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ANTARCTICA REPORT—1965

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HEARINGS
BEFORE THE
SUBCOMMITTEE ON
TERRITORIAL AND INSULAR AFFAIRS
OF THE
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES
EIGHTY-NINTH CONGRESS
FIRST SESSION
ON
H.R. 555, H.R. 2211, H.R. 4658, H.R. 5494
BILLS TO PROVIDE FOR CONTINUITY AND SUPPORT OF STUDY,
RESEARCH, AND DEVELOPMENT OF PROGRAMS FOR PEACEFUL
USES IN SCIENCE, COMMERCE, AND OTHER ACTIVITIES
APRIL 12, 13; MAY 6, 7; AND JUNE 15, 1965
Serial No. 6

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NOTE.—The chairman, Hon. Wayne N. Aspinall, is an ex officio member of each subcommittee.

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ANTARCTICA REPORT—1965

MONDAY, APRIL 12, 1965

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TERRITORIAL AND INSULAR AFFAIRS
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:55 a.m., in room 1324, Longworth House Office Building, Hon. Leo W. O'Brien presiding.

Mr. O'BRIEN. The Subcommittee on Territorial and Insular Affairs will come to order for the start of hearings on H.R. 555 by Mr. Zablocki, H.R. 2211 by Mr. Hosmer, H.R. 4658 by Mr. Saylor, and H.R. 5494 by Mr. Morton. These are bills to provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica. Reports were requested on April 12, 1965, from Defense, State, Interior, National Science Foundation, National Academy of Sciences, and the National Research Council. We have at the moment a report from the Department of State, a report from the Department of Interior. I do not know whether the report from the Department of State is intended to speak for the other agencies from whom we have not received reports, but that, of course, will be developed as the hearing progresses.

Unless there is objection, the reports from the Department of State and the Department of Interior will be made a part of the record at this point.

(The reports referred to follow; also the following bills: H.R. 555, H.R. 2211, H.R. 4658, H.R. 5494.)

DEPARTMENT OF STATE,
Washington, April 12, 1965.

HON. WAYNE N. ASPINALL,
*Chairman, Committee on Interior and Insular Affairs,
House of Representatives.*

DEAR MR. CHAIRMAN: Thank you for your letters of February 12, 1965, enclosing for the comments of the Department of State copies of H.R. 555, H.R. 2211, H.R. 4658 and H.R. 5494, bills to provide for the continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica.

It is the view of the Department of State that there is no need to create an additional separate organization within the Government, such as the Antarctic Commission contemplated in the bills, for the conduct of U.S. Antarctic programs. The principal activity of the United States in Antarctica is the conduct of programs of scientific research which, pursuant to Circular A-51 of the Bureau of the Budget, dated August 3, 1960, are administered by the National Science Foundation with logistic support furnished by the U.S. Navy.

Present arrangements for coordination within the Government are in accordance with the statement of President Kennedy made in connection with the abolition of the Operations Coordinating Board on February 19, 1961.

The Department and other agencies concerned recently concluded a review of these arrangements. As a result of this review it was concluded that while these arrangements have been satisfactory, it would be beneficial to provide a more formal framework for policy deliberations. Accordingly, an Antarctic Policy Group has been established by the Secretary of State, consisting of the Assistant Secretary of Defense for International Security Affairs, the Director of the National Science Foundation, and the Assistant Secretary of State for International Organization Affairs, who serves as chairman.

The Department believes, therefore, that present arrangements for the coordination and conduct of U.S. Antarctic programs provide the opportunity for that continuing consultation among the agencies concerned which is essential to assure that these programs are of optimum benefit to the United States.

The Bureau of the Budget advises that, from the standpoint of the administration's program, there is no objection to the presentation of this report for the consideration of the committee.

Sincerely yours,

DOUGLAS MACARTHUR II,
Assistant Secretary for Congressional Relations.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., April 9, 1965.

HON. WAYNE N. ASPINALL,
*Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.*

DEAR MR. ASPINALL: This responds to your request for a report on H.R. 555, "To provide continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, etc.," and similar bills, H.R. 2211, and H.R. 4658. This report applies equally to a similar bill, H.R. 5494.

We recommend that the bills not be enacted.

These bills provide for a Commission to be responsible for coordination and direction of research programs of the Antarctic. It would also have certain informational responsibilities and would maintain continuing records of U.S. interests and activities of the Antarctic.

While the objectives of the bills are worthwhile, it is our opinion that adequate mechanisms to accomplish them are already in existence. The bills are unnecessary, and if the Commission were established the cost to the Government to coordinate Antarctic activities would be considerably increased without assurance that a more effective program would result.

Research in the Antarctic is now a primary responsibility of the National Science Foundation, which works very closely with the Department of State, Department of Defense, other Government agencies, and the nongovernmental research community. Coordination and direction are handled by a small advisory committee. Lines of communication are excellent, decisions are reached quickly, and program direction and content seems adequate. The more formal requirements of a Commission may actually hamper the facility with which present Antarctic affairs are being handled.

During the next few years when the Antarctic program involves research and data collection, the National Science Foundation is a logical focal point for coordination. If the program goes into a development stage, some other arrangement may be appropriate.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

JOHN A. CARVER, JR.,
Under Secretary of the Interior.

[H.R. 555, 89th Cong., 1st sess.]

A BILL To provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, which shall include, but shall not be limited to, gathering, evaluating, correlating, and dispersing of information and knowledge obtained from exploration, research, and other mediums relating to weather, communications, travel, and other areas of information; also to coordinate Antarctic activities among those agencies of the United States Government and private institutions interested in or concerned directly with the promotion, advancement, increase, and diffusion of knowledge of the Antarctic; and to direct and administer United States Antarctic programs in the national interest.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Richard E. Byrd Antarctic Commission Act of 1965".

DEFINITIONS

Sec. 2. When used in this Act:

- (1) "Commission" means the Richard E. Byrd Antarctic Commission.
- (2) "Director" means the Director of the Commission.
- (3) "Board" means the Board of Governors.
- (4) "Commissioned officer" means a commissioned officer of the Armed Forces of the United States.

THE COMMISSION

Sec. 3. There is established in the executive branch of the Government, the Richard E. Byrd Antarctic Commission. The Commission shall consist of a Director, two Deputy Directors, and a Board of Governors.

FUNCTIONS OF THE COMMISSION

Sec. 4. The Commission shall—

(1) maintain a depository of information relating to the Antarctic including: (A) all records of the Commission, (B) originals or copies of records within the executive branch relating to the Antarctic, (C) books, pamphlets, periodicals, and articles dealing with the Antarctic, and (D) such other information as the Commission considers desirable;

(2) conduct such field and laboratory studies and evaluations as it considers advisable to further the knowledge of the Antarctic in science, commerce, and related activities, which shall include, but shall not be limited to gathering, evaluating, and dispersing of information and knowledge obtained from exploration, research and other mediums, relating to weather, communications, travel, and other areas of information;

(3) publish or arrange for the publication of scientific, technical, historical, and general information so as to further the dissemination of information about the Antarctic, when the dissemination is consistent with the interests of national security and the public interest (publication may be made without regard to section 87 of the Act of January 12, 1895 (ch. 23, 28 Stat. 622), and section 11 of the Act of March 1, 1910 (ch. 86, 40 Stat. 1270; 44 U.S.C. 111));

(4) with the concurrence and approval of the Board, perform, at the request of the head of any executive agency, specific research, investigation, or experimentation in connection with matters relating to the national defense and/or the interests of the United States;

(5) approve the plans for and supervise Antarctic operation or expeditions conducted by, or supported by, other agencies of the United States except for operations or expeditions or parts thereof which are military in character;

(6) assist private Antarctic expeditions or research programs when such assistance is in the best interests of the United States;

(7) accept and utilize the services of voluntary and uncompensated personnel and provide transportation and subsistence as authorized by section 5 of the Act of August 2, 1940 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 73b-2), for persons serving without compensation; and

(8) acquire by purchase, lease, loan, or gift, and hold or dispose of by sale, lease, or loan, real or personal property necessary for, or resulting from, the exercise of authority under this Act;

(9) receive and use funds donated to the Commission if such funds are donated without restriction other than that they be used to carry out the general purposes of this Act;

(10) report to the President before September 16 of each year, summarizing the activities of the Commission and making such recommendations as it considers appropriate. The report shall include the recommendation of the Board.

THE DIRECTOR OF THE COMMISSION

SEC. 5. (a) The Director shall be appointed by the President, by and with the advice and consent of the Senate, for a period of six years and shall be paid at the rate prescribed in section 107(a) of the Federal Executive Pay Act, 1950 (70 Stat.). He may be a person appointed from civilian life or a commissioned officer in an active or retired status.

(b) The Director shall—

- (1) manage the affairs of the Commission;
- (2) issue such regulations as he considers necessary to carry out this Act;
- (3) appoint and fix the compensation of such personnel as may be necessary to carry out this Act; and
- (4) be a member of the Board of Governors ex officio.

(c) The appointments made and the compensation fixed shall be in accordance with the Classification Act of 1949 and the regulations of the Civil Service Commission. However, the Director may employ such technical and professional personnel, and fix their compensation, as he considers necessary, without regard to the Classification Act of 1949 or the regulations of the Civil Service Commission. The Director may terminate the employment of any officers or employees, except the Deputy Directors, whenever he considers that termination to be in the best interests of the United States, except that no person in the classified service may be removed or suspended without pay unless it is accomplished under the Act of August 24, 1912 (ch. 380, 37 Stat. 555), as amended (5 U.S.C. 652).

DEPUTY DIRECTORS

SEC. 6. (a) The Deputy Directors shall be appointed by the President, by and with the advice and consent of the Senate, and shall perform such duties as he may prescribe.

(b) The Deputy Directors may be appointed from civilian life or may be commissioned officers in an active or retired status. However, if the Director is appointed from civilian life, only one Deputy Director may be a commissioned officer. If the Director is a commissioned officer, both Deputy Directors shall be appointed from civilian life.

(c) The Deputy Directors shall be paid \$ a year.

MILITARY STATUS OF DIRECTOR AND DEPUTY DIRECTORS

SEC. 7. (a) When a commissioned officer is appointed as Director or Deputy Director, he is not subject to military authority and may not exercise command over any members of the Armed Forces of the United States except as the President may prescribe.

(b) The appointment of a commissioned officer as Director or Deputy Director does not affect his status or rank or the pay and allowances incident to his status or rank. He is entitled to receive the pay and allowances payable to an officer of his rank and length of service, for which the appropriate department shall be reimbursed from any funds available to defray the expenses of the Commission. He is also entitled to be paid by the Commission the amount by which the compensation provided for the Director or Deputy Director exceeds his annual military pay and allowances.

BOARD OF GOVERNORS

SEC. 8. (a) The Board—consisting of eleven members—shall be appointed by the President, by and with the advice and consent of the Senate. The Board shall consist of the President of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, plus four selected from civil life who are eminently qualified in their professions including a representative of the academic polar institutes so as to provide, in addition to Federal administration, a broad field of knowledge and experience which will properly relate the activities of the Commission to the national welfare.

(b) The members of the Board, in addition to the President of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, shall be appointed for a period of six years, except that (1) any member appointed to fill a vacancy occurring before the expiration of the term of his predecessor shall be appointed for the remainder of the term; (2) the term of office of the members first taking office after the date of enactment of this Act shall expire, as designated by the President at the time of appointment, one at the end of two years, one at the end of four years, and two at the end of six years, and (3) a member may be reappointed to the Board for not more than one additional term; and (4) the members of the Board who are Cabinet members shall be members of that Board during the tenure of office as Cabinet members.

(c) Members of the Board shall be paid at the rate of \$50 per day—for each day—except members of the President's Cabinet during their services as members of the Board, and shall be allowed travel expenses as authorized by section 5 of the Act of August 2, 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 78b-2).

(d) The Board shall—

(1) meet annually on the first Monday in November and at such other times as the Chairman determines;

(2) elect a Chairman and Vice Chairman, at the regular annual meeting, to serve for the following year;

(3) review and assess the research and exploration activities relating to the Antarctic; and

(4) make such recommendations to the Commission as they consider appropriate for the advancement and dissemination of knowledge of the Antarctic.

RESEARCH CENTERS

SEC. 9. (a) Under the provisions of this Act there shall be established research centers at academic and/or research institutions having special competences or interests in scientific aspects of polar research.

The Commission shall determine that each such center shall meet criteria prescribed by the Commission under the policy guidance provided by the Board of Governors, and the Commission shall be responsible for the overall development and coordination of programs of research which may be approved for development within the research centers in, and related to the Antarctic region. Such programs of research as may be initiated at the research centers with the approval of the Commission, in close cooperation with the National Science Foundation, shall be supported by Federal or private funds.

(b) Due to the unique requirements of polar research, a designated number of fellowships or grants shall be provided to permit qualified students and others to conduct studies pertinent to Antarctica. The Commission shall be authorized to grant support funds specifically associated with polar research, recommended by the Director of the Commission and approved by the Board of Governors.

