration with the Atomic Energy Commission (Commissariat à l'énergie atomique, CEA), a series of closed seminars dealing with WMD proliferation, disarmament, and non-proliferation. Generally held in English these seminars take the form of a presentation by an international expert. The Proliferation Papers is a collection, in the original version, of selected texts from these presentations. The following text is based on a presentation given by Lewis A. Dunn.

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Introduction

Nuclear deterrence was the centerpiece of U.S. and NATO strategy – and as adapted to their own circumstances, of the strategies of France and the United Kingdom – in the long Cold War confrontation with the Soviet Union. At its most basic, U.S. strategy was designed to deter an attack upon the American homeland by the threat of society devastating nuclear retaliation. This strategy came to be implemented in doctrine (assured destruction), forces (more than twelve thousand deployed strategic nuclear warheads organized in a nuclear triad of land-based bombers, intercontinental ballistic missiles, and submarine launched ballistic missiles), and command and control procedures (including extremely high readiness and alert levels.) At the same time, the United States extended deterrence to America's NATO allies by a threat of escalation to all-out nuclear war. This extended deterrent provided reassurance against possible Soviet nuclear blackmail. Concepts and analysis, doctrine, force posture and deployments (conventional as well as nuclear), R & D, technical investments, diplomacy, institution-building and cooperation, and leadership all supported what was a successful Cold War nuclear deterrence strategy.

Compared to the challenge of Cold War nuclear deterrence, however, the strategic situation confronting the United States and in varying degrees other countries in the early 21st century is considerably more complex. Unlike one superpower nuclear adversary, the United States confronts a mix of new or emerging hostile proliferators from North Korea in Asia to Iran in the Middle East; a network of al-Qaeda-Jihadist extremists as well as possibly other non-state actors seeking nuclear weapons or other weapons of mass destruction (WMD); and a rising China with whom conflict triggered by Taiwan may be unlikely but cannot be excluded.

In some of these situations, deterrence's role is little questioned in principle, typified best by the importance of U.S. extended nuclear deterrence in reassuring traditional allies confronting new hostile proliferators. In practice, however, extending deterrence in response to proliferation threats raises a number of difficult questions and will require adaptation of traditional approaches. But in other situations, what role, if any, deterrence – though not necessarily nuclear deterrence – should play is itself an open question. This applies perhaps most to possible efforts by the United States and other countries to bring to bear deterrence or other complementary strategies aimed at shaping a terrorist adversary's strategic calculus to help meet the threat of use of a nuclear weapon or other WMD attack by al-Qaeda and its Jihadist allies. Here, too, new thinking will be required to define and implement such complementary strategies for influencing the

calculations of terrorist adversaries. But questions about the applicability – or at least complexities – of deterrence also are reflected in today’s expressions of concern that some new nuclear powers may be “non-deterrable” as well as that an asymmetric balance of stakes is creating a new deterrence equation outside of Europe. Regarding Russia, Moscow no longer is an adversary of the West but nor is it a friend – and moving beyond deterrence to a non-adversarial relationship so far has been more rhetoric than reality. As for China, the U.S. extended nuclear deterrent continues to play a role in helping to avoid a confrontation over Taiwan as well as in reassuring those officials in Asia that are uncertain about the ultimate impact of China’s rise. That said, it would be preferable to mute the role of nuclear deterrence in the U.S.-China strategic relationship and, as with Russia, to develop a non-adversarial relationship between the United States and China.

From an American perspective, the following essay addresses this new, more complex agenda of the early 21st century. Specifically, it turns first to the challenge of extending deterrence to U.S. allies and friends threatened by new, hostile proliferators. In exploring that issue, the analysis considers some of the difficulties that need to be successfully overcome to provide nuclear reassurance to newly-threatened regional friends and allies. Discussion then considers the role that traditional deterrence – whether by the threat of punishment or the threat of denial of benefits – as well as other influence strategies can play in helping to meet the threat of al-Qaeda-Jihadist use of nuclear weapons – or other so-called weapons of mass destruction. Here, the challenge for the United States and Western countries will be to expand but also go beyond the threat of deterrence by the threat of punishment in order to bring different types of hard and soft power to bear to influence the actions of the specific different individual and possibly state links or nodes that would comprise an al-Qaeda-Jihadists WMD attack chain. Meeting this challenge also calls for wide cooperation among countries. As part of this discussion, the possibility is discussed that al-Qaeda could seek to use claimed or real possession of nuclear weapons as a deterrent to U.S. or other outsiders’ actions. As an afterword, this essay offers some thoughts on going beyond deterrence in managing the U.S.-Russian strategic relationship by a reinvigorated process to roll-back the Cold War nuclear legacies that still overhand that relationship – and to avoid making deterrence the overarching framework of the U.S.-China strategic relationship.

Extending Nuclear Deterrence in the Early 21st Century

With the collapse of the Soviet Union and the end of the Cold War, extending nuclear deterrence to allies faded into the background of the American security agenda. Even now, the American nuclear connection to NATO Europe no longer is the critical buttress to political-military security and stability that it was for so many decades. By contrast, in northeast Asia as well as on the fringes of and within the Middle East the importance of extending nuclear deterrence to countries threatened by new proliferators is gaining in prominence and visibility. Particularly but not exclusively among the NATO members “to the east”, the U.S. nuclear connection to Europe also remains an important mechanism for the broader American involvement in Europe¹.

Northeast Asia

Within northeast Asia, there are growing concerns about nuclear security both in Japan and South Korea.² Particularly in Japan, first North Korea’s 1998 test firing of a Taepodong-1 medium-range missile over Japan, followed by its 2006 test of a nuclear weapon, have energized and legitimized a Japanese debate about nuclear security options. For some Japanese officials and experts, concern about the implications of a rising China further feeds into this debate. For now, however, the preferred Japanese official option remains reliance on the overall American security connection, including the American nuclear guarantee. This preference is reinforced by the strong but no longer overwhelming anti-nuclear sentiments among the Japanese public. That said, there also is some questioning of the credibility of the American nuclear guarantee, particularly in more ambiguous or marginal scenarios. Somewhat similarly, after North Korea’s nuclear test, South Korean officials publicly pressed the United States to reaffirm the American nuclear security guarantee.

¹ See the discussion in Lewis A. Dunn et. al. , “Foreign Perspectives on U.S. Nuclear Policy and Posture,” October, 2006, report prepared for the Advanced Systems and Concepts Office of the U.S. Defense Threat Reduction Agency. Based on a survey of written statements and interviews, this report describes and analyzes views of U.S. nuclear policy held by experts and officials in a wide range of countries, including other nuclear weapon states, NATO members, U.S. allies in Asia, and developing countries.

² See Dunn et. al. , “Foreign Perspectives on U.S. Nuclear Policy and Posture,” Ibid. Japan’s concern also has become increasingly evident in a virtual drum-beat of articles in the Japanese press since North Korea’s October, 2006 nuclear test on Japan’s nuclear security.

These Japanese and South Korean concerns about their nuclear security provide yet another reason to intensify the efforts within the Six-Party Talks to freeze and then negotiate the political roll-back of North Korea's nuclear weapons capabilities. Prospects for doing so are difficult to judge. The February, 2007 round of talks in Beijing appears to have made progress in working out an approach to denuclearization.³ The prospect of a heightened American nuclear connection to Japan and South Korea if North Korea's nuclear weapons capability cannot be reversed could well provide a compelling incentive for China to do its part – along with greater U.S. readiness to reach a political-security deal – to make the Six-Party process work. But it is important to recall that a future success of the Six-Party Talks would be the sixth time over more 20 years that the North Korean nuclear problem had apparently been “solved.”⁴ If these talks again prove a chimera, the American security connection – including extended nuclear deterrence – will be even more critical to build proliferation fire-breaks and prevent a cascade of proliferation in northeast Asia.

