The Dilemma of Curbing Chemical Warfare

"Now, repeat after me: 'I am your master; you are my slave.'"

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CHEMICAL WARFARE: Arms Control problems

By Joshua Lederberg

Professor of genetics at Stanford University, Lederberg has had a longstanding interest in the control of chemical and biological warfare. He was a member of the consultants' panel of the World Health Organization whose report was instrumental in establishing new initiatives for such controls.

PRESIDENT NIXON'S resubmission of the Geneva protocol for Senate ratification will help clean up some unfinished business, mainly as an indispensable step for more comprehensive agreements to delimit chemical warfare.

Chemical weapons (CW) should not be confused with biologicals (BW), which pose a threat to mankind by contagion. They are not to be compared with nuclear armaments in their potential destructiveness, nor in their role in ultimate strategy. They are the subject of universal revulsion, perhaps because they are unfamiliar and invisible, and reduce evil to its elemental form. They ought to be condemned under law in part as a response to this general emotion.

A more compelling rational argument is that world order is far more likely to be approached if no nation has chemical arsenals than if they all do. These are the only realistic alternatives. We could scarcely tolerate a situation where other countries retained a potential for chemical attacks and harassments on us while we had abandoned a like capacity for retaliation and for direct defensive measures.

The Geneva protocol goes only part way, being a contract among its signers to repudiate the first use of chemical or biological warfare. In the version that now prevails, the signatories have reserved the right to use such weapons in retaliation for a like attack.

The right to retaliate has motivated the military interest in chemical weapons by every major power whether a party to the Geneva protocol or not. The Soviet Union, for example, holds that the threat of retaliation implied by the protocol was the main factor that deterred Hitler from using nerve gas in World War II. In fact, the discovery of nerve gas had given the Nazis a unique advantage; why Hitler did not exploit it remains a historical puzzle.

Maj. Frederic Brown in "Chemical Warfare—a Study in Restraints," suggests that faulty intelligence led Hitler to suppose that the Allies had also discovered nerve gas. An apocryphal story has been quoted that an American security clamp on wartime insecticide research supported this conclusion, for the German gas, Tabun, was discovered accidentally during such work. In fact, the American interest was in DDT for the control of typhus and malaria. (Albert Speer's memoirs also quote Hitler as having speculated that the Western allies would "accept" gas warfare against the U.S.S.R., a fantasy that may still color the psychology of present day negotiations.)

The Senate's ratification of the protocol would then formalize adherence to a policy to which the United States has been committed by executive action for some time. In common with many other countries, development work and stockpiling of chemical weapons would have a clear rationale, as a deterrent against the first use of such weapons against us.

In a world of conflict, the only safe presumption would be that adversaries were preparing for such a violation, and the groundwork would be set for a continuous escalation of effort in this direction and the inevitable proliferation of such weapons to every country.

The development of nuclear weapons has drastically altered the complexion of the problem at a strategic level. Nuclear missiles would be a much more credible deterrent than chemicals for retaliation against any major attack on our home population, whether by chemicals or any other weapon of mass destruction. At a tactical level, however, the situation is much more problematical.

The use of mustard gas by Egyptian forces against Yemenite royalists is well documented; the munitions were probably World War II stocks inherited by Communist China. Suppose these had also been used by the Vietcong in Southeast Asia? Would a nuclear response have been appropriate?

A chemical response is not necessarily the best answer either. Nevertheless, the stockpiles of U.S. chemical weapons, which have been so embarrassing to us in other ways, undoubtedly helped to keep us from having to face this dilemma.

Chemical warfare capability is therefore not to be abandoned lightly, and even constitutes one approach to decreasing the likelihood that chemical weapons will be used on a significant scale. It is, however, a precarious safeguard, especially as the technique of chemical war becomes universally available, which is technically and economically much easier than that of nuclear weapons.

Disclosing Secret Weapons

INDEED, MUCH OF THE current research on chemical weapons in the United States, according to congressional testimony, is focused on the problem of safe handling and disposal of chemical agents—precisely the difficulties that would bar a small country or insurgent group from using them today. Such advances in military technology cannot be held secret indefinitely. They have already been disclosed in indiscreet detail in the course of the budget and policy justifications before Congress.

If such disclosures are inevitable, and perhaps they are in a democratic society, they have to be counted as part of the price of developing new weapons systems.

Progress toward international control of CW has been terribly confounded by being entangled with the war in Vietnam, which has brought in three separate but interrelated issues: counterinsurgent intervention, ecological warfare and humanitarian warfare. It would be better if these issues could be decided on their individual merits; it does not make much sense to be outraged about defoliation by chemical herbicides, as if that were a special sin compared to fire and high explosives.

The antiwar movement can get special leverage from the requirement for a two-thirds Senate majority to ratify the Geneva protocol. It may then use the forth-coming debate on the protocol for lengthy and vehement protest about the Vietnam war. The obvious point of attack is the White House's interpretation of the protocol, that it was not intended to cover tear gas or herbicides but only chemicals that would inflict permanent injury or death on human targets.

If the protocol were the last and only word in the development of national and international policy, I would advocate a long, drawn out debate. It is, however, just a step, one so awkward and full of potential embarrassment for the administration that it took months to implement, even after the President had announced his intentions last November.