SERVICES AND FUNDS OF OTHER AGENCIES

SEC. 10. (a) The Commission may, with the consent of the agency concerned, accept and utilize on a reimbursable basis the officers, employees, services, facilities, and information of any agency of the United States. However, such services and facilities may be furnished only if it does not interfere with the performance of the primary mission of the agency concerned. An agency having custody of data relating to the matters within the jurisdiction of the Commission shall, upon request of the Director, make that data available to the Commission without reimbursement.

(b) Funds available to any agency of the United States for scientific or technical research, educational, or other public service are available for transfer, with the approval of the head of the agency concerned, to the Commission for such use as is consistent with the purposes for which those funds were provided. Funds so transferred shall be spent by the Commission for the purposes for which the transfer was made or for general administrative expenses until such time as an appropriation is made available to the Commission.

ACTS AMENDED

SEC. 11. Subsection 107(a) of the Federal Executive Pay Act of 1956 is amended by adding the following after clause (22):

"(23) Director of the Antarctic Commission."

SEC. 12. Section 505 of the Classification Act of 1949, as amended (70 Stat. 762; 5 U.S.C. 1105), is amended by adding the following subsection:

"(f) The Director of the Antarctic Commission is authorized, without regard to any other provision of this section, to place a total of seven positions in the Antarctic Commission in grades 13, 17, and 18 of the General Schedule. Such positions shall be in addition to the number of positions authorized to be placed in such grades by subsection (b)."

[H.R. 2211, 80th Cong., 1st sess.]

A BILL To provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, which shall include, but shall not be limited to, gathering, evaluating, correlating, and dispersing of information and knowledge obtained from exploration, research, and other mediums relating to weather, communications, travel, and other areas of information; also to coordinate Antarctic activities among those agencies of the United States Government and private institutions interested in or concerned directly with the promotion, advancement, increase, and diffusion of knowledge of the Antarctic; and to direct and administer United States Antarctic programs in the national interest.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Richard E. Byrd Antarctic Commission Act of 1968".

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(1) maintain a depository of information relating to the Antarctic including: (A) all records of the Commission, (B) originals or copies of records within the executive branch relating to the Antarctic, (C) books, pamphlets, periodicals, and articles dealing with the Antarctic, and (D) such other information as the Commission considers desirable;

(2) conduct such field and laboratory studies and evaluations as it considers advisable to further the knowledge of the Antarctic in science, commerce, and related activities, which shall include, but shall not be limited to, gathering, evaluating, and dispersing of information and knowledge obtained from exploration, research, and other mediums, relating to weather, communications, travel, and other areas of information;

(3) publish or arrange for the publication of scientific, technical, historical, and general information so as to further the dissemination of information about the Antarctic, when the dissemination is consistent with the interests of national security and the public interest (publication may be made without regard to section 87 of the Act of January 12, 1905 (ch. 28, 28 Stat. 622, and section 11 of the Act of March 1, 1919) (ch. 86, 40 Stat. 1270; 44 U.S.C. 111));

(4) with the concurrence and approval of the Board, perform, at the request of the head of any executive agency, specific research, investigation, or experimentation in connection with matters relating to the national defense and/or the interests of the United States;

(5) approve the plans for and supervise Antarctic operations or expeditions conducted by, or supported by, other agencies of the United States

except for operations or expeditions or parts thereof which are military in character;

(6) render advisory assistance to private Antarctic expeditions or research programs when such assistance is in the best interests of the United States;

(7) accept and utilize the services of voluntary and uncompensated personnel and provide transportation and subsistence as authorized by section 5 of the Act of August 2, 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 73b-2), for persons serving without compensation;

(8) acquire in the United States or abroad by purchase, lease, loan, or gift, and hold or dispose of by sale, lease, or loan, real or personal property necessary for the operation and maintenance of the Commission, provided that the acquisition by lease or otherwise, of buildings in the United States including the District of Columbia, shall be through the Administrator of General Services.

(9) receive and use funds donated to the Commission if such funds are donated without restriction other than that they be used to carry out the general purposes of this Act;

(10) make arrangements (including contracts, agreements, and grants) for the conduct of such research and other scholarly activities in science and related fields, by private or public institutions or persons as may implement the function of the Commission;

(11) procure services as authorized by section 15 of the Administrative Expenses Act of 1946, as amended (5 U.S.C. 55a), at rates not to exceed \$100 each day per individual, and in addition, transportation expenses and per diem, in lieu of subsistence while away from their homes or regular places of business, as authorized by section 5 of said Act, as amended (5 U.S.C. 73b-2): *Provided*, That services of such individuals may be secured singly or as members of committees: *And provided further*, That contracts so authorized may be renewed, annually;

(12) pay travel and related expenses of the members of the Board, the Director, members of the staff of the Commission, members of visiting committees, and advisors to the Commission, as authorized; utilize or employ the services, personnel, equipment, or facilities of any other Government agency, with the consent of the head of the Government agency concerned, to perform such functions on behalf of the Commission as may appear desirable; and

(13) report to the President before September 16 of each year, summarizing the activities of the Commission and making such recommendations as it considers appropriate. The report shall include the recommendation of the Board.

APPROPRIATIONS AND USE OF FUNDS

SEC. 5. (a) There is hereby authorized to be appropriated, such funds as may be necessary to carry out the purposes of this Act, and when so provided in an appropriation Act, such funds may remain available until expended.

(b) Funds appropriated for the purposes of this Act or transferred to the Commission by other government agencies for such purposes, shall be available for the exercise of any authority granted by this Act, including but not limited to: expenses of printing; purchase, rent or lease of offices and buildings for the use of the Commission; payment therefor, in advance; and maintenance improvements and repairs of such properties or grounds; expenses of attendance at meetings concerned with furthering the purposes of this Act, including expenses in connection with meetings of persons whose appointment, employment, assignment, detail, or services are authorized.

THE DIRECTOR OF THE COMMISSION

SEC. 6. (a) The Director shall be appointed by the President, and with the advice and consent of the Senate, for a period of six years and shall receive compensation at the rate of \$20,500 per annum. He may be a person appointed from civilian life or a commissioned officer in an active or retired status.

(b) The Director shall—

(1) manage the affairs of the Commission;

(2) issue such regulations as he considers necessary to carry out this Act, consistent with policies and guidance established by the Board;

(3) appoint and fix the compensation of such personnel as may be necessary to carry out this Act; and

(4) be a member of the Board of Governors *ex officio*.

(c) The appointments made and the compensation fixed shall be in accordance with the Classification Act of 1949 and the regulations of the Civil Service Commission. However, the Director may employ such technical and professional personnel, and fix their compensation, as he considers necessary, without regard to the Classification Act of 1949 or the regulations of the Civil Service Commission. The Director may terminate the employment of any officers or employees, except the Deputy Directors, whenever he considers that termination to be in the best interests of the United States, except that no person in the classified service may be removed or suspended without pay unless it is accomplished under the Act of August 24, 1912 (ch. 380, 37 Stat. 555), as amended (5 U.S.C. 652).

DEPUTY DIRECTORS

SEC. 7. (a) The Deputy Directors shall be appointed by the President, by and with the advice and consent of the Senate, and shall perform such duties as he may prescribe.

(b) The Deputy Directors may be appointed from civilian life or may be commissioned officers in an active or retired status. However, if the Director is appointed from civilian life, only one Deputy Director may be a commissioned officer. If the Director is a commissioned officer, both Deputy Directors shall be appointed from civilian life.

(c) The Deputy Directors shall be paid \$18,500 a year.

MILITARY STATUS OF DIRECTOR AND DEPUTY DIRECTORS

SEC. 8. (a) When a commissioned officer is appointed as Director or Deputy Director, he is not subject to military authority and may not exercise command over any member of the Armed Forces of the United States except as the President may prescribe.

(b) The appointment of a commissioned officer as Director or Deputy Director does not affect his status or rank or the pay and allowances incident to his status or rank. He is entitled to receive the pay and allowances payable to an officer of his rank and length of service, for which the appropriate department shall be reimbursed from any funds available to defray the expenses of the Commission. He is also entitled to be paid by the Commission the amount by which the compensation provided for the Director or Deputy Director exceeds his annual military pay and allowances.

BOARD OF GOVERNORS

SEC. 9. (a) The Board—consisting of eleven members—shall be appointed by the President, by and with the advice and consent of the Senate. The Board shall consist of the President of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, plus four selected from civil life who are eminently qualified in their professions including a representative of the academic polar institutes so as to provide, in addition to Federal administration, a broad field of knowledge and experience which will properly relate the activities of the Commission to the national welfare.

(b) The members of the Board, in addition to the president of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, shall be appointed for a period of six years, except that (1) any member appointed to fill a vacancy occurring before the expiration of the term of his predecessor shall be appointed for the remainder of the term; (2) the term of office of the members first taking office after the date of enactment of this Act shall expire, as designated by the President at the time of appointment, one at the end of two years, one at the end of four years, and two at the end of six years, and (3) a member may be reappointed to the Board for not more than one additional term; and (4) the members of the Board who are Cabinet members shall be members of that Board during the tenure of office as Cabinet members.

(c) Members of the Board shall be paid at the rate of \$50 per day—for each day—except members of the President's Cabinet during their services as members of the Board, and shall be allowed travel expenses as authorized by section

5 of the Administrative Expenses Act of 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 781-2).

(d) The Board shall—

(1) meet annually on the first Monday in November and at such other times as the Chairman determines;

(2) elect a Chairman and Vice Chairman, at the regular annual meeting, to serve for the following year;

(3) review and assess the research and exploration activities relating to the Antarctic; and

(4) make such recommendations to the Commission as they consider appropriate for the advancement and dissemination of knowledge of the Antarctic.

RESEARCH CENTERS

SEC. 10. (a) Under the provisions of this Act there shall be established research centers at academic and/or research institutions having special competences or interests in scientific aspects of polar research.

The Commission shall determine that each such center shall meet criteria prescribed by the Commission under the policy guidance provided by the Board of Governors, and the Commission shall be responsible for the overall development and coordination of programs of research which may be approved for development within the research centers in, and related to the Antarctic region. Such programs of research as may be initiated at the research centers with the approval of the Commission, in close cooperation with the National Science Foundation, shall be supported by Federal or private funds.

(b) Due to the unique requirements of polar research, a designated number of fellowships or grants shall be provided to permit qualified students and others to conduct studies pertinent to Antarctica. The Commission shall be authorized to grant support funds specifically associated with polar research, recommended by the Director of the Commission and approved by the Board of Governors.

SERVICES AND FUNDS OF OTHER AGENCIES

SEC. 11. (a) The Commission may, with the consent of the agency concerned, accept and utilize on a reimbursable basis the officers, employees, services, facilities, and information of any agency of the United States. However, such services and facilities may be furnished only if it does not interfere with the performance of the primary mission of the agency concerned. An agency having custody of data relating to the matters within the jurisdiction of the Commission shall, upon request of the Director, make that data available to the Commission without reimbursement.

(b) Funds available to any agency of the United States for scientific or technical research, educational, or other public services are available for transfer, with the approval of the head of the agency concerned, to the Commission for such use as is consistent with the purposes for which those funds were provided. Funds so transferred shall be spent by the Commission for the purposes for which the transfer was made or for general administrative expenses until such time as an appropriation is made available to the Commission.

(c) The United States Navy shall provide such logistical and operational support as is required to fulfill the objectives of United States Antarctic programs and field studies in Antarctica. The commander of such Antarctic support force shall have the responsibility for determining the feasibility of, and insuring the success and safety of, United States Antarctic operations in Antarctica. The logistical-operational support that shall be provided by the United States Navy shall be on a fund-reimbursable basis from funds authorized by clause (4) of section 4 of this Act.

ACTS AMENDED

SEC. 12. Subsection (a) of section 107 of the Federal Executive Pay Act of 1950 (5 U.S.C. 2200) is amended by adding at the end thereof the following:

"(22) Director of the Antarctic Commission."

SEC. 13. Section 505 of the Classification Act of 1949, as amended (5 U.S.C. 1105), is amended by adding at the end thereof the following:

"(m) The Director of the Antarctic Commission is authorized, without regard to any other provision of this section, to place a total of seven positions in the Antarctic Commission in grades 16, 17, and 18 of the General Schedule. Such positions shall be in addition to the number of positions authorized to be placed in such grades by subsection (b)."

[H.R. 4658, 89th Cong., 1st sess.]

A BILL To provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, which shall include, but shall not be limited to, gathering, evaluating, correlating, and dispersing of information and knowledge obtained from exploration, research, and other mediums relating to weather, communications, travel, and other areas of information; also to coordinate Antarctic activities among those agencies of the United States Government and private institutions interested in or concerned directly with the promotion, advancement, increase, and diffusion of knowledge of the Antarctic; and to direct and administer United States Antarctic programs in the national interest.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Richard E. Byrd Antarctic Commission Act of 1963".