With regard to Japan, immediately after the October, 2006 North Korean nuclear test, U.S. Secretary of State Rice stated “that the United States has the will and the capability to meet the full range – and I underscore the full range – of its deterrent and security commitments to Japan.” This statement was an important step to reaffirm the American security alliance (including the U.S. nuclear guarantee) and to reassure Japan.⁵ Continued close U.S.-Japan cooperation on missile defenses (including command and control procedures) as well as wider cooperation on military operations in the areas surrounding Japan also serves those goals.

In addition, the United States should take steps now to initiate low-key discussions between American and Japanese officials on the American nuclear guarantee to Japan. These discussions could explore both sides' views on some or all of the following topics: the basic nuclear guarantee; what types of options could be brought into play to enhance the credibility of that guarantee in a crisis or to implement it if ever necessary; the specific forces that are available for any such nuclear deterrence role in support of Japan; and the types of contingencies which could call for support from an American nuclear guarantee.

Though what is envisaged here are bilateral U.S.-Japan discussions, the NATO Nuclear Planning Group (NPG) offers a partial precedent. That group was created in the mid-1960s to provide strategic reassurance

³ See, Glenn Kessler and Edward Cody, “U.S. Flexibility Credited in New Deal with N. Korea,” *The Washington Post*, February 14, 2007.

⁴ The preceding successes entailed: encouraged by American diplomatic entreaties, Soviet success in convincing the Pyongyang regime to join the Nuclear Non-Proliferation Treaty in 1985; the initial provision of an International Atomic Energy Agency safeguards agreement to North Korea, but an agreement which failed to come into effect for technical reasons; the eventual start of full-scope safeguards in North Korea in the late 1980s; the 1992 Korean Peninsula Denuclearization Agreement; and the 1994 Agreed Framework.

⁵ See “Rice reassures Japan on security commitment,” Associated Press, October 18, 2006.

to America's non-nuclear NATO allies, especially Germany. The purpose of U.S.-Japan discussions of nuclear security matters would again be to provide a more visible symbol of strategic reassurance. Moreover, there very well may be lessons to be learned from the NATO NPG experience for providing credible nuclear reassurance to a key U.S. ally.⁶

Continuing reassurance of South Korea also is needed today. To that end, Secretary of Defense Rumsfeld in the October, 2006 U.S.-ROK Security Consultative Meeting: "offered assurances of firm U.S. commitment and immediate support to the ROK, including continuation of the extended deterrence offered by the U.S. nuclear umbrella, consistent with the Mutual Defense Treaty."⁷ Should there be interest on the part of the Seoul government, U.S.-ROK nuclear security discussions also could be begun along the lines set out above in the case of Japan. Here, however, the situation is considerably more complicated. It is necessary to balance reassurance of South Korea and deterrence of North Korea with avoiding actions that could reinforce North Korean fears of an American military or other threat to that regime's survival – or that would provide elements within the Kim Jong-Il regime with additional arguments against giving up that country's nuclear weapons in return for political-security-economic normalization of relations with the outside world.

Looking down the road, options might eventually need to be considered for a more visible American nuclear connection with both Japan and South Korea. The most important determinant would be whether this sixth time it does prove possible to convince Kim Jong-Il and the North Korean leadership to trade that country's nuclear weapons for normalization of relations and political-economic benefits. Also important will be what Japanese and South Korean officials think is needed for nuclear reassurance absent such a trade. However, for the most part, the NATO model of extended deterrence – U.S. deployments of many thousands of nuclear weapons onto European soil, nuclear burden-sharing by non-nuclear NATO allies' acceptance of nuclear missions in a conflict, joint development of nuclear doctrine, and a very structured process of interaction within the Nuclear Planning Group – cannot be simply transferred from Cold War Europe to today's Asia. That said, over time, the type of initial exploration of nuclear issues suggested above between the United States and Japan (and or that matter the United States and South Korea) could be made more formal or even institutionalized on a bilateral basis. Future requirements for U.S. nuclear deployments in the region could be assessed. For their part, U.S. planners also could consider preparations for rapid redeployments of nuclear-armed cruise missiles at sea in the region should that become necessary to reinforce deterrence.

⁶ The possibility of such low-key discussions of nuclear matters was raised informally with the author during discussions with Japanese officials and experts in April, 2006. Since that time, it has been raised publicly in Japan's ongoing debate on nuclear security.

⁷ See "The 38th Security Consultative Meeting Joint Communiqué," October 20, 2006, Washington, D.C., paragraph 3.

Assuming a U.S. readiness to initiate such nuclear security discussions with Japan and to the extent desired by Seoul with South Korea, it will be important to consult closely with Chinese officials. There should be no Chinese veto on U.S. cooperation with these traditional allies. But U.S. officials should be prepared to explain the logic of U.S. strategy and actions as well as the importance of both for preventing the emergence of a nuclear-armed Japan and a nuclear-armed South Korea. There clearly is a parallel U.S.-Chinese interest in that goal. At the same time, as already suggested, U.S.-Japanese cooperation on missile defenses already is seen by Japanese officials as an important step to implement and buttress the U.S.-Japan security alliance. Again without providing a Chinese veto, U.S. officials should be prepared to discuss missile defense issues with their Chinese counterparts as part of a broader dialogue on the future U.S.-China strategic relationship. In this case, the purpose of such discussions to the extent possible would be to reassure Chinese officials about the ultimate scope and purpose of U.S.-Japan missile defense cooperation if not also of U.S. missile defense deployments overall. (For a further if brief discussion of the U.S.-Chinese strategic relationship, including the role of nuclear deterrence in that relationship, see the final section of this paper.)

Further, even if the Six-Party Talks prove unable in the near-term to come up with a deal mutually acceptable to all parties, it could be desirable to keep that forum alive. It would provide at least one venue for continuing contacts between the United States and North Korea as well as among the wider group of countries. Such contacts could prove helpful in avoiding future miscalculation, lessening the risk of a nuclear confrontation, and in more generally opening a channel for strategic exchanges with North Korea to complement U.S. extended deterrence to Japan and South Korea. Continuation of the Six-Party Talks eventually could lead to yet another effort to convince the North Korean leadership to give up its nuclear weapons in return for some combination of acceptance of its regime, political-security normalization, and economic benefits.⁸

The Middle East

Growing fears that it will not be possible to head-off Iran's acquisition of nuclear weapons are creating new nuclear insecurities among that country's neighbors and others across the Middle East. Widespread statements of concern about Iran's nuclear ambitions by officials in Turkey, Saudi Arabia, Jordan, Egypt, and elsewhere are but one example of that nuclear insecurity. Sometimes those concerns are more general; at other times, off-the-record remarks directly link Iran's acquisition of nuclear weapons to other nations' rethinking of their own non-nuclear postures,

⁸ In this regard, it may be useful to look back into Cold War precedents in Europe. The 1975 Helsinki Accord – particularly with its principle of no changes of borders by force as well as its baskets of activities – helped to lay the foundation for the end of the Cold War fifteen years later. Somewhat similarly, the Mutual and Balanced Force Reduction Talks also presaged later more successful efforts to stabilize the Cold War confrontation.

e.g., in the case of Turkey.⁹ New found expressions of interest all across the region from Turkey to Egypt in nuclear energy and power are openly acknowledged to be another signal of heightened nuclear insecurity.¹⁰ In turn, there has been periodic speculation – often from reliable sources though officially denied – about Saudi nuclear intentions, including that the Saudi regime already is thinking about how to acquire “dual-key” nuclear warheads from Pakistan if Iran’s pursuit of nuclear weapons cannot be stopped.¹¹

If Iran acquires nuclear weapons, outside extended nuclear deterrence almost certainly will play an important part in any attempt to prevent a proliferation cascade across the Middle East – including Israel’s open deployment of nuclear weapons. Here, too, the prospect that the United States and other countries would act to counter the potential political-military benefits of Iran’s acquisition of nuclear weapons could be an incentive for that country to stop short of the bomb. Indeed, there is some evidence that within the Iranian elite one of the questions now being debated is whether going all the way to the bomb ultimately would prove counter-productive, stimulating reactions by neighbors and other countries that would make Iran more insecure.

