

Most of the things that I happen to believe esthetically are my personal opinions. I would like to see the world with lots of trees around. However, I think biologically and scientifically we can actually get down to analyzing what the effect of these things are on the human being, in terms of productivity and in terms of human welfare. I don't see any question but that these biological principles can be investigated and then subsequently we can enlist the aid of the social sciences, the psychological sciences, to determine the effect and the implications of these things on human beings.

Now there have been researches conducted showing what crowding means to human beings, showing what noise means to human beings, showing what lack of trees means. These are in their infancy, but they are going to increase. So I don't think I am entirely dealing in esthetics. I have my preferences, it is true, and I would like to revert to a little more space for all of us, it is true. But I think these things can be backed up by research.

Mr. BROWN. Well, I don't like the way you are trying to weasel out of the responsibility of science for what has happened. In fact, some of the problems in science result from this same need of a human being to bring order out of chaos. The development of science into our vast proliferation of highly compartmentalized boxes is a result of this tendency on the part of human beings. It is this tendency which has resulted in science in general up to now. Maybe this program is going to reverse the not caring what happens to the human being but what happens to their little box.

Dr. RAY. I think you are entirely right in this. I think we actually have more common ground than would at first appear. But I don't want to put the blame on anyone right now. I would like to solve the problems that exist. It is as simple as that. If we can think of a better way to do it, that is fine.

Mr. DADDARIO. Don't programs such as the IGY and the IBP, however, develop a national attitude. They educate the scientific and technical community about its need to go further than it has in the past? It doesn't have the flexibility presently available as it has had as the country was growing and it needs to develop an ability to figure out the social consequences of its activities.

Dr. RAY. I think you are entirely right, on two levels. I believe that a program like this—as happened with the Antarctic program, which started with IGY and with which I have been associated for about 4 years—gets all sorts of scientists all worked up. People seem to push a little harder. And secondly, this has an effect on the general public, I believe. They become aware of the problems more than they would have otherwise. They become aware of what scientists are after, what the problems of applying science are. Overall I think it has a very great psychological impact, quite aside from its practical aspects: that of unification, rather than a series of disjointed happenings which don't get in the papers so well. Whoever heard of the "quiet sun" until the IQSY, International Quiet Sun Year. I personally never heard of a quiet sun or a noisy sun. I knew the sun was there and that was about it. As a scientist, I should have known something about it. Now I know something about it because it was broadcast. This is interesting and I think important.