

**REDUCING THE CHEMICAL AND BIOLOGICAL WEAPONS THREAT:
WHAT CONTRIBUTION FROM ARMS CONTROL?**

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By

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On July 25, 2001 the United States announced that it would not support the draft protocol negotiated by the Ad Hoc Group (AHG) of states parties to the Biological Weapons Convention (BWC) as presented in the “composite text” offered by the AHG Chairman. The U.S. statement made clear that further negotiation of specific language in the draft would not address the major problems the United States had with the proposed protocol, which was seen as based on a fundamentally flawed conceptual approach and unwarranted assumptions.

Five months later, the Fifth BWC Review Conference suspended its efforts without completing a Final Declaration in light of a demand by the United States that the Ad Hoc Group process be brought to an end. This last-minute standoff was the culmination of three weeks of disputes over how best to strengthen the BWC and to carry forward the fight against biological weapons (BW) proliferation.

Between these two events, the United States was the victim of unprecedented anthrax attacks in the wake of the September 11 destruction of the World Trade Center. The anthrax attacks transformed what had been a theoretical concern for some people into a very real security threat for the entire country.

While much of our recent attention has focused on biological weapons, concern about chemical weapons should be no less intense. We have seen chemical weapons used – both by states and by terrorists. Saddam Hussein’s chemical attacks against both Iranian forces and his own people introduced this generation to the horrors of such weapons. The Aum Shinrikyo’s use of sarin nerve gas in the Tokyo subway in March 1995 served as a wake-up call to the United States, combining with the bombing of the Murrah Federal Building in Oklahoma City to drive home the realization to policy makers and public alike that the United States was not immune from terrorism, that weapons of mass destruction could be involved, and, perhaps most importantly, that we were not prepared.

Today, administration witnesses report that perhaps as many as two-dozen countries are pursuing chemical weapons capabilities. A significant number are also seeking biological weapons. The pursuit of chemical and biological weapons capabilities by terrorist groups such as al Qaida also has been well documented in court proceedings as well as in the media.

Among the difficult lessons we have had to learn about chemical and biological weapons is that they are not the same, and addressing the challenges they pose – whether in terms of proliferation or terrorism – will require a different mix of policy responses.

Among the mix of tools on which we must draw to deal with these challenges is arms control. But this is not to argue that arms control must have pride of place among those tools. Indeed, arms control is not likely to be the most important policy arena for dealing with either chemical and biological weapons proliferation by states or their potential acquisition by terrorists. But arms control can make a contribution, and it should not be eliminated from the policy toolbox.

If arms control is to make an effective contribution to the CBW challenges, however, policy makers must begin with an appreciation of the complex environment that will shape its application. A number of factors are driving a need for new thinking.

The Convergence of States and Terrorists

Before the events of September 11 and the subsequent anthrax attacks, analysts tended to conceptualize and address the state proliferation challenge and the problem of terrorism along separate tracks. This split approach prompted a focus on different strategies and different policy tools for dealing with what were considered distinct aspects of the problem, if not separate problems altogether. Arms control measures, such as the Biological Weapons Convention, were deemed to be targeted against state proliferation and not designed to address the terrorist threat.

Such a separate approach in the world after September 11, however, will no longer suffice. The distinction between proliferation and terrorism and between terrorists and the state has become difficult to draw. As a result, the United States and the international community more broadly must implement a response to the chemical and biological weapons challenge that deals with state proliferation and bioterrorism as different aspects of the same problem. This will require an approach that is strategic in nature, multifaceted in action, and which exploits a range of tools.

Arms control is important in this context, but the combination of politics, science and technology, and treaty language that surrounds both the Chemical Weapons Convention and, especially, the Biological Weapons Convention ensures that these conventions will be insufficient on their own. Nor does an emphasis on arms control alone provide a sufficiently wide perspective to facilitate all of the varied actions that will be required by all of the necessary actors – from both the public and private sectors – to deal effectively with the new realities that the convergence of state and non-state challenges present. What is needed is an approach that goes beyond the traditional modalities of arms control to new ways of thinking about how to strengthen the conventions and the norms against biological and chemical weapons that they embody.