In thinking about possible approaches to extending nuclear deterrence into this region, at least two different challenges need to be addressed. These are: first, revitalizing the NATO nuclear security guarantee to Turkey and second, putting in place new means of reassurance to Arab countries in the wider Middle East. Each aspect is discussed before then turning to a broader assessment of the likely credibility and effectiveness of such efforts to extend nuclear deterrence today.¹²

Nuclear Reassurance to Turkey. In principle, NATO’s structure already provides a mechanism to meet heightened Turkish concerns about an Iran with nuclear weapons or for that matter to respond to any future Iranian attempt at nuclear blackmail aimed at NATO’s members overall. Nonetheless, any attempt to reassure Turkish officials and elites via NATO is made more difficult by resentment in Turkey over the unwillingness in 2003 prior to the Iraq War of some NATO members to make clear that Article V of the NATO treaty would be invoked in the event of an Iraqi attack on

⁹ One senior Turkish diplomat is reported to have said but not for attribution directly that the American nuclear presence in NATO is the key to Turkey’s remaining a non-nuclear state. Dunn, op. cit.

¹⁰ See, for example, Richard Beeston, “Six Arab states join rush to go nuclear”, *TIMESONLINE*, November 4, 2006.

¹¹ This was told to the author by an individual with extensive contacts within the Saudi elite. More generally, see “Will Saudi Arabia Acquire Nuclear Weapons,” *Nuclear Threat Initiative Issue Brief*, March, 2004.

¹² If Iran cannot be prevented from acquiring nuclear weapons, one other issue is what steps might be taken to influence an all but certain debate within Israel about whether or not to deploy nuclear weapons openly. This debate already is commencing in a low-key way in Israel. An option that is sometimes raised in this context is the possible further expansion of NATO to provide an additional layer of nuclear security to Israel. For reasons of space, this issue is not addressed here.

Turkey. Perceived unwillingness of NATO members to send PAC-3 missile defense units to Turkey at that time also is mentioned¹³.

Against this background, U.S. officials should seek ways to reassure Turkey – both privately and publicly – of U.S. readiness to bring the full spectrum of American political-military power to bear in supporting Turkey against possible Iranian nuclear threats. As envisaged by the New Triad of the 2001 Nuclear Posture Review, that power would encompass defenses and advanced conventional capabilities in addition to traditional nuclear weaponry. Such a U.S. guarantee is likely to be the most credible means of reassurance. As for possible NATO actions, it also will be important not to change the NATO nuclear status quo vis-à-vis Turkey. The NATO bureaucracy also is in the midst of reassessing NATO's Strategic Concept for the first time in over a decade. That process would provide a means to reaffirm a NATO commitment to Turkey facing the threat of a nuclear-armed Iran, possibly as part of a broader NATO declaration of intent to resist nuclear threats, blackmail, or attack from new proliferators against NATO members. NATO's pursuit of an enhanced European missile defense capability also could play a part in enhanced extended deterrence.

Nuclear Reassurance to Friendly Arab Countries. By contrast, any efforts to extend nuclear deterrence to friendly Arab countries facing a nuclear-armed Iran would be considerably more difficult. Formal alliances are lacking. An American troop presence to symbolize commitment not only is lacking but is widely viewed as undesirable. Extending deterrence almost certainly would run up against American domestic politics, including likely reluctance to undertake new commitments after Iraq. Conversely, Arab countries could well be reluctant to be seen tying themselves so closely to the United States. Any such American nuclear security guarantee would be controversial domestically, while also exposing those governments to new terrorist threats.¹⁴ Despite these difficulties, the stakes of avoiding a cascade of Middle East proliferation are sufficiently high that it is incumbent on U.S. and other Western decision-makers at least to explore what options could be pursued.

For the United States, an initial step would be to make clear American readiness to stand by its friends and allies in the Gulf and beyond in confronting a nuclear-armed Iran. Missile defense cooperation could be expanded or pursued, for its direct impact in reducing any Iranian nuclear missile threat to countries in the region, for its symbolic importance in building habits of cooperation, and for its role in signaling the U.S. commitment. (Continued pursuit of missile defense capabilities beyond the Middle East region to counter longer-range Iranian missile threats also would pay-off in comparable ways.) Quiet assurances of U.S. readiness to bring its nuclear deterrent into play could be backed by more public statements when or if sought by Arab governments. As appropriate, visible deployments of U.S. military assets – both non-nuclear and nuclear – could be

¹³ This point was made to the author (and others) at a recent October, 2006 Wilton Park, UK conference on deterrence issues.

¹⁴ This point was made to me by George Perkovich, reflecting his own recent discussions in the region.

undertaken at home and within the region to buttress deterrence of Iranian nuclear blackmail.

In addition, the option should be explored of bringing the French and British nuclear deterrents to bear to reassure Iran's neighbors and the Arab countries in the Middle East. One possibility to explore would be some type of joint U.S.-French-British declaration of a readiness to come to the support of countries threatened by a nuclear Iran. Any such declaration would need to go beyond the already existing, long-standing, and for the most part *pro forma* diplomatic declarations of so-called positive security assurances made in support of NPT diplomacy. One way to enhance a new tripartite declaration's credibility would be to back it up by a process of continuing consultations among Washington, Paris, and London on nuclear reassurance to friendly Arab countries. Specific forces might be allocated to this mission and plans developed to heighten deterrent visibility in a crisis between a nuclear-armed Iran and a non-nuclear neighbor. Or should a tripartite declaration not be feasible, France and the UK still might consider providing their own independent assurances to countries with which close political-security ties exist. As already suggested, moreover, such a "nuclear security declaration" now could help convince the Iranian leadership that going nuclear will prove not worth the cost.¹⁵

One final element of extended nuclear deterrence to reassure Iran's neighbors bears brief mention – in relationship to reassuring not only Arab countries but also Turkey and even other NATO members that might be threatened by a nuclear-armed Iran. As in the Asian case, it would be important to find some mechanism for U.S.-Iran exchanges on strategic issues. Many purposes could be served by such a dialogue from making clear U.S. readiness to set aside any goal of regime change – subject to Iran's not engaging in nuclear blackmail or nuclear use against its neighbors – to providing reassurance to neighboring countries that might be fearful of an unintended U.S.-Iran nuclear confrontation.

Can Extended Nuclear Deterrence be Made Credible?