DEFINITIONS

SEC. 2. When used in this Act:

- (1) "Commission" means the Richard E. Byrd Antarctic Commission.
- (2) "Director" means the Director of the Commission.
- (3) "Board" means the Board of Governors.
- (4) "Commissioned officer" means a commissioned officer of the Armed Forces of the United States.

THE COMMISSION

SEC. 3. There is established in the executive branch of the Government, the Richard E. Byrd Antarctic Commission. The Commission shall consist of a Director, two Deputy Directors, and a Board of Governors.

FUNCTIONS OF THE COMMISSION

SEC. 4. The Commission shall—

(1) maintain a depository of information relating to the Antarctic including: (A) all records of the Commission, (B) originals or copies of records within the executive branch relating to the Antarctic, (C) books, pamphlets, periodicals, and articles dealing with the Antarctic, and (D) such other information as the Commission considers desirable;

(2) conduct such field and laboratory studies and evaluations as it considers advisable to further the knowledge of the Antarctic in science, commerce, and related activities, which shall include, but shall not be limited to, gathering, evaluating, and dispersing of information and knowledge obtained from exploration, research, and other mediums, relating to weather, communications, travel, and other areas of information;

(3) publish or arrange for the publication of scientific, technical, historical, and general information so as to further the dissemination of information about the Antarctic, when the dissemination is consistent with the interests of national security and the public interest (publication may be made without regard to section 87 of the Act of January 12, 1895 (ch. 23, 28 Stat. 622, and section 11 of the Act of March 1, 1919 (ch. 86, 40 Stat. 1270; 44 U.S.C. 111));

(4) with the concurrence and approval of the Board, perform, at the request of the head of any executive agency, specific research, investigation, or experimentation in connection with matters relating to the national defense and/or the interests of the United States;

(5) approve the plans for and supervise Antarctic operations or expeditions conducted by, or supported by, other agencies of the United States except for operations or expeditions or parts thereof which are military in character;

(6) render advisory assistance to private Antarctic expeditions or research programs when such assistance is in the best interests of the United States;

(7) accept and utilize the services of voluntary and uncompensated personnel and provide transportation and subsistence as authorized by section 5 of the Act of August 2, 1946 (ch. 744, 60 Stat. 806), as amended (5 U.S.C. 73b-2), for persons serving without compensation;

(8) acquire in the United States or abroad by purchase, lease, loan, or gift, and hold or dispose of by sale, lease, or loan, real or personal property necessary for the operation and maintenance of the Commission, provided that the acquisition by lease or otherwise, of buildings in the United States

including the District of Columbia, shall be through the Administrator of General Services.

(9) receive and use funds donated to the Commission if such funds are donated without restriction other than that they be used to carry out the general purposes of this Act;

(10) make arrangements (including contracts, agreements, and grants) for the conduct of such research and other scholarly activities in science and related fields, by private or public institutions or persons as may implement the function of the Commission;

(11) procure services as authorized by section 15 of the Administrative Expenses Act of 1946, as amended (5 U.S.C. 55a), at rates not to exceed \$100 each day per individual, and in addition, transportation expenses and per diem, in lieu of subsistence while away from their homes or regular places of business, as authorized by section 5 of said Act, as amended (5 U.S.C. 73b-2); *Provided*, That services of such individuals may be secured singly or as members of committees: *And provided further*, That contracts so authorized may be renewed, annually;

(12) pay travel and related expenses of the members of the Board, the Director, members of the staff of the Commission, members of visiting committees, and advisers to the Commission, as authorized; utilize or employ the services, personnel, equipment, or facilities of any other Government agency, with the consent of the head of the Government agency concerned, to perform such functions on behalf of the Commission as may appear desirable; and

(13) report to the President before September 16 of each year, summarizing the activities of the Commission and making such recommendations as it considers appropriate. The report shall include the recommendation of the Board.

APPROPRIATIONS AND USE OF FUNDS

SEC. 5. (a) There is hereby authorized to be appropriated, such funds as may be necessary to carry out the purposes of this Act, and when so provided in an appropriation Act, such funds may remain available until expended.

(b) Funds appropriated for the purposes of this Act or transferred to the Commission by other government agencies for such purposes, shall be available for the exercise of any authority granted by this Act, including but not limited to: expenses of printing; purchase, rent or lease of offices and buildings for the use of the Commission; payment therefor, in advance; and maintenance improvements and repairs of such properties or grounds; expenses of attendance at meetings concerned with furthering the purposes of this Act, including expenses in connection with meetings of persons whose appointment, employment, assignment, detail, or services are authorized.

THE DIRECTOR OF THE COMMISSION

SEC. 6. (a) The Director shall be appointed by the President, and with the advice and consent of the Senate, for a period of six years and shall receive compensation at the rate of \$20,500 per annum. He may be a person appointed from civilian life or a commissioned officer in an active or retired status.

(b) The Director shall—

(1) manage the affairs of the Commission;

(2) issue such regulations as he considers necessary to carry out this Act, consistent with policies and guidance established by the Board;

(3) appoint and fix the compensation of such personnel as may be necessary to carry out this Act; and

(4) be a member of the Board of Governors *ex officio*.

(c) The appointments made and the compensation fixed shall be in accordance with the Classification Act of 1949 and the regulations of the Civil Service Commission. However, the Director may employ such technical and professional personnel, and fix their compensation, as he considers necessary, without regard to the Classification Act of 1949 or the regulations of the Civil Service Commission. The Director may terminate the employment of any officers or employees, except the Deputy Directors, whenever he considers that termination to be in the best interests of the United States, except that no person in the classified service may be removed or suspended without pay unless it is accomplished under the Act of August 24, 1912 (ch. 389, 37 Stat. 555), as amended (5 U.S.C. 652).

DEPUTY DIRECTORS

Sec. 7. (a) The Deputy Directors shall be appointed by the President, by and with the advice and consent of the Senate, and shall perform such duties as he may prescribe.

(b) The Deputy Directors may be appointed from civilian life or may be commissioned officers in an active or retired status. However, if the Director is appointed from civilian life, only one Deputy Director may be a commissioned officer. If the Director is a commissioned officer, both Deputy Directors shall be appointed from civilian life.

(c) The Deputy Directors shall be paid \$18,500 a year.

MILITARY STATUS OF DIRECTOR AND DEPUTY DIRECTORS

Sec. 8. (a) When a commissioned officer is appointed as Director or Deputy Director, he is not subject to military authority and may not exercise command over any member of the Armed Forces of the United States except as the President may prescribe.

(b) The appointment of a commissioned officer as Director or Deputy Director does not affect his status or rank or the pay and allowances incident to his status or rank. He is entitled to receive the pay and allowances payable to an officer of his rank and length of service, for which the appropriate department shall be reimbursed from any funds available to defray the expenses of the Commission. He is also entitled to be paid by the Commission the amount by which the compensation provided for the Director or Deputy Director exceeds his annual military pay and allowances.

BOARD OF GOVERNORS

Sec. 9. (a) The Board—consisting of eleven members—shall be appointed by the President, by and with the advice and consent of the Senate. The Board shall consist of the President of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, plus four selected from civil life who are eminently qualified in their professions including a representative of the academic polar institutes so as to provide, in addition to Federal administration, a broad field of knowledge and experience which will properly relate the activities of the Commission to the national welfare.

(b) The members of the Board, in addition to the president of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, shall be appointed for a period of six years, except that (1) any member appointed to fill a vacancy occurring before the expiration of the term of his predecessor shall be appointed for the remainder of the term; (2) the term of office of the members first taking office after the date of enactment of this Act shall expire, as designated by the President at the time of appointment, one at the end of two years, one at the end of four years, and two at the end of six years, and (3) a member may be reappointed to the Board for not more than one additional term; and (4) the members of the Board who are Cabinet members shall be members of that Board during the tenure of office as Cabinet members.

(c) Members of the Board shall be paid at the rate of \$50 per day—for each day—except members of the President's Cabinet during their services as members of the Board, and shall be allowed travel expenses as authorized by section 5 of the Administrative Expenses Act of 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 73b-2).

(d) The Board shall—

(1) meet annually on the first Monday in November and at such other times as the Chairman determines;

(2) elect a Chairman and Vice Chairman, at the regular annual meeting, to serve for the following year;

(3) review and assess the research and exploration activities relating to the Antarctic; and

(4) make such recommendations to the Commission as they consider appropriate for the advancement and dissemination of knowledge of the Antarctic.

RESEARCH CENTERS

SEC. 10. (a) Under the provisions of this Act there shall be established research centers at academic and/or research institutions having special competences or interests in scientific aspects of polar research.

The Commission shall determine that each such center shall meet criteria prescribed by the Commission under the policy guidance provided by the Board of Governors, and the Commission shall be responsible for the overall development and coordination of programs of research which may be approved for development within the research centers in, and related to the Antarctic region. Such programs of research as may be initiated at the research centers with the approval of the Commission, in close cooperation with National Science Foundation, shall be supported by Federal or private funds.

(b) Due to the unique requirements of polar research, a designated number of fellowships or grants shall be provided to permit qualified students and others to conduct studies pertinent to Antarctica. The Commission shall be authorized to grant support funds specifically associated with polar research, recommended by the Director of the Commission and approved by the Board of Governors.

SERVICES AND FUNDS OF OTHER AGENCIES

SEC. 11. (a) The Commission may, with the consent of the agency concerned, accept and utilize on a reimbursable basis the officers, employees, services, facilities, and information of any agency of the United States. However, such services and facilities may be furnished only if it does not interfere with the performance of the primary mission of the agency concerned. An agency having custody of data relating to the matters within the jurisdiction of the Commission shall, upon request of the Director, make that data available to the Commission without reimbursement.

(b) Funds available to any agency of the United States for scientific or technical research, educational, or other public service are available for transfer, with the approval of the head of the agency concerned, to the Commission for such use as is consistent with the purposes for which those funds were provided. Funds so transferred shall be spent by the Commission for the purposes for which the transfer was made or for general administrative expenses until such time as an appropriation is made available to the Commission.

(c) The United States Navy shall provide such logistical and operational support as is required to fulfill the objectives of United States Antarctic programs and field studies in Antarctica. The commander of such Antarctic support force shall have the responsibility for determining the feasibility of, and insuring the success and safety of, United States Antarctic operations in Antarctica. The logistical-operational support that shall be provided by the United States Navy shall be on a fund-reimbursable basis from funds authorized by clause (4) of section 4 of this Act.

ACTS AMENDED

SEC. 12. Subsection (a) of section 107 of the Federal Executive Pay Act of 1956 (5 U.S.C. 2206) is amended by adding at the end thereof the following:

"(22) Director of the Antarctic Commission."

SEC. 13. Section 505 of the Classification Act of 1949, as amended (5 U.S.C. 1105), is amended by adding at the end thereof the following:

"(n) The Director of the Antarctic Commission is authorized, without regard to any other provision of this section, to place a total of seven positions in the Antarctic Commission in grades 10, 17, and 18 of the General Schedule. Such positions shall be in addition to the number of positions authorized to be placed in such grades by subsection (b)."

[H.R. 5494, 89th Cong., 1st sess.]

A BILL To provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, which shall include, but shall not be limited to, gathering, evaluating, correlating, and dispersing of information and knowledge obtained from exploration, research, and other mediums relating to weather, communications, travel, and other areas of information; also to coordinate Antarctic activities among those agencies of the United States Government and private institutions interested in or concerned directly with the promotion, advancement, increase, and diffusion of knowledge of the Antarctic; and to direct and administer United States Antarctic programs in the national interest.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Richard E. Byrd Antarctic Commission Act of 1963".

DEFINITIONS

SEC. 2. When used in this Act:

- (1) "Commission" means the Richard E. Byrd Antarctic Commission.
- (2) "Director" means the Director of the Commission.
- (3) "Board" means the Board of Governors.
- (4) "Commissioned officer" means a commissioned officer of the Armed Forces of the United States.

THE COMMISSION

SEC. 3. There is established in the executive branch of the Government, the Richard E. Byrd Antarctic Commission. The Commission shall consist of a Director, two Deputy Directors, and a Board of Governors.

FUNCTIONS OF THE COMMISSION

SEC. 4. The Commission shall—

(1) maintain a depository of information relating to the Antarctic including: (A) all records of the commission, (B) originals or copies of records within the executive branch relating to the Antarctic, (C) books, pamphlets, periodicals, and articles dealing with the Antarctic, and (D) such other information as the Commission considers desirable;

(2) conduct such field and laboratory studies and evaluations as it considers advisable to further the knowledge of the Antarctic in science, commerce, and related activities, which shall include, but shall not be limited to, gathering, evaluating, and dispersing of information and knowledge obtained from exploration, research, and other mediums, relating to weather, communications, travel, and other areas of information;

(3) publish or arrange for the publication of scientific, technical, historical, and general information so as to further the dissemination of information about the Antarctic, when the dissemination is consistent with the interests of national security and the public interest (publication may be made without regard to section 87 of the Act of January 12, 1905 (ch. 28, 28 Stat. 622, and section 11 of the Act of March 1, 1910 (ch. 86, 40 Stat. 1270; 44 U.S.C. 111));

(4) with the concurrence and approval of the Board, perform, at the request of the head of any executive agency, specific research, investigation, or experimentation in connection with matters relating to the national defense and/or the interests of the United States;

(5) approve the plans for and supervise Antarctic operations or expeditions conducted by, or supported by, other agencies of the United States except for operations or expeditions or parts thereof which are military in character;

(6) render advisory assistance to private Antarctic expeditions or research programs when such assistance is in the best interests of the United States;

(7) accept and utilize the services of voluntary and uncompensated personnel and provide transportation and subsistence as authorized by section 5 of the Act of August 2, 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 73b-2), for persons serving without compensation;

(8) acquire in the United States or abroad by purchase, lease, loan, or gift, and hold or dispose of by sale, lease, or loan, real or personal property necessary for the operation and maintenance of the Commission, provided that the acquisition by lease or otherwise, of buildings in the United States including the District of Columbia, shall be through the Administrator of General Services.

