

Privileged

CISAC Working Group on Biological Weapons Control  
National Academy of Sciences  
Washington, D.C.  
December 16, 1988

Summary Minutes

A meeting of the Committee on International Security and Arms Control Working Group on Biological Weapons Control took place in Washington on December 16, 1988 at 12:00 p.m. Present were: Joshua Lederberg, chairman; Robert Chanock, Thomas Monath, Alexis Shelokov, John Steinbruner and Lynn Rusten.

Lederberg began the meeting by reviewing the May 1988 meeting on biological weapons control with a Soviet counterpart group and the ensuing proposal from the President of the Soviet Academy for these groups to establish small working groups to work more intensively on the problem. Lederberg reiterated that this group was private and not sponsored by the government in any way, although it will keep the government informed of its activities. He speculated that CW and BW would be high on the priority list of the incoming administration, but said that it would be important to keep the two issues separate because they are substantively different and because a CW Treaty is under active and intensive negotiation, while the issue with BW is to ensure that the existing Convention is honored and remains in force.

Lederberg said that verification of the Biological Weapons Convention (BWC) required self-inspection on both sides. He said getting Soviet scientists involved in discussions was useful for this, and may in fact be the most useful result of the bilateral inter-Academy dialogue.

Lederberg said he hoped today's meeting would result in an agenda and meeting dates to propose to the Soviets for the next bilateral working group meeting, writing assignments for the American delegation, and a schedule of preparatory meetings. He suggested that the bilateral working group meetings take place in Europe unless there is a reason to go to the USSR or the US, such as a site visit.

Monath asked what sites besides USAMRIID the Soviets were concerned about. Lederberg said he did not know for sure, but probably contract work and Dugway.

Steinbruner agreed it would be useful to have a bilateral meeting in a neutral site before having a meeting in the USSR.

Regarding meeting dates, it was agreed to propose to the Soviets that the bilateral working group meeting take place in

London on April 1-2, 1989. An alternate date would be March 25-26.

American preparatory meetings will be on February 7 in Washington, and March 3 in New York. (An alternate for the March 3 date is February 27 in Washington).

Lederberg said it would be useful to get technical people focusing on questions with mixed technical content. He said it would be useful to have someone write a paper on marginal activities and how to further delineate them. For instance, how to give a quantifiable definition to the concept of research for peaceful use.

Steinbruner agreed it would be useful to raise the question of what is the understanding on both sides about what is permitted by the BWC, and then perhaps to advance for discussion a set of rules about what is permitted. Lederberg agreed and asked Steinbruner to take the first crack at drafting the paper. He suggested Steinbruner talk to Bob Mikulak at ACDA about the current understanding of the definition of compliance.

Shelokov said it would be useful to prepare a glossary of key terms to be discussed with the Soviets to anticipate and clarify ambiguities which arise from translation and differences in terminology. He volunteered to begin to prepare the list and work on it further with Rusten.

Lederberg recalled that in the early CISAC meetings in the early 1980's, the Soviets did not want to discuss BW issues at all, but now their position had evolved to the point where they agree that the Treaty regime could use strengthening. In 1987 and 1988 they participated in exchanges of information designed as a confidence building measure for the Convention. Lederberg noted that the Soviets listed more facilities than required, and that their disclosures contained some surprises.

Monath suggested that reporting in the future should include animal diseases. He said people in the USDA study the natural introduction of these agents, such as Foot and Mouth disease and rinderpest. Chanock said Plum Island was where these agents are studied.

Lederberg said there could be an agreement to exchange samples of the strains when there is an epidemic and to cooperate in identifying the origins of the outbreak. Steinbruner said this could be in the list of suggested obligations. Lederberg said an agreement could provide for international investigation of the virus, however, its origin could still be covered up. Steinbruner said it would be helpful to establish rules for reporting outbreaks and disclosing samples. Monath agreed this would be a useful confidence building measure.

Lederberg said the recent Soviet agreement to exchange epidemiological data demonstrated an important change in the Soviet attitude, which formerly was that public health incidents were not a matter for international discussion.

