tion of a scientific program on the continent of Antarctica. Two basic administrative concepts are used by Jones and his staff (which is composed largely of former IGY personnel): that scientific personnel at the various stations should be free of housekeeping duties during their stay, and that a dual command structure should be established, with a Navy doctor in charge of the service personnel who maintain the bases and a scientist in charge of the scientific party. This set-up has worked well, and differences between the military and the parties of scientists have been rare. The general attitude is one of cooperation, and many of the Navy personnel take considerable interest in the work of the scientists.

The National Science Foundation administrators have developed a familiarity with naval practices and procedures that is of value to them in their conduct of the program. When it has been determined that a certain action is needed, Jones makes a request to Rear Admiral David M. Tyree, commander of the Antarctic Support Force, who in turn issues an order to the relevant unit under his command. A parallel procedure is followed by representatives of the scientific parties at the various stations on the continent.

Jones, who had been acting head of NSF's Office of Scientific Information Services before taking on his current job, expects that the antarctic program will continue indefinitely. Behind the program and the new direction that it is taking lies a great deal of his thinking. In a recent interview in Christchurch, New Zealand, he explained his position on the continuation of the program: "In order to sustain and keep a research program virile over a long time, I believe it is essential to shift away from the wholly-planned program, carried on in the field by hired technicians and analyzed by scientists or machines at home, to support of the individual in a research program in which he is deeply interested, while at the same time maintaining a reasonable balance of subject areas."

Chemistry Teaching Method Being Tested

A new method for teaching beginning chemistry, one that teaches students "to think like chemists," is now being tested in nine United States high schools, according to Laurence Strong, professor of chemistry at Earlham College and director of the project that developed the method. The present test, financed by a $90,000 National Science Foundation grant, is the culmination of approximately 3 years of work by a number of college and high-school chemistry teachers. The program, which has been made possible by financial contributions from various foundations, has had the support of the Division of Chemical Education of the American Chemical Society.

The initial conference leading to the new course was held at Reed College in the summer of 1957, under the direction of Arthur Scott and Harry Lewis. The meeting was financed by the Crown Zellerbach Foundation. A year later the group met again, at Wesleyan University, this time supported by the National Science Foundation. A writing conference was held last summer, at Reed College, devoted to the actual construction of the new course and the writing of the textbook. This work, also financed by NSF, was directed by Strong and by Arthur H. Livermore, professor of chemistry at Reed.

The Idea for the Method

The idea for the new teaching method grew out of the conviction of Strong and others that the conventional beginning-chemistry course dealt with isolated facts and technology which students were required to memorize, rather than with the logical pattern of chemistry. As Strong explains:

"Until now the emphasis in beginning chemistry has been on the factual material of chemistry, but not on what lies behind the facts. No basis for understanding the basic ideas of chemistry has been given. The new course will present the facts against a background of ideas. It is our hope that tests will show that students can take these ideas and work out the answers to new problems for themselves."

Called the "Chemical Bond Approach Project," the new method is based on the idea that atoms are tied together by bonds and that the manner in which they are tied together is an important factor in determining the chemical makeup of a substance. Strong says that if students understand this basic factor, "they can gain an initial insight into the possibilities of predicting the properties of yet-to-be-made compounds. By such a procedure the student . . . is able to focus on some of the most dramatic aspects of chemistry. There are great possibilities in this new approach of enlisting the interest of students at every level of ability."

High schools which are participating in the present test are Central High School, Phoenix, Ariz.; Leonia High School, Leonia, N.J.; Chester High School, Chester, Pa.; Los Angeles High School, Los Angeles, Calif.; Shortridge High School, Indianapolis, Ind.; Grant High School, Portland, Ore.; Lawrenceville School, Lawrenceville, N.J.; University of Illinois High School, Urbana, Ill.; and Sunset High School, Beaverton, Ore. The teachers who are using the experimental course were all participants in last summer's conference at Reed.

Collaborating with Strong in the direction of the project are Livermore; H. A. Neidig, professor of chemistry at Lebanon Valley College (Annville, Pa.); and M. Kent Wilson, professor of chemistry at Tufts University. Periodic tests are given students who are taking the new course in order to determine their progress. The course will probably be revised at the end of the experiment and then released in final form.

Bureau for Research on Sources of Poverty Urged; Committee Formed for Social Action

Some problems in American society and some new approaches to their solution were discussed last month in Washington at the closing session of the biennial round-table conference of the American Public Welfare Association. Agnes E. Meyer, widow of the former chairman of the board of the Washington *Post and Times Herald*, addressing the group, called for a federal research bureau to study the causes of poverty. Such a study, she said, offers the only way of "breaking the vicious circle whereby dependency, disease, and crime are handed down from generation to generation. . . ." Later in her speech she disclosed that a committee of natural and social scientists has been formed to "narrow the gap between knowledge and action" in meeting the nation's pressing social needs.

Mrs. Meyer suggested that a bureau to study the sources of poverty could properly be set up in the Department of Health, Education, and Welfare. State offices working with the department now have research staffs that