(9) receive and use funds donated to the Commission if such funds are donated without restriction other than that they be used to carry out the general purposes of this Act;

(10) make arrangements (including contracts, agreements, and grants) for the conduct of such research and other scholarly activities in science and related fields, by private or public institutions or persons as may implement the function of the Commission;

(11) procure services as authorized by section 15 of the Administrative Expenses Act of 1946, as amended (5 U.S.C. 55a), at rates not to exceed \$100 each day per individual, and in addition, transportation expenses and per diem, in lieu of subsistence while away from their homes or regular places of business, as authorized by section 5 of said Act, as amended

(5 U.S.C. 73b-2) : *Provided*, That services of such individuals may be secured singly or as members of committees: *And provided further*, That contracts so authorized may be renewed, annually;

(12) pay travel and related expenses of the members of the Board, the Director, members of the staff of the Commission, members of visiting committees, and advisers to the Commission, as authorized; utilize or employ the services, personnel, equipment, or facilities of any other Government agency, with the consent of the head of the Government agency concerned, to perform such functions on behalf of the Commission as may appear desirable; and

(13) report to the President before September 16 of each year, summarizing the activities of the Commission and making such recommendations as it considers appropriate. The report shall include the recommendation of the Board.

APPROPRIATIONS AND USE OF FUNDS

SEC. 5. (a) There is hereby authorized to be appropriated, such funds as may be necessary to carry out the purposes of this Act, and when so provided in an appropriation Act, such funds may remain available until expended.

(b) Funds appropriated for the purposes of this Act or transferred to the Commission by other government agencies for such purposes, shall be available for the exercise of any authority granted by this Act, including but not limited to: expenses of printing; purchase, rent or lease of offices and buildings for the use of the Commission; payment therefor, in advance; and maintenance improvements and repairs of such properties or grounds; expenses of attendance at meetings concerned with furthering the purposes of this Act, including expenses in connection with meetings of persons whose appointment, employment, assignment, detail, or services are authorized.

THE DIRECTOR OF THE COMMISSION

SEC. 6. (a) The Director shall be appointed by the President, and with the advice and consent of the Senate, for a period of six years and shall receive compensation at the rate of \$20,500 per annum. He may be a person appointed from civilian life or a commissioned officer in an active or retired status.

(b) The Director shall—

(1) manage the affairs of the Commission;

(2) issue such regulations as he considers necessary to carry out this Act, consistent with policies and guidance established by the Board;

(3) appoint and fix the compensation of such personnel as may be necessary to carry out this Act; and

(4) be a member of the Board of Governors *ex officio*.

(c) The appointments made and the compensation fixed shall be in accordance with the Classification Act of 1949 and the regulations of the Civil Service Commission. However, the Director may employ such technical and professional personnel, and fix their compensation, as he considers necessary, without regard to the Classification Act of 1949 or the regulations of the Civil Service Commission. The Director may terminate the employment of any officers or employees, except the Deputy Directors, whenever he considers that termination to be in the best interests of the United States, except that no person in the classified service may be removed or suspended without pay unless it is accomplished under the Act of August 24, 1912 (ch. 380, 37 Stat. 555), as amended (5 U.S.C. 652).

DEPUTY DIRECTORS

SEC. 7. (a) The Deputy Directors shall be appointed by the President, by and with the advice and consent of the Senate, and shall perform such duties as he may prescribe.

(b) The Deputy Directors may be appointed from civilian life or may be commissioned officers in an active or retired status. However, if the Director is appointed from civilian life, only one Deputy Director may be a commissioned officer. If the Director is a commissioned officer, both Deputy Directors shall be appointed from civilian life.

(c) The Deputy Directors shall be paid \$18,500 a year.

MILITARY STATUS OF DIRECTOR AND DEPUTY DIRECTORS

SEC. 8. (a) When a commissioned officer is appointed as Director or Deputy Director, he is not subject to military authority and may not exercise command over any member of the Armed Forces of the United States except as the President may prescribe.

(b) The appointment of a commissioned officer as Director or Deputy Director does not affect his status or rank or the pay and allowances incident to his status or rank. He is entitled to receive the pay and allowances payable to an officer of his rank and length of service, for which the appropriate department shall be reimbursed from any funds available to defray the expenses of the Commission. He is also entitled to be paid by the Commission the amount by which the compensation provided for the Director or Deputy Director exceeds his annual military pay and allowances.

BOARD OF GOVERNORS

SEC. 9. (a) The Board—consisting of eleven members—shall be appointed by the President, by and with the advice and consent of the Senate. The Board shall consist of the President of the National Academy of Sciences; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, plus four selected from civil life who are eminently qualified in their professions including a representative of the academic polar institutes so as to provide, in addition to Federal administration, a broad field of knowledge and experience which will properly relate the activities of the Commission to the national welfare.

(b) The members of the Board, in addition to the President of the National Academy of Science; Director of the National Science Foundation; Secretary of Defense; Secretary of State; Secretary of Interior; Secretary of Commerce, or their designees, shall be appointed for a period of six years, except that (1) any member appointed to fill a vacancy occurring before the expiration of the term of his predecessor shall be appointed for the remainder of the term; (2) the term of office of the members first taking office after the date of enactment of this Act shall expire, as designated by the President at the time of appointment, one at the end of two years, one at the end of four years, and two at the end of six years, and (3) a member may be reappointed to the Board for not more than one additional term; and (4) the members of the Board who are Cabinet members shall be members of that Board during the tenure of office as Cabinet members.

(c) Members of the Board shall be paid at the rate of \$50 per day—for each day—except members of the President's Cabinet during their services as members of the Board, and shall be allowed travel expenses as authorized by section 5 of the Administrative Expenses Act of 1946 (ch. 744, 60 Stat. 808), as amended (5 U.S.C. 73b-2).

(d) The Board shall—

(1) meet annually on the first Monday in November and at such other times as the Chairman determines;

(2) elect a Chairman and Vice Chairman, at the regular annual meeting, to serve for the following year;

(3) review and assess the research and exploration activities relating to the Antarctic; and

(4) make such recommendations to the Commission as they consider appropriate for the advancement and dissemination of knowledge of the Antarctic.

RESEARCH CENTERS

SEC. 10. (a) Under the provisions of this Act there shall be established research centers at academic and/or research institutions having special competences or interests in scientific aspects of polar research.

The Commission shall determine that each such center shall meet criteria prescribed by the Commission under the policy guidance provided by the Board of Governors, and the Commission shall be responsible for the overall development and coordination of programs of research which may be approved for development within the research centers in, and related to the Antarctic region. Such programs of research as may be initiated at the research centers with the approval of the Commission, in close cooperation with the National Science Foundation, shall be supported by Federal or private funds.

(b) Due to the unique requirements of polar research, a designated number of fellowships or grants shall be provided to permit qualified students and others to conduct studies pertinent to Antarctica. The Commission shall be authorized to grant support funds specifically associated with polar research, recommended by the Director of the Commission and approved by the Board of Governors.

SERVICES AND FUNDS OF OTHER AGENCIES

SEC. 11. (a) The Commission may, with the consent of the agency concerned, accept and utilize on a reimbursable basis the officers, employees, services, facilities, and information of any agency of the United States. However, such services and facilities may be furnished only if it does not interfere with the performance of the primary mission of the agency concerned. An agency having custody of data relating to the matters within the jurisdiction of the Commission shall, upon request of the Director, make that data available to the Commission without reimbursement.

(b) Funds available to any agency of the United States for scientific or technical research, educational, or other public service are available for transfer, with the approval of the head of the agency concerned, to the Commission for such use as is consistent with the purposes for which those funds were provided. Funds so transferred shall be spent by the Commission for the purposes for which the transfer was made or for general administrative expenses until such time as an appropriation is made available to the Commission.

(c) The United States Navy shall provide such logistical and operational support as is required to fulfill the objectives of the United States Antarctic programs and field studies in Antarctica. The commander of such Antarctic support force shall have the responsibility for determining the feasibility of, and insuring the success and safety of, United States Antarctic operations in Antarctica. The logistical-operational support that shall be provided by the United States Navy shall be on a fund-reimbursable basis from funds authorized by clause (4) of section 4 of this Act.

ACTS AMENDED

SEC. 12. Subsection (a) of section 107 of the Federal Executive Pay Act of 1956 (5 U.S.C. 2206) is amended by adding at the end thereof the following: "(22) Director of the Antarctic Commission."

SEC. 13. Section 505 of the Classification Act of 1949, as amended (5 U.S.C. 1105), is amended by adding at the end thereof the following:

"(m) The Director of the Antarctic Commission is authorized, without regard to any other provision of this section, to place a total of seven positions in the Antarctic Commission in grades 16, 17, and 18 of the General Schedule. Such positions shall be in addition to the number of positions authorized to be placed in such grades by subsection (b)."

Mr. O'BRIEN. I might say at the outset and very briefly that we have been having hearings annually on this legislation or similar legislation. They have been very pleasant get-togethers, provided an opportunity on occasion for those who have labored hard and arduously in the Antarctic to appear here and share with us some of their experiences. But each year, we have had the same outcome, nothing was ever done about the bills on which the hearings were held.

I want to say at the outset that as far as I am concerned, while I have enjoyed these little get-togethers, I intend to ask this subcommittee this year either to vote up or down one or more or a combination of these bills, because if we are never to act upon legislation after the hearings, there is not much point in these members who have introduced them year after year, convinced that what they propose is correct—not much point in their continuing to introduce these bills.

Our first witness this morning will be our distinguished colleague from Oklahoma, Hon. Tom Steed.

**STATEMENT OF HON. TOM STEED, A REPRESENTATIVE IN CONGRESS
FROM THE FOURTH CONGRESSIONAL DISTRICT OF THE STATE
OF OKLAHOMA**

Mr. STEED. Mr. Chairman, members of the committee, first let me express my appreciation for your consideration in having me have the opportunity of appearing here today. I am not going to take up much of the committee's time. But I did want to appear here today. I do not advocate any particular bill, but rather, the general purpose of the legislation before you. It happened that I was granted an opportunity last November to go to Antarctica and observe the operations going on down there. I came away with a few very definite impressions, the principal one of which is that I think that it is quite well and proper and in the national interest that we are now in Antarctica and that it will be in the national interest for us to remain there on a permanent basis. The activities going on down there, both from the standpoint of our own Government and that of other countries is one, I think, that is very much to be desired in the world we live in, and I think one who could have a firsthand look at this area and at the scientific work going on there would readily admit that it is something that very much needs to be done and that by all means, our country must have a major part in. I hope this subcommittee will give some serious consideration to the type of legislation before it because, in an activity such as is necessary for us to carry on in order to be there at all, many agencies of the Government are involved, and it seems to me that a central authority would be desirable. I was told that most of the other nations in there do approach their activities in such a manner.

While anyone seeing it firsthand would be very impressed with the wonderful job the Navy, the Air Force, the National Science Foundation, and all the others involved, are doing, there comes a point where things that are not within the scope of any particular agency, but rather are of such broad importance that they involve many agencies, need to be attended to, and I think that a central agency making long range policy evaluations and having the authority to put this thing in focus not only for our own country but to relate it with the activities of all these other countries would be very helpful. I know you gentlemen are a lot more familiar than I with details of how we got into this activity in the first place and what we have done there since. But it seems to me that we now have enough knowledge and experience that we could make this a more useful and a more helpful operation if we went into this activity of centralizing it and putting it on a more permanent basis. There are many advantages to be gained if those charged with the job to be done down there have a more spelled-out course of action, not just for a single season or a year but for a long time to come.

It is quite wasteful to operate down there on a crash basis program. It can become more equal and I think more fruitful if we recognize, one, the fact that we are there to stay, that it is in the national interest that we must stay there, and two, that since we are going to do that, we do it on a more organized and a more planned out and a more developed overall policy basis.

