

Global Challenges for the 21st Century: Nonproliferation and Arms Control

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Thank you for the warm introduction. It is a pleasure to be here tonight, substituting for CIA's Deputy Director John Gordon, who is a big fan of DTRA and who wanted very much to be here himself, but was detained in Washington to complete the final lap of the confirmation process for his new job. General Gordon will be the Undersecretary of Energy for Nuclear Security and Administrator for National Security Administration at the Department of Energy. Actually, he needs some time alone just to memorize his new title!

In his two-and-a-half years as DDCI, John Gordon has been an enthusiastic champion of DTRA's mission to deter the use of weapons of mass destruction, to reduce the present threat, and to prepare for the future threat by collaborating widely with experts inside and outside the US Government. General Gordon appreciates, as I do, the growing challenge the United States faces from WMD, and he applauds the impressive progress DTRA, supported by the Intelligence Community, has made in developing strategies to deal with it.

On a personal note, I would tell you that General Gordon's leadership as DDCI has made a positive impact on many other critical intelligence programs in recent years. You miss him tonight as a featured speaker, I will miss him a lot longer as a smart boss and a sympathetic colleague.

I was glad to step in for General Gordon because I believe this conference is on the right track in focusing on the "globalization of the security environment." Tonight, I will describe some of the serious issues behind this catchy phrase; and, second, make some concrete points about the implications for counterproliferation.

Globalization, or more precisely, a global economy driven by information technology, is basically good news for the United States, which enjoys a major technological advantage in projecting its global interests. US national interests are increasingly tied to our dependence on global networks that ensure the unrestricted flow of economic, political, and technical information, as well as people, goods, and capital. In the years ahead, globalization will provide mankind, often led by the United States, with the unprecedented opportunity to improve the

quality of life across the planet.

But, there is a flip side to globalization, which raises the security stakes for the United States beyond the usual concern about countries - such as Russia, China, and North Korea - with WMD capabilities. Globalization will be accompanied by economic volatility; by the political and security implications of sharpening inequalities of income; and by the growing threat from multiple, relatively small-scale programs of weapons of mass destruction, that have the capability of striking with surprise.

Let me now focus this discussion on six points I want to make about this changing threat environment.

- First, for those countries and non-state actors that cannot integrate into the world economy in the years ahead, disaffection will grow as both economic development and investment in people lag behind. Terrorism and WMD programs, to some degree, will reflect such disaffection and pose threats to American citizens, soldiers, territory, allies, and global interests.
- Second, the threat environment for the United States will continue to change rapidly and substantially. By contrast with the massive but arguably contained Soviet threat - thanks, in part, to arms control agreements - this new challenge will come from lesser developed - and less disciplined - states, well-financed international terrorist groups, and powerful individuals with increasingly easy access to conventional explosive, and to biological, chemical, and, to a lesser extent, nuclear weapons, along with the missile systems to deliver them. This is an array of little guys who can hurt us!
- Third, these adversaries, often motivated by ideological rage of ethnic hatred, will have fewer and less powerful weapons than the Soviets but are more likely to use them! And they will increasingly be able to employ the element of surprise!
- Fourth, our adversaries, big guys and little guys, will increasingly benefit from ready access to four critical enablers in the global economy - all subject to "dual-use" applications: (1) fast-moving, high-volume information in the general sense; (2) technological know-how in the operational sense; (3) finance in a global sense; and (4) sophisticated deception-and-denial practices to cover their tracks.
- Fifth, arms control, to be effective, will have to adapt to this dispersed, rapidly changing threat environment. Arms control models, in fact, have been changing to meet new circumstances for much of the past decade. This adaptation and innovation will continue as far as we can see into the future.
- Sixth, fighting proliferation in the future will be, more than ever, a collaborative business. The Intelligence Community, like DTRA, will have to reach out to experts and responsible parties, inside and outside the US government, to ensure that we have the best technical information, research and analysis, and counterproliferation policies in place to prevent WMD use and to minimize destructive impact if they are employed. There is no place for singletons in the fight against proliferation! I am glad to say that collaboration is the guiding principle of the DCI Counterproliferation Center, ably led by John Lauder, and of the Defense Threat Reduction Agency, smartly directed by Jay Davis.

Proliferation is a Transnational Issue

Bearing in mind the effects of the explosion of technology, economic integration, and Cold War residuals, let me elaborate on the threat to the United States, and all nations, arising from as many as 20 states having nuclear, chemical, and biological weapons programs.

