# Hornig Committee: Beginning of A Technological Marshall Plan?

In recent weeks, questions of the "technological gap" and of international scientific and technological cooperation have received much comment from the leaders of numerous governments. During his Paris visit, Soviet Premier Alexei N. Kosygin accused the United States of trying to use international scientific cooperation as a vehicle for domination, called for a technological alliance between Europe and the Soviet Union, and told European specialists that they should stay in Europe rather than join the "brain drain" to the United States. French President Charles de Gaulle asked for a "multiplication" of scientific and technical contacts and an increase in exchanges of equipment between the Soviet Union and Western Europe.

While de Gaulle faced East, British Prime Minister Harold Wilson kept his feet planted in the West as he called for the creation of a European "technological community" which would rival the United States. In one of a series of speeches on U.S.–European technical disparities, Vice President Humphrey backed Wilson's proposal as the "most promising" device for closing the "technological gap."

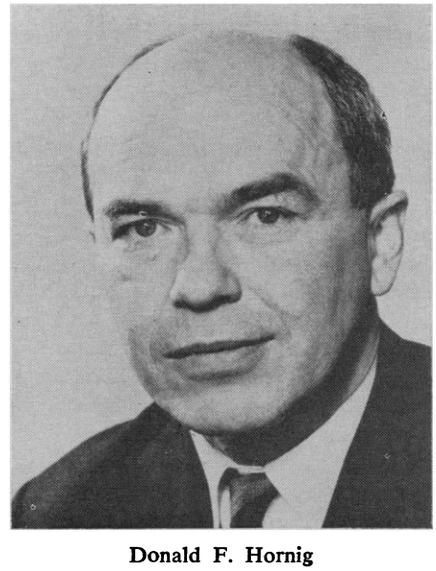
### Hornig Appointment

The most formal expression of high-level attention to this problem by the U.S. Government was the White House announcement on 26 November that President Johnson had appointed Donald F. Hornig, his Special Assistant for Science and Technology, to study the issue and find ways for the United States to help Europe overcome these disparities. In the White House statement, President Johnson's conversations with Wilson and with former German Chancellor Ludwig Erhard were specifically listed as being among the European initiatives which led to the appointment of the Hornig committee. Although not mentioned at the time of the White House announcement, an equally important impetus to the creation of the committee was a proposal delivered in September by Italian Foreign Minister Amintore Fanfani to Secretary of State Rusk.

President Johnson took official notice of the Fanfani proposal on 7 October in a speech to the National Conference of Editorial Writers in New York. In emphasizing his desire to maintain close relations with the nations of Europe, the President said: "We are exploring how best to develop science and technology as a common resource. Recently the Italian government has suggested an approach to narrowing the gap in technology between the United States and Western Europe. That proposal deserves careful study. The U.S. is ready to cooperate with the European nations on all aspects of this problem."

### Fanfani Memorandum

The Fanfani proposal, which has not yet been officially released, is not highly specific, but it does contain some fairly adventurous suggestions. The Italian government wants a 10-year "technological Marshall Plan" in which methods of cooperation will be worked out between the United States and the European nations. The Italians believe that within a decade the industries of their country and those of other European nations will be unable to compete with those of the United States and the Soviet Union unless dramatic moves are taken now to bridge the growing technological gap; they fear that Europe can rapidly become an industrially underdeveloped continent. To avert such a calamity, the Fanfani memorandum proposes U.S. cooperation with European nations in several areas, including computer technology, aeronautics, space, desalination, and atomic and energy research. The Italian government hopes that its proposal will be thoroughly discussed at the Paris meeting of NATO foreign ministers on 15 and 16 December, and that this meeting will launch a conference which will establish a special international agency to increase scientific and technical cooperation between the NATO countries. The Italians also hope that such cooperation with the nations of Eastern Europe can be improved. The Italian government views the appointment of the Hornig committee as a highly important step on the road to greater technological cooperation between the United States and Europe.



Donald F. Hornig

In addition to Italy, Germany, and the United Kingdom, other European nations, including France and Belgium, have also made known to the United States their desire for greater technological cooperation. At the meeting last January of the Organization for Economic Cooperation and Development (OECD), the subject was widely discussed; the current Belgian foreign minister, Pierre Harmel, made a strong statement on the problem of the technological gap, which was answered by Hornig. An OECD report issued last December pointed out that the United States was spending almost twice as large a proportion of its gross national product on research and development as the nations of Western Europe were. The OECD's science-policy committee is now undertaking an extensive study of the disparities in several sectors of development. "With the pot boiling in Europe, it seemed time for us to take a look," Daniel F. Margolies of the U.S. Office of Science and Technology (OST) commented in an interview with *Science*.

The Hornig committee, which has not yet been given a formal name, will consist of representatives from the departments of State, Commerce, and Defense and from NASA, the AEC, and the Council of Economic Advisers. As of this writing, appointment of the members has not been announced, but the committee is likely to include executives at the assistant secretary level. Men such as J. Herbert Holloman, Assistant Secretary of Commerce for Science and Technology, and John M.