That, Mr. Chairman, is the thing I came away feeling very strongly and to express which I asked the opportunity to impose upon this

subcommittee today. It is the impression I got from the experience I had found there. I hope and trust that all of you today who have not already had that experience will take the first opportunity you get to go into that area. Since there is nothing else like it on the face of the earth, it is very difficult for anyone to know just what it is like until he experiences a trip in there. It is a very dramatic experience. I think that the one thing that will impress anyone going in there for the first time is that this is a part of the world that we know little about, we must know a lot more about it; it does have great importance in the affairs of the world in the future. By all means, the United States must be active in that area as long as there is any action on the part of anyone in that area.

Mr. O'BRIEN. Thank you, very much, Mr. Steed. I know that all the members of the committee appreciate the fact that people of your stature in Congress who are not directly concerned, at least with the legislation, take the trouble to learn at firsthand what is going on in these places.

Does your subcommittee of appropriations handle funds for the National Sciences Foundation?

Mr. STEED. No, unfortunately not, Mr. Chairman.

However, we do have an opportunity to find out at firsthand in the whole committee, when the several items affecting this operation come up. I think that in the sense of obtaining the funds that will be needed in the years ahead to operate down there, the time will come when it would be very helpful if you had a central authority that spoke for the whole spectrum of it rather than the piecemeal approach we now have.

Mr. O'BRIEN. Mr. Aspinall?

Mr. ASPINALL. Mr. Chairman, I am glad to know that our colleague from Oklahoma, Mr. Steed, went down into the area, that he has some well-founded opinions about it.

Of course, if we should have, sooner or later, this unified operation that you speak about, Mr. Steed, we might take away from some of the individual groups that are going down there some of the authority in the operations that they presently have. This may be one of the reasons why they do not want to be interfered with.

Mr. STEED. Well, I am not talking in terms of replacing the action part of the program we have there. I do not consider myself authority enough to spell out what approach can be made. But there is coming a time when an agency that can, at least in the field of follow-up, have some authority, can be quite useful. I think that if I were on your subcommittee and called upon to make a decision on this, I would be quite interested in knowing a great deal about what the other countries in there have found in their way of approach to it.

Anytime you have an activity of this magnitude, where many agencies of the Government become involved, it imposes certain problems and I am thinking more in terms of perhaps coordination and follow-up than I am in the field of actual action.

Having the opportunity to see what the people down there are doing, I was very much impressed. I thought the Navy was doing a very outstanding job. But still they are handicapped in the fact that we do not have what seemed to me to be a spelled-out, long-range policy, a long-range goal down there. They need to know not only just what

they are going to be doing next year, but where they are headed for a long time to come. It seems to me that I could not visualize a time when it would never be in our national interest not to be active in that area. I think its importance to the rest of the globe is such that we must remain active there.

Mr. ASPINALL. What kind of importance, Mr. Steed? Are we kidding ourselves, or trying to kid ourselves and the rest of the world, why we are down there, building things in support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica?

Mr. STEED. Well, for one thing, I will put it this way: What we do not know about that area seems to be a great deal more than what we do know. But we do know that many other countries are quite interested in research in that area. For no other reason than because of the great unknowns surrounding it and the fact that others want to know and the potential impact it could have on all sorts of international affairs, I think it would be the height of folly for the United States to pull out of there and turn its back on that area. Our people there have learned enough already to indicate to a layman like me that it is most valuable and worthwhile, and my concern is that they are now compiling enough scientific information that to begin to reach some what you might call dividend from it is to make it more readily available to all elements of our society that might now or in the future have need for it. I think some activity in that area is very desirable. I think that perhaps a more spelled-out central approach and long-range policy could not only accomplish all we want to do there but actually make it possible for us to carry on what we need to do in a more economical and realistic way.

Mr. ASPINALL. Well, Mr. Chairman, I do not wish to prolong this discussion. This is an area where the United States should have and must have a great deal of involvement for our own national security. We might just as well admit it out in the open and have a go at it. How long we can keep playing with it as we are playing with it, each great nation of the world having a particular segment without any continuity of prolonged effort on the part of the United States, is something that I do not know.

Thank you, very much.

Mr. O'BRIEN. Any further questions?

Mr. HALEY. Mr. Chairman, Congressman Steed, you spoke about other members of the subcommittee going down to this part of the world. A trip down there could not be classed as a pleasure trip by some of our freewheeling columnists, could it? The night life and other things in that part of the country is not very enticing, is it?

Mr. STEED. Mr. Haley, I will tell you that it would be very hard for me to conceive of a type of person who would conceive of a trip to Antarctica as a pleasure trip. One of the strongest feelings of relief I had was that when I was safely out of the place. Yet, it was one experience I was happy to have had and I was impressed by it.

But another recommendation I make to the committee, instead of wasting any money sending me back down there, it would be a lot more helpful if some of those of you who have not been would go.

Mr. HALEY. Of course, we take these trips, Congressman Steed, as you know. We are usually accused of wasting the taxpayers' money

in such places as Paris to investigate the growing of tomatoes and things of that kind. This certainly would not occasion any columnist to write that we have gone on a pleasure trip. I sometimes wish that some of these people who criticize—I do not make many trips, but I wish sometimes that some of these columnists would go with me on one of my trips when I go to these Indian reservations, where one day you may have 108-degree heat and the next day you are freezing at 40.

Mr. STEED. I have seen you back in my State, Mr. Haley, conducting some committee business and it certainly was not any pleasure. It was a pretty long, hard day's work. Those folks you are dealing with so rarely have an opportunity to present their matters to Congress that you cannot blame them for taking full advantage of you when you are kind enough to come out there and see them. I think Congress would be better informed and the people would feel a lot better represented if a lot more of that was done instead of less. It is not something that you put on a pleasure basis. This is a thing that our Government is doing that is almost impossible to know the whole story unless you do observe it firsthand. I would not know how to explain the feeling of being in Antarctica to anyone. There is nothing I have ever come into contact with in all my life that is like it. There is no place on the globe like it. If a man wants to know the whole flavor of it, he just has to go down there. If it does not make a profound impression on him, he will be a different type human being than I have run into yet.

I want to say this, that all the Americans down there are there on a volunteer basis and if you do not get anything else out of it, it is refreshing to see that many of your fellow countrymen so dedicated and so devoted to the work they are doing as we saw down there.

Mr. HALEY. Thank you, Mr. Steed. I am glad you have had an opportunity to go down and see the area and know what is going on.

Mr. O'BRIEN. Thank you very much, Mr. Steed. We are very grateful to you.

Our next witness will be one of our colleagues, who is the author of one of these bills before us, the Honorable Rogers C. B. Morton, the author of H.R. 5494.

STATEMENT OF HON. ROGERS C. B. MORTON, A REPRESENTATIVE IN CONGRESS FROM THE FIRST CONGRESSIONAL DISTRICT OF THE STATE OF MARYLAND

Mr. MORTON. Mr. Chairman, I want to thank you and this subcommittee on which I am privileged to serve for the opportunity to discuss the U.S. Antarctic programs.

The Zablocki bill, H.R. 555, the Hosmer bill, H.R. 2211, the Saylor bill, H.R. 4658, and my own bill, H.R. 5494, are directed toward the establishment of a management concept for the U.S. operations in the Antarctic. I believe this is a proper step forward and necessary to the long-term conduct and pursuit of our national interest on the Antarctic Continent.

Before proceeding any further, I want to express on the record my sincere appreciation to Admiral Reedy, the members of his command, and to the U.S. Navy for making it possible for me to visit Antarctica, including our base at McMurdo, our Pole Station, and our Byrd Station. There is no question or controversy in my mind as to the magnifi-

cent job the Navy is doing in carrying out its mission of logistic support of the U.S. Antarctic research programs. The officers and men are dedicated to the task and apply themselves to it in the highest tradition of the service. They are to be complimented and commended.

Also, may I express my sincere appreciation to the chairman of the subcommittee and the chairman of the full committee, Mr. Aspinall, for authorizing my visit to Antarctica. We were accompanied on this trip by Dr. Taylor, our own staff consultant, who, in his usual efficient manner, contributed much to the value of the trip. We are indeed fortunate to have Dr. Taylor as a member of our staff on the Interior and Insular Affairs Committee.

From the outset, let us stipulate that our country has a national interest in Antarctica. This interest arises from the basic purpose of the Antarctic Treaty, of which we are a member nation, and arises from the overall strategy of keeping Antarctica free from military use by any nation and keeping this vast area at the foot of the world free from any development which does not have peaceful purposes.

The question does arise, on the other hand, as to the method by which we evaluate our total national interest, by which we plan and develop the programs for peaceful uses of Antarctica and by which we determine the priorities within various program areas. In short, the basic organization of management control of the U.S. efforts in Antarctica is open to debate, and, in my opinion, is subject to specific improvement.

First, we must recognize that the U.S. activity in Antarctica is an on-going proposition. We are there to stay. Let's face this fact and convert our activities from a crash program to a long-term plan of efficient operation. In my opinion, the best way of doing this is to establish the Richard E. Byrd Antarctic Commission and a co-related Board of Governors.

The very nature of the things that we should do in the development of our interests in Antarctica and in the coordination of our activities with other nations will inevitably bring to bear many agencies of different interests both governmental and nongovernmental, and both technical and operational in character.

Since I think we all agree that there will be a tomorrow, and again a tomorrow, for American activities in this area, the orderly maintenance of a depository of information including records, plans, and evaluation of data, becomes an overriding consideration in the management of our activities. In addition to the conduct of field and laboratory studies, long-term engineering considerations for making our facilities there permanent must be developed.

A visit to the ice and particularly to McMurdo is all that is necessary to make one realize fully that our present operations have grown to this point very hurriedly and are now in need of reevaluation and more thoughtful planning. For example, one finds a disorderly array of supplies scattered across the hillsides. One finds a heterogeneous inventory of transport, earthmoving and specialized equipment, indicating a lack of standardization which results in abnormally difficult maintenance problems and an unusually large number of tractors, vehicles, and machines on the deadline.

I am not critical of the fact that these situations exist today because I understand the time pressures of work orders under which the total American-Antarctic complex was developed. The visitor is also

quickly impressed with the fact that the logistic requirements to support a single scientist, his equipment, and his activity in this hostile climate is of important magnitude. In fact, the figure was given to us that it costs \$240,000 for logistic support to keep a single investigator going for a period of 1 year. We were told that the requirement was 10 military personnel for each scientist. This fact alone would lead us to conclude that a dollar spent in long-term planning and engineering for the simplification of logistic procedures could earn a large return on investment.

The fact that we have still in the crank-up stage an atomic plant designed to meet the power requirements of McMurdo and provide the heat for distillation of sea water in sufficient quantities to support the community and the fact that this powerplant has been difficult to bring to full-scale efficient production are demonstrable reasons for the development of an overriding management control.

In my opinion, what we have going in Antarctica in no way should be compared in the ordinary sense to an overseas military base. Nor, on the other hand, should we consider further operation or development without the use of Navy facilities and capabilities. The point is that in the Antarctic we have the opportunity, in cooperation with the sister nations of the treaty, to add significantly to our inventory of scientific knowledge which will inevitably accrue for a better life for men on earth. But, because of the difficulties involved, the very complex nature of the experimentation required, careful consideration must be given to the format of our scientific investigation and to the priorities for the various phases of our scientific work.

It is reasonable to believe that the interpretation and evaluation of the data collected should be current with the work going on in the field. It will be the conclusions derived from various experiments and investigations that will, in my opinion, be most important for the determination of the depth and scope of additional investigation within each scientific discipline.

The operations we have going in the area of mapping, geological investigation and general knowledge of the physiognomy of the continent require at this point, qualitative evaluation and conclusive review of our accomplishment in these areas. I have been unable to find out if the supporting cartography has kept pace with the data collected and the thousands of aerial photographs that have been made. Much of this work is interagency in nature and part of it is developed through contractual agreements with colleges, universities, and foundations.

After receiving the scientific briefings at McMurdo and the two inland stations and discussing with the scientific community the mission and scope of their work, I was not convinced that the work going on enjoyed the full supervision of the senior people in the various disciplines. I was not convinced that the data collected would have topflight attention and result in the kind of evaluation it deserved based on the cost of acquiring it.

Many hours have been consumed and many dollars have been spent. Let us now through a management device designed to plan, to control, to evaluate, to interpret, and to inform, draw together an accurate portrayal of the work we have done, of what remains to be done, and how we are going to do it.

We must realize that the National Science Foundation is not an operating agency. It should welcome the establishment by top management of the Byrd Commission as a means of more effectively dealing with the problems of scientific accomplishment.

Finally, in our country, we have proved beyond any doubt in the development of our economy and our way of life that there is no substitute for good management. The legislation we have proposed here may not be a final answer, but I am convinced it is a step forward, giving the taxpayer a better return for his money, giving the Nation a more valuable position in the Antarctic and providing the scientific world a more orderly procedure in the development of knowledge.

More than all of this, the establishment of the Antarctic Commission with a clear-cut responsibility for the development of our national interest in Antarctica will remove the temptation of using this operation as a device for influencing world opinion or as a short-term expression of current international policy. Rather, it will insure orderly and efficient procedures for the development of a continent which can eventually play an important role in the ultimate survival of civilization on this planet.

Mr. O'BRIEN. Thank you, Mr. Morton, for a very fine statement.