In the past few years, programs in many of these states have reached new milestones. George Tenet has emphasized that no issue better illustrates the challenges, complexities, and uncertainties that we in US intelligence-and indeed in all of our national security community-face than halting the proliferation of WMD and their delivery systems.

We have witnessed continued missile development in Iran, North Korea, Pakistan, and India. Add to this the broader availability of technologies relevant to biological and chemical warfare, nuclear tests in South Asia, as well as continuing concerns about other nuclear programs and the possibility of shortcuts to acquiring fissile material. We are also worried about the security of WMD materials throughout the world, increased cooperation among so-called "rogue states," more effective efforts by proliferants to conceal illicit activities, migration of technical know-how from the former Soviet Union to states seeking WMD capabilities, and growing interest by terrorists and potentially other groups in acquiring WMD capabilities.

Our efforts to halt proliferation are complicated by the fact that most WMD programs are based on dual-use technologies and materials that have civil as well as military applications. In addition, a growing trend toward indigenous production of weapons of mass destruction-related equipment decreases, to some extent, the effectiveness of sanctions, interdictions, and other tools designed to counter proliferation.

The Missile Threat

Let's look first at the growing missile threat. We are all familiar with the fact that Russia, China, and the United States all have ICBMs capable of striking at distant targets. To a large degree, we expect our mutual deterrent and diplomacy to help protect us, as they have for much of the last century.

Over the next 15 years, however, all of our cities will face ballistic missile threats from a wider variety of actors-North Korea, *probably* Iran, and *possibly* Iraq. In some cases, this is because of indigenous technological development, and in other cases, because of direct foreign assistance. And while the missile arsenals of these countries will be fewer in number, constrained to smaller payloads, and less reliable than those of the Russians and Chinese, they will still pose a lethal and less predictable threat.

These countries, in our view, calculate that possession of ICBMs would enable them to complicate and increase the cost of US planning and intervention, enhance deterrence, build prestige, and improve their abilities to engage in coercive diplomacy.

- As alarming as the long-range missile threat is, it should not overshadow the immediacy and seriousness of the threat that US forces, interests, and allies already face overseas from short- and medium-range missiles. The proliferation of medium-range ballistic

missiles--driven primarily by North Korean No Dong sales-is significantly altering strategic balances in the Middle East and Asia.

The Biological and Chemical Threat

Against the backdrop of this increasing missile threat, the proliferation of biological and chemical weapons takes on more alarming dimensions. Biological and chemical weapons arguably pose the most daunting challenge for intelligence collectors and analysts.

- I should note first that the preparation and effective use of biological weapons by both potentially hostile states and by nonstate actors, including terrorists, is harder than some popular literature seems to suggest. You all remember Tom Cope, Richard Preston's fictional loner in the Cobra Event, who combined nuclear polyhedrosis virus, rhinovirus, and smallpox in his creepy Manhattan apartment and then used the agent to kill innocent New Yorkers. Scary stuff! I'm glad it is harder than Tom made it look. That said, potential adversaries are pursuing BW programs, and the threat that the United States and our allies face is growing in breadth and sophistication.
- Second, we in intelligence are trying to get ahead of these challenges by recruiting and training a new generation of intelligence analysts and collectors who understand WMD and by developing a sound strategy designed to encourage sophisticated approaches to penetrating and understanding the threat.
- Third, we recognize that much of the relevant wisdom in the biological and chemical weapons field is outside the traditional national security community-and we are forging new partnerships with experts in the academic and private sector for research and development and to inform our analysis on a continuing basis. This is an imperative, not an option for the Intelligence Community today.
- But, many of our efforts will not begin to affect our intelligence capabilities for months or even years. There are, and there will remain, significant gaps in our knowledge.

About a dozen states, including several hostile to Western democracies-Iran, Iraq, Libya, North Korea, and Syria-now either possess or are actively pursuing offensive biological and chemical capabilities for use against their perceived enemies, whether internal or external.

Some countries are pursuing an asymmetric warfare capability and see biological and chemical weapons as a viable means to counter overwhelming US conventional military superiority. Other states are pursuing such programs for counterinsurgency use and tactical applications in regional conflicts, increasing the probability that such conflicts will be deadly and destabilizing.

A number of terrorist and other groups are seeking to develop or acquire biological and chemical weapons capabilities. As you well know, there are fewer constraints on nonstate actors than on state actors. Some groups-like Usama bin Ladin's-have international networks, adding to uncertainty and the danger of a surprise attack.