Assuming a readiness to strengthen or put in place a web of nuclear security assurances to countries in Asia and the Middle East, can those assurances be made sufficiently credible – in the eyes both of allies and friends such as Japan and South Korea in Asia and Turkey, Saudi Arabia, and other Arab countries in the Middle East as well as potential new nuclear adversaries? Skeptics of the effectiveness and feasibility of extended nuclear deterrence outside of the Cold War NATO context focus on two closely related issues: on the one hand, a perceived asymmetry of stakes between the United States as well as other outside powers and a regional nuclear adversary; on the other hand, the difficulties of replicating in toto

¹⁵ It is too soon to signal how the United States alone – or the three Western nuclear powers – in combination might be prepared to give a visible demonstration of such nuclear security assurances to Iran's neighbors. But it need not be too soon to explore possible options, from more visible planning to over-the-horizon nuclear deployments. For many reasons, NATO-like nuclear burden sharing would not fit.

the more visible elements that under-pinned the U.S. nuclear security guarantee to Cold War NATO Europe. The following discussion considers each in turn briefly.

On the one hand, among many U.S. defense experts and officials it has become almost a cliché to state that an alleged *asymmetry of stakes* between the United States (and/or other outsiders) and a regional nuclear power would make it much more difficult to provide credible nuclear security assurances along the lines suggested above. That purported asymmetry of stakes also is widely seen by those same experts and officials as putting the United States (or other outsiders) at a fundamental disadvantage in any crisis with a regional power and shifting the deterrence balance in its favor. Emphasis on the impact of a perceived asymmetry of stakes partly reflects a view that the intensity of the stakes in any given crisis or confrontation is dependent most on what has been called “the proximity effect”: stakes’ intensity is a function of geography. Concern about an asymmetry of stakes also gains support from the fact that a desire to deter the United States or other outsiders probably is one incentive motivating some new or aspiring nuclear .

This line of argument should not be accepted at face value. To the contrary, in two different ways, the stakes for the United States (and other outsiders) in a crisis or confrontation with a regional nuclear adversary would be extremely high. To start, what is at stake is the likelihood of cascades of proliferation in Asia and the Middle East. Such proliferation cascades almost certainly would bring greater regional instability, global political and economic disruption, a heightened risk of nuclear conflict, and a jump in the risk of terrorist access to nuclear weapons. Equally important, nuclear blackmail let alone nuclear use against U.S. and other outsiders’ forces, those of U.S. regional allies and friends, or any of their homelands would greatly heighten the stakes for the United States and other outsiders. Perceptions of American resolve and credibility around the globe, the likelihood that an initial nuclear use would be followed by a virtual collapse of a six-decades’ plus nuclear taboo, and the danger of runaway proliferation all would be at issue. So viewed, how the United States and others respond is likely to have a far-reaching impact on their own security as well as longer-term global security and stability.

On the other hand, questions about the credibility and effectiveness of proposed efforts to extend nuclear deterrence today to countries in Asia and the Middle East (other than Turkey) partly reflect *differences between those two regions and Cold War NATO Europe*. Those differences, however, should not be taken as sufficient reason to forgo the attempt to pursue efforts to reassure countries in both regions. Particularly in Asia and to a lesser degree admittedly in the Middle East, key elements that under-pinned extended deterrence in Europe exist or could be pursued in whole or part.

By way of example, the U.S. extended nuclear deterrent in Europe was part of the overall NATO alliance system – a formal treaty commitment by the NATO members’ to each other’s defense, political institutions, inte-

grated military command and planning structures, and as discussed next, a very significant U.S. military presence. Over the decades, critical habits of defense cooperation also grew up among the United States and its NATO allies. Within Asia, extended nuclear deterrence can build on formal U.S. alliances as well as an integrated military command structure in South Korea and growing military-to-military cooperation with Japan. Despite ups and downs, habits of cooperation have developed and continue to be strengthened. By contrast, no such alliance structure exists to buttress extended deterrence to friendly Arab countries – nor is it likely to be wanted. Even within the Middle East, however, habits of defense cooperation exist and can be strengthened, e.g., as in the Gulf Cooperation Council or in the earlier U.S.-sponsored Cooperative Defense Initiative.¹⁶

Still another element that buttressed extended nuclear deterrence in Cold War NATO Europe was the deployment of large numbers of U.S. nuclear weapons onto European soil and nuclear burden-sharing. As part of the latter, several NATO nations trained, equipped, and planned to carry out nuclear strike missions in the event of a major NATO-Warsaw Pact military conflict. At least in Asia, redeployment of U.S. nuclear weapons into the theater – if only at sea – cannot be ruled out as a symbol of the American nuclear guarantee. Comparable at sea deployments could be explored to buttress the credibility of a nuclear guarantee to threatened neighbors of Iran. In neither region does traditional NATO nuclear burden-sharing, with allies' taking on nuclear missions, seem a plausible or desirable measure.

During the Cold War confrontation, NATO's build up of its conventional military capabilities also strengthened the credibility of extended deterrence. Indeed, it sometimes is suggested that the presence of American troops in Europe was the most critical reason why the American nuclear guarantee was deemed credible. Those forces also ensured that any Soviet use of force would need to be an all-out combined conventional-nuclear attack since NATO's forces could not be easily overcome by conventional means only. Today, there is a significant American conventional military presence in both Japan and South Korea. Excepting Iraq, however, the on-the-ground American military footprint is shrinking in the Middle East – and seems likely to continue to do so. Naval forces can partly compensate for this more limited troop presence. U.S. missile defense cooperation with countries in both regions also continues to intensify. Like Cold War conventional forces, effective defenses to some degree can force the regional adversary to face the choice of large-scale use of force or none at all – at least if that adversary wants to back up that use of force with a threat to escalate to nuclear missile attacks..

Not least, declaratory policy at all levels also played an important part in enhancing deterrence's credibility vis-à-vis the Soviet threat. It can do so again in regard to extending deterrence to meet future regional nuclear threats. One key role will be to articulate the high stakes for the

¹⁶ The phrase habits of cooperation was coined by Ambassador Maynard Glitman. He often has argued that what most buttressed extended deterrence in Europe were the habits of cooperation built up in NATO over many decades.

United States and likeminded outsiders in successful nuclear reassurance in Asia and the Middle East. Indeed, as already argued, it is the very magnitude of those stakes which calls for actions to buttress or provide nuclear security assurances to allied or friendly countries in both regions. This is so despite the difficulties that need to be confronted and even if the ultimate outcome sometimes may be uncertain.

Finally, concerns that the United States would be at a strategic disadvantage in any crisis with a more distant nuclear power are not new. In some ways, they are reminiscent of the long-ago arguments over the credibility of the American nuclear guarantee to Europe. Chinese speculation that the United States would not risk Los Angeles for Taipei cannot but call to mind musings elsewhere over whether the United States would risk New York for Paris or Bonn. However, ultimately, measures were taken by the United States and its Western allies that overcame such concerns and ensured robust deterrence as seen in virtually all NATO capitals as well as Moscow.

Deterrence and Other Influence Strategies to Shape the Jihadist WMD Use Calculus¹⁷

The possible use of a nuclear or biological weapon – and to a lesser degree other so-called weapons of mass destruction (WMD) – by al-Qaeda or other entities within the wider extremist Jihadist movement is rightly considered to be the most pressing global security threat facing the United States and other Western countries. Confronting this threat, the United States and other countries have intensified their actions and cooperation to prevent a terrorist WMD attack – from efforts to prevent terrorist groups from gaining access to a nuclear weapon or nuclear weapons material through preparations to interdict or otherwise abort attempted WMD attacks to direct action against al-Qaeda and the wider Jihadist movement. Until quite recently, little attention was paid to the possible role of deterrence or influence strategies as another complementary approach to lessen the likelihood of a successful terrorist nuclear, biological, or other WMD attack. Acquisition was assumed to mean use.

