A Treaty Proposal On Germ Warfare

By Joshua Lederberg

(The author is Professor of Genetics at the Stanford University School of Medicine, and a recipient of the Nobel Prize for Medicine in 1958.)

ON SEPT. 19 a distinguished group of my scientific colleagues released the text of a petition to President Johnson concerning U.S. policy on biological and chemical warfare. They point to the encouragement for the wider commitment to these weapons that our own actions in Vietnam might generate.

According to news reports, we are making extensive use of defoliating chemicals not only against forest cover but also against crops purportedly available to the Vietcong. At some times, tear gas has also been used in military and occupation missions.

The United States has vehemently denied the military use of any biological weapons or of any lethal chemical weapons has continued since World War II. The Army has a well-known research facility at Fort Detrick, Md., and a testing station at Dugway, Utah. The aggressiveness with which these activities have been publicized may be laid to intra-service competion for funds to expand a line of work whose actual military utility is highly controversial.

CBR (Chemical, Biological, Radiological Warfare) can easily evoke a highly emotional response, attracting the most vehement emotions on the inhumanity of war. The focus on boycott demonstrations against napalm production shows this; aircraft manufacture or steel production would be far more consequential to the roots of military homicide. The petitioners do not allude to the specific inhumanity of CBR, but it is undoubtedly involved in the stringency of their reactions.

CAN WE be "rational" about the inhumanity of one class of weapons as against another? It is hard to imagine more inhuman methods of homicide than explosion or suffocation in a collapsed building or starvation, the most widely practiced techniques of contemporary warfare. Humanitarian opposition to CBR is altogether irrational, except as it is directed to war itself. It can be argued, however, that man's proclivity to warfare must be contained through his social institutions, and any breakdown of traditional limitations in the way war is practiced is one more step of degradation of the species.

The petition suggests that minor uses of CBR will lead to escalation. However, since tear gas is already rationalized for other social purposes, the lumping of Chemical, Biological and Radiological warfare may be especially confusing, and could exacerbate the chances of escalation. Biological warfare should be carefully set apart, particularly for the initiative in international negotiations, for several reasons:

Its development is closest to medical research, therefore conveys the most intense perversions of the human aims of science.

It is the most dubious of military weapons.

Its effects in field use are most unpredictable, with respect to civilian casualties, and even retroactive on the user.

The large scale deployment of infectious agents is a potential threat against the whole species: mutant forms of viruses could well develop that would spread over the earth's population for a new Black Death. Chemical weapons, however potent, at least do not produce equally or more virulent offspring!

ONE APPROACH to the control of biological warfare should be a nonproliferation treaty. Biological warfare development is within the potential resources of the smallest nations, and the weapons liable to the most irresponsible use. On the other hand, no vital interests of one nation are now committed to biological warfare: the powers can afford to limit their sovereignty in this area.

A nonproliferation treaty in this area could be a constructive precedent for other areas of arms control; the more narrowly it is defined the greater the likelihood of its adoption.

The treaty could dedicate all biological and medical research to human welfare. In this light, no research on living organisms could be classified. M.D.'s and Ph.D.'s in life sciences would be registered and expected to report periodically on their current research activity to an international organization. Ideally, these registrants should have the right of free travel, if necessary, for the purpose of reporting violations of the treaty. Special provisions are needed for proprietary interests, e.g., the drug industry, but with stringent time limits set for confidentiality of its information. A world data center for life sciences would have many human benefits, in addition to centralizing the surveillance of treaty obligations.

The future of the species is very much bound up with the control of these weapons. Their use must be regulated by the most thoughtful reconsideration of U.S. and world policy.