Advancing Science and Technology

Chemistry and biology and their associated technologies have witnessed incredibly rapid advances in recent years, and, if anything, the pace of change is likely to accelerate. Rapid changes in biotechnology in particular in the next several years will shape new scientific and business methods and practices far removed from those of today. Moreover, many of the breakthroughs in the relevant sciences and technologies are likely to be promoted by combining them with other technologies – for example, nanotechnology, cutting-edge information technologies, and new materials science. Creative scientists and technologists could find new ways of putting such things together to advance their CBW capabilities. In essence, advancing science and technology will allow future proliferators – whether governments or terrorists – to enter the chemical and

biological weapons game with a greater scientific and technological base on which to build their efforts.

Classic arms control will have difficulty in capturing this dynamism. Government bureaucracies are notoriously slow to adapt. International organizations are no less so. The vastly different rates at which science will move forward and governments can adapt require a broader approach that facilitates an ongoing appreciation of the evolving scientific and technological landscape in as close to real-time as possible.

Engaging Industry More Productively

In areas associated with commercial activities based on the life sciences in particular, those involved emphasize the vast contributions their rapidly advancing scientific and industrial capability is making to the improved quality of life for many people. Not everyone shares the view, however, of advancing life sciences in a commercial context as an unalloyed good. Unscrupulous drug companies or other biotechnology enterprises, for example, have recently been portrayed as villains in popular novels and movies. The fact that advanced biotechnology is given a dark dimension in the popular culture captures a sentiment among the public that, at the very least, reflects uncertainty and uneasiness about industry dealing with issues generated by the advancing life sciences and related technology.

Representatives from U.S. biotechnology and pharmaceutical industries could argue that they participated extensively in the BWC protocol negotiating process, at least insofar as they interacted with government representatives engaged in the negotiations. Some characterizations of industry involvement, however, suggest that it was industry opposition that influenced the Bush administration's decision not to support the draft protocol. While such a characterization is not entirely accurate, industry certainly preferred a minimalist approach in the protocol that would have created the least demanding obligations possible. It is also fair to say that industry often did not display an overly cooperative attitude.

Looking to the future, there is little to suggest that industry would change its approach if another protocol-style effort were put forward as the means by which to pursue biological arms control. Something different is needed, and governments must do better with industry. As the drivers of much of the critical science and technology, industry must be made to understand its stakes in the challenge and be fully integrated into the necessary strategic response. Given the growing public and governmental concerns over developments in biotechnology, it would also be very much in the interests of the biotechnology industry to cooperate in promoting proper, safe, and ethical practices around the world.

The Way Forward

In responding to this environment, the arms control contributions to addressing the chemical and biological weapons challenges begin from different starting points and are likely to take different courses.

Challenges to Chemical Arms Control

The first challenge in eliminating the scourge of chemical weapons is to destroy those weapons that already exist. Although the destruction process in the United States is proceeding reasonably well, its counterpart in Russia is far behind schedule. It is doubtful in the extreme that Russia will meet the timetable specified in the CWC, even if it is granted the one-time, five-year extension allowed by the convention.

This predicament is first and foremost a problem for the Russians themselves. Moscow is clearly committed to making progress, but its financial commitments will not be sufficient to meet its treaty obligations. Ways must be found to promote a greater commitment from Russia itself. In addition to greater Russian expenditures, those countries that have an interest in the destruction of the Russian CW stockpile – which is, in essence, every state party to the CWC – should provide more assistance. In particular, the Europeans and Japanese should do more. The CWC Review Conference scheduled for next year should provide an opportunity for developing a support strategy to meet this goal, which, in my view, represents the single most important objective of the CWC.

Moscow is not likely to be the only target of criticism during the Review Conference, however. Washington will come in for its share of censure as well, particularly for the three unilateral exemptions included in the U.S. implementing legislation. Prior to the Review Conference, therefore, the administration should assess the impact of these provisions on CWC implementation, including their effects on the general political environment. This assessment would then provide the context for judging whether the potential benefits of retaining them outweigh the costs. Based on that assessment, the administration could convey to the Review Conference that whatever problems have been created for the convention by this legislation will be addressed.