Lederberg volunteered to write a paper summarizing what measures the experts agreed to in this regard and outlining further measures to include registering and making available strains involved in outbreaks, including animal outbreaks.

Lederberg asked what the US currently does about reporting animal outbreaks? Monath said there are reporting procedures and documentation, and he offered to check out what is routinely available.

Steinbruner asked if such reporting should be extended to plants. Monath said he thought yes, and that we eventually should include someone from the Department of Agriculture Animal and Plant Inspection Agency in Beltsville.

Monath raised the issue of whether a clarification about genetic engineering would be useful. Lederberg said the question has been looked at, and it was decided that an organism is an organism, even if genetically engineered. However, the range of opportunities for use is extended. Monath said Article I of the BWC does not appear to include a gene not in a living agent. Lederberg said the inclusion of toxins raises some troublesome definitional issues. He said there was the problem of synthetic copies and derivatives of naturally occurring toxins. Lederberg agreed to write something up on the need to clarify what is and is not permitted. He said this may become moot if a CW Treaty is completed.

Lederberg said there was a need for a paper on distinguishing defensive from offensive R&D. Chanock volunteered to write it. Lederberg said one determinant was secrecy. Monath suggested another critical element was volume, scale and weaponization.

Lederberg said this paper may end up being more for domestic analysis than for discussion with the Soviets, but that it is useful to think about. He said the BW defense program is difficult to distinguish from the groundwork for offensive development.

Steinbruner said one doesn't need a threat to justify the research for knowledge and to be able to deal with a future threat, and that this viewpoint has not been well articulated.

Lederberg said he wanted to focus on the issue of what aspect of the research has to be done by the Army that is troop specific, that could not be done by the broader health service. He noted one confidence-building measure proposed was to reduce the amount of research done by the military.

Chanock responded that diseases to which the military might be exposed that are not a problem for the US should be researched by the military. Monath added that it was necessary to protect military personnel at overseas installations in peacetime and to be prepared to protect military personnel everywhere in the world in the event of wartime operations. He noted that the Public Health Service has not paid much attention to these requirements. Monath added that military medicine has had important public health spin-offs.

Steinbruner said one does not need an absence of military research, but that one could put the research in a public health setting.

Lederberg asked Chanock to discuss all this in his paper.

Steinbruner said two issues seemed to be emerging: 1) openness about the research conducted; and 2) controls on producing things in large numbers. Lederberg said supposing it was agreed not to stock large quantities of virulent strains, how could that be verified? Steinbruner suggested requiring disclosure of large fermentation tanks.

Chanock said labs had to report for safe practices purposes, so some reporting is already done internally. He said the most important information is the amount of live virus available at any one time. Lederberg asked whether one would also want to know production capability.

Monath noted that there are not that many BL-3 and BL-4 facilities. Steinbruner said one could begin with disclosures and exchanges of information on these facilities.

Lederberg said the information could be more quantitative and there could be inspection produces or further disclosures if the quantities exceed a specified amount.

Monath said toxicity and dose seemed important. Lederberg said the level of containment was not the only determinant. In fact, he said the ideal BW agent spreads slowly so that it can be controlled, which means not necessarily the BL 4 level kind of agents.

Steinbruner asked about monitoring production facilities. Lederberg pointed to the relative ease of conversion.

Monath said one confidence building measure to help differentiate between offensive and defensive research would be to disclose which agents are being worked on at military facilities.

Steinbruner asked what was the objection to full disclosure. Lederberg said there was some concern about disclosing what we are not doing. He said recombinant research could change all this because it gives unlimited opportunity to design novel agents against which vaccines could not work.

Steinbruner suggested we could take the risk with a policy of full disclosure to encourage the Soviets to match it. He said they know pretty much what we are doing, so we have more to gain from the initial exchange. It's a small risk at the margin.

Lederberg raised the question of how significant is BW in the overall strategic picture as between the superpowers, in contrast to third parties. We don't invest that much in BW defense. He asked Monath to write a paper on the costs and benefits of full disclosure of research conducted under military auspices.

