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## News of Science

### Science Advisory Committee's Recommendation for Science Council Being Implemented by Executive Order

Rapid progress is being made on the implementation of the proposal of the President's Science Advisory Committee for the establishment of a Federal Council for Science and Technology. Informed observers in Washington indicate that an executive order establishing the new council and giving its membership can be expected very soon. The inter-agency council will have responsibility for promoting coordinated science policy planning and more effective management of federal programs in science and technology. The recommendation for the council was made last December in the report "Strengthening American Science" issued by the President's Science Advisory Committee.

#### Major Problems Solved

At this writing, the executive order that will bring the council into existence is being reviewed by the Justice Department for any legal or jurisdic-

tional problems that might have been overlooked by its framers in the executive department. Customarily, this review is the last step before an executive order is signed. Both the quality of the Advisory Committee's original report and the early solution of the thorny problem of council membership have contributed to the rapid progress of the work, according to various governmental sources. The membership problem offered one of the greatest difficulties. How many of the governmental agencies doing scientific work should be represented on the council? The committee report called for a membership of nine persons—the chairman and eight representatives from the various major governmental agencies doing scientific and technological work.

The agencies, which were selected primarily on the basis of their expenditures for scientific activity, were the National Science Foundation, the Atomic

Energy Commission, the National Aeronautics and Space Administration, and the departments of Defense, Interior, Commerce, Agriculture, and Health, Education, and Welfare. The committee's recommendation was accepted, and representatives of these agencies will constitute the council. In the case of three agencies, the National Science Foundation, the Department of Defense, and NASA, the representatives are known. In order, they are Alan Waterman, Herbert York, and T. Keith Glennan. All but two of the remaining representatives are said to have been decided upon. It is expected that these persons will not be given new positions in their departments, but rather, they will be the existing secretary, one of the assistant secretaries, or a special assistant. In all cases the object is to have one man with general policy responsibility to represent effectively all the technical activities of his department. The position of Director of Defense Research and Engineering in the Defense Department exemplifies the type of representation the council needs. This position, now held by Herbert York, was defined recently by Secretary McElroy as the top research and development position in the Department of Defense.

A second problem that has been treated successfully by the Bureau of the Budget personnel working on the executive order is that of reconciliation of previous executive acts with the new one. Orders which gave the National Science Foundation authority to coordinate governmental scientific activity and which established the Interdepartmental

Committee on Scientific Research and Development have been reviewed to ensure that they are consonant with the responsibilities of the new council. This reconciliation, with its time-consuming legal and jurisdictional complexities, was the major procedural problem faced by those concerned with the order, it is understood.

#### Few Changes Made

The executive order is expected to follow the outline of the committee report on all major points. One of the few deviations is said to be that giving a greater emphasis to international aspects of science planning. It is believed that the recommendation that the science adviser to the Secretary of State attend the council's meetings as an observer will be supplemented by other provisions that will promote greater recognition of the world-wide scope of American scientific efforts.

The Science Advisory Committee's report states that "the chairman of the council should be the Special Assistant to the President for Science and Technology." There is every reason to believe that this recommendation will be accepted and that the first council president will be James R. Killian.

#### Indirect Effects of Council Planning

One effect of the work of implementing and staffing the Federal Council for Science and Technology was to stimulate thinking among the various federal agencies doing scientific work. When officials of the Bureau of the Budget asked for recommendations of persons to sit on the council the agencies whose scientific activities are fragmented and dispersed were forced to examine their organizations and personnel. They had to ask themselves if they each had a man who was sufficiently on top of all the agency's scientific activity that he could speak for it before the council. When such men could not be found, it is reported, duties were assigned and staff work was begun that would fill the need. This is one of the things the Science Advisory Committee's report was designed to accomplish.