A third set of issues that must be addressed relates to challenge inspections under the CWC. In many ways, the challenge inspection provision is the single most important tool in the entire convention. To date, however, that provision has never been invoked, although suspicions have been raised that some states parties are in substantive violation of their commitments. The United States, for example, has claimed publicly for years – both the Clinton and Bush administrations – that Iran continues to violate the treaty, yet Washington has never followed up these allegations by requesting a challenge inspection in Iran.

The longer such provisions are not used, the more difficult it will become to do so. As a result, the international community could lose a critical tool for promoting the fundamental goals of the CWC.

A fourth important issue that must be addressed is the adaptability of the CWC to advances in chemical science and technology. As noted, certain areas of chemistry and biology relevant to the CWC are changing rapidly and will continue to do so. In the area of toxins, for example, advanced biotechnology can create novel toxins that have scientific or medical applications but can also be misused as weapons.

The CWC's Scientific Advisory Board is engaged in a process with the U.S. National Academy of Science to examine the critical areas of scientific advance that warrant attention from CWC states parties. Their work will represent an important input into the forthcoming Review Conference. Consideration should be given, however, to an ongoing process that provides updated information on critical scientific and technological developments to states parties on a sustained basis.

A fifth area of effort should focus on issues of cooperation and assistance. During the first five years of CWC implementation, states parties and the OPCW have tended to view assistance issues as secondary to operational matters such as declarations and inspections. Because the assistance provisions of the CWC have important political implications, however, they should not be ignored. The Review Conference provides a good opportunity to demonstrate interest in making tangible progress in this area.

The issue of international cooperation is important in light of the ongoing debate over the future of chemical export controls. The Australia Group (AG), in particular, has been a target for some non-aligned countries that find it to be discriminatory and inconsistent with the spirit if not the letter of the convention. Australia Group members respond that as long as they have the right to make their own judgments as to which countries are in compliance with the treaty, they also have the right and the obligation to determine to whom they will export relevant chemical and equipment and how they will make and implement those decisions.

As science and technology continues to advance and global technology diffusion proceeds, the question of export controls will become increasingly difficult to manage. While export controls continue to make a contribution, the fact that they only buy time to help other tools of policy to work raises the question of how much time and effort should be put into preserving them.

The final area which chemical arms control must address relates to the institutional context within which those arms control efforts proceed, particularly straightening out problems with the Organization for the Prohibition of Chemical Weapons (OPCW). First, for some time, the OPCW has been plagued with financial and staff problems that must be fixed. In some cases, the solutions rest in the states parties fulfilling their obligations in a timely matter. But some of the budget problems are structural and will require the organization to define new ways of doing business to set the situation right.

On staffing questions the OPCW already has a reputation of being overly sensitive to “pay and promotion” matters such as its salary scale relative to other international organizations.

Second, many states parties cover activities at the organization with a junior diplomat from their bilateral embassy to The Netherlands. Such officials often lack the technical capability and political authority to make decisions or even effective interventions. Although important decisions are matters for national capitals, the current generally low level of representation at the OPCW complicates and hampers the work of the organization and makes it less efficient and effective.

Finally, questions of institutional leadership have arisen. It is clear that the OPCW leadership has lost the confidence of some of the key CWC players. Such a situation cannot be allowed to continue for very long as it creates an environment that is severely detrimental to staff morale and effective action. If the OPCW is not led in a manner that generates confidence among those countries whose support is critical, treaty implementation will suffer. The focus of attention will be on internal issues rather than on getting the job done. And the job is critical and should come first. A means for resolving the current dispute must be found.

Challenges to Biological Arms Control

If the international community is to use arms control effectively in addressing biological weapons proliferation and bioterrorism, it must address the political problems that plagued past biological arms control efforts, including the Ad Hoc Group’s attempt to negotiate a legally binding protocol to the BWC. Five issues, in particular, must be addressed.

