

lenges of human expansion, it seems to me, rather than industrial expansion.

The problems of air pollution are widely different in different places, not one and the same. In Los Angeles, the problem is now recognized to be mainly the automobile. In New York City, it is mainly stack emissions from heating and power generation. Throughout pollution, we must give more attention to the diversity of what seemed at first glance to be single problems.

While I must defer to experts on the promise for the future of the present R. & D. program, I stress our panel's recommendations E1 and E2 which said, and I quote:

We recommend that the Federal Government exert every effort to stimulate industry to develop and demonstrate means of powering automobiles and trucks that do not produce noxious effluents.

We recommend that the Federal Government stimulate industrial development of more economic processes for exclusion of sulfur compounds from stock effluents.

Turning now to question 28, first question in paragraph C(5):

What can be done to overcome the tendency of the present Federal agency organization to fragment research as to source or environmental sector?

Problems of combined attention to different sources of pollution do not appear to me to be as crucial today as problems involving different environmental sectors. Management reorganizations alone will do little to affect the breaking up of research and thinking by environmental sector. We need more technical ties between related work and different sectors. There is no reason why we cannot now go ahead in the way that would be presently most effective—namely, by attacking a certain number of key problems on an intersector basis.

This can be done effectively either by interagency cooperation (see panel recommendations B8, B9, and F6 for examples) or by interdisciplinary advisory studies (see panel recommendations C5, C6, and C7 for examples).

Specific intersector studies are essential, but so, too, is a forum in which the Nation's scientific and engineering communities can interact with the Federal Government's senior technical and scientific administrators. It is only through considering the broader aspects of pollution at such a level and in such a breadth that we can have an adequate chance of being properly warned of the broader problems of pollution as they come into view. In strongly urging the setting up of such a forum, the PSAC panel proposed, in its recommendation G1, a specific mechanism, interrelating the Federal Council of Science and Technology and the National Academy of Science.

Today, our deficit is in the investigation and recognition of such problems, not in the willingness of workers in different fields to join together. There are specific intersectorial tasks that are ready to be undertaken.

Turning now to questions 36 to 38—

Mr. DADDARIO. On that point, Dr. Tukey, you say there is not a lack of willingness of workers to work at these problems but rather it is a deficit in the recognition of the problems. How about the number of workers available at all levels—do you consider this as part of the problem? Even though there may be a willingness to work, is there a deficit in compatibility?