

that you have found, because you in a sense delete it from other activities you have going. Somehow all the agencies do the same thing and you do have the authority to put the funds in one place.

Dr. RIPLEY. Right. My understanding was that the National Academy set up this general holding committee, and this is to be administered by the National Science Foundation and funds in effect were to be threaded together in this complex way and made available—rather small funds for preliminary planning. I still do not believe that this is the right way to approach the total program.

I think that there should be a line item of some sort and an approach to funding on its own for such a program in the same way that there was for the International Geophysical Year. This is then not in competition within the agencies for very hard to get small amounts of money.

Mr. DADDARIO. As you look at the whole picture, what kind of funds would it take to do this job in the right way?

Dr. RIPLEY. That is a very hard figure. I would say that if we started off over a period of, I think, a 5-year projection with \$10 million, something of this sort, we would be talking about the kinds of money which would then elicit the kinds of interest which would then be able to focus enough bright minds in biology on how to get the liaison with the foreign scientists, who are very keen to undertake this—in many cases far more keen than we are—to get the program going.

Mr. DADDARIO. You are talking about \$10 million total over the 5 years?

Dr. RIPLEY. No, I would think at least \$10 million a year. You would hardly be able to get going for much less. Any one of the programs which Dr. Revelle speaks about which have already been very extensively thought out by the committee will involve several hundred thousands or millions of dollars to get underway, these sample programs.

Mr. DADDARIO. Have you been able to estimate how much we will be able to pool together in this method presently before us?

Dr. RIPLEY. I am very pessimistic about how much money we will be able to provide at this stage or how much you will be able to invoke the enthusiasm of the other participants to make an earnest effort to provide even more. It seems to me to be a sorry way to look at the programming of this urgent thing that we are talking about.

Mr. MOSHER. Mr. Chairman.

Mr. DADDARIO. Yes, Mr. Mosher.

Mr. MOSHER. Dr. Ripley used the term "grantsmanship," I think.

Dr. RIPLEY. Yes.

Mr. MOSHER. You are implying there, and in your other remarks, that when Congress sees a need in the field of research and development that needs to be fulfilled, and wants to initiate or innovate in some scientific area, the best way we can initiate and give direction to effort is by appropriating funds that are then available for grants, and that these grants will attract scientific talent and stimulate the direction of scientific effort. In general is that necessarily the process that Congress has to follow in its direction of scientific policy?

Dr. RIPLEY. I would think so.