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Department of Genetics

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Dear Mr. Neild:

Thank you for your letter of April 15.

I should have been more precise, and in the future will attempt to be, in defining what I meant by proposing a "chemical non-proliferation treaty." Basically I was trying to carve out segments of potential mischief that nevertheless were not too severely complicated by problems of verification. The mischief I had in mind was the dissemination of CW capability from capable to other powers, i.e. a chemical arms trade. Apart from the strategic and political implications of such dissemination, it also constitutes a technique of operational testing that would then focus irresistible interest in such weaponry. Consider Spain in 1936 with reference to tactical air power!

The other aspect of proliferation, the independent development CW capability by countries which do not now have it, would be subject to the same uncertainties of verification that would apply to a general CW ban. I agree that there would be little merit in seeking that kind of step.

Even with respect to non-dissemination I agree that this is unlikely to be developed in response to any unilateral suggestions from the larger powers.

On pages 107 to 108 distinguish the interest in verification on the part of nuclear and smaller powers. This may be the focus of any important disagreement in our points of view. The U.S. is involved (in contrast to Sweden's independent line) in circum-global security arrangements. The needs of the U.S. as a nuclear power and of others allied to it are not so readily distinguished. Of course I cannot insist on my speculations about possible future courses of nuclear politics. The progressive encapsulation of nuclear power is one of several possibilities -- perhaps one of the most optimistic. But we clearly have emerged a considerable distance away from the doctrine of massive retaliation upon which your own reasoning evidently relies.

All of the factors indicated at 2A of your letter are pertinent to the potential outcome. Many people have argued for removal of U.S. troops from Europe and reliance instead on airlift for prompt response in support of European defense. The possibility of such developments is related to the confidence that a one or two day delay will not be critical. Thus the evaluation of NATO may be profoundly influenced by the credibility of a unilateral Soviet chemical threat. This in turn would have important reverberations for a long-term development of independent

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German military capability. Unverifiable chemical disarmament may then end up giving us less rather than greater stability.

What I meant by a "loose" CW agreement was one along the lines of the Soviet block proposals during the last two years. On the other hand, no approach seems more promising than one based on "inspection by challenge" or what might be called negotiated verification. However, this may require a flexibility of approach beyond what can be accomplished in a straight forward way by a formal treaty. Perhaps we could make strong headway in that direction by negotiating a non-dissemination treaty that also included provisions for setting up elective machinery leading to "inspection by challenge" by informal agreement.

You ask about applying these principles to BW. Nothing in this area can be regarded as entirely reassuring or satisfactory! However, BW not yet having been tested to any significant degree its military utility is far more dubious and there is correspondingly less incentive to risk a clandestine development. Also, for obvious reasons it will be more difficult to test BW, at least that directed against man, in any very realistic way. In contrast to CW and other weapons it is not feasible to make simple physical extrapolations on the efficacy of a BW from measurements in test situations or on experimental animals. However, the main justification for the separate BW treaty is that it is the best that can be negotiated, that it is subject to a certain kind of inspection via the international health community, and that it may lay the basis for more congenial mutual confidence in this field in the future. But I believe most of these arguments have been developed and amplified by your own group.

My remark about a loose agreement making it difficult to accomplish a meaningful one means simply this: if the Soviet Union had been able to secure an unverified ban they would have had an unilateral advantage (in practice) from which they would be most unlikely to retreat in the future. I do not suggest that they would intend to proceed with clandestine violations. But, given the facts of their social system, they could look forward to a freedom of action that is not available to the democratic countries.

I am surprised that you have received little feedback from your publications. They have already had a considerable influence and this will increase when they are definitively published. They have been quoted often in the Proceedings of the Conference of the Committee on Disarmament and they cannot but have had an important influence on the thinking of the diplomats there.

One of my most urgent concerns is that CW may be adopted by guerilla groups, in this country and elsewhere, as more and more attention is given to them. This merely leads me to suggest some discretion in the advertisement of technical details, for example about nerve gas or some biologicals, except where this is really pertinent to the political discussion. In particular, while one cannot avoid a discussion of the binary concept, I would certainly hesitate to broadcast enough detail about it to encourage an amateur to try his hand at making a safe home-made weapon. Needless to say this is also a very strong argument against the escalation of military experiments in this field!

Sincerely yours,

Joshua Lederberg
Professor of Genetics

If it is the former, then I agree with you that assumptions can be made about the unuseability of nuclear weapons such that they cannot be counted on to deter in any degree an attack with conventional or CBW weapons. In that event, one-sided possession of CW could plainly have an effect upon the balance of strength - though how great an effect is a matter of debate. The important point to note is that the assumption is a very strong one, that it contradicts all those Western propositions about compensating for conventional weakness with nuclear weapons, whether by means of massive response, flexible response, or any other kind of response. This is not to say that the assumption should be ignored. Strong assumptions are often the most interesting ones. But I think one has to consider the radical implications it has for strategy and also what are the political premises beneath it. My hunch is that the difficulties of maintaining compulsory military service in the West may limit conventional manpower and so push strategy towards heavier dependence on weapons of mass destruction, including nuclear weapons. But this shift in military "economics" could always be offset by an increasing political feeling that nuclear weapons are unacceptable. But in that event one is postulating a shift in political attitudes to nuclear weapons. There have of course been swings in nuclear doctrine, but if there were to be an enduring shift in the direction you suggest, it would be a development of major importance. One would have to ask what it was that made use of nuclear weapons become more unacceptable - nuclear parity, the huge overkill, the problems of controlling use, internal political developments, détente, the threat of proliferation. There is a huge variety of factors that may come into play singly or in combination with one another, and one must think out which of them matter so that one can consider whether, and how, they impinge on the general disarmament picture or on chemical disarmament in particular. Some would make chemical disarmament more difficult, others not, and so on.

The military aspects will be discussed in more detail in Volume II which has yet to be prepared. We have had many discussions of them and have found it an extremely difficult game. There is so little experience to go on that one has to build strategic castles in the air.

I disagree with you rather strongly in your suggestion that there should be a chemical non-proliferation treaty. The nuclear non-proliferation treaty has been a very uncertain benefit so far and it has certainly provoked resentment amongst non-nuclear countries who regard it as an instrument of discrimination, imperialism, and so on. If the strong powers were again to propose a discriminatory treaty of this kind, I think it could be counter-productive, the more so since the use of CW, as we emphasize, has usually been "downhill", i.e. by a strong country against a weak one, as in Ethiopia or Vietnam. (Similarly, the Swedes would not, I think, take at all kindly to the idea that the superpowers should keep a careful bilateral balance in

(unlimited risk of starting nuclear escalation)
 2A inhibits this case except for
 the most careful intentions!