# NEWS IN BRIEF

● **200-BEV ACCELERATOR**: AEC officials say that, despite the prodigious budget cutting now going on inside the administration, plans are proceeding to go ahead with the construction of the 200-bev accelerator, and a site will be announced before the end of the year. Total construction costs are now estimated at close to $400 million, but in the first year, it is estimated, $5 million to $10 million would suffice to get the project off the drawing boards and underway. As for a site, the six nominated by the National Academy of Sciences—in California, Colorado, Illinois, Michigan, Wisconsin, and New York—are still in the running. So far, by all available accounts, the White House has left the selection entirely to the AEC, which in looking at the various sites has been paying particularly close attention to power costs and the civil rights situation.

● **NEW COLUMBIA INSTITUTE**: Columbia University recently announced the creation of a permanent Institute for the Study of Science in Human Affairs, which will call upon an interdisciplinary group of scholars to recognize and interpret the effects of science on society. The program will concentrate on studies in this field and on developing graduate and undergraduate teaching programs that cross departmental lines.

A $1 million founding grant for the institute came from the Alfred P. Sloan Foundation. A quarter of this grant will support the Advanced Science Writing Program in Columbia's School of Journalism, whose facilities will be used to keep the public informed of the institute's studies. Christopher Wright, director of the new Institute, predicted expenditures of several million dollars over the next 10 years.

The institute replaces Columbia's Council for Atomic Age Studies which Wright directed.

● **ACADEMY HISTORY**: Rexmond C. Cochrane, author of the recently published history of the National Bureau of Standards, *Measures for Progress*, has joined the staff at the National Academy of Sciences to write a history of the Academy. Cochrane, author of a number of publications on Francis Bacon and 17th- and 18th-century science, received his Ph.D. at Columbia and has taught at Indiana University and the University of Virginia. He also served for some years as a military and contract historian for the Army Chemical Corps. Cochrane, who has been reviewing the Academy's historical documents since early August, finished a working outline of the history in early October. The proposed history, which will be a 5-year project, would span the years from the Academy's inception in 1863 to its centennial observance in 1963, with special emphasis on the events of the last 50 years.

● **NIH ADVISORY COMMITTEE**: Implementing a recommendation of the Wooldridge committee (*Science*, 26 March 1965), the National Institutes of Health has appointed a new advisory committee on program and policy matters. It is the first committee set up specifically to advise the NIH director on the overall direction and balance of NIH programing. Existing committees deal with the programs of particular institutes and are technically advisory to the Surgeon-General of the Public Health Service, not to the chief of NIH. Members of the committee are Philip P. Cohen, University of Wisconsin; Douglas D. Bond, Western Reserve; G. Franklin Edwards, Howard University; Caryl P. Haskins, Carnegie Institution of Washington; Maurice John Hickey, University of Washington; Irving M. London, Yeshiva University; William D. McElroy, Johns Hopkins; V. G. Nielsen, Aerospace Corporation; Wendell M. Stanley, University of California; Barnes Woodhall, Duke University Medical Center; and Jerome B. Wiesner, Massachusetts Institute of Technology.

● **ACADEMIC POST FOR DOUGLAS**: Senator Paul Douglas (D–Ill.), who was defeated for re-election by Charles Percy, has accepted a teaching position at the New School for Social Research in New York, starting on 3 January. Douglas, who taught economics at the University of Chicago before his election to the Senate 18 years ago, will teach economics as a member of the New School's graduate faculty of political and social science.

Leddy, Assistant Secretary of State for European Affairs, have been active in government discussions of the problem. Hornig is expected to supervise the workings of the group directly rather than delegate duties to a subordinate.

The committee is scheduled to make its preliminary report by 30 January. Some OST officials seem to hope that the group's mission will be discharged with the filing of the preliminary report; in any case, they do not expect it to operate for more than 6 or 9 months.

Since the committee has not met, OST advisers are unwilling to predict the future shape of the committee's deliberations and recommendations. But, whatever the hopes of the Italian and other European governments for extensive American cooperation, it is obvious that the U.S. Government is reluctant to become committed to any kind of "technological Marshall plan."

American officials tend to dismiss the technological gap with Europe as a "non-problem," or at least as a problem that the U.S. Government can do little to help solve. While admitting that the United States is ahead of Europe in computers, electronics, aviation, and space, Americans point out other areas where the United States is behind—metallurgy, steel, and shipbuilding. They also note the German superiority in plastics, the Dutch preeminence in cryogenics, and the positive balance of trade for the European Economic Community in synthetic fibers. Like Kosygin, they wonder whether the greater amounts the United States spends on R & D actually result in greater industrial improvement. Alexander B. Trowbridge, Assistant Secretary of Commerce for Domestic and International Business, recently posed this question: "If the Atlantic Community nations are really at a technological disadvantage vis-à-vis the United States today, how have most of them managed to outstrip the United States in production growth and in expansion of their foreign trade during the last decade?"

