EDITORIAL

Can Anybody Hear Us?

Although a symposium on *Science and the Human Condition* raises obvious, unanswerable questions, it can also stimulate some thinking about not-so-obvious matters: What do nonscientists think of science? What contributions to society should the scientists make—if any? A while back I attended such a symposium at the University of Illinois. The program comprised evening speeches, panels that discussed the speeches and working groups assigned to the relations between science and other fields.

As I saw it, the meeting quickly became polarized along a pro- and anti-science axis. Two of the principal speakers, Columbia molecular-beam physicists Isidore I. Rabi and Polykarp Kusch, offered a platform for the pro-science group. Their message was that methods of physics have demonstrated their effectiveness by what they have achieved in physics. These methods and associated criteria have relevance in broader realms. If they can attack big social problems, let us get about finding how.

The humanists were not enthusiastic. They seemed not to want the gadgets and devices of science and not to believe it had anything better to offer. They found the scientists' viewpoint arrogant and accused scientists of lacking values. (Rabi's answer: "You speak to me of values; show me your credentials. As Jerrold Zacharias once remarked, 'If you re a police dog, where is your badge?' ")

A working group on science and public information found itself without common views of problems and solutions although it appeared to agree that there is little public information about science. For example, said someone, although an educated person might be embarrassed to show an ignorance of Franz Kafka, he would not be perturbed—he might even be proud—to display complete ignorance of science. A strongly held opinion was that science is sick and out of touch with the rest of human experience. An opposing minority said that science is healthy, that literature is available to teach the nonscientist about it, that if there is a sickness, it is in the nonscientist, who does not want to learn.

Regardless of the cause, both sides recognized a lack of coupling between the scientist and his neighbors. As Michael Flanders and Donald Swann phrased it for us once again on television the other evening: "this problem of not being able to talk to scientists because we don't understand science. They can't talk to us because they don't understand anything else, poor dears." Both Rabi and Kusch felt that scientists have been unimaginative in opposing this prevailing nonscientists' contempt for science.

If anyone finds the coupling between science and society a stimulating subject for retrospection, he can look back on a golden age for science that started with the second world war and went on for five or ten years after the fighting. Physics departments were strained by an influx of applicants seeking the secrets of radar and nuclei. Enrollments (war effects eliminated) doubled from 1940 to 1950. Newspapers added science departments and began to tell readers about neutrinos, masers and newly found resonances. One large news magazine found a "Science" department was not enough; it listed also "Space and the Atom," and both departments appeared regularly. The National Science Foundation was born.

The picture has changed, and what used to look like a great public awakening to the values of scientific culture is now fading like a brief, pleasant hallucination. Physics enrollments are dropping. High-school students don't sign up because physics is too hard; college students don't sign up because physics is too long, and, anyway, they doubt its relevance. Congress is cutting appropriations.

In the newspapers, little science appears, and most of what they call "science" is technology and medicine. "Space and the Atom" is no more, and science sections appear irregularly. The decreasing attention to physics paid by the newspapers is in sharp contrast with the increasing number of pages in professional journals.

Should the scientist be more concerned about what his work means to society? Should the banker and baker get more of a kick out of what's new in particle accelerators and stellar dynamics? If a sickness is in the nonphysicist, who ought to be interested in physics, can the physicist supply a cure?

When any questions like these stimulate a "Yes," we are still faced with the basic riddle: If we can explore the innermost parts of atoms, the outermost parts of space, the nature of gravity and the bending of waves; if we are skillful enough to unlock the power of the calculus and perceptive enough to conceive relativity; if we can shake faiths by showing that the sun, not the earth, is the center and that all the stars are suns, why can we not show our neighbors that our methods are strong, our criteria valid and our concerns interesting? If there is a relation between science and the human condition, how shall we demonstrate it?

—R. Hobart Ellis Jr