

April 11, 1961

Mr. J. P. T. Pearnan  
Space Science Board  
National Academy of Sciences  
2101 Constitution Avenue  
Washington 25, D.C.

Dear Peter:

Mike Villard has passed on his correspondence relative to extraterrestrial intelligent life. I am glad to see this coming along and am in full accord with the substance of Drake's letter of March 13. I would also be delighted to receive an invitation myself.

Mike indicated a desire for suggestions on people and topics. The areas that ought to be well covered are

- (1) The natural radio noise background, and detectivity of artificial signals against this.
- (2) Singularities in the choice of communication frequencies.
- (3) The optimum form of messages.
- (4) What would we send? At what stage of technological development would we make our own efforts with this intention?

In addition to the best talent in radio astronomy, we should also try to see what we can do in radio communication theory, logical linguistics, biology, and game theory. The last may seem odd but Schilling (cf. The Strategy of Conflict) has some telling comments on problems of hindered communication. Freudenthal of Utrecht (recently visiting Professor of Mathematics at Yale) has written a provocative monograph (Lincos - A Language for Cosmic Communication, N. Holland Press) that suggests he would make a worthwhile contributor. Several of the contributors to Don Menzel's (Ed.) book should have relevant material. And obviously it might be politic and worthwhile to invite Lloyd Berkner and Jerome Wiesner. Harold Urey would certainly be an asset.

Among biologists, I don't know who would be especially interested - perhaps Aaron Novick; S. E. Luria; K. C. Atwood (Microbiology, U. of Illinois) have a very wide fund of knowledge and would follow the jargon.

What might come out of the session? Perhaps a better sense of the value of this line of research, and of the confidence of one's colleagues in its serious purpose. Obviously, very little will be settled by it. But it should provoke some new looks at the questions.

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I would suggest that there be only three or four formal papers - if possible these might be circulated in advance and the bulk of the session be given over to informal criticism, etc. Perhaps all the participants might be asked to contribute in advance one or two pages of their own preoccupations.

Yours sincerely,

Joshua Lederberg  
Professor of Genetics

JL/jh

cc: Dr. O. G. Villard, Jr.  
Mr. F. D. Drake