

November 3, 1969

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Dear Professor Schaerf:

Thank you very much for your letter of October 11 and for your kindness in forwarding the materials on CBW to Ambassador Caracciolo. I am sending two additional copies of the materials you requested as well as two copies of the proceedings of the recent Conference on Chemical and Biological Warfare recently sponsored by The American Academy of Arts and Sciences and The Salk Institute.

You may be interested to learn that the employment of one of the herbicides most widely used in Vietnam, 2,4,5-trichlorophenoxy-acetic acid (2,4,5-T), has recently been restricted to unpopulated regions by order of the White House. It has also been prohibited for agricultural use in the U.S. This announcement follows the finding that 2,4,5-T can cause a very high frequency of fetal malformations when orally administered to experimental animals. Concern for its possible effects in Vietnam has been intensified by reports in the Saigon Press of an abnormal incidence of fetal malformations. Some newspapers have claimed that the malformed fetuses are caused by defoliants. Other newspapers contend that the frequency of such deformities is not unusual. Clearly, the newspaper reports themselves cannot establish the facts of the matter; nevertheless, there is considerable concern here. The enclosed clippings give some additional information.

This has made me consider anti-plant warfare much more seriously than I had before. I still see no great objection to the use in war of defoliants along roadsides and around the perimeters of military bases, if only their use could be limited to these purposes. However, what we see now in Vietnam is the defoliation of enormous areas. The total area treated since the beginning of the program in 1962 is approximately 20,000 square kilometers. This is more than ten percent of the entire area of

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South Vietnam. The essential point, I now believe, is that such warfare departs fundamentally from the traditional concept of confining weapons to the immediate locale of the enemy. Such techniques open the door to a whole new concept of warfare that might be called "environmental" or "area" war. There is no doubt that future technological advances will supply the means for making such warfare more efficient. In view of these considerations, I believe it important to establish the principle that the use in war of defoliants over large areas is against international law. Just how the restriction should be phrased so as to be workable is a problem. Perhaps defoliants could be used along roadsides and around military bases if they are not sprayed from the air. Only spraying from airplanes affords a method for covering huge areas.

I would appreciate hearing any comments you might have on the above or on the materials I am sending you under separate cover.

Sincerely yours,

Matthew Meselson

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Encl.