The first question must be the goals of the next arms control steps. Obviously, the more robust the goals, the more challenging they will be to implement successfully. The goal clearly cannot be BWC “verification.” Even Ad Hoc Group members accepted the fact that the BWC cannot be verified under current circumstances. The AHG goal, therefore, became defining measures that contributed to “enhancing confidence in compliance.” They ultimately fell short of that goal as well, indicating how difficult real progress in biological arms control is.

Two sets of possible objectives for next steps suggest themselves. One relates to more “traditional” arms control-related goals, including verification, confidence building, increasing transparency, or enhancing consultations. Of these, verification is not possible, and each of the others has conceptual and practical political problems. None of them appears to be sufficiently robust to energize the currently stagnant process.

An alternative approach is go beyond traditional arms control goals to define the aims altogether differently. To some extent this was the goal of the Bush administration when it offered its package of alternative measures at the Fifth Review Conference. In light of the complex environment with which biological arms control must deal, as well as the

clear lack of success of traditional approaches, the need for new thinking is clear. In particular, an effort must be made to create a new conceptual and policy environment within which current challenges can be addressed. Such a new environment would mean a move away from “business as usual” by all of the critical stakeholders, including governments, industry, the scientific community, the health community, and others. New partnerships among these key constituencies must be developed. New means must be identified to address the speed of scientific and technological change. This raises questions in particular about the appropriate contributions of each of the key stakeholders, including questions about the value of and potential for governance or self-governance of the international biological scientific and technological communities.

Second, part of Washington’s problem with the draft protocol was that it proposed expending considerable resources on activities not clearly or directly associated with core proliferation concerns. In announcing its rejection of the draft protocol, in its statement at the Fifth Review Conference, and in discussions after the Conference was suspended, for example, U.S. officials stressed that too little attention has been paid to questions of non-compliance. Given this clear U.S. priority, any next steps must address two core concerns that, from Washington’s perspective, are critical: First, how do BWC states parties meet the essential, but often ignored responsibility of dealing with countries who are party to the treaty but are either cheating or suspected of doing so? Second, how do they deal with those countries who are not states parties and therefore are not breaking any commitments but are clearly violating a widely held norm? These are not questions that members of the international community necessarily are comfortable addressing. They would prefer to assume that states that join a convention comply with their obligations. The reality, however, is that states cheat, and something must be done about them.

Third, part of the reason the protocol did not focus on core proliferation concerns is that the drafters bent over backwards to meet the political requirement of some participants that any multilateral agreement treat all states parties the same. This political objective has been a hallmark of nonaligned nations’ positions in arms control negotiations since the NPT created nuclear “haves” and “have nots.” Non-aligned states in particular have used the “rules of the game,” particularly the requirement that any agreement must be done by consensus, to insist on meeting this political sine qua non.

Non-discrimination may be politically essential but it does not necessarily create good arms control in a situation in which participants are not equal in terms of their interests, assets, or obligations. Moreover, the Bush administration has made it clear that the protocol negotiations and, to some extent, the Review Conference were conducted in a framework that, if not discredited, must now be set aside. Will other participants agree since a new “game” may deprive them of some critical leverage for achieving key political goals? If progress is to be made, these imperatives must be reconciled. But can they, and, if so, how?

Fourth, cooperation and assistance in the life sciences for peaceful purposes is a political imperative of non-aligned countries that they insist must be included in any

nonproliferation agreement. Some Ad Hoc Group participants made no secret of the fact that they were involved not because of their concerns over biological weapons but in order to secure access to critical science and technology. In the minds of some people, therefore, the packaging of compliance measures and cooperation and assistance provisions in the protocol distracted from the main objective of the protocol and the BWC itself and created potential for confusion and competition among priorities.

Conventional wisdom holds that no multilateral progress will be made on harder-edged proliferation measures without something on cooperation and assistance. If this is the case, any next steps must find a way to reconcile these strongly held interests. But conventional wisdom should also be challenged, and consideration of next steps should also explore whether potential “hard arms control” and cooperation and assistance measures might be addressed on separate tracks.

