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Professor Matthew Meselson  
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Dear Matthew,

Thank you for your kind permission to send your Anthrax-manuscript to Dr Markkula. I have now sent it to him, together with copies of our correspondens on the matter, as well as some of your earlier material, the Proc. Natl. Acad. Sci. article and the ASA newsletter interview.

In your letter you also invited us to make comments on the manuscript, which I, for my part, am happy to do hoping that they may be of some value for you. As you will see they are mainly results of my curiosity, and perhaps misunderstandings, rather than implying any criticism of your reasoning. In fact, and as I have told you previously, I think you and your co-workers have provided a very elegant analysis of the probable course of events!

I have put my concerns in the following points.

1. On p. 5 you state that human anthrax is not considered contagious, and that there was no evidence of person-to-person transmission. Further down you refer to the official warnings to the population about the risk for consumption of contaminated meat and contact with sick animals. With respect to the distribution of animal cases further along the wind direction you state that there were no human cases but cattle and particularly sheep cases, the latter thus probably being more sensitive than man.

My question, myself being far from knowledgeable about anthrax and its epidemiology, is, if there is a risk for man to get the infection from sick animals (and I am of course not talking about contaminated meat), why should it not be contagious between men? This has not necessarily any bearing on your investigation, unless there had been signs of such transmission, which you say there were not. It might have been nice, though, to get also this information, but since your space was limited, I suppose the choice not to discuss that aspect was easy.

2. As you point out, it seems puzzling that no young people were infected and you refer to an earlier Soviet paper (ref. 31), stating this to be the case also in earlier pulmonary outbreaks in the area.

My question is, whether this fact also refers to the more common food contamination outbreaks?

As I have understood it, pulmonary infections are rather unusual, but if this age distribution is a consequence only of the pulmonary infection it further strengthens that the outbreak related to an aerosol release. For the average reader it might have been useful to have some further information on these conditions. I understand however, that your sources might not have

allowed too detailed conclusions on this aspect, and that you accordingly left the matter as stated.

3. You discuss possible reasons for the fact that there seem to have been no recorded cases from the immediate vicinity of the source of release. You also mention that the military authorities did not take part in the civilian measures to handle the outbreak. Further, I have not been clear on whether the five cases reported from compound 19 were the people from the military reserve class, normally living outside the compound, or if there were five further people residing in Compound 19 that also got infected.

Depending on which is the correct version, the question arises, do you have any indications about the possibility that whatever happened to the personnel actually working with the the release, whatever its nature, or staying in its immediate vicinity, might have been taken care of by the military authorities themselves, and never reported outside the compound? This may have been easier to put to silence, if people were residing in the compound. If there actually were five of the people, reported on the administrative list, other than the five military reserve class, staying and living in the compound, the question, of course, is less relevant.

4. At last a personal question which you might not want to go into or answer by letter, but which I and, I know, many other people have been asking ourselves over the years. What was the reason that you initially seemed willing to accept, apparently bona fide and without possibilities to really check on-site, the Soviet explanation of the event, however plausible, that it was a natural outbreak from contaminated meat?

I can understand that it might have been good, if it really was a natural outbreak, particularly with regard to the value of the BWC. On the other hand, had it not been, and the rest of the world had been lulled into a feeling of - false - security, that might have been really disastrous. Of course, in the aftermath of the disappearance of the Soviet Union the problem has been possible to elucidate to a high degree, even if not completely, and it is to your merit that so has happened.

Another reason - other than curiosity - for my question is that the whole process has illuminated a particular verification aspect, which I think I have mentioned to you before: It should be recognized that it might be possible to find out about violations of this - and other conventions - a long time after that they actually happened, even if security was tight at the time of the violation. Thus, with changing conditions the truth may appear in due - if long - time. This possibility should be held out in verification discussions as an incentive for accepting prompt verification measures on suspicions about violations, and accordingly, also as an incentive not to try to violate at all. Even Dictators may be conscious of their posthumous reputation.

Or, is that thought too naive? If you read Issraelyan's report on Gromyko's reactions at the time of the 1980 BWC review conference (in the SIPRI Scorpion Series no 12 re BWC verification) you must, of course, remain sceptic about any dictatorship conscience! Further, when it comes to secret information I suppose that one never can expect the full truth on a matter from a any type of state in control of its own fate - and that of others. Or, is that too pessimistic?

I hope, indeed, that your tireless efforts shall result in a final and complete clarification of what actually happened, and I wish you all luck in your endeavours! I hope we shall meet again sometime for talks about this and other problems of mutual interest!

My best regards to you and also to Jeanne, who also, perhaps, may be interested in my views.

*Sincerely yours,*

*John*