

Dr. BUCKLEY. Well, let me comment for just a moment on that. I'm not sure what an ecologist is, but it doesn't seem to me that one sets out necessarily to train an ecologist. It seems more than anything else that ecology is a point of view, a recognition of the interactions that take place, so it doesn't mean to me that you have to have a man who goes through a set period of training and at the end of this comes out an ecologist. He may do this and there are a dozen or so institutions around the country that do offer graduate training and do produce people with these capabilities and many of them are first-rate people. But there are many other first-rate ecologists who were trained as fishery people or foresters or almost any kind of field biologist. I think for my purpose, I would restrict this to the biological field rather than others, but this is not necessarily so because I can think of some people who are trained in physical science who are also first-rate ecologists.

How do we get them? It seems to me that we get them as we need them. In the first place, this hasn't been an attractive field to go into. It has been attractive intellectually, but the employment possibilities have been, if not nil, not very striking, and while I might say that money alone will not cure this sort of thing, it seems to me that at least a sufficient amount of money in the sense of available jobs and so on is one of the requirements without which this will not happen. I think that it is sort of a chicken-and-egg thing.

I am not suggesting that a large amount of money would suddenly produce ecologists, but I am saying that without a relatively large amount of money we are not likely to be able to stimulate an additional number of people into the field.

Mr. DADDARIO. Is ecology sufficiently attractive intellectually so that, if there were programs which had direction, purpose, and force behind them, people would be attracted to it?

Dr. BUCKLEY. Yes, I would say so—both in terms of an intellectual challenge and problems which are subject to actual solution.

Beyond this, I think solution of such problems have a social importance, and most scientists will ultimately admit that, in addition to basic curiosity, they are interested in the well-being and contributing to the well-being of the world.

Mr. BROWN. Mr. Chairman.

Mr. DADDARIO. Mr. Brown.

Mr. BROWN. Might I suggest that we could solve the problem of providing additional funding and career opportunities if we retitled these ecologists as biological systems engineers and let the DOD finance them.

Dr. BUCKLEY. May I make only one disparaging comment on systems analysis, but it seems to me this is sort of an organized common-sense in the way that I like to think of it in regard to environment. It has some very sophisticated practitioners and some requirements for highly skilled methodology. Basically it really lets us apply common-sense in the best possible manner to the solution of a particular problem and lets us eliminate many of the constraints that traditional thinking imposes.

I'm not saying systems analysis is not a highly worthwhile thing. I firmly believe that it is. Just as I feel that computer modeling in