Within the U.S. government as well as among outside American experts, however, there has been a great change in thinking about the role of deterrence strategies as part of the U.S. response to the threat of terrorist use of WMD. Possible options and actions to influence terrorist decision-making are now being seriously explored.¹⁸

Given the uncertainties associated with prevention strategies, it is none too soon to explore the potential role of deterrence – whether by either of the two traditional deterrence strategies of the past decades, that is, the threat of punishment or the prospect of denial – in countering the terrorist WMD threat. At the same time, it is important to think more broadly about how to complement deterrence by bringing to bear other influence

¹⁷ The following discussion extends my earlier analysis of the possible role of deterrence in Dunn, “Can al-Qaeda be Deterred from Using Nuclear Weapons,” previously cited, including the emphasis on focusing on the many links in any terrorist attack. My own recent thinking on these matters also has been shaped by conversations with Brad Roberts of the Institute for Defense Analyses, who has been one of the key individuals within the U.S. defense community exploring approaches to deterrence of WMD terrorism.

¹⁸ This author has been personally involved in several such efforts undertaken for different U.S. government agencies in the past six months to one year.

strategies aimed at shaping the decisions of terrorists and their network of aiders and abettors. Though these complementary strategies go beyond the concept of deterrence as it is usually understood, they do have the same underlying purpose: to shape the strategic calculus of an adversary about the potential costs and benefits of taking a given action or course of action.

The starting point for such thinking about the role of deterrence and influence is the recognition that al-Qaeda and the wider Jihadist movement are not a monolithic entity. To the contrary, any successful terrorist WMD attack would almost certainly entail effective cooperation by many different links in a terrorist attack chain. Those links include leaders, operational planners, lower-level operators, and a multitude of “aiders and abettors” (technical experts, logistics supporters, financial supporters, fellow-travelers, and others.) Further, for reasons suggested below, state technical or political support could well be a critical input to a “big terrorist WMD attack.” Each of these links comprises a possible leverage point for bringing deterrence and other influence strategies to bear as one further element in global cooperation to head-off an al-Qaeda-Jihadist WMD attack.¹⁹

Deterring or Influencing the Al-Qaeda-Jihadist Leadership

In the aftermath of the September 11th as well as extensive evidence of al-Qaeda's efforts to acquire nuclear, biological, chemical, and radiological weapons, the idea of deterring or influencing the al-Qaeda-Jihadist leadership's decision whether or not to use nuclear or other WMD may seem illusory. Particularly in the case of al-Qaeda and the Jihadist movement, there also now exists a very extensive body of theological writings justifying mass killing of innocents and the use of nuclear, biological, and other weapons of mass destruction as part of jihad. This body of writings puts forward a variety of justifying arguments, including, for example, claims that such use is a legitimate retaliation for the loss of innocent Muslim lives already inflicted by the United States and the West and is consistent with situations in which the Prophet sanctioned indiscriminate killing. The theological requirement of “warning” also is seen to have been fully met.²⁰

Nonetheless, the very fact that it has been thought necessary to offer these theological justifications suggests that there still is some debate

¹⁹ For ease of setting out a basic argument, the following discussion focuses primarily on what actions can be taken to shape the calculations of the individuals that would comprise the many links in a terrorist nuclear attack or perhaps a biological weapons attack that also would exact mass casualties in the tens of thousands. It is acknowledged that the basic lines of argument set out below should be assessed in light of their effectiveness across the separate elements of WMD and that chemical and radiological weapons are not likely to be as much “mass destruction” weapons as nuclear or biological weapons. Later analysis will explore these different dimensions.

²⁰ Many of these arguments are put forward in Nasir bin Hamd al-Fahd, “A Treatise on the Legal Status of Using Weapons of Mass Destruction against Infidels,” Foreign Broadcast Information Service (FBIS) translation, May 1, 2003, p. 9, p.12, *passim*.

underway about the legitimacy and theological sanction for WMD use within the al-Qaeda-Jihadist movement. Further, the argument that use of WMD and mass killing is justified is not the same as saying that such use will help serve the terrorists' agenda. The absence of any significant WMD attack also gives reason to explore possible approaches to deterring or at least influencing the al-Qaeda-Jihadist leadership. Three such approaches are: deterrence by the threat of punishment, deterrence by denial, and influencing perceptions of whether WMD use would help or hurt their agenda and cause.

Turning first to the *threat of punishment*, that threat – holding at risk what the Soviet leaders' valued most – was at the heart of Cold War deterrence. By contrast, deterrence by the threat of punishment probably has little applicability to deterring the al-Qaeda-Jihadist leadership from the use of nuclear or other weapons of mass destruction. Efforts already are being made to capture and bring these individuals to justice for their recourse to traditional "bombs and bullets" terrorism. Thus, from the standpoint of their personal well-being, there is little added risk for escalating to use of WMD. In any case, barring more successful efforts, threatening to capture key al-Qaeda-Jihadist leaders will continue to lack credibility. Other more credible threats of punishment are likely to be unacceptable to U.S. decision-makers and those of many but possibly not all Western countries, e.g., punitive action against leaders' families.²¹ Finally, although deterrence by punishment need not require a state against which to retaliate (but only an ability to make decision-makers pay a high price in terms of whatever they value), the fact that the al-Qaeda leadership no longer controls a safe-haven also undercuts reliance on the threat of punishment as a means of deterring its use of WMD. Al-Qaeda already has paid the price of loss of that safe-haven as well as the movement's disruption and dispersion in the American response to the 9-11 attacks.²²

By contrast, *deterrence by denial* strategies – that is, to use today's American strategic lexicon, strategies aimed at convincing a terrorist adversary that use of WMD will not attain the benefits being sought – could hold out greater promise of influencing the decisions of the al-Qaeda-Jihadist leadership. Over the past decade and one-half, al-Qaeda's terrorist attacks clearly reveal a pattern of sticking with what works, both in terms of targets

²¹ Such a likely U.S. reluctance to target families may seem at odds with the fact that during the Cold War, U.S. nuclear retaliation against the Soviet Union would have resulted in great loss of life among innocent Soviet civilians. The United States, however, never targeted Soviet population *per se*, always developing its nuclear retaliatory packages to target instead more specific Soviet assets – war supporting industry, leadership control, economic recovery, nuclear forces, and military forces more generally. In practice, this was a difference without a distinction; in principle, not targeting the population was and remains a well-valued and engrained tenet of U.S. nuclear doctrine. It is often cited as one reason for not dramatically reducing the size of the U.S. nuclear arsenal, a reduction ultimately seen to require counter-population targeting. By contrast, both France and the United Kingdom, with far smaller, less capable nuclear forces, held population hostage. In particular, both targeted Moscow.

²² As discussed below, threats of punishment could be part of a deterrence strategy aimed at influencing "aiders and abettors" as well state sponsors.

struck and means used. For al-Qaeda's leadership, moreover, bombs and bullets terrorism has so far proved effective in serving its agenda. By taking steps to deny acquisition of WMD altogether or make it more difficult, as well as to the extent possible to make it less likely that use will succeed, the United States and other countries may well be able to influence the leadership's choice of terrorist action. Accelerated efforts to enhance controls over nuclear weapons materials in Russia and enhanced cooperation against smuggling nuclear materials out of Russia are two such steps. All of these denial strategies have the added benefit of comprising actions that should be taken in any case to prevent or defend against a terrorist WMD attack. But this has always been a distinguishing feature of deterrence by denial, as opposed to the threat of punitive retaliation.