A number of questions occur to me, but I think that perhaps it would be better if we refrained from questions and allowed you as a member of the subcommittee later on, perhaps, to propound some of those questions yourself.

Mr. MORTON. Thank you, very much.

I would like, in response to the gentleman from Florida's question, to say that this was not a junket. It was a long and arduous trip. But the Navy made it as comfortable as they could. They were very hospitable to us while we were at the base at Christchurch and also while we were in their facility in Honolulu. There were no frills. But I think everybody made this trip in good shape.

We were pleased to have on this trip Dr. Waterman, who is the retired Director of the National Science Foundation. Also with us was our former colleague from this committee, Congressman Duncan.

Mr. HALEY. Mr. Chairman, may I say to the gentleman that he has, I think, here, a very fine and a very good report. It indicates that he was not on a pleasure trip down there by any means.

I might say to the distinguished gentleman from Maryland that the gentleman from Florida does not propose to go down there, because anytime it gets 40 above, I start freezing.

Mr. ASPINALL. Mr. Chairman, I wish to thank Congressman Morton for taking the trip. It has always been my feeling that anyone who makes a trip as arduous as this, has a great deal to offer to the committee and to the Nation at large. It is a sacrifice, as I see it, to make the trips. I am very pleased to have the statement.

I have one question. During your planning of your trip down there and during the time you were there, how many Government agencies did you find in an authoritative position?

Mr. MORTON. Mr. Chairman, there is the Navy, then there is a National Science Foundation; there is the Air Force to a limited degree, and I guess you could say also the Coast Guard, since they were the senior ship involved in the ice-breaking operations that were going on

there. The State Department, the Departments of Commerce and Interior are also involved.

Mr. ASPINALL. Did you find any people down there representing the State Department?

Mr. MORTON. We had a State Department officer with us on the trip, but I do not believe there is a State Department man permanently stationed on the ice.

Dr. Taylor reminds me that the U.S. Ambassador to New Zealand also made the trip with us. Ambassador Powell contributed a great deal to our trip.

This is a program which involves many facets of both the private and public sector.

I think the question was brought out by you or by the gentleman from Florida to Mr. Steed. I am sure that the Congressman from Oklahoma and I are in agreement on this point, we are not trying to eliminate anybody here. We are trying more effectively to use the various agencies of Government. I was not impressed by many of the scientific experiments that were going on, because I think the Antarctica, bluntly, is being used by a lot of people to acquire a master's degree. At \$240,000 a year to support a scientist we can't afford this. The Navy does a fantastic job of supporting these people. Nobody is arguing that. But I say, coming back to your question, let us not fool anybody about this thing. Let us lay the cards on the table. We have to stay in the Antarctic in support of our national interest. So while we are there, let's not run a game of charades. Let's run a first-class, tightly managed operation which does as much as possible.

Mr. ASPINALL. I thank the chairman for a fine statement.

Mr. RIVERS. I want to join in complimenting you on your close observations and the fine paper you wrote.

Mr. O'BRIEN. Mr. Bingham?

Mr. BINGHAM. Mr. Chairman, I have one question.

Mr. O'BRIEN. Yes.

Mr. BINGHAM. I would like to join also in complimenting our colleague from Maryland on having made the trip and on his excellent statement.

I wonder, Mr. Morton, if you would care to develop a little more the next to the last sentence of your prepared statement, which I find intensely interesting. I though perhaps you would care to develop the thoughts a little further.

Mr. MORTON. You are referring to the establishment of the Antarctica Commission with a clear-cut responsibility for the development of our national interests, and so on?

Mr. BINGHAM. That it will remove the temptation of using this operation as a device for influencing world opinion or as a short-term expression of current international policy.

Mr. MORTON. I think we have to be very blunt here. Whenever we confront the Russians, and we are involved in this thing with the Russians, there is a temptation to escalate or deescalate a program that is alongside of them as it fits short-term consideration of our posture against communism.

Have I made myself clear?

Mr. BINGHAM. Yes. I thank the gentleman.

Mr. O'BRIEN. Thank you.

Mr. MORTON. Thanks again.

Mr. O'BRIEN. We will next hear from our colleague, Craig Hosmer, who is the author of H.R. 2211.

STATEMENT OF HON. CRAIG HOSMER, A REPRESENTATIVE IN CONGRESS FROM THE 18TH CONGRESSIONAL DISTRICT OF THE STATE OF CALIFORNIA

Mr. HOSMER. Mr. Chairman, rather than introducing a statement, I would like to ask the unanimous consent of the subcommittee to reprint at this point the testimony furnished to the subcommittee last year; that is, testimony furnished by Rear Adm. David M. Tyree, former antarctic project officer, which appears at pages 42 and 43 of last year's report. It is a well-rounded statement of what the problem is and I think a point of reference from which the other witnesses may wish to testify.

Mr. O'BRIEN. Without objection, it is so ordered.

(The testimony referred to follows:)

Under the existing arrangement set forth in Bureau of the Budget Circular No. A-51 dated August 3, 1960, for conduct of antarctic affairs, the Operations Coordinating Board was named as the coordinating agency for the totality of antarctic activities. After the abolishment of the Operations Coordinating Board in 1961, the functions assigned to the OCB by Bureau of Budget Circular A-51 were assumed by the Department of State.

Since abolishment of the OCB, coordination has been accomplished through informal discussions in a committee composed of representatives of the numerous departments or agencies having antarctic interests and chaired by the State Department representative. No statement of national objectives, no plan for the totality of antarctic activities, no adequate overall budgetary guidance had been issued under this arrangement prior to my detachment from the U.S. Antarctic Projects Office less than a year ago, and so far as I know have not been issued since that time.

Bureau of the Budget Circular A-51 made a clear separation of responsibilities for the scientific effort under the National Science Foundation and the conduct of operations in support of the scientific or other programs in Antarctica under the Department of Defense.

Each is discharging its separate responsibilities with competence. The State Department in dealing with international relations in Antarctica is doing its job well as, in fact, are all departments and agencies concerned with antarctic activities as far as such activities pertain to their own particular sphere of influence. This is not unexpected, because each department or agency is competent in its own separate area to carry out its antarctic responsibilities according to its interpretation of such responsibilities. This is not enough to insure an efficient, economical program best designed to further our national interest. Too often responsible agencies pull in different directions with quite honest differences of opinion. Examples of this can be found in the planning for the new Byrd Station, the implementation of the Joint Atomic Energy Commission's authorization for nuclear reactors. Mapping requirements, nuclear reactors proposals for stations in the Palmer Peninsula, and a supply line through South America. Many times differences of opinion can be resolved through the informal discussions of the interdepartmental committee, but informal agreements thus reached usually do not carry enough weight with the budget people to produce the desired result. U.S. interests thus may inadvertently be injured through lack of authoritative firm objective total planning.

There is no decisionmaking authority below the Presidential level for antarctic matters affecting more than one department or agency. There is no single agency in which our complex interests in Antarctica come to a focus. Five-year plans are formulated by different departments or agencies, but who is to produce a 5-year plan for the totality of our antarctic effort and say, "This is what needs to be done to further and protect U.S. interests in Antarctica"? When funds and resources become a limiting factor, who is to estab-

lish priorities so that first things will be done first? This involves more than separate determination of priorities for scientific projects, priorities for technological improvements, or priorities for development of possible economic applications which may come in the future.

Acquisition of knowledge of the Antarctic through scientific research and use of the unique characteristics of Antarctica, to investigate problems of worldwide scientific significance presently is considered by many, probably most people, to be our principal reason for being there. The existence of the Antarctic Treaty gives added impetus to this idea. I believe though that our reason for being there is more basic than just science; that it is to keep the United States in a preeminent position in that area of the world. For this reason, as well as to improve our ability to support scientific programs, technological advance in coping with the antarctic environment have significant importance. Introduction and extensive use by the United States of aircraft and tracked vehicles, for example, has had a profound effect on our ability to cope with the antarctic environment; has made possible most of our current extensive scientific investigations, and is a major factor in putting the United States in a preeminent position in Antarctica. Technological improvements in communications; aircraft, both fixed and rotary wing; vehicles; photomapping; nuclear power; construction techniques; and other things which improve our ability to work and live in Antarctica must not be neglected through overemphasis on science, as I fear is happening under present organizational arrangements. Neither should the possibility of commercial applications in the future be overlooked, and responsibility should be assigned for monitoring this.

An Antarctic Commission would provide a focus for antarctic interests. It would provide a governing agency responsible to the President, the Congress, and the American public for all antarctic affairs. It would provide a budget in a single package that would stand or fall on its own merit.

In short, it would vest authority in a single agency which in my opinion is needed if the United States is to get the greatest return for its investment in Antarctica and keep its preeminent position there.

Mr. HOSMER. I have nothing further. I have been in the area, too, and I can also testify that it is not a junket.

Mr. O'BRIEN. I would say that 1 trip to the Antarctic would justify 10 trips to Paris.

There are two other Members who have bills—three other Members; they will testify later on—Mr. Saylor, Mr. Zablocki, and Mr. Duncan.

Mr. MORRON. Mr. Chairman, I failed to say one thing. I would like to go back. I would like to make another visit. I think that is the only place where Mr. Steed and I differ.

Mr. O'BRIEN. I gathered that impression.

Our first public witness is the Honorable Harlan Cleveland, Assistant Secretary of State for International Organization Affairs.

Mr. Cleveland?

STATEMENT OF HON. HARLAN CLEVELAND, ASSISTANT SECRETARY OF STATE FOR INTERNATIONAL ORGANIZATION AFFAIRS; ACCOMPANIED BY JAMES SIMSARIAN, BUREAU OF INTERNATIONAL ORGANIZATION AFFAIRS, DEPARTMENT OF STATE

Mr. O'BRIEN. Mr. Cleveland, do you desire to have anybody with you?

Mr. CLEVELAND. Yes. This is Mr. Simsarian of my staff, who works with the interagency committee on this subject. He is from the Office of International Economic and Social Affairs in the Bureau of International Organization Affairs.

Mr. Chairman, it is a privilege to appear before this committee, chaired by my fellow citizen of upstate New York in the presence of the chairman of the full committee.

The senior members of this committee are so thoroughly aware of the problems involved and the accomplishments of the Antarctic program that I have hesitated to do what we decided in the executive branch might be useful to do; namely, to bring before this committee a rather full statement of all of the aspects of this program as it has proceeded, as an introduction to discussion of the organizational problems, which are the focus of the bills before the committee.

You have read into the record, Mr. Chairman, the formal statement of the State Department on the bill. This year and in previous years, our thinking about these bills has been on the negative side at this stage of the development of the Antarctic operation. But this negative thinking is a reflection, I hasten to say, of positive thinking about the program itself and about the nature of the U.S. national interest in Antarctica.

I would like to call the committee's attention to a document with which I am sure it is familiar, the message from the President of the United States of September 2, 1964, which is the fullest official report by the U.S. Government on the development of the Antarctic program before and since the Antarctic Treaty and has been printed as a House document.

Mr. Chairman, the focus of your concern, I understand, is a series of proposals to provide for an Antarctic Commission and to provide in various ways for continuity and support of U.S. activities related to Antarctica.

In an agreement with our close collaborators in the National Science Foundation and the Department of Defense, we thought that your purpose in this hearing might best be advanced by presenting here a statement of what the Federal Government has accomplished in and around the Antarctic Continent since the Antarctic Treaty came into force on June 23, 1961. Against that background I will then describe how we are organized to tackle the difficult and exhilarating tasks that lie ahead of us.

It falls to me, as chairman of the Antarctic Policy Group in the executive branch, to make this statement.

Mr. O'BRIEN. May I interrupt at that point? Is this the new group to which you refer in the report from the Department of State?

Mr. CLEVELAND. Yes, sir, and I will discuss it a little bit a little later on in my statement, why it has been set up and what it proposes to do.

I must say that I do so with great enthusiasm. For this program, remote and obscure as it may seem to most Americans, is greatly in our national interest. And the way it is now working, it is a triple success story:

A story of scientific exploration at the very fringe of man's knowledge of his environment.

A story of heroic deeds by the U.S. support force, Task Force 43; and a story of international cooperation that really works.

Members of this committee well know that the United States has long played a proud and important role in the South Polar region. One hundred and fifty years ago our whalers and sealers were among

the first to penetrate the forbidding oceans of the Antarctic. Later Rear Adms. Charles Wilkes and Richard E. Byrd led the way to discovery of the continent and the early probes into its interior. Today the scientists, and those who make it possible for them to get there and stay there, live and work in stations spotted from the edges of the continent to the South Pole.

But Antarctica has never been a private domain. Other nations pursued programs similar to our own. Some of them even established territorial claims—three of them overlapping—to wedges of the Antarctic pie. Access to the frozen continent was attracting more and more scientists and explorers, and so began to be an issue in international politics.

Again, Mr. Chairman, some of this background is familiar ground to most of you, but it seemed useful for completeness to sketch it in.