#### Opportunities of the Council

Great hopes are entertained by the committee for the new council. It is viewed as a means of eliminating the many *ad hoc* groups that have from time to time attempted to effect some coherent planning of the Government's vast scientific activities and replacing them with one group with direct access to the executive department and with sufficient authority to reconcile the many programs that are put forth by the various agencies. Clear alternatives could be presented to the President, and the "capital and manpower bind" that now adversely affects

many projected scientific programs could be resolved in the way that best serves the national interest.

#### Relationship to a Department of Science

Contrary to some speculation, the new council is not to be viewed as a prototype for an eventual department of science, according to informed sources. It is simply an attempt to solve the programming, funding, and resources problems that have multiplied to an unmanageable degree since the end of World War II. Science has come to be a major element in the national welfare and the national defense; the advisory committee believed that a Federal Council for Science and Technology offered the best means to accomplish this end. It was devised and offered to solve particular problems in the most efficient way, and not to set the stage for a department of science or to abort any efforts in that direction. In the view of one commentator, one of the great virtues of the council is that it is an innovation without the status and inertia of a full-fledged department. If it works, if it solves the specific problems to which it is addressed, so much to the good. If it does not, it can be abolished and replaced by whatever its experience shows to be the better mechanism—perhaps a department of science. But the view here is that the Federal Council for Science and Technology has the background planning, the cooperation of the federal agencies, and the auspicious beginning that give promise of effective planning and management of the Government's expanding scientific and technological activities.

#### Bethe Testifies on New Data, and Their Relationship to Geneva Talks

Speaking before the Joint Atomic Energy Committee's subgroup on disarmament, Hans Bethe, professor of physics at Cornell University and member of the President's Science Advisory Committee, gave his views last month on certain scientific findings that have bearing on the armament control talks now underway in Geneva, Switzerland. Bethe said that he would like to see the manned surface seismographic stations that are now being considered supported by many robot stations both on the surface and in deep wells around the earth. Bethe's testimony, which was well received by the subcommittee, covered many aspects of the related problems of nuclear weapon testing and detection.

The testimony was presented 2 February and was released later in the month after classified material had been deleted. Two passages from the transcripts of the hearings are published here.

#### Effect of Data on Geneva Conclusions

Senator Hubert Humphrey (D-Minn.), chairman of the subcommittee: "What Dr. Bethe is attempting to help us with today, is the effect of the new data upon the conclusions drawn by the Geneva Conference of Experts."

Bethe: "That is what I hope to say."

Humphrey: "As you know some people said that the new data necessitated a complete reevaluation of what had taken place at Geneva last summer. They have said that the conclusions last summer have been made invalid because of the new explosions, since the conclusions last summer at Geneva were based pretty much on the Rainier test, plus the theoretical knowledge we had, plus the knowledge about earthquakes and non-nuclear explosions."

Bethe: "Yes."

Humphrey: "But with these four nuclear explosions last October, new data were obtained, and some people have said that the new data literally washed out all that had been accepted as true before. What Dr. Bethe is saying is that the new data didn't affect the first zone [0 to 600 miles] or the second zone [1400 miles and further], but it did show up a few tracings in the shadow zone [600 to 1400 miles]. Is that right?"

Bethe: "That is correct, except that I said that the magnitude of the signal in the first and second zone was less than . . ."

Humphrey: "Than they had anticipated."

Bethe: "Than they had anticipated."

Humphrey: "In other words, the larger explosions theoretically should have yielded a larger magnitude in the first zone and the second zone."

Bethe: "That is correct."

Humphrey: "But they did not. In other words, the practical experience did not fully substantiate the theoretical conclusions."

Bethe: "That is correct."

Humphrey: "However, the practical experience did not destroy the theoretical evaluations."

Bethe: "That is also correct."

Humphrey: "It only turned out to be a little less."

Bethe: "That is correct."

Humphrey: "In other words, the assumptions were greater than the fact."

Bethe: "That is correct."

#### Result of October Tests

Bethe: "This is what I want to testify to, just this problem. The main result of the October tests in Nevada was not what I said before, but the main result was that the first motion of the earth as recorded by the seismograph is reduced to about 40 percent of what we previously expected. Now the first motion is important because this is the way we tell