Adding to the unpredictability are the "lone militants" or the ad hoc groups here at home and abroad who may try to conduct a biological and/or chemical weapons attack. Also, biological weapons attacks need not be directed only at humans. Plant and animal pathogens may be used against agricultural targets, creating both potential economic devastation and the

possibility that a criminal group might seek to exploit such an attack for economic advantage.

One disturbing trend that numbers alone do not reveal is that BW and CW agents are becoming more dangerous, and monitoring these programs is becoming more complex:

- First: As deadly as they now are, BW agents could become even more sophisticated. Rapid advances in biotechnology present the prospect of a new array of toxins or live agents that require new detection methods, preventive measures, and treatments. On the chemical side, the risk is growing that information about new types of chemical agents developed in the former Soviet Union-the so-called "fourth-generation" agents-may spread to other countries or subnational groups.
- Second: BW and CW programs are becoming more self-sufficient, challenging our detection and deterrence efforts, and limiting our interdiction opportunities. Iran, for example-driven in part by stringent international export controls-is acquiring the ability to domestically produce raw materials and equipment to support indigenous biological agent production. Self sufficiency clearly is a threat to the world community's ability to limit proliferation through arms and technology control regimes.
- Third: Countries are taking advantage of denial and deception techniques, concealing and protecting BW and CW programs. Concealment is a particular risk with BW because of its overlap with legitimate research and commercial biotechnology. The technologies used to prolong our lives and improve our standard of living can quite easily be used to cause mass casualties. Even supposedly "legitimate" facilities can readily conduct clandestine BW research and can convert rapidly to agent production.
- Fourth: Advances are occurring in dissemination techniques, delivery options, and strategies for BW and CW use. We are concerned that countries are acquiring advanced technologies to design, test, and produce highly effective munitions and sophisticated delivery systems.

Nuclear Proliferation

Turning now to nuclear proliferation, the growing threat is underscored today by developments in South Asia, where both India and Pakistan are developing more advanced nuclear weapons and moving towards deployment of significant nuclear arsenals. We remain concerned about the prospects for renewed testing by both countries and the resulting escalation of the nuclear arms race on the subcontinent.

Iran also is pushing its program forward, augmenting its nuclear technology infrastructure. Stemming the flow of nuclear-related technologies into Iran remains one of our highest goals.

Meanwhile, Iraq probably has the personnel, documentation, and some equipment needed to continue nuclear-related work. If Iraq is able to improve its access to foreign markets, it could begin a major reconstitution effort.

With regard to North Korea, the "Agreed Framework" has frozen Pyongyang's ability to produce additional plutonium at Yongbyon, but we are deeply concerned that North Korea continues covert nuclear weapons development at other sites.

Nuclear Security and Smuggling

We are also concerned about the potential for states and terrorists to acquire plutonium, highly-enriched uranium, other fissile materials, and even complete nuclear weapons. Acquisition of any of the critical components of a nuclear weapons development program--weapons technology, engineering know-how, and weapons-usable material--would seriously shorten the time needed to produce a viable weapon.

- Iran and Iraq could quickly advance their nuclear aspirations through covert acquisition of fissile material or relevant technology.

And some nonstate actors, such as separatist and terrorist groups, have expressed an interest in acquiring nuclear or radiological weapons.

Fortunately, despite press reports claiming numerous instances of nuclear materials trafficking, we have no evidence that any fissile materials have actually been acquired by a terrorist organization. We also have no indication of state-sponsored attempts to arm any of these organizations with the capability to use any type of nuclear materials in a terrorist attack. That said, there is a high risk that some such transfers could escape detection, and we must remain vigilant.

Similarly, we have no evidence that large, organized crime groups with established structures and international connections are--as yet--involved in the smuggling of nuclear materials. But the potential is there...

The Role of Arms Control

What is the role of arms control in reducing the WMD threat? Let me say that there is more than one model of arms control. Arms control has changed dramatically in the past 15 years and will continue to evolve in response to the changing WMD threat environment I have described.

Before the Moscow coup in August 1991 and the breakup of the Soviet Union, the model for "traditional" arms control treaties--START/INF and CFE-- included extensive and highly intrusive verification provisions. This was a proud era for the US arms control community.