Then in 1957 and 1958 the International Geophysical Year threatened to convert the national rivalries into troublesome confrontations of power and prestige. Twelve countries mounted IGY expeditions to Antarctica. The always touchy question of sovereignty—who could come into which part of the icy waste—became acute. And as the fringes of the continent began to see ships and airplanes, more and more people feared that this vast uncharted area might become the site of military installations designed to alter the balance of power elsewhere in the world.

It was these latent fears and potential troubles which led to one of the most sensible treaties in the not-always rational history of international diplomacy. The Antarctic Treaty, signed on December 1, 1959, and ratified by the United States on August 18, 1960, was an innovation without precedent on the world's land surface.

Essentially, the treaty applied to the whole southern end of the globe, south of 60 degrees south latitude. Its doctrine is simple: that all nations would have access to Antarctica, as long as that access was for peaceful scientific purposes.

The treaty obligates the 14 treaty partners to cooperate with each other in scientific investigation. It prohibits military activities, and forbids nuclear explosions; it was, among other things, history's first nuclear test ban agreement. It authorizes any signatory nation to inspect the activities of all other nations in Antarctica.

For the United States, as the nation with the greatest capability to mount and support scientific investigations in Antarctica, this treaty was clearly better than limiting ourselves to one slice of a much-divided pie. As things stand, we are at liberty to investigate anywhere, build anywhere, fly anywhere, traverse anywhere in this vast and still mysterious southland.

The treaty, as you know, did not set up an international organization as such. Every year or two, the nations meet and recommend measures to improve the treaty's operation. Twenty-six measures from three such meetings have already been approved by governments since the treaty went into force in June 1961.

The nations operating in Antarctica have agreed, for example, to exchange detailed reports about their expeditions. The inspections called for by the treaty have actually been carried through—when you think of how much trouble there has been about inspections in other parts of the world, that is a striking fact in itself—we have sent

inspectors to the installations of a number of our Antarctic partners, including the Soviet Union. The detailed report is contained as an annex to the message of the President of the United States, as I have earlier referred. And we have opened our own peaceful stations to their scrutiny whenever they care to come.

The United States has given and received help from almost every other country active in Antarctica. Many a life has been saved, and many an expedition completed, only because of timely help across national lines made invisible by the realities of human hardship and the prospect of scientific gain.

Outside the Antarctic Continent, itself, the same cooperative spirit prevails. For example, our advance base for Antarctica is actually at Christchurch in New Zealand, and we provide logistic support for some of New Zealand's operations in Antarctica.

Even in the formal meetings of the treaty powers, national delegations are impressed to see a spirit of accommodation seldom matched as I can testify from watching a good many other international bodies. There are heated discussions, and national positions defined with vigor; but the debaters are more bent on achieving a constructive purpose which all regard as common. Antarctica is not what the war gamers call a "zero-sum game," where one nation must lose for another to gain. In the land of ice and penguins, discoveries by one nation are a gain for all.

The executive agencies of the Government have given careful thought to where we are going and what we are trying to do in Antarctica. I can summarize the policy by which we are now guided in seven simple sentences:

1. The United States supports the principles of the Antarctic Treaty, and will do what is necessary to insure that Antarctica is used for peaceful purposes only.

2. We foster international cooperation among the nations active in Antarctica, seeking further areas for agreement wherever that is possible.

3. We continue to attach major importance to programs of scientific research for which Antarctica affords unique conditions.

4. We pursue vigorously our efforts to explore and chart the south polar region.

5. We shall not overlook the possibility that Antarctica may, at some indiscernible time, disclose resources which the world needs.

6. As part of the attempt to master Antarctica's difficult environment, we give special attention to the technicality of transport and other logistics.

7. In all our activities, we make special efforts to preserve Antarctic animal and plant life.

This political framework and the policy framework I have just described have enabled us to devote our full and unfettered energies to investigating the mysteries of the continent. Since the treaty was signed, we have made enormous progress, both in practical knowledge and in scientific research.

The first and most practical question of all was that of man's future on the hostile ice. Could this wasteland be subdued so that man might inhabit it for long enough periods of time to get useful work done?

The support force established by the U.S. Navy has proved that

human ingenuity is equal even to this gruelling task. American Seabees built an ice runway which now permits easier air connection with the outside world. Aircraft equipped with skis can now land in the furthest reaches of the continent. Primitive quonset huts are being replaced by permanent barracks of double wall construction.

Admiral Reedy, the commander of the support force, has already demonstrated the feasibility of transpolar flight from outside lands. He flew nonstop from South Africa to McMurdo Sound, a distance of 4,700 miles, and from Australia to Byrd Station. These were the pioneer flights between the continents of the Southern Hemisphere across the frozen bottom of the globe. They showed that transpolar flights can use Antarctica as a landing place for emergencies now and perhaps later as a regular feature of air traffic in that part of the world.

To improve the flexibility of our programs, we developed a modular station—buildings and equipment weatherproofed for year-round use. This station consists of a set of prefabricated components, and a tractor to offload and shift them into position. The whole package, tractor included, can be flown wherever it is needed. When the program there is ended, the whole station can be picked up and moved to the next location.

To reduce our dependency on costly oil supplies, a nuclear reactor was installed at McMurdo Station to supply heat and power. The same reactor will soon supply the power for a desalting operation, already proved out with thermal power, to provide fresh water for the base.

In the past year the support force again demonstrated its increasing mastery of man's most forbidding environment. On the slush and snow of McMurdo the Seabees built the first hard surface road on the Antarctic Continent. Supplies can be moved over this surface directly from the ships in McMurdo Sound to the supply depots more than a mile away.

In the 6-month darkness of this past austral winter, they took a giant step forward. Last July, a Seabee was seriously injured in a fall, and needed hospital care not available at the wintered-in base. No one had ever flown into Antarctica during the winter night. But somehow the men at the station cleared the skiway in subzero temperature, working by the light of improvised flares. Air Squadron 6 had the pilots with the skill, the courage, and the Antarctic experience to bring in the plane, and take it out without mishap.

Just a few months ago, Admiral Reedy's Task Force 43 had to rise to another challenge. Great cracks appeared in the ice of the bay. A large part of the snow-compacted runway was swept out to sea and installations at Williams Field were in danger of following it. It took a heroic effort to avert disaster, but these remarkable Americans believed the impossible could be accomplished. In 2 days the threatened buildings and equipment were successfully moved to a safe location 5 miles away. The damage to the ice runway cannot be fully assessed now. But no lives were lost, and the base is operating.

Thus, with trouble and effort and a little heroism, Americans are learning how to cope with the harsh and unpredictable environment of Antarctica. It is now a fair claim that the United States knows how to place and maintain year-round working units anywhere on the Antarctic Continent.

The extraordinary efforts required just to get to Antarctica, and to stay there, are amply justified by the rich returns of scientific investigation in and around this darkest of all continents.

Scientists have already completed three-quarters of a major geological reconnaissance. With one exception every exposed range in West Antarctica and the edges of the continent have been explored by experts. Scientists have identified the types of rock, estimated their age, and compared them with similar rocks elsewhere in the world. More detailed geology—including the effort to find any mineral content—is the next step.

A major study of the earth's magnetic field is now underway. We have learned that impulses fed into the magnetic field in Antarctica are flung far into space to return with nearly undiminished energy at the magnetic north. When more is known of this phenomenon it may be of vital importance to telecommunications, including satellite systems.

To shed more light on these curious magnetic fields, last November a small band of men started by tractor from the South Pole on a traverse of 4,000 miles. They will follow a zigzag course in an unknown area where climate and altitude combine to create the most savage of all Antarctic conditions, making measurements as they go. At the end of each austral summer planes will pick up the men, wherever they are, leaving the equipment on the ice. The following summer the traverse will resume from where it stopped.

From glacial studies, our scientists are compiling a record of the earth's travel through space. Preserved in the snows of Antarctica are space particles which have bombarded this planet in past ages. The particles can be dated by their position in the snow layers, and by radioactive techniques. If later studies show that these particles have a recurring pattern we may someday be able to predict from the work in Antarctica the kinds of particles and radiation conditions our astronauts will encounter as they travel through outer space.

Still another program uses the information relayed by the picture-taking weather satellites, the Tiros and the Nimbus. One of the earliest results of this research is the discovery of "hotspots" in the snow and sea ice. These are areas where the temperature of the snow is higher than the temperature of the surrounding snow. The cause of this difference is still an enigma; the scientists are determined to unravel it by further research.

As a final example of this fruitful Antarctic research, the National Science Foundation is now embarked on a program which may have profound significance for the world's food supply. Aboard their laboratory ship, the *Ettanin*, scientists from many disciplines have begun studies of the oceans surrounding Antarctica. These waters cover an area as large as the Pacific Ocean. Little is known about them. Yet the first insight from the research so far is of enormous importance. For it seems that the Antarctic seas are the source of all the major ocean currents around the globe. The Antarctic waters are peculiar, it seems, in that turbulent vertical currents sweep from the oceanbed to the surface, tearing loose the rare and elemental nutrients necessary to sustain life, and spreading them through the vast bodies of water. The precious food elements are then transported along the ocean cur-

rents to all the other seas of the world. The Antarctic Oceans may, therefore, be the major source of all life in the sea, and, thus, of all the marine foods of which man now extracts only a tiny fraction.

It is already clear that the scientific work sponsored by the National Science Foundation in Antarctica has a very great importance, both in pushing out the frontiers of our knowledge about our physical world, and in enabling man, by applying that knowledge, to control and escape his natural environment. It is arguable, I think, that any one of these investigations—in geology, in glacial studies, in the physics of outer space, in meteorology, and in the behavior of the southern oceans—may prove to be worth the \$27 million which the U.S. Government invests each year for the scientific program and the logistical support that makes it possible.

Agencies of the Federal Government are not given to eulogizing each other. But having watched the Antarctic program with some care—though regrettably from Washington—for 4 years now, I can testify to a remarkable combination of imagination and prudence which characterizes the work of the National Science Foundation and the Department of Defense in this remote but exciting frontier of our national interest.

So political, scientific, and logistics factors all directly affect U.S. activities in Antarctica, and coordination of these factors is vital to the success of our programs. Briefly, this coordination is effected along the following lines:

At the working end, in Antarctica itself, are two operating agencies—the Department of Defense and the National Science Foundation. These agencies function on the spot under the overall on-the-spot command of the commander of the task force, Admiral Reedy. They meet the many needs, both technical and logistic, of the various stations and field parties. They watch the continually changing weather and flying conditions, and schedule their activities accordingly. Coordination of their work is carried out in the only place where the necessary factors governing operations can be known, on the ice in Antarctica, and directly between the representatives of these two agencies.

All scientific programs are developed, coordinated, and managed by the National Science Foundation. Competent experts in each discipline approve the scientific content of the program and insure that each project is coordinated with related projects in other areas. To do this job, the National Science Foundation works closely with other agencies of the Government and with private scientific institutions and universities. Following these consultations, the Foundation develops a comprehensive 5-year program for scientific research.

This 5-year program which is under development now is examined minutely by logistics experts in the Department of Defense who are veterans in Antarctic experience. These experts consider the possible physical hazards for the men involved and determine whether the job can be accomplished with available manpower and material. Wherever difficulties are foreseen, they are discussed directly with the Science Foundation and necessary adjustments are made in the scientific and logistics plans. This process is repeated every year in a rolling 5-year plan.

The 5-year plan is then reviewed by top officers of the Department of State, the Department of Defense, and the National Science Foundation to assure that it is responsive to our overall interests and policies in Antarctica.

An important part of this mechanism is the Interagency Committee on Antarctica which was established in 1961. Every agency in the Government with an interest in Antarctica is represented on this committee. Prior to that time, as members of this committee will recall, the coordination of that responsibility was in the hands of the Operations Coordinating Board, a part of the National Security Council system, during the period of the Eisenhower administration. At the beginning of the Kennedy administration, the system was changed to abolish the Operations Coordination Board with all of its panoply of committees and subcommittees, and place in the Department of State the responsibility for the coordination of the various regional functional programs of an international character. The Interagency Committee in its meetings provides an opportunity for each agency to learn the plans of all the other agencies and to express its views on proposed programs and activities. The Committee is not a policy- or decision-making body; but its discussions point up those areas where policy changes may be needed and need to be discussed at a higher level in the Government or where new policy should be developed.

U.S. policy for Antarctica until recently was determined in the usual manner by the executive branch. Responsible officers from the various agencies consulted together on the questions involved and arrived at a common decision, which became the agreed policies.

At a meeting last October, Assistant Secretary McNaughton of Defense, who is here today, Director Leland Haworth of the National Science Foundation, and I discussed these arrangements. We concluded that policy problems should be considered in a more formal framework. We later consulted more widely with the Department of Interior and the Department of Commerce, who also have a stake in the Antarctic programs. Both Departments agreed with the notion of a more formal policy group. Last week, the Acting Secretary of State formalized the new arrangement establishing an Antarctic Policy Group of the type described in the letter from the State Department which the chairman put in the record.