In addition to doubting whether greater U.S. R & D expenditure produces greater industrial development, American officials also remind Europeans that great technological gaps exist within the United States. They note that the east and west coasts tend to be much more developed than much of the interior, and that there is a Ph.D. "brain drain" from the Midwest.

A final and more significant American attack on European complaints of

a technological gap is the argument that the European problem lies deeper than underdeveloped technology—that it is caused, rather, by deeply rooted structural features of European societies. In a November speech, Secretary of Commerce John T. Connor stressed the argument that "management innovation" is often more important than technical invention. "The primary problem, in many cases," Connor said, "is not technological lags, but obstacles to the application of existing technology that is readily available."

One of Connor's deputies, Alexander Trowbridge, has written that "the American chooses other points of emphasis" when discussing disparities between American and European industries. "A picture of European traditionalism dominates his image of the difficulty. He talks of slow-moving management methods that fail to convert Europe's outstanding basic research to practical production and sales exploitation of new products. . . . He criticizes the European elitist ideal in education that, in his view, slows technological progress by wasting untapped talent. He notes tendencies to fragmentation in European industry that keeps many too small to support a satisfactory R & D effort."

American officials particularly stress the need for Europeans to permit freer flow of technology and trade across national boundaries. When the Belgians called for American technological aid at the OECD meeting in January, Hornig crisply replied that the United States might have technical help to offer if the Europeans made progress toward European economic integration, movement on the "Kennedy Round" of tariff negotiations, and advances in international monetary reform. In a November speech, Vice President Humphrey said that the creation of "larger continental markets" could be "a powerful force for closing any technology gaps."

In his speech of 30 November, British Prime Minister Wilson seemed to express comparable views as he called for British participation in a European technological community of 300 million people: "America's technological dominance in so many parts of the world derives from the original opportunities presented by her own wide, dynamic markets. It derives too from the fact that her industries are sufficiently developed and massive, sufficiently free from undue fragmentation, to enable her to reap the advantages of a large scale production which modern technology demands, and will in increasing measure demand."

Later in his speech Wilson repeated the good-natured warning which he gave Americans in New York last year: "given the response of which our people are capable, be under no illusions, we shall be ready to knock the hell out of you."

Whether the British and other Europeans tool up on their own to knock the "hell" out of the Americans in technical competition, or whether they will increasingly ask for the "heaven" of a "technological Marshall plan," remains to be seen. It is almost certain, however, that the Hornig committee will provide no easy answers for solution of the technological gap, and that disparities in technical progress between nations will continue to occupy a high place on the agenda of every government for years to come.

—BRYCE NELSON

# Educational TV: NSF and Arts Foundation Speak Out

Though its support of basic research and its fellowships have been useful, the National Science Foundation has been regarded, even by its officials, as largely "passive"—an agency often generous with its support but inclined to let others take the initiative. NSF has been criticized on that account, and recently there have been indications that the Foundation wants to influence national policy in science and education in a more positive fashion. These stirrings within the Foundation seemed manifest in a statement which NSF, joined by the newly established National Foundation on the Arts and the Humanities (NFAH), made last week on the need to have communications satellites put to the service of educational and cultural television broadcasting.

Although Leland J. Haworth, director of NSF, says the joint statement represented no conscious new role or departure for the Foundation, the statement had a strong activist ring seldom heard in NSF pronouncements. The commercial television networks' failure to fill the need for cultural and educational programming was briefly but forcefully described in words forthright enough to make network executives wince. The foundations, while neither proposing nor endorsing any specific plan of action, said that domestic communications satellite facilities should be established to "bring a broad and imaginative range of educational and public information programs in the arts, humanities, and sciences to the American people."

The joint NSF–NFAH statement was made in response to a Federal Communications Commission inquiry. Specifically, FCC has asked interested parties for comment on whether it can and should consider applications by nongovernmental entities such as commercial television networks to build and operate satellite systems for their own special domestic requirements. The FCC inquiry was inspired by an application last year by American Broadcasting Companies, Inc., for permission to establish such a system.

The ABC application was opposed by the Communications Satellite Corporation, which by law already has exclusive U.S. rights to operate satellites for international purposes, and which seeks to have a similar right recognized for the operation of satellites for domestic purposes. The Ford Foundation, in its statement filed with FCC on 1 August, proposed that a Broadcaster's Nonprofit Satellite Service be established to serve the commercial networks and noncommercial TV (*Science*, 26 August).

The Ford proposal was shrewdly designed to make the competing commercial interests and the FCC give high priority to the benefits noncommercial broadcasting could receive from satellite systems. Under the Ford plan, noncommercial broadcasts for cultural and