Equally important, measures to enhance public health preparedness generally and more specific preparations to deal with a bio-terrorist attack can greatly lessen the likelihood that such an attack would succeed and impose high casualties. Perhaps more controversial, civil defense preparedness against a nuclear terrorist attack could well reduce loss of life significantly if not destruction. In particular, a capability to assess rapidly the direction of the resulting fallout plume from a terrorist nuclear detonation – with warning mechanisms – could make it possible for persons downwind to take precautions against fallout. There are many other ways to deny the benefits of a terrorist WMD attack or make it less likely to succeed, including effective interdiction. All such actions enhance the comparative advantage to the terrorist leadership and operators of investing in and relying on more traditional means vice pursuing more uncertain WMD attacks.

Going beyond traditional deterrence strategies, a complementary approach aimed at the al-Qaeda-Jihadist leadership's cost-benefit calculus would seek to *influence perceptions of whether use of nuclear weapons or other WMD would help their overall agenda*. Put otherwise, it would seek to shape their views not of whether such use is justified – which increasingly is becoming an established “fact” among the most extreme Jihadists – but of whether such use is smart – a more open question. As a start, U.S. and western statements could stress that any such WMD use would result in a truly no-holds-barred campaign against the al-Qaeda-Jihadist movement. Such a campaign could include, for example, far less readiness to defer to issues of “national sovereignty” in rooting out al-Qaeda's leadership or in using whatever means necessary to get at sources of financial, logistics, and other support; use of extra-legal means in gathering needed intelligence to disrupt operations or kill leadership, operatives, and supporters; a willingness to use coercive military measures to force governments to act against the al-Qaeda-Jihadist movement; pressures on international financial institutions to impede financial flows to that movement; and a readiness to hold any government accountable –though in ways not necessarily specified in advance – for actions by its firms or citizens that directly or indirectly contributed to terrorist access to WMD. Concern about just such an all-out escalation, for example, is said to have been one reason

why some members of the southeast Asia extremist group Jemaah Islamiya were not prepared to help al-Qaeda acquire biological weapons.²³

Initiatives also might be taken aimed at strengthening concerns among the al-Qaeda-Jihadist leadership that nuclear or other WMD use would be met with outrage and loss of support from *their* audience in the Ummah, the wider Islamic community around the globe. The existence of potential concerns about how the Ummah will respond is reflected in the very debate within the Islamic community about the legitimacy of using WMD (and killing many innocents) as well as in the web-based criticism of Abu-Musab al-Zarqawi for planning a major chemical weapons attack on Jordan in 2004.²⁴ It is that wider community that al-Qaeda and the Jihadist movement is seeking to mobilize, whether as is sometimes suggested to a new Caliphate or more narrowly to a renewed commitment to Islam.

Admittedly, influencing potential concerns about how the wider Islamic community will respond will not be easy. This is so partly because of the lack of any formal authority to resolve such doctrinal questions in Sunni Islam and partly because of the impact of the Internet in self-empowering many interpreters of the Prophet's teachings. Nonetheless, with this goal in mind, Western countries could encourage more moderate Islamic leaders to respond to the arguments that have been made about the justification and legitimacy of WMD use. So far, for example, the previously cited fatwa by bin Hamd al-Fahd has yet to be answered. Other individuals across the broad belt of Islamic countries as well as from the Islamic community in Western European countries also could be urged to speak out. Both traditional publications and the Internet could provide other channels for raising doubts about the acceptability of WMD use among the wider Islamic audience.

As part of this effort, still other actions could seek to shape more diffuse Muslim attitudes toward the United States and other western countries in ways that could make more extreme leaders think twice about the potential adverse consequences, for their own cause, of mass killing. The dramatic jump in favorable attitudes toward the United States that followed the surge of American emergency assistance to Indonesian victims of the 2004 tsunami provides but one example. By contrast, there is little doubt that the war in Iraq has had the opposite effect within the wider Islamic community.

Not least, how the United States, its friend and allies, and the overall global community respond after the first terrorist WMD attack could be a decisive turning point in all of the above dimensions. It is none too soon to begin thinking about the goals and options for possible responses. This also should be a subject for ongoing dialogue and cooperation within the G-8 but also more widely.

²³Statement made by a participant in a recent U.S. workshop on "Deterring al-Qaeda."

²⁴ See "Zarqawi Among 13 Indicted by Jordan in Plot," *The Washington Post*, October 18, 2004.

Any such efforts to influence the al-Qaeda-Jihadist leadership's assessment of whether mass killing would serve their goals might prove in vain. Or those efforts might only have an impact in those situations in which large numbers of innocent Muslims might lose their lives, thereby not giving any enhanced protection to the United States or most Western countries. That said, to repeat a point already made, there are no significant costs of seeing to buttress such constraints, not least in light of the uncertain effectiveness of more "robust" measures.²⁵

Influencing Operational Planners and Operators

The deterrence by denial approach discussed above also could help influence the calculations of operational planners and operators. For both of these links the prospect of investing considerable resources in seeking to carry out a WMD attack but failing would be an argument for sticking with the tried and true means of bombs and bullets terrorism. Contrasted with the al-Qaeda-Jihadist leadership and the operational planners, the threat of capture, incarceration, and failure also could have some deterrent impact on lower level operators. For the most part, however, a focus on deterring or influencing operational planners and operators appears less promising than a focus either on the leadership or the aiders and abettors discussed next.

²⁵ One final possibility should be noted: particularly for Osama bin-Laden and the senior-most al-Qaeda leadership, could nuclear weapons be too valuable to use? For several of their goals – from overthrowing the Saudi or Egyptian regimes to creating a New Caliphate – possession of one or more nuclear weapons could provide a valuable deterrent to outside intervention. Use would undermine that deterrent role. This approach would be consistent with al-Qaeda's ongoing offers of truces with western European countries, its behavior as a "state", and with some earlier statements by bin Laden. For elaboration, see Lewis A. Dunn, "Can al Qaeda be Deterred from Using Nuclear Weapons," National Defense University, Center for the Study of Weapons of Mass Destruction, Occasional Paper 3, July, 2005.

Deterring the Terrorist “Aiders and Abettors”

A further element of a deterrence strategy would be to increase the perceived risks to those individuals that could provide logistics, financial, technical, political, or other support to an al-Qaeda-Jihadist nuclear or other WMD attack. A clear declaratory policy that the United States, its friends, allies, and others, and the international community most broadly will hold individuals accountable for support to a terrorist WMD attack is a place to start. Building on United Nations Security Council Resolution 1540 and the new International Convention against WMD Terrorism, all nations could be encouraged to put in place needed laws and mechanisms to apprehend and punish aiders and abettors or to extradite them to another country that is prepared to do so. Public affirmations by governments of a readiness to share intelligence could also help to create a presumption on the part of these individuals that their activities will be detected at best in advance of a WMD attack or at worst attributed afterwards.

There is one further if much more controversial approach for influencing the risk calculations of possible aiders and abettors of a terrorist WMD attack. Publicly reported covert action against high-visibility targets would signal to others the dangers being run. Examples exist. In the early 1960s, German scientists were scared off from helping Egypt produce ballistic missiles by a series of bombings aimed at them. Over two decades later, the Canadian scientist Gerald Bull was murdered before he could complete work on a long-range gun capable of firing two-ton projectiles from Iraq at Israel.

Holding State Leaders Accountable if...

From Aum Shinrikyo's use of the non-lethal vaccine strain of anthrax in its attempt to kill hundreds of thousands of persons in downtown Tokyo in the mid-1990s to the unintended neutralization of Ricin by the Jihadists planning to attack individuals in London in 2004, with isolated exceptions all attempted WMD terrorism has been technically flawed.²⁶ In those two examples, the considerable “art” involved in successful production and dissemination of biological agents was lacking. Comparable art is associated with the other weapons of mass destruction. State support could provide that art, possibly resulting in a major terrorist WMD success vice an aborted attack. For that reason, it is especially important to take steps to make such support too risky for a state's leaders.