The verification regimes included detailed exchanges of information concerning the types, quantities and locations of nuclear and conventional weapons, rigorous on-site inspections, and the use of satellite imagery. We could count precisely the weapons of the other side and monitor compliance.

These arms control agreements worked very well, as we all know, and resulted in substantial reductions in both nuclear forces, as well as in conventional weapons. START II, the second-generation strategic arms control agreement, has been ratified by the United States and Russia and will, if it comes into force, further reduce each side's nuclear forces; and consultations have been held on START III.

CFE has worked as well, and there is now an adapted CFE Treaty to take into account the new realities involving an expanded NATO and the states of the former Soviet Union.

Following the 1991 coup, other more flexible models of arms control emerged rapidly. FSU leaders feared the loss of central control over tactical nuclear weapons and the possibility that these weapons would find their way to other countries.

The Bush Administration made substantial progress through informal or "nontraditional" arrangements that had little in common with the START/INF and CFE model. The mechanism for change was unilateral initiatives by each country that were expected to be matched by the other side. Decisions were made to forego the intrusive verification provisions contained in earlier arms control agreements and to rely instead on transparency.

Through close communication between senior officials in both governments, the threat of tactical nuclear weapons was reduced, both sides stood down from alert their strategic bombers and ICBMs scheduled for elimination under START, and other measures were adopted to stabilize the situation.

The Clinton Administration has continued to build on such initiatives. As you know, Congress passed a number of programs known as the Cooperative Threat Reduction program. In a nutshell, these measures were designed to provide funds to assist Russia and the former Soviet states in reducing their arsenals of nuclear, chemical and biological weapons, and to prevent WMD proliferation to other states.

These programs, which are ongoing, have reduced the proliferation threat. Congress is planning on a billion-dollar counterproliferation budget for the next fiscal year. What all of these initiatives have in common is a reliance on transparency, including visits, exhibitions, and data exchanges in place of formally negotiated, reciprocal monitoring measures.

These programs--clearly designed for the times--help to reduce the proliferation threat, although they may not provide the same monitoring confidence as traditional treaties.

A third model for arms control is the multilateral arms control treaty, best represented by the Chemical Weapons Convention and the Comprehensive Nuclear Test Ban Treaty.

--Both treaties have more than a hundred states parties, who differ from each other in a number of important respects, including their nuclear weapons capabilities and the sophistication of their chemical industries.

--Secondly, as pointed out earlier, the dual-use nature of equipment to produce chemical weapons makes monitoring difficult. And, the international monitoring regime established under the CTBT is designed to detect only non-evasive testing, making it difficult to detect potential evasive testing.

--Third, because the enforcement mechanisms of both treaties are in the hands of international organizations, they have both positive benefits as well as certain disadvantages.

The challenges of multilateral treaties raise questions about the extent to which they help reduce the threat to world peace caused by weapons of mass destruction.

- On the positive side, the multilateral treaties have established international norms of behavior in the area of nuclear weapons development and the development and retention

of chemical weapons and facilities.

--While so-called "rogue" states may not be inclined to obey the rules, these norms can provide a basis for international action against the violator.

-- Potential violators now must now weigh what they see as the security and political benefits of WMD against the potential monetary cost of evasive measures to advance nuclear weapons designs or to develop chemical weapons, and the potential negative impact of international sanctions following a violation.

- The disadvantage in the multilateral approach is that the inherent difficulties in enforcing these treaties could create a false sense of security.

Now I will try to answer the question I posed earlier: What is the role of arms control in reducing the threat of weapons of mass destruction? Let me make some suggestions, based on the history of arms control over the last 15 years.

- First, arms control cannot be viewed as a rigid formula. It must be a flexible concept that responds to the requirements of the times, as it has, indeed must, in our fast-changing world.
- Second, it requires strong leadership by policymakers who are willing to explore innovative approaches to changed circumstances in the world.

The enduring question is, "what kind of arms control do we need to meet the challenges of our times?" Do we still need the intrusive verification regimes of yesterday? Will global security be enhanced by risking closer relationships with our former adversaries?

Some, as you know, have suggested we need to consider even deeper reductions in the nuclear missile forces of major powers, enhanced cooperation on national defense and early warning systems, and new cooperative initiatives to halt the proliferation of weapons of mass destruction. Whatever initiatives our country adopts, it is clear that our arms control experts are adapting their tradecraft to changed circumstances into the world.

Those of you who work arms control have our full confidence-and-thanks - as you look for new ways to enhance global security.

Let me stop here.

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