The group then received a briefing from Lt. Col. Frank Cox of The Joint Staff. Cox said he had been a chemical officer with the Army for twenty years and was now assigned to The Joint Staff. He said the next BWC Review Conference, scheduled for September 1991, is currently a back-burner issue. This is due in part to the fact that it is the responsibility of the same people who are responsible for the Chemical Weapons Treaty negotiations, which is their first priority.

Cox said the main thing to come out of the October 1986 Review Conference was the Soviet disclosure about the Sverdlovsk incident and discussion of verification issues which resulted in the ad hoc meeting of technical experts in April 1987. Cox said the US disclosed information about its BW defense research centers. He said the US wants greater transparency to ensure we understand what the Soviets are doing.

Cox said there is a Conference on Disarmament working group (called the Western Group) made up of NATO countries, Canada, and a few other Western countries which meets occasionally to discuss position papers. He said given President-elect Bush's personal concern with CW and BW issues, they were anticipating political movement in these areas.

Cox said the CW negotiations at the moment are hung up on on-site inspection at declared sites and challenge inspections. He said for challenge inspections, they are trying to develop a list of criteria to describe facilities which will not be subject to challenge inspection. He said confidence building measures, stockpile verification and verification at manufacturing facilities are all under discussion. Cox said the intention is to consider applying all of these verification procedures and confidence building measures to the BWC eventually.

Cox noted that the Army decided not to go forward with construction of a level 4 facility at Dugway, and will keep it at level 3. He said the fact that strong public opinion still exists in this country is important to convey to the Soviets.

Cox referred to Congressman Owen's (Utah) bill in the last Congress calling for all non-classified research to be moved

from DoD to NIH. Lederberg ask Monath to include in his paper a discussion of the pros and cons of such a move.

Lederberg asked Cox if he could find out: 1) whether there were any understandings about the levels permissible for defensive research; 2) the toxin provision--where does that blend over into being a chemical? Is a synthetic polypeptide modeled on a toxin a toxin or a chemical? 3) provide an updated list of BWC signatories and unilateral declarations, etc. Cox said he would get this information. He left the meeting.

Monath raised the question of what is the depth of knowledge one could gain from an inspection.

Lederberg said we needed a paper on that topic: What can be gained from an inspection? What can be learned? He asked Shelokov to write it. Lederberg said one answer is that production capability can be seen. He asked whether it could be concealed. He asked what to do about the problem of dealing with high bio hazards. Lederberg said it would be useful to form groundrules for a visit such as providing prior information on layout, declaration of what's there, etc.

Regarding exchanges of people as a confidence building measure, Rusten said a few words about exchange programs between the NAS and the Soviet Academy of Sciences and between the Institute of Medicine and the Soviet Academy of Medical Sciences which could facilitate exchanges of individual biomedical scientists and perhaps facilitate scientific workshops. Monath noted that the CDC has proposed an exchange of scientists between Ft. Detrick and Soviet institutions, but that a decision on this has not been reached.

Lederberg asked Rusten to find out what the NAS has done about advertising opportunities in the Soviet Union for American post-docs and to be sure to inform Ivanov of what has been done in this regard.

Regarding proliferation, Steidbruner observed that US-Soviet cooperation on this issue reduced the maneuvering room for third parties. He said there were precedents in other areas that could be applied to the BWC regime. He suggested that perhaps this was an issue Alisa Harris (a Fellow at the Brookings Institution who could be brought on as a consultant) could write on in the future. However, he said it might be best to first advance our bilateral efforts and defer the proliferation discussion to a future meeting. Lederberg said the Soviets were concerned about proliferation and that it would be useful to think about kinds of sanctions for enforcement of an international regime.

It was agreed that Rusten would draft a telex to the Soviets suggesting date and venue for the next meeting and informing them of our delegation and the topics on which we expect to prepare papers.

The meeting adjourned at 5:00 p.m.