



PERSPECTIVE...

Science, the House of Magic

GERARD PIEL, *Publisher, The Scientific American*

SCIENCE STILL occupies the House of Magic in which it was exhibited at the New York World's Fair in 1939. In the popular view science is first of all our most securely established body of knowledge. It is a rich mine of hard facts that have a tougher consistency and more utility than revelation. How these facts originated and got put together, nobody inquires. The notion that they might go on growing in number is disturbing to a number of people. They raise the question whether there shouldn't be a breathing spell. Scientists are workers in the house of magic. They are qualified by special gifts—today, of course, they must also be cleared—for access to technical information. Their job is to make something useful out of ready-to-hand facts. Science is thus primarily an important step in the immense technological process that makes our country so rich and strong. The suggestion that science has cultural as well as technological implications is downright suspect and heretical, if not worse.

There is good reason why our contemporary romantics should turn the wrath of their frustration upon science. In the 400 years since Copernicus the scientific enterprise has brought more than an industrial revolution. It has undermined the ancient absolutes in which men once found purpose and plan of their existence. Nor has the much-praised utility of science proved an unmixed blessing. Technology has made possible, indeed has necessitated, the organization of superstates, giant cities, and vast industrial enterprises. With the attendant centralization of initiative and authority, the individual becomes the anonymous creature of decisions and compulsions originating he knows not where. It is not hard for 20th century medievalists to show that the serf found

more happiness in the security of his bondage than modern man in the insecurity of his liberation.

The demands of the human spirit cannot be denied. If we are to maintain individual freedom in our crowded world and manage civilization democratically, then each man must have conviction in his own worth as an individual and purpose that fulfills the personal miracle of his existence. It is now too late in the history of science for men to satisfy these demands by retreat to authority. It is, in fact, impossible for the human mind in its integrity to deny for long the inescapable conclusions of its capacity to know and to think.

The rational method offers no absolutes and no blueprints prepared in advance to tell us what we want to live for. But science does broaden and secure the ground upon which men can make their choice. It has already shown that human life is not fated to be, in the words of Thomas Hobbes, bloody, brutish, and short. In our increasingly complete and connected knowledge of the cosmos we have an ever clearer understanding of ourselves and our place in nature. We see that the perfected man, the ideal of the 18th century enlightenment, is the ultimate product of the cosmic process as it is known to modern science.

Science thus bears upon the ends as well as the means of the life of man. We have need for a better understanding of science among the members of our society not only that we may use the power which such understanding gives us, but that we may use it well.

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