

MacArthur

For Kate Early from Matthew Meselson, 20 May 1990.

COMMENTS ON THE PROPOSAL OF MARK WHEELIS: STRENGTHENING THE BWC THROUGH GLOBAL EPIDEMIOLOGICAL SURVEILLANCE

This proposal has two parts, to which the following comments are separately directed.

A) Development of a proposal for a global epidemiological surveillance program. The idea here is to design and evaluate a system for tracing the origin of pathogens isolated from unusual disease outbreaks suspected to have been caused by clandestine BW. The proposed system would depend on DNA fingerprinting methods. The proposal is reasonable from a technical point of view. Surveillance methods based on DNA sequence are in wide and increasing use in the area of public health, in connection with naturally occurring outbreaks. For tracing clandestine use of BW, DNA methods can be of use to police and intelligence agencies. But I question whether such methods would be taken up by any international organization for purposes of verifying treaty compliance or non-compliance. The UN Secretary General, for example, has the authority to send experts to investigate claims of CBW attack made by member states. Such UN teams have provided highly reliable documentation of the use of mustard gas in the Gulf War. Similarly, inspectors could in principle provide reliable evidence for the presence of a particular pathogen, following a disease outbreak. But the question at issue is the origin of the pathogen. In the mustard gas example, the finding of its presence and of many people with mustard burns was enough to demonstrate hostile use. This was because mustard gas and mustard casualties do not occur naturally. With pathogens in the situations contemplated by Wheelis, the problem is quite different. It becomes necessary to demonstrate not only presence but origin. Considering the complexities and uncertainties involved in proving origin, I do not think that the proposed DNA techniques are likely in practice to be relied upon by an international body. My advice, therefore, is that this part of the project should be funded only if the Foundation wishes to make a contribution to the ability of police and intelligence agencies to trace possible BW agents.

B) An historical and analytical study of past epidemics that have been alleged to be the result of covert BW. So far as I am aware, there is no published study of this nature done with the thoroughness and expertise of which Wheelis appears to be capable. The publication of such a study could help clarify past allegations and suspicions, could set standards for judging such allegations, past and future, and could act as a deterrent both to actual uses and to false or flimsy accusations. Such a study would be of real value for arms control. I do not know Wheelis, but his training, research, writing ability, and reputation make me think that he could prepare an excellent study.