A clear declaratory policy that *state leaders will be held accountable for intentionally* supporting a terrorist WMD attack again is the foundation for bringing deterrence to bear in shaping those leaders' calculations of the risks and benefits of providing that assistance. This threat of punishment should be aimed at the leaders directly – not their populations as well – for three reasons: first, the leaders in question value most their own lives, perquisites, and right to rule and have little if any concern about their popula-

²⁶ The anthrax mailings of 2001 are the most notable exception, with speculation that these attacks were carried out by an individual with considerable past technical expertise in bio-weapons.

tion's well-being; second, indiscriminate threats against population would run counter to the wider efforts needed to influence the Islamic world's perceptions of the United States and the West; and third, it is likely to be considerably more credible that the United States would retaliate discriminately against leaders supporting WMD terrorism than against an entire nation's population, not least if there are any residual uncertainties about the linkage between a terrorist WMD attack and a particular country's leadership.

A policy of holding leaders accountable for intentionally supporting a terrorist WMD attack might be expressed on a national basis, typified, for example, by U.S. warnings to Kim Jong-Il about sales of North Korean nuclear weapons materials or more generally by French President Chirac's warning in January, 2006 that France would respond against state supporters of WMD terrorism against France.²⁷ Or groups of countries could go on record to this effect as might the great powers through the Security Council or otherwise.

Memories of the U.S. decision to overthrow the Taliban leadership in Afghanistan after it refused to stop harboring bin Laden and al-Qaeda after 9-11 would give credibility to this particular deterrence strategy. Events in Iraq cut both ways: the Bush Administration was prepared to use force to overthrow Saddam Hussein but then became bogged down in a costly insurgency. Demonstrated U.S. capabilities for highly-precise, prompt conventional strikes against high-value targets also buttress the credibility of a policy of holding leaders' accountable.

In the final analysis, the credibility of a policy of holding leaders accountable also will need to be backed up by a perceived capability to "track back" to the state source of the know-how, materials, and components, if not a weapon or supply of agent. Attribution presupposes not only technical capabilities.²⁸ It also will call for an infrastructure of political, legal, institutional, nuclear data-sharing, and intelligence cooperation among countries and between countries and international institutions such as the International Atomic Energy Agency with its data base on nuclear materials around the world. Despite progress in attribution, there is more work to be done in all of these areas. Nonetheless, as evidenced by U.S. ability to link 9-11 to al-Qaeda almost immediately, to link the Pan-Am 103 bombing ultimately to Libya, and to link more sophisticated improvised explosives among the Iraqi insurgents back to the Iranian Revolutionary Guards, a leader weighing the risks of aiding a terrorist WMD attack should not assume that his assistance will leave "no fingerprints".

As U.S. and other countries' capabilities to "track-back" to the source improve, moreover, the logic of deterrence would suggest signaling those capabilities to the extent that it could be done without providing oth-

²⁷The response ". . . could be conventional. It also could be of another nature." See "France 'would use nuclear arms', BBC News, 19 January 2006.

²⁸ For a discussion of some of the technical issues see William Dunlop and Harold Smith, "Who Did It? Using International Forensics to Detect and Deter Nuclear Terrorism", *Arms Control Today*, October 2006.

ers with insights into ways to defeat those very capabilities. As in the Cold War confrontation with Moscow, there also may be room for disinformation in this deterrence strategy aimed at convincing terrorists and their potential state supporters that the risks of attribution – and ultimately punishment – are considerable.

State linkage to a terrorist WMD attack, however, might not be intentional. Russian nuclear materials or know-how, for example, might find their way to a terrorist group due to some mixture of lower-level corruption, benign neglect, and plain inefficiency. Or individuals within Pakistan's nuclear weapons program might collude with al-Qaeda operatives to provide nuclear know-how, much as Pakistan's A.Q. Khan provided nuclear technology on demand to states. Threats of retribution in advance could well backfire; at least in the case of Moscow, actual retribution after the fact seems highly improbable. Nonetheless, political and diplomatic leverage could be used to underscore such states' responsibilities to ensure effective nuclear controls as well as controls in other WMD-related areas. (U.S. officials also should develop a list of top-priority security "fixes" tailored to specific countries that could be called for as urgent actions in the aftermath of an aborted or successful terrorist WMD attack linked back to inaction or neglect by that state's officials. Rather than "closing the barn door after the horse was gone", such actions would leverage the shock of an attack – howsoever bad – to make follow-on attacks less likely.)

Deterrence, Influence, and Shaping the Terrorist WMD Calculus

Confronted by the threat of terrorist use of nuclear or other weapons of mass destruction, the United States, its friends and allies, and indeed all countries need to bring as many possible responses to bear to counter that threat. Within both the U.S. government and the outside expert community, recognition of this need is generating a renewed interest in the possible role of deterrence of a terrorist nuclear or other WMD attack. For its part, the preceding discussion has focused on the roles and limitations of deterrence. In so doing, it also has identified other influence strategies that might be pursued in complementary approach also aimed at shaping the terrorist WMD cost-benefits calculus. Its starting point is the need to think in terms of the many different individual links, from leaders to aiders and abettors that would be integral parts of any future nuclear terrorist attack by the al-Qaeda-Jihadist movement. Its basic contention is that both deterrence and related influence strategies can contribute to meeting today's terrorist WMD threat.

More specifically, while traditional deterrence by the threat of punishment probably lacks sufficient credibility to shape the calculus of the al-Qaeda-Jihadist leadership, the threat of punishment – legal and extra-legal – may be an important means to influence the aiders and abettors needed for any successful terrorist attack. Deterrence by the threat of punishment also has an important role to play in shaping the calculations of potential state supporters of a nuclear or other WMD attack. By contrast, deterrence by denial of benefits strategies may hold greater promise for influencing the leadership's calculations as well as those of its operators and planners. Both sets of individuals need to make decisions about where best to allo-

cate scarce resources and in the past have shown a strong tendency to stick with "what works." Besides, virtually all such deterrence by denial actions should be taken regardless of their potential deterrent impact in order to prevent or reduce the consequences of a WMD terrorist attack. Somewhat differently, a wide range of influence actions offer a complementary approach to shape the calculus of the al-Qaeda-Jihadist leadership about whether the indiscriminate loss of life likely to be caused by a nuclear terrorist attack would serve their overall agenda. Put most starkly, even if that leadership believes that such loss of innocent life is fully justified in their eyes, they still must ask whether it would be smart.

The ultimate impact of each of these measures to shape the al-Qaeda-Jihadist calculus is uncertain. None of them offers a high-confidence promise of success. But much the same thing can be said about all of the other actions being taken and initiatives being pursued in response to the risk of WMD terrorism. Instead, prospects for success almost certainly will depend on effectively pursuing a set of complementary approaches. Deterrence by the threat of punishment, deterrence by denial, and wider influence actions all should be a part of that mix.

Beyond Deterrence – Strategic Interaction with Russia and China – a Brief Aside

Any discussion of today's deterrence challenges also needs to consider, however briefly, the role of deterrence in U.S. strategic interaction with both Russia and China. In both cases, the most important challenge is to move progressively beyond traditional deterrence as the central concept of strategic interaction.

Strategic Interaction in a Context of Mutual Uncertainties

Turning first to *U.S.-Russian strategic interaction*, it is acknowledged by both countries that a nuclear conflict between the two of them is virtually inconceivable. At the same time, it has proved difficult to put in place the new non-adversarial strategic relationship that both countries' leaders have affirmed is their goal. Though no longer emphasized, the logic of deterrence retains its hold on bureaucratic thinking and planning in both countries. As such it influences decisions about nuclear force posture and doctrine, stockpile numbers, alert levels, and resource allocations.