Finally, following the failure of the Ad Hoc Group negotiations and the suspended Review Conference, some participants might want to abandon arms control altogether and rely on other measures to fight BW proliferation and biological terrorism. Even if arms control is included in the tool kit for promoting BW nonproliferation and bioterrorism, the priority it assumes in relation to other available tools will be a critical factor in assessing how assertively and successfully one might promote next steps in arms control.

In fact, differences have already emerged between the United States and other countries, including friends and allies, over these relative priorities. The United States tends to assess the value of arms control and the contribution of instruments such as the BWC in terms that relate them to other tools in the tool kit, including intelligence, diplomacy, passive and active defenses, military options, and export controls. Arms control is appreciated for its contribution, but its limitations are also recognized, and maximizing its potential is seen to derive from making it work together effectively with other policy tools. In contrast (and to overstate for emphasis), some Europeans tend to give pride of place in the tool kit to arms control. Some even view arms control as an alternative to these other policy tools rather than as a complement to them. The result is that some friends and allies of the United States rely more heavily on the contribution of arms control in dealing with the problem of proliferation than does Washington. Such differences must be explored in an assessment of the potential utility and effectiveness of next steps in BW arms control.

Additional Measures

The United States made it clear that it does not view the package of measures it proposed at the Fifth Review Conference as a comprehensive list of potentially valuable and negotiable measures. Indeed, it should not. The U.S. proposals, supplemented by good ideas that emerged through consultations with close friends and allies, form the basis for moving forward, but more could be done. The following ideas are offered as a contribution to thinking about further measures that might be considered.

Strengthening the Ability to Confront the State/ Terrorist Convergence

The fact that the terrorist and state proliferation threats have converged requires that the BWC be considered in light of what further it might be able to contribute to the problem as a whole. The proposal for domestic legislation that criminalizes BWC-prohibited activity is one such measure that could be applied to both dimensions of the challenge. Another possibility, one that also serves the Article X requirement for states parties to promote cooperation and assistance, might focus on international collaboration on biological terrorist issues. Such collaboration might be as limited as sharing information on lessons learned from exercises. Additionally, it might extend to direct cooperation in which those states parties that have done more in the area of biological terrorism preparedness and response assist other states parties whose capabilities in those areas are more limited.

Such collaboration would have to be done on a voluntary basis. There are obviously areas related to counter-terrorism, including preparedness efforts, that are highly sensitive and for which sharing with others would not be appropriate. But the events of September 11 should have led all states parties to recognize that anyone could be the object of biological terrorism and that the threat extends to everyone. In such a situation, one could assume that some states parties will be looking for help in addressing that threat. Providing assistance under Article X of the BWC would be one means of meeting their needs.

A second possible measure that could be explored for its value in addressing the convergence of state BW proliferation and bioterrorism relates to investigations. The proposed U.S. package included a proposal for a mechanism to investigate suspicious outbreaks of disease or alleged biological weapons use. The prospect of developing a mechanism for investigating facilities that may be suspected of conducting activities prohibited by the convention should also be considered. While this is certain to be a controversial suggestion, including within the U.S. government, the possibility of a limited measure to this effect should be explored.

The historical example of the Sverdlovsk anthrax outbreak suggests some of the reasons why. Even if the additional measures the United States proposed had been in place in 1979, they would have afforded only the opportunity for the investigation to go to the gates of the facility that was thought to be the source of the release. No mechanism would exist for allowing access to the facility. Without such access, the result of any investigation at Sverdlovsk would still have been unanswered questions, continuing allegations and denials, and, in political terms, insufficient grounds for mobilizing an international response to a potentially serious treaty violation. This could also be the result of investigations conducted under the new U.S. proposals if there is no ability to get inside suspect facilities.

The proposal offered here is analogous to the challenge inspection provision of the CWC, an extraordinary measure that would be used only when strong evidence exists of a serious violation. It is not in any way an endorsement of the elaborate, and unhelpful, facility declaration and visits system detailed in the draft protocol. Rather, what is

needed is a more limited, stand-alone capability that would allow some means for seeing what is going on inside facilities about which serious suspicions have been raised. The measure is offered in the full realization that even getting inside a facility will not necessarily yield a smoking gun.