The Policy Group has been established with the following mandate:

In consultation with other agencies of the Government, as appropriate, to—

- (a) Define U.S. policies and promulgate overall U.S. objectives and guidelines for action in Antarctica, and
- (b) Review and approve plans for U.S. activities and programs in Antarctica.

The Group will be composed of the Assistant Secretary of Defense for International Security Affairs; the Director of the National Science Foundation; and, as Chairman, the Assistant Secretary of State for International Organization Affairs.

The arrangements I have described are both practical and comprehensive. There is joint participation by the agencies concerned, beginning with policy and extending through programming to operations. At the same time there is freedom for those on the scene to adapt to

the changes which inevitably occur in a complex and dangerous environment.

I believe that we should continue to direct our Antarctic programs through the agencies best equipped to deal with the scientific, logistical, and political problems involved. It would be a mistake to divorce policy from the operational necessities on which it must rationally be based.

The Antarctic program is working smoothly and efficiently. The relations among the agencies involved are good; the lines of responsibility are clear; the leadership of both the support force and the scientific program is in excellent hands. Internationally, the program works with very little national rivalry; politics is at a remarkable minimum.

When Congress finds a Government activity that works as well as the Antarctic program does, it is cause not for reorganizing but for rejoicing.

Thank you, Mr. Chairman.

Mr. O'BRIEN. Thank you, Mr. Cleveland.

May I say first that I congratulate those responsible for the establishment of the Antarctic Policy Group in the executive branch. I might say somewhat humorously, I observe that while you were in the midst of rejoicing over the success of the program, you did do a bit of reorganizing yourself.

Mr. CLEVELAND. Indeed, we did.

Mr. O'BRIEN. I think that definitely indicates something.

This may sound like a rather abrupt question. But the executive branch of the Government has been aware for some time of the keen and growing interest of Members of Congress in the whole problem. I am just a bit curious, in view of that fact, why Congress was not consulted in the slightest degree or involved in the slightest degree in this organizational planning meeting, or advised of them until this hearing.

Mr. CLEVELAND. This was a sort of long and rather leisurely discussion among the Government agencies concerned based on the considerations that seem clear to us, and which had been brought out in last year's hearings of this committee; namely, the possibility that as time goes on, other factors and a larger and larger number of people and larger and larger number of organizations would find themselves interested in this whole development in Antarctica, and that therefore, we probably needed a somewhat more formal arrangement to reflect the really extraordinarily good working relations among the agencies that actually operate this program. This came to a head, really, last week, and we considered when the Acting Secretary was signing off on the establishment of the group, whether we should go through some consultations with Congress. Knowing, however, that this committee was about to have a hearing on this very subject today, we thought that we would conduct our explanations and consultations in this forum.

Mr. O'BRIEN. Will this new policy group be in a position to check overlapping expenditures, separation of authority among the various agencies involved, various groups involved?

Mr. CLEVELAND. Well, the primary operating agencies are the National Science Foundation and the Support Force itself.

Mr. O'BRIEN. Is the National Science Foundation an operational agency?

Mr. CLEVELAND. For this purpose, it certainly is.

Mr. O'BRIEN. Is not most of its work done by contract?

Mr. CLEVELAND. Yes. The same is true, as you know, of most of the agencies of the Government today, including the Defense Department.

Mr. O'BRIEN. But the colleges and the universities do have a rather loud voice in this operation; do they not?

Mr. CLEVELAND. Oh, yes; the National Science Foundation tries to draw into the program under its supervision the best people it can find in each of the scientific areas that are proposed to be investigated. But the fact that it farms out some of the work does not make it less of an operating agency, any more than the procurement arms of the Department of Defense are less operational because they contract the building of airplanes to airplane companies.

Mr. HALEY. Would you yield on that?

Mr. O'BRIEN. Yes.

Mr. HALEY. Mr. Cleveland, the chairman asked you a question which I do not think you have responded to. That was why the Congress was not informed of any of these changes. Why are we not—we are quite interested in this, as I think you well know.

Mr. CLEVELAND. I think you are.

Mr. HALEY. And when we start looking into these matters, you must realize, or somebody must have realized that probably things were not just as rosy as you like to paint them here, because you now find it necessary to establish a policy group. It seems to me like all of this operation has gone along and the Congress is not kept informed as to what is going on. I think that is disturbing to us.

Mr. ASPINALL. Let me ask the question this way, if my colleague will yield.

Mr. O'BRIEN. I yield.

Mr. ASPINALL. Do you consider that this committee has any jurisdiction over this particular matter at all, Mr. Cleveland?

Mr. CLEVELAND. Yes, sir; I think that the bills before this committee reflect its jurisdiction.

Mr. ASPINALL. I did not ask you about the bills. I am asking you about the operation.

Mr. CLEVELAND. Yes, sir; I think this is the place to which the executive branch comes to report to Congress on the on-going program. But there has not, in fact, in the last couple of years or more, seemed to be a need for new legislative authority. The Appropriations Committees, of course, consider the appropriations in their normal categories of the National Science Foundation and the Department of Defense.

Mr. ASPINALL. But you see, neither one of those agencies of Government has to report to us. So in that respect, we have no jurisdiction over the matter. What I was trying to find out was whether you, representing the State Department, felt that this committee had any right at all to be involved in this because of the great jurisdiction that we do have over offshore areas. I thought that was basic to answering the question Mr. Haley asked you, which was in furtherance of the question that Mr. O'Brien asked you.

Mr. CLEVELAND. Mr. Chairman, I think this committee does indeed have this jurisdiction and has expressed it and followed it up with the annual hearing that has been held by this subcommittee on the Antarctic program.

Mr. ASPINALL. Then the question asked by Mr. Haley is in order.

Mr. CLEVELAND. I think the problem about the policy group was merely that the problem arose in its action form last week. We knew already that this committee was going to meet on Monday and it seemed that there would be a full opportunity for discussion of it with the committee on Monday, without the further process of visitations on the Hill last week.

I might also plead that I was working on Vietnam most of last week.

Mr. O'BRIEN. I think if I may say so, Mr. Chairman, I think the chairman of the full committee has put his finger squarely on the problem. Once a year, we meet and we receive the report of what is going on. Occasionally, or in fact, every year, we suggest the creation of an Antarctic Commission. That is the end of it. There is no place in the Congress of the United States where all these threads are gathered together and where there is a direct and rather full responsibility for activities in the Antarctic. That in and of itself indicates a fundamental weakness, to me. The Appropriations Committee, yes, that is fine. But its members are never in contact with us or we with them on it. We get involved with a dozen different committees and you have a feeling that whenever you approach this subject, it is like trying to pick up a bowling ball without holes in it. No one has the responsibility.

I think that perhaps one of the reasons that there has been so much pressure from so many distinguished Members of Congress, many of them not members of this committee, for a commission is that then you would have a central agency.

Now, here we are talking today, you are here from the State Department. We are going to have somebody from the Defense Department and we are all over the lot.

Now, I can see where, from your viewpoint, this policy group will be a drawing together. But that is in the executive branch. There is no drawing together in Congress of this whole problem, because we do not know whom to deal with, frankly.

I know it is difficult. It is not a territory, it is an offshore area, I guess, which is an odd way of describing a continent, but that is the best you can do. Do we get control for that reason.

Mr. CLEVELAND. I think, Mr. Chairman, you are drawing attention to a very important and very fundamental problem. I am not sure that it is basically a problem of the manner in which the executive branch is organized in this matter. I must confess that I was surprised that when we sent a message from the President of the United States on this specific program, it was referred to and printed by the Committee on Foreign Affairs. The Appropriations Committees do in fact develop testimony on this subject when the National Science Foundation in one subcommittee and the Defense Department in another subcommittee are heard.

When, as, and if there is a requirement for legislative authorization—that we do not now, in our judgment, need—then I assume and personally would hope that the initiative in that would be with this committee.

But as far as the executive branch is concerned, we have tried—because we know that there is a good deal of malaise about who is doing what—to point up the manner in which this program is in fact tied together, by transmitting this message from the President last fall: by presenting an overall piece of testimony here rather than a State Department piece of testimony, and by establishing at the political level in the executive branch a group which consists, in effect, of the three people who supervise those parts of the Government that in fact are responsible for the details in this program, to formalize what has been an occasional lunch or frequent telephone call among the Defense Department, the National Science Foundation, and my part of the State Department.

Now, I think there may well be a problem of legislative jurisdiction on this rather peculiar subject. And the last thing that I as an executive branch witness would presume to do would be to suggest how that—I would hesitate even to describe such a problem, let alone suggest how it ought to be resolved. But our judgment is that what needs to be done does get done with remarkable efficiency and really extraordinarily little turbulence in the way the thing is now organized. Our concern is simply not to load this present operation with layers of bureaucracy that it does not require to get the job done and which might, perhaps, get in the way of the effective operation. Between the three agencies involved and other inputs into the scientific program from public and private agencies, the Budget Bureau's responsibility for the money side of the matter, and the President's overall responsibility, the executive branch is essentially content with the way the thing is organized. It is never content with the forward program, of course, because we are always trying to improve it.

Now, we would like to and we assume it is our business to report periodically to this committee on how things are going. Our judgment at the moment is that things are going sufficiently well and with fruitful enough research and effective enough logistical support and wise enough political advice on the international side that it does not require another layer between the President and the present group that is supervising the program.

Mr. O'BRIEN. I am often curious at the report each year that you are satisfied. What happens if this committee at one of these annual tea parties is not satisfied. What can we do about it? Go to the Appropriations Committee and say cut down the appropriations?

Mr. CLEVELAND. Or perhaps increase the appropriations, if that is the reason for dissatisfaction.

Mr. ASPINALL. If my colleague will yield, the way it is run at the present time is there are two places to get the money, one from the Defense Department, and one from a group that is answerable to the National Academy of Sciences. This is the only place.

This is a good reason why that message of the President went to the Foreign Affairs Committee. It could not go any place else, Mr. Cleveland.

Mr. CLEVELAND. Because it had to do with a treaty.

Mr. ASPINALL. After all, the only jurisdiction we have in Antarctica at the present time comes under the President's authority over international matters. Although we think we could have handled that message a little more expeditiously, perhaps, at least as far as the

study is concerned, we had no right to receive it. And we do not want it—the peculiar thing about it is we do not want to treat this as a foreign operation, as something that has to do with foreign areas. We want to feel as if it is a part of the United States of America, and if it is, then it comes under the jurisdiction of some committee up here directly. At the present time, it is out there in the ether.

Thank you, very much. I have said too much.

Mr. CLEVELAND. In effect, Mr. Chairman, we have agreed not to treat it as part of the United States and also not to treat it like any other foreign area in the world.

Mr. ASPINALL. We cannot do it.

Mr. CLEVELAND. It is a very special agreement in the treaty.

Mr. ASPINALL. You may do that up on the moon, but you cannot do it on the globe, in my opinion.

Mr. HALEY. Mr. Cleveland, on page 3, where you state in your first paragraph:

It authorizes any signatory nation to inspect the activities of all other nations in Antarctica.

Who are these nations, Mr. Cleveland, that have that right?

Can you numerate them?

Mr. CLEVELAND. All of the signatories to the treaty. The signatories of the treaty are the Governments of Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Union of South Africa, Soviet Union, United Kingdom, and the United States. Under the treaty, any of those countries has the right to visit what any of the other countries is doing in the area. This is the present arrangement. And we, partly to make sure that that right did not lapse from non-use, we exercised it, as you know, a year ago.

Mr. HALEY. Yes, I am well aware of that.

Mr. Cleveland, it seems to me that these bills introduced by my colleagues are kind of not only a drawing together of this whole operation, it also would bring about an agency of the Government where the Congress would know whom to go to or whom to deal with. I think that is a very important thing, do you not think? Rather than have all these various departments involved and having to go to them for this information and so on, do you not think it would be better to have one agency of the Government that is responsible, for this operation, where all data was supplied to that agency, where they could evaluate what was being done, see that there was no duplication and so forth?

Mr. CLEVELAND. Reports are already regularly made by, on the scientific side, the National Science Foundation, and on the logistical support side, by the Antarctic Projects Office in the Defense Department. I would hope that we would continue the practice of sending up a message from the President summarizing what is going on in this area to make sure that everybody has a central reference document on the basic facts about the program.

I do not, myself, think that it would be useful—I think it would, in fact, be an overlapping and a duplication to establish another group with a staff and a budget and so on, to receive reports from Admiral Reedy, from the National Science Foundation, from us, and put it all together in a file for possible use.

To the extent that the information needs to be brought together for operating purposes, we now do it. To the extent that it needs to be brought together for congressional consideration, we either are doing it or certainly can do it and tried very hard to do it in this message from the President, which brought the matter up to date as of last September; and in my testimony this morning.

Now, there is always some temptation to try to make every Government program look as if it is run by one person, but in fact, as you of long experience know, these complex Government programs do not operate that way except in the sense that all of them are under the supervision of the President of the United States. They are exercises in cooperation among elements of the executive departments. We think it is working very well.

Mr. HALEY. Mr. Cleveland, on page 4, you enumerate seven things that you say summarize policