



THE SALK INSTITUTE

POST OFFICE BOX 1809, SAN DIEGO, CALIFORNIA 92112 714: 453-4100

Joseph Elliott Slater  
President

25 August 1969

Dr. Henry A. Kissinger  
Assistant to the President  
for National Security Affairs  
The White House  
1600 Pennsylvania Avenue  
Washington, D. C. 20050

Dear Henry:

On Friday, July 25, The Salk Institute and the American Academy of Arts and Sciences cosponsored a day-long meeting at the Academy House on chemical and biological warfare. The 29 participants included biologists, chemists, international lawyers, political scientists, physicists and disarmament experts, most of whom are well known to you. (see attached list)

The meeting was an unusually good one and brought out a number of facts, ideas and arguments that should be carefully weighed in re-examining national policy in this area. I list below some of these without any sense of advocacy at this point.

The evidence presented on the extent of use of "non-lethal" gas (CS) in Vietnam and the role it is playing in increasing casualties there indicated quite strongly that this initiative is opening up a new dimension of ground warfare.

Despite the present advantage that this is giving us, the long range view suggests that this may be temporary. Because chemical weapons are as readily produced as most ordinary ordnance, we can expect them to be used against us in future land engagements if these occur. Since in most circumstances, our forces would be more concentrated than those of the other side, the advantage may be reversed.

The widespread use of CS in Vietnam has brought gas masks into nearly routine use on both sides. This and the attendant growth of the capacity to use gas lowers the psychological barriers to the

use of lethal gases or more severely harassing gases that can in some circumstances be lethal. Indeed an opposing force could claim that our use of gas has, in effect, been lethal and justified thereby their own use of lethal gases. However, the group saw no difficulty in continuing the use of tear gas in domestic situations.

A large part of the meeting was devoted to the various options that face this country if the ratification of the 1925 Geneva Protocol on Chemical and Biological Weapons is again introduced to the Senate Agenda. The protocol as you know, has been ratified by 69 nations including members of NATO, the Warsaw Pact, Communist China and all of the major industrial powers except Japan and the United States. The group felt that the possibility that this Country might seek to ratify the protocol with the reservation that it did not apply to non-lethal gases, such as those that have already been used in Vietnam, warrants a careful, dispassionate study in public and private.

At the meeting, it was pointed out that when this technicality was discussed at the Geneva Disarmament Conference in 1930, a number of countries (Great Britain, France, Canada, Italy, Turkey, Rumania, Czechoslovakia, Spain, the USSR and China) went on record to state that the use of non-lethal gas was indeed prohibited by the terms of the protocol.

The group was somewhat troubled by the degree of slippage that seems to have occurred in our interpretation of the tear gas option (such as CS) since we began to use these agents in Vietnam. On March 24, 1965, Dean Rusk stated that we would use such agents "only in those situations involving riot control or situations analogous to riot control".

At the same time, as the group learned, materials such as CS have been modified in such a way as to make them last longer in combat and thereafter. Some of these modifications have been formulated in such a way that, unlike ordinary tear gas, their primary effect is on the lungs rather than the upper respiratory tract. Therefore, the arguments that supported their earlier use may no longer apply.

The group was concerned that ratification of the protocol with the non-lethal gas reservation would open the door to large scale experimentation with non-lethal gases, not only by our own country but also other countries who have felt restrained by the protocol in the past. The participants wondered whether the risks and costs of proliferation and escalation of these non-lethal agents and their modifications are worth the reservation.

On this point, some participants observed that at the conclusion of the Vietnam war, the government might be in a good position to state that we are no longer considering the use of non-lethal agents in military situations and then proceed toward the ratification of the protocol. Alternatively, the participants agreed, it would be a simple matter to cease their use in Vietnam now with no outward statement of policy change.

Whatever stance this country takes vis-a-vis the protocol, it might be emphasized that it prohibits first use of chemical and biological weapons which would interfere in no way with our developing, if it seemed necessary, an adequate chemical and biological warfare capability to meet the threats of others.

As for lethal chemical weapons, those at the meeting, after a wide ranging discussion of various options, recognized that a limited chemical deterrent in Europe in the face of a Soviet stockpile of such weapons might appear to be reasonable at this time.

As for biological weapons, lethal and non-lethal, the group judged that the need for a capability in biological weapons is probably minimized by the uncertainties involved in developing, delivering, detecting and protecting against such agents. Biological agents were seen to add nothing to our nuclear deterrent, unlike chemical deterrents, which might represent an acceptable middle ground in future land wars. The participants in the Massachusetts meeting were also very interested in a proposal by former UN Ambassador James Wiggins, who suggested that it might be worthwhile for many reasons, for the United States to announce a unilateral ban on the use, manufacture, stockpiling, and research of biological weapons, reserving for ourselves the option to retaliate with any other means if we were subjected to biological attack by some other nation.

It also was agreed at the meeting that the United States should take adequate time to evaluate its role as a participant in other international efforts toward the control of chemical and biological weapons now under way. These include new efforts in the UN following the lengthy report on chemical and biological weapons prepared by an international team of experts at U Thant's request and Great Britain's recent submission to the Geneva Disarmament Committee on banning biological weapons. Both may open many interesting avenues for careful exploration.