There also is a more fundamental disagreement between the two countries on the role of more formal negotiations and binding agreements in increasing mutual transparency and predictability. This is particularly so as both sides seek to strike a deal on what if anything will provide that transparency and predictability when the START I strategic arms agreement expires on December 31, 2009. The Bush Administration's rejection of what it regard as Cold War nuclear arms control clashes with the Russian desire for traditional legally binding agreements. Though the Bush Administration eventually agreed to the 2002 Strategic Offensive Reductions Treaty (SORT), that treaty will have legal effect only for a fixed point in time in 2012 by which time both sides must reach the agreed range of deployed strategic nuclear warheads. After that point in time, its legal impact ends. In turn, the Administration has remained skeptical about putting in place a legally-binding replacement to START I after 2009.

There clearly are many sources of political contention between Moscow and Washington, from how to deal with Iran to uneasiness about Russia's domestic trends. Recent disagreement over U.S. plans for a third ballistic missile defense site to be located in Eastern Europe have reflected but also added to the political tensions. But the continued Cold War nuclear legacy in forces and thinking – reflected in occasional statements by both

sides' officials that only the other side can destroy its society – contributes as well.²⁹

Unlike the case with Russia, a *U.S.-China* nuclear crisis or even confrontation is not inconceivable. Precipitous action by Taiwan could be one trigger; a decision by Chinese officials to act against Taiwan another. In any such confrontation over Taiwan, it is conceivable that Chinese officials could miscalculate the readiness of the United States to support Taiwan. Chinese officials also could miscalculate their ability to manage the risks of escalation. In that regard, some Chinese experts have stated informally that such an asymmetry of stakes would put the United States at a fundamental disadvantage in any China-Taiwan-U.S. crisis. That is, in their view, given asymmetric stakes, the United States would be reluctant to escalate even after a Chinese limited use of a nuclear weapon.³⁰

The U.S.-China strategic relationship also is characterized by mutual uncertainties about each other's longer-term strategic intentions in both Washington and Beijing. In Washington, the scope and goals of China's planned nuclear modernization as well as its readiness to play a constructive role in dealing with pressing non-proliferation problems remain open questions. Beijing's decision to test an anti-satellite weapon in January, 2007 clearly reinforced those uncertainties. In Beijing, the scope and goals of U.S. deployment of missile defenses and advanced conventional weapons is being closely watched given concerns about a possible U.S. pursuit of a disarming first strike against China's nuclear arsenal. For their part, China's experts and officials have signaled that the scope and pace of China's nuclear modernization is linked to those American deployments. So viewed, China is prepared to do whatever it takes to preserve a limited nuclear deterrent.³¹

Against this backdrop, the U.S. extended nuclear deterrent has a role to play in lessening the risk of Chinese miscalculation over Taiwan. More broadly, as suggested above, the American presence in Asia and the U.S. nuclear deterrent also is seen by some Japanese and other officials as a reassuring factor in the context of China's growing military capabilities and political rise in Asia. U.S. officials need to continue to make clear U.S. support for a peaceful resolution of the Taiwan question. U.S. officials need to be prepared to counter Chinese perceptions that an asymmetry of stakes reduces the risks of China of threats or use of force should any confrontation over Taiwan occur. The steps set out above to buttress the U.S.-Japan and U.S.-Korea alliance relationship also provide a broader reassurance vis-à-vis China.

²⁹ For a cogent Russian assessment of the impact of the Cold War nuclear legacy, see Alexei Arbatov and Vladimir Dvorkin, *Beyond Nuclear Deterrence: Transforming the U.S.-Russia Nuclear Equation*, 2006.

³⁰ This point was made to me by Dr. Brad Roberts, reflecting his own discussions with Chinese experts and officials.

³¹ See, Lewis A. Dunn, "Foreign Perceptions of U.S. Nuclear Policy and Posture," cited above. The author also thanks Dr. Brad Roberts for his insights on China's strategic thinking.

Nonetheless, a U.S.-China confrontation over Taiwan is not inevitable. Indeed, unlike in the late 1990s and early 2000s, current Chinese thinking emphasizes the manageability of the Taiwan issue. Its resolution, so it seems, can be deferred for some time to come. The key is that Taiwan's leadership exercises restraint on the matter of independence, a factor seen as more likely given the very extensive economic and people-to-people interaction across the Taiwan Straits. Moreover, China's rise in Asia and globally need not result in growing instability and insecurity for the countries in that region. Rather both U.S. and Chinese interests – as well as those of China's neighbors – would be well served by moving over time toward a non-adversarial strategic relationship as part of greater political-economic-security cooperation.

Cooperative Security Management

Cooperative security management would provide a possible framework for reducing mutual uncertainties and moving beyond deterrence toward non-adversarial 21st century U.S.-Russian and U.S.-Chinese strategic relationships. Space precludes a thorough discussion of this concept. Suffice it to suggest that a sustained and serious strategic dialogue – supported politically at the senior-most levels of all three governments as well as within the respective bureaucracies – would be the foundation. Narrowly defined, those dialogues would seek to avoid misunderstanding, misperceptions, and miscalculations. More broadly, the purpose such strategic dialogues would be to identify transparency and predictability measures as well other mutually agreed actions to stabilize longer-term U.S.-Russian and U.S.-Chinese strategic interactions. Most broadly, the purpose would be to identify and pursue still other cooperative steps to strengthen regional and global stability – including in cooperation with still other great powers. Many different modalities could be used, from political commitments to more formal legally binding agreements.

By way of elaboration, some specific U.S.-Russian examples of the types of actions that could be pursued would include: a post-START I transparency and predictability regime; joint U.S.-Russian cooperation in early warning; cooperative actions in ballistic missile defenses against proliferators; and steps to reduce the alert levels of each side's strategic forces to levels consistent with today's post Cold War political relationship. With regard to China, an initial start would be to institutionalize a more robust U.S.-Chinese strategic aimed reducing mutual strategic uncertainties and strengthening cooperation in selected areas (e.g., non-proliferation in Asia and elsewhere) Over time, more specific actions might be pursued to avoid growing U.S.-Chinese competitive strategic deployments, including limits on Chinese offensive nuclear forces and on U.S. missile defenses. Not least, among the United States, Russia, China, and the other nuclear powers, strategic dialogue could provide a foundation for enhanced cooperation to meet the proliferation and terrorism challenges ahead.

Conclusion

The challenges confronting deterrence today are considerably more complex than during the Cold War. As argued in this essay, new thinking and action is needed in many areas: to meet the new challenges of extended nuclear deterrence, especially within Northeast Asia and the Middle East; to bring to bear the traditional concepts of deterrence by punishment and deterrence by denial to shape in so far as possible the calculus of the many individuals whose cooperative actions would be needed to carry out a terrorist attack with a nuclear or other weapon of mass destruction against the United States, Western countries, and their friends; to complement such deterrence strategies by added influence measures, especially to shape calculations of the al-Qaeda-Jihadist leadership about whether a nuclear terrorist attack would be a smart means to serve their longer-term global vision of an Islamic renewal in a new Caliphate; and beginning the process of going beyond deterrence as the governing framework to guide future U.S.-Russian and U.S.-Chinese strategic interaction. The stakes are high. The challenges are high. Not least, the payoffs of new and creative thinking also are high. It is time to get on with the job of transforming, adapting, and extending Cold war deterrence for the 21st century.