I thought you might be interested in a few words about the European impression of the polio vaccine problem gathered by Dr. Penso at the recent meeting in Lyons, France of the Virologists Section for Europe. Everyone at Lyons appeared to agree that the vaccine made in Copenhagen, Denmark by the Serum Institute contained so much formaldehyde and was kept in incubation so long that it had very little, if any, antigenicity. It is interesting that the Serum Institute itself was so doubtful about its antigenicity in the face of an absolute decision to produce the stuff and give it to everybody that not a single instance of potency testing was reported to have been done. There are no antibody studies, so far, performed or looked for in any of the children inoculated. As you will recall, the Danish vaccine was given intradermally in two injections, but there is no serologic evidence that any antibodies were produced.

The Swedish experience for two years in a row, on the other hand, has been the other way. They are exceedingly careful workers and they have done potency tests. Interestingly enough, their material was very potent indeed, but on centrifugation and inoculation of aliquots of material representing 3,000 to 5,000 cc. of vaccine, live virus could be demonstrated by one technic or another last year as well as this year, so that no vaccine made in Sweden has as yet been given for this reason. One of the Swedish workers at the Institute here tells me that even in situations where all tissue culture tests were negative and all monkey inoculations failed to cause paralysis -- and this situation occurred this last year in a few lots -- made them think that at least they had gotten a safe product. Histopathologic lesions could still be demonstrated in monkeys sacrificed, especially those who had gotten good antibody response.

This, then, would be very much in line with Dr. Enders' suggestion that if there is good antibody response, live virus -- at least in some amounts -- was present and actual infection has, in fact, taken place. The Swedish workers have, however, not given up hope of this vaccine. It is their feeling that the reason for failure to inactivate virus in the formaldehyde lies in the fact that the virus particles are not actively disbursed even now. If you consider that Dr. Kolmer's vaccine was exceedingly crude compared to this vaccine, from the point of view of virus particle disbursal, this is an interesting observation. It is the hope of the Swedish workers that such disbursal could be affected by physical methods of ultrasonic waves, special shaking devices, etc.
It is interesting that both Sweden and Denmark both solidly are on the side of dead vaccine immunization and will not, at present, consider any other type of immunization. On the other hand, England Ireland are more disposed toward a live vaccine of some sort. Germany has been particularly of interest to me. A number of German scholars here tell me that the West German public was already to distribute polio vaccine made by two German firms. What kept it from being used was the energetic voice of a professor of neurophysiology and neuroanatomy in Hamburg, Germany who, with his wife, was able to find definite lesions in the central nervous system and spinal cord of monkeys inoculated with the vaccine in the absence of any positive findings. He talked just loud enough to prevent the vaccine being used for the present on the basis of lack of safety.

I believe Hilary Koprowski, on his way to Africa, is going to see this man and give a talk at Hamburg. As far as Germany is concerned, of course, no live vaccine experiments are possible where ever, because of the tremendous impart the Nuremberg atrocity trials made on German medicine. I think this is one of the few fields where our trial procedure had any effect since it appears they have not been worth very much in the fields of economics and politics where they quickly gave ground to expediency, and encouraged them to do the same.

As far as Italy is concerned, I believe that this sort of vaccine is not likely to be used for the next year or so unless it is shown to have been made much safer. The people at the Institute who would be responsible for safety testing-as Bethesda was-hope that they never are in as bad a position.

Finally, I am terribly upset by the degree of contempt with which our own scientific method in this whole regrettable experience is greeted by people on the Continent. They feel we did badly with gamma globulin. They feel we did worse with this, and that furthermore that we have gotten them into a tough situation. Suddenly we are regarded as impetuous, incautious, and terribly unscientific in our approach and there is pitifully little one can say in rebuttal.

Two things stand out in recent memory which make me feel that much of Dr. Salk's recent behavior smacks of straightforward dishonesty. One is his insistence that in the presence of antibodies, virus excretion does not occur. This simply is not true and never has been true. It isn't true in polio and it isn't true in herpes simplex where, in the presence of massive amounts of antibodies, active infection repeatedly occurs in people who suffer from chronic infection of herpes simplex flare-ups. In the presence of any amount of antibody, virus excretion does occur, and there is ample evidence to support that, including that gathered by Koprowski quite recently.
Next, the frequent statements by Bodian and Salk that the titers of serum antibodies after three injections of vaccine are higher than that of the natural infection. I don't know how they do their test, but I have yet to speak to anyone actively engaged in this field who has confirmed this finding.

It is interesting enough that Bodian and Salk both relate this particular bit of information, which I believe false to their own children. Both Bodian and Salk say that their own children got more antibodies from their vaccine than they would have had from a natural infection. If their figures are right, it suggests strongly that what they gave their children was unnatural infection.

Lastly, the smoke screen of provocation disease, simultaneous disease, and unrelated disease in the face of such overwhelming evidence for inoculation disease seems to bespeak a lack of candor and plain ordinary honesty which might as well be called that. You have to know Dr. Enders to know how much he hated to go to Washington to be on Dr. Paul's Expert Committee for the U.S. Senate.

In talking to Dr. Weller and him I am perfectly sure that he feels that the Salk vaccine contains live virus if it is antigenic at all, and the straight line of extinction of virus particles which is Dr. Salk's specific contribution to the entire field was false, and according to some of Dr. Salk's laboratory workers was known to be false quite early in the game--at least by them.

Some time next month a number of the Swedish and Danish workers will be coming this way and I shall be interested to hear what they have to say on this subject.

Very good regards,

C. Henry Kempe, M.D.

July 19, 1955--S. F.