

GENERAL SCIENCE

Leaders Approve Council

Grand Jury inquiry concerning what leading scientists think about the organization of Government science shows virtually unanimous opposition to a science academy.

► AMERICA'S SCIENCE leaders approve overwhelmingly a Federal council for science and technology, they split on whether there should be a Secretary of Science in the Cabinet and they oppose almost unanimously a Federally supported academy for training scientists, similar to West Point, and Annapolis and the Air Force Academy.

Heads of leading scientific societies were asked to answer, anonymously, questions in a SCIENCE SERVICE Grand Jury inquiry.

The vote was 84% "yes," 5% "no" and 11% not voting on the question:

"Should there be a Council or Committee of Scientific Advisers similar in function to the President's Council of Economic Advisers?"

While the poll was being taken President Eisenhower established a new Federal Council for Science and Technology to promote closer cooperation among Federal agencies in planning their programs in science and technology. The vote therefore was in accord with this action.

Upon the question whether there should be a Secretary of Science in the Cabinet heading a department that would be a centralized scientific agency encompassing bureaus now scattered, the vote was: 47% "yes," 45% "no" and 8% not voting.

Upon the question of a national academy for training scientists, the vote was 95% "no" and only 5% "yes."

The jury was also asked whether there should be increased expenditures by the Federal Government for research. For pure, fundamental or basic research the vote for increased Federal money was 84% "yes," 13% "no" and 3% not voting. For applied research, the vote was 37% "yes," 55% "no" and 8% not voting.

Out of 49 ballots sent to presidents of national science societies, 38 were voted.

Duplication Criticized

One expert who voted for the Federal council did so because "the inevitable complexity of Federal research in a multiplicity of bureaus needs coordination, criticism and audit in the public interest." He believes that there is too much duplication and scatter-brained projects hidden within the bureaus.

Opposing both a department and council of science, one authority said that "anything tending to centralize interest in our control of scientific activity would be very bad because the strength of science is in its diversification and independence of central authority."

Fear of the domination of Federal Government science by politics, particularly in the case of a Department of Science, was expressed by several scientists. One sug-

gested: "The Department of Science might be more like an independent agency such as the Smithsonian Institution rather than the Department of Commerce."

A Secretary of Science was deemed, by another expert, "desirable for the best utilization in government of resources of science and scientists, with the aim of best coordination of efforts in basic research." But he "should not take over regulatory or applied scientific agencies such as the entomological work of the Department of Agriculture and some functions of the Bureau of Mines and the Geological Survey."

In the opinion of another respondent, a Secretary of Science would overcome one serious problem that politicians have in dealing with scientific matters, which is the apparent belief that appropriating more money is always a solution.

Scientists Oppose Academy

In the 95% opposition to a West Point for scientists, some opinions were:

"Incomparably superior to a special school is utilization of the country's established institutions with enlarged scholarship and fellowship grants."

"Fundamental science flourishes best where it develops within a general university's trial, its use may be permitted on site environment with the kind of broad general intellectual stimulus that comes from mixing the scientists with other scholars concerned with art, literature, philosophy, the social sciences and the humanities generally."

"There is more money available for research than can be used efficiently by the available qualified scientists," one opinion declared, adding "the emphasis in support should rather be on providing training in science for individuals who are innately capable of becoming scientists."

Another urged that "our greatest need is for better college and graduate training in fundamental scientific attitudes and also a public appreciation that science is a way of thinking not the production of gadgets."

Federal funds for fundamental or basic research should be placed without direction of the research, it was urged by one opinion. Allocation to fields is satisfactory but aside from this the money should be given to good men and leave it up to them as to what to do.

"It serves little purpose to step up research unless education is stepped up also," another opinion stated.

Many agreed that Federal expenditures for basic or pure research should be increased, but some felt that most applied research should be done by industry

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MODEL OF 84 INCH—The heart of the telescope, shown with the figure of a man for size, will be an 84-inch mirror.

ASTRONOMY

Telescope Disk Cast for National Observatory

See Front Cover

► THE TELESCOPE blank for the new National Observatory's 84-inch reflecting mirror has been cast by Corning Glass Works at Corning, N. Y.

It is the largest glass blank made since completion of the 200-inch disk for the giant Hale telescope atop Mt. Palomar. The disk weighs more than 3,500 pounds, is 13 inches thick and will now be slowly cooled for seven months to limit internal stress in the glass.

The glass was melted on a mold by a process known as sagging. It is shown in the photograph on the cover of this week's SCIENCE NEWS LETTER just before sagging was started in an especially built furnace at temperatures reaching approximately 2,300 degrees Fahrenheit. The glass is a hard, low expansion borosilicate material developed for telescopic application.

It is the largest piece of glass ever produced by this method. The 200-inch disk was cast by ladling molten glass into a mold.

The mirror will be installed at the new National Observatory under construction at Kitt Peak, 40 miles southwest of Tucson, Ariz. The observatory is operated by the Association of Universities for Research in Astronomy, Inc., or AURA, under the direction of Dr. A. B. Meinel. When finished, the mirror will serve as the primary reflective piece in the 84-inch telescope. A 36-inch telescope will also be installed at Kitt Peak.

The project is sponsored by the National Science Foundation, which also supports the National Radio Astronomy Observatory at Green Bank, W. Va. These two observatories are the first in the U. S. to be constructed with Federal funds for use of all qualified astronomers.

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