

GENERAL SCIENCE

Praise and Advice

PRESIDENT EISENHOWER sent the following telegram:

"To the students and teachers assembled at the Tenth National Science Fair, I send greetings. Our age of science demands the fullest development of all our human resources and abilities. The Science Clubs of America contribute importantly to this development. Best wishes for the success of your Science Fair."

Remarks by Dr. C. S. Draper, director of Massachusetts Institute of Technology Instrumentation Laboratory:

Recognition of boys and girls with outstanding talents for leadership should be made early in their educational careers. Once well-qualified individuals are identified, fellowships, scholarships, assistantships, research grants, and the many other encouragements toward advanced education that are now available may be brought into action to make sure that opportunities for classroom and laboratory studies are given to able students. Beyond these formal phases of personal development, it is important to provide potential leaders with experiences in independent thinking coupled with active work on problems of actual practice. After schooling is over, education of all sorts must and will continue throughout the career of any person who deals with the situations of our modern world. Any leader who does not keep himself abreast of essential changes in his environment will not be likely to retain a position of prominence for long.

Individuals differ among themselves so greatly that no single path for education can be acceptable for all students. Many patterns must be established; law, religion, medicine, business, humanities, science, engineering, and other disciplines may all provide the background of knowledge and experience to bring out latent creativity and leadership. Aside from the detailed bodies of information involved, the differences between persons trained in the various disciplines lie in the mental attitudes and methods of attack on problems.

Science fairs make tremendous contributions to the development of youth for the responsibilities of adult living. The science fair method is to provide an arrangement under which boys and girls may benefit from the use of personal initiative. . . .

Dr. Louis M. Orr, president-elect of the American Medical Association:

As I witness the outstanding results of your talents and enthusiasms in your exhibits, I feel that your achievements deserve a generous portion of our interest, enthusiasm, and encouragement.

To those of you who are seriously planning to continue your career in the various fields of medical science, may I say that your opportunities have never been better, nor your horizons more far-reaching. The practice of medicine has changed dramatically in the last 25 years. It shows every

evidence of changing just as dramatically in the next 25. This age of the atom and space is just one area which holds unprecedented promise for the inquiring mind. Change always brings opportunity to those who are alert and ready for it.

For example, authorities in the electrical engineering research field believe that scientific fields will merge. They see a closer relationship between the abstract and the medical, for instance, in the study of the brain. Brain specialists, working with physicists, engineers, chemists, and physicians will one day combine their knowledge as a step forward in understanding the brain and how it works.

More than that, in order to work effectively together, these varied scientific fields will develop a common language—an understanding of each other's professional terms—and through this come to recognize the way in which each individual specialty contributes its part to the final understanding of the common problem. We do not have such understanding yet. However, a beginning is being made.

Science is frequently a lonely endeavor, in some cases an isolated endeavor. It is easy for scientists to confine themselves and their thinking to their immediate problems, interests and specialties. It is usual for them to communicate only with each other. If young people like yourselves devote your time to scientific delving exclusively, you will probably hardly notice that you are growing up in a restricted world filled only with the requirements of your interest.

It is on this point of scientific isolation that I want to express a word of caution.



ROBERT R. DICKEY—This young scientist worked with embryos for his award-winning project.



JOIE PIERCE JONES—Award winner is shown with drawings of rocket.

Today, we have a tendency to insist from every scientist a dedication so complete that we are in some danger of creating a sort of totalitarian man as a single-purposed and as dominating as a totalitarian state.

I believe that dedication is the backbone of achievement, but it should have a broad base. The individual must be prepared not just to work, but to live—at the same time both as a unique person and as a fellow member of the human race. American philosophy places a fundamental value on its regard for the uniqueness and worth of the individual in his own right. The individual is the end of the free society.

We should not make the mistake of thinking science into a narrow channel. A scientist must be concerned with the environment in which he lives. One of the most frustrating aspects of contemporary life is its tendency to develop compartmental divisions. Business is business, politics is politics, science is science. We have all heard the often repeated fear that our scientific knowledge has far outstripped our human and moral understanding so that we are in danger of destroying ourselves. Without widespread understanding, it could be true. . . .

Maj. Gen. H. N. Toftoy, Commanding General, Aberdeen Proving Ground:

The Army's interest in the development of scientists and engineers is long and honorable. It stems from the earliest days of its history. It led to the founding of the United States Military Academy on July 4, 1802, at an Army Post known as West Point.

History records how the U S. Army gave the light of inspiration which has guided American scientists and engineers for many years. And it was your forebears in the fields of science who worked closely with Army research and development through those years. Today, the Army with scientists and engineers, both civilian and military, has built a vast, imaginative research and development program to plan and equip the United States Army of the future for our national defense. . . .

Science News Letter, May 23, 1959