Clearly, we can go no further in the disarmanent negotiations at Geneva until the protocol has been ratified, and our competitors will defer their own self-interest in reaching new agreements so long as we stew on the subject. The interpretation of the protocol is a quarrelsome subject, but it can be settled through customary routes of international law, or better still through the inclusion of specific understandings and some technical machinery for more precise interpretation, in new treaties under negotiation.

Domestic policy on the use of tear gas and defoliants is properly criticized through congressional debate on military appropriations. These weapons are small matters in relation to the enormity of the war as a whole, but their appearance on the agenda is more than happenstance. We should be dumfounded to be involved in a land war in Asia at all; but having done so, it was inevitable that every effort would be made to substitute American technology for American manpower.

Whether tear gas was intended to be forbidden by the original negotiators of the Geneva protocol cannot be decided today. More important is the question whether it ought to be so regarded today. Tear gas is an important resource for riot control in a democratic country; it is far less vital for the protection of order in a totalitarian regime, whose ability and readiness to use machineguns against its own citizens are not in doubt. Police use it as an alternative to more brutal force that would endanger the lives of its targets.

The argument that tear gas makes warfare more human is contradicted by practical experience. In the hands of combat forces whose own lives are at risk, tear gas simply makes other firepower more efficient; its moral value one way or the other is like replacing a rifle with a machinegun.

The main argument for embracing tear gas under CW is to simplify the definition of forbidden acts, to form a commonly understood firebreak that all parties tacitly understand. "No gas, period," as economist Thomas Schelling has put it, is an easy slogan by which to judge military acts and policies and to maintain a common understanding about a no-first-use policy.

The difficulty is that tear gas will, and ought to, be available for civil use. Linking it with CW has pernicious effects on both sides. Civil disorder may become even more hysterical if protest is contained by weapons forbidden even in war.

Conversely, the use of tear gas in civil disorder and even convict outbreaks, may be taken as ample excuse to trigger retaliation under the Geneva protocol. When a well-meaning senator can "denounce Department of Defense officials for purchasing and maintaining this huge amount of nerve gas for possible use in putting down riots in our country," we see the other side of a "gas is gas" doctrine. Chemical warfare is simply too complicated a subject to be governed by simplistic slogans.

The issue could be minimized if the use of tear gas in Vietnam were simply phased out by executive order as part of a general deflation of that war, without attempting to prejudge the details of a carefully negotiated international agreement.

Lethal Chlorine

THE PROBLEM of definition becomes even more complex in efforts to go beyond the Geneva protocol, namely, to find ways in which the production, stockpiling and general proliferation of CW capability could be controlled. Simplistic definitions will break down immediately if we attempt to use the same criteria to forbid possession and to forbid use of a CW agent.

Besides tear gas, we have the example of chlorine, which was the first lethal chemical weapon to be used in modern war, having been introduced by the Germans, clumsily but effectively, in World War I. Chlorine is of course, an important industrial chemical that is produced and shipped in tank car lots. The use of chlorine gas as a weapon of war would be an indisputable violation of the Geneva protocol. How could we possibly monitor the production and disposition of a chemical so widely used (for example, to sanitize swimming pools) from the standpoint of an international arms control agreement?

Nerve gas, on the other hand, is a real concern for tactical and civil defense planning; this chemical, at least, has no indispensable use in the civilian economy. It can then readily be labeled as the kind of agent that might be forbidden under a CW treaty. But there remains the problem of verification: How can we be sure that other countries have indeed destroyed their own stocks?

The United States would be under a considerable disadvantage, being subject to internal policing by its own Congress and citizens for compliance with this kind of treaty. A further winding down of our investigative and defensive efforts in CW might then incite other countries to make trouble.

The only way that the United States can recruit the rest of the world into a reliable pursuit of a common policy on CW is to demand a high degree of credibility in any common agreements. This may require any of a number of forms of verification, which introduce questions of considerable technicality.

If such agreements can be reached, we may be saved considerable expense on all sides from having to maintain multi-level deterrents against the use of CW. More important, we may escape the suicidal trap of devising the most sophisticated weapons today that will be used against us tomorrow.

Suicidal Revenge

IN THE LONG RUN, CW will give stronger advantages to piracy than to world order. It is a weapon ideal for sabotage and blackmail, for surprise attacks, for starting catalytic wars, for harassing the life of an orderly community, for suicidal revenge, for undiscriminating death and the subtlest brutality. If we develop the technology for the safe handling of CW, it will eventually become available to the destroyers of society.

To such powers, and the anxieties and suspicions they will engender, a chemical deterrent is no answer. We do well to work for a global arrangement that will enable us to stop short of this stage of CW technology.

Viewed as a technical problem, the control of CW calls for agreement on a general framework of scrutiny, within which the measures appropriate to a given class of chemicals could be worked out in detail. The destruction of existing stockpiles, the assessment of new industrial plants, the incorporation of chemicals into munitions, all present intricate problems if they are to be monitored effectively but without intolerable intrusions into a national economy.

For specific classes of chemicals, the difficulties may be surmounted, and it may indeed be wise to accept even such a limited achievement as a basis for further steps in mutual divestment of interest in chemicals for war. A mere statement of principle, lacking means of enforcement, might be even more mischievous than the verbal dedication to "general and complete disarmament" that cloaked a decade of the most intense arms race in the history of the world.

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already labelled, by radical theoreticians, as part of a war of national liberation!