16 September 1966, Volume 153, Number 3742 **SCIENCE**

EDITORIAL CORRESPONDENCE: 1515 Massachusetts Ave., NW, Washington, D.C. 20005. Phone: 202-387-7171. Cable: Advancesci, Washington. Copies of "Instructions for Contributors" can be obtained from the editorial office. ADVERTISING CORRESPONDENCE: Rm. 1740, 11 W. 42 St., New York, N.Y. 10036. Phone: 212-PE 6-1858.

Commitment to Science

In an essay entitled "Science, Scientists, and Politics,"* the historian Lynn White, Jr., has pointed out that public attitudes toward science have always been closely related to the basic religious, social, and esthetic values of a culture. Thus science flourished in Greece and for four centuries in Islam, but was ignored in Rome and deliberately abandoned in Islam when the focus of Islamic culture changed in the 12th century.

In its earlier years, the European scientific tradition was strongly supported by the congruence of scientific attitudes and the Protestant ethos—the similarity of their cosmic views, the Christian belief in good works, and the use of science to increase man's understanding of the works of the Creator. Now, as White explains, "the motive force of natural theology has long been spent, and it does not seem to have been replaced with any other idea of equal power."

What has developed is a strong commitment to the practical values of science. Within available means, the United States and many other countries are willing to support research that gives promise of useful application. In fact, the announced policy of the present U.S. administration is to place even greater emphasis than in recent years on research designed to achieve useful objectives. The recent vote of the House of Representatives denying funds for continuation of the Mohole Project is relevant. The controversy that has surrounded this project almost from its beginning makes it easy to sympathize with congressional feelings of irritation and to understand the intrusion of political arguments into the debate. Nevertheless, the vote should be interpreted not only as a rejection of a particular, and meritorious, research program but also as a sign of a serious flaw in the American commitment to science. That commitment is so largely to the practical values of science that other values tend to be forgotten. Contributions of the Mohole Project to the improvement of drilling techniques have not been much stressed, and geophysical studies of the earth's crust and the Mohorovičić discontinuity have neither medical nor military appeal. Given our emphasis on practical results, such projects become easy targets when the going gets a little rough.

The expectation of practical results is a thoroughly sound reason for supporting research; scientists and government officials both talk of "investment in research." But this is not society's only justification for supporting research.

"Science for its own sake" provides the scientist with enthusiasm and motivation, but does not have strong public endorsement. It can be hoped, however, that current efforts to improve the teaching of science and to increase public understanding of science will gradually develop a firmer and more widespread understanding of the nature of scientific work and of the intellectual and esthetic benefits to society that result from a vigorous scientific program. In this effort it seems appropriate to place special emphasis upon the better education of students who are not themselves expecting to become scientists but who will shortly become the cultural, political, and business leaders of the country.

Another kind of effort is also necessary. We who are living in this time and this culture find it difficult to view our science and its relations to other aspects of our culture from an external vantage point. Yet is it not a responsibility of scientific statesmen to look at science objectively and scientifically, to study the ecology of scientific work, and to analyze the reasons for, the nature of, and the weaknesses in, the current national commitment to science? To do otherwise is to leave the future of science to the vagaries of social fashion.—DAEL WOLFLE

*Prepared for the Center for the Study of Democratic Institutions, Santa Barbara, California.