In discussing the forthcoming National Security Council study on chemical and biological warfare requested by President Nixon, the group felt that there were several important options and points of argument that call for a very comprehensive study and debate before the administration publicly announces its position on chemical and biological weapons. To assist this necessary public education process, the meeting participants suggest the formation of a private or public commission on chemical and biological warfare with the implication that it might somehow feed its own expertise into the government's considerations. Many of those who attended the meeting could certainly help form and/or man such a commission.

Potentially troublesome areas that might be analyzed comprehensively by the commission, in conjunction with the government's own studies include: present U.S. policy toward ratification of the Geneva Protocol on chemical and biological weapons; a probing study of the use of non-lethal gases in military and non-military situations, proliferation of lethal or non-lethal chemical and biological weapons, a discussion for the need of a chemical deterrent in Europe and other international efforts aimed at control of chemical and biological weapons.

In closing, I would point out that the meeting was a coherent discussion of the chemical and biological warfare area by extremely knowledgeable men who desire to help in this area. To the extent that they can assist the government in its own weighty deliberations, I, on behalf of the group, offer any assistance that might be useful, whether it be through the commission I described or some type of ongoing consultive group.

Meanwhile, I am attaching a copy of Dr. Meselson's recent testimony to the Senate Foreign Relations Committee, which appears to be a very lucid presentation on the subject. The transcript of our meeting will follow soon.

If you have any questions on this letter or on the July 25 meeting, please let me know.

Warm personal regards.

Cordially,

J. E. Slater

Enclosures

AMERICAN ACADEMY OF ARTS AND SCIENCES

Salk Institute-American Academy Conference on  
Chemical and Biological Warfare

House of the Academy

Friday, July 25, 1969

List of Participants

Co-chairmen

Dr. Paul Doty  
Mallinckrodt Professor of Biochemistry  
Harvard University  
7 Linden Street  
Cambridge, Massachusetts 02138

Dr. Matthew S. Meselson  
Professor of Biology  
Biological Laboratories  
Harvard University  
Cambridge, Massachusetts 02138

Mr. William Bader  
Program Officer  
European and International Affairs  
Ford Foundation  
320 East 43rd Street  
New York, New York 10017

Dr. Lincoln Bloomfield  
Professor of Political Science  
Massachusetts Institute of Technology  
Room E53-435  
Cambridge, Massachusetts 02139

Dr. George Bunn  
Visiting Professor of Law  
Law School  
University of Wisconsin  
Madison, Wisconsin 53706

Dr. John S. Dahler  
Professor of Chemical Engineering  
University of Minnesota  
Minneapolis, Minnesota 55455

Professor John Edsall  
Professor of Biological Chemistry  
Biological Laboratories  
Harvard University  
16 Divinity Avenue  
Cambridge, Massachusetts 02138

Dr. Bernard Feld  
Professor of Physics  
Massachusetts Institute of Technology  
Room 26-425  
Cambridge, Massachusetts 02139

Dr. Arthur William Galston  
Department of Biology  
Yale University  
New Haven, Connecticut 06520

Mr. Irwin Gubman  
Office of the General Counsel  
Arms Control and Disarmament Agency  
Room 5643 N S  
Department of State Building  
2201 C Street  
Washington, D. C. 20451

Mr. Michael Guhin  
National Security Council  
The White House  
1600 Pennsylvania Avenue  
Washington, D. C. 20506

Mr. John F. Henahan  
Senior Programs Officer  
The Salk Institute  
P.O. Box 1809  
San Diego, California 92112

Dr. Eugene Patrick Kennedy  
Hamilton Kuhn Professor of  
Biological Chemistry  
Harvard Medical School  
25 Shattuck Street  
Boston, Massachusetts 02115

Dr. Salvador Luria  
Sedgwick Professor of Biology  
Massachusetts Institute of Technology  
Room 56-423  
Cambridge, Massachusetts 02139

Professor Frank C. Newman  
Professor of Law  
University of California, Berkeley  
53 Acacia Drive  
Orinda, California

Dr. Alexander Rich  
Department of Biology  
Massachusetts Institute of Technology  
Cambridge, Massachusetts 02139

Dr. Herbert Scoville, Jr.  
Brookings Institution  
Room 534  
1775 Massachusetts Avenue, N.W.  
Washington, D. C. 20036

Mr. Joseph E. Slater  
President  
The Salk Institute  
P. O. Box 1809  
San Diego, California 92112

Professor Louis Bruno Sohn  
Bemis Professor of International Law  
Harvard University  
866 United Nations Plaza  
New York, New York 10017

Mr. Han Swyter  
4600 South Four Mile Run Drive  
Arlington, Virginia 22204

Dr. James D. Watson  
Professor of Biology  
Harvard University  
Cold Spring Harbor Laboratory for  
Quantitative Biology  
Cold Spring Harbor, New York 11724

Dr. Martin Weigert  
The Salk Institute  
P. O. Box 1809  
San Diego, Calif. 92112

The Honorable James Russell Wiggins  
Former United States Representative to the United Nations  
Sedgwick, Maine 04676

Mr. John Voss  
Executive Officer  
American Academy

Mrs. Thomas Oleson  
American Academy