It may be that the techniques are not yet available to allow for a meaningful facility investigation that can also protect unrelated national security or proprietary business information. Certainly, there was considerable debate during the protocol negotiations over differing interpretations of the results of various on-site trial activities. It would be unfortunate, however, if consideration of the possibility of doing facility investigations stopped completely because it was deemed “too hard” or “too dangerous.” One need not commit now to the realization of such a measure, but as monitoring technology continues to evolve, including technology based on advancing life sciences, exploring further what procedures might be helpful could prove to be a worthwhile effort.

Coming to Grips with Advancing Science and Technology

In its proposal package, the United States called for better oversight of genetic engineering on the grounds that certain experiments involving the cutting and splicing of genetic material could have dramatic and unexpected consequences with relevance for biological weapons. However, it is not just genetic manipulation that creates potential and unexpected risks, but the combination of better understanding of life at the molecular level with other scientific advances, including nanotechnology, materials science, and bioinformatics. BWC states parties might consider, therefore, whether there is anything in these combinations of scientific activities that could also create sufficient risks to warrant greater oversight and reporting. BWC states parties, therefore, could convene a working group of scientific experts charged with identifying combinations of scientific activity that could create serious potential threats. The panel could also elaborate what kind of national oversight of such activities would be appropriate.

A further dimension of advancing life sciences and technology that will have important implications for the evolution of the biological weapons threat is their growing global dissemination. Indeed, the way in which science and technology is developed, produced, and disseminated on a global basis has changed significantly in the years since the BWC entered into force. Much of the material is dual use; the private sector is responsible for most of the advances; knowledge and capability will only become increasingly dispersed around the world as biology and biotechnology are applied to more aspects of life.

States parties to the BWC should try in general to identify ways to ensure that this global diffusion of science and technology does not result in a more serious BW threat and, in particular, to ascertain ways to bolster Article III of the BWC which prohibits transfers of biological weapons and related-materials. The draft protocol included a provision that created a consultation mechanism whereby one state’s concern that an unauthorized, inappropriate, or prohibited transfer has occurred could be raised with the state party that made the transfer. Although it is an excellent idea, such a provision would have no

chance of being adopted in light of the contentious dispute about export controls that plagued the Ad Hoc Group negotiations.

The continuing debate, however, may provide an opportunity for an evaluation of long-term management of the diffusion of biological-related science and technology. This is not a call to abandon the Australia Group whose activities will remain important for the foreseeable future. Rather, it is a plea to recognize that the new environment within which the biological weapons problem must be addressed will include a rapidly changing scientific and technological global landscape.

Fostering Better Appreciation of the Need for a New Conceptual and Policy Environment

The confidence building measures (CBMs) agreed at the 1986 and 1991 Review Conferences will remain on the books. These voluntary measures ask states parties to provide information regarding biological-related activities, including past offensive BW programs, current biological defense activities and facilities at which that work is being conducted, unusual outbreaks of disease (to be reported to the World Health Organization), and facilities involved in human vaccine production, among others. It might be helpful for BWC states parties to take another look at the CBMs to determine whether they can contribute to the creation of the new broader conceptual and political approach discussed earlier, either in their current or in an adapted form.

Some people might argue that any attempt to return to the CBMs would be a waste of time. Because the measures are deemed politically rather than legally binding, only a relatively small number of countries provided the information called for in the CBMs even once, let alone annually. Although the number of states parties participating in the CBMs steadily increased, the generally poor performance suggests that, left to their own devices, states parties are unlikely to participate more than they have in the past.

The point, of course, is that states parties should not be left to their own devices. Some of the CBMs could be replaced by elements of the new U.S. proposal. But other CBMs will remain as part of the BWC regime, and they should not just be abandoned. Rather, they should be considered for what they might contribute to the new conceptual framework. If they are deemed to be of some value, they should not be dropped.