

plexity. I can understand and sympathize with the desire to increase our knowledge of ecology and we have some very active and able ecologists in my district, however, it seems to me that any increased emphasis in this area involves a vast expenditure of time and money. What kind of goals can one set in this enormous area?

Dr. TUKEY. I see no reason to believe that there will not, in the long run, be a large degree of generalizability in what we find out about ecology and about population dynamics. After all, if we take another biological area for the moment, a very large amount of genetics has been done on the little fruit fly. You could have said in the beginning that there were very many species of insects, there are more species of other things. How were you ever going to get hold of genetics if you had to work with each of these spores?

The ecological situation is not as simple as the genetic one. Most but not all of life operates on roughly the same genetic pattern. (The yeasts and the molds do not use the same system as some other types of life.) We will not be as fortunate in ecology as we were in genetics to having to deal with one mechanism, but all we know about life sciences generally suggests that, if we come to understand a small number of mechanisms and how they interact, we are going to have knowledge that will be useful in a wide variety of situations.

Mr. VIVIAN. I don't intend to dodge your comment about ecology. I happen to agree with you, but my question is what do we attack first? Where do we put a priority?

Dr. TUKEY. I think that that ought to be controlled in a mixed way. And, by that I mean we ought to spend some effort in stimulating things that are directed toward specific missions and we ought to spend some effort in stimulating ecology as a whole, in letting the ecologists go where the problems seem ecologically important and ready for attack. If we don't do both of these things, we aren't going to come out well.

There are a lot of ecological problems related to pollution. A lot of these are ripe enough to be studied by present methods. If we were to emphasize ecology in the pollution direction it would be good, just so long as we supported the scientifically guided expansion of ecology in other directions at the same time.

Mr. VIVIAN. Do you suggest any particular strategy in regard to this question of ecology?

Dr. TUKEY. I think I would be glad to see more funds go into things which had some detectable relation to pollution as well as more funds generally. I think we can afford a substantial piece of mission-oriented support if we make this orientation not too strong. I think if the money was there for this, that the fact that the public is so much more interested in pollution now than it was five years ago is going to help get good people into the area.

People go where the problems are, both where problems are scientifically attractive and where problems are felt to be important. We are better off in recognized importance of pollution than we were a few years ago; we ought to take advantage of this, by providing more research money to go with the popular interest and concern.

Mr. VIVIAN. I would like to suggest one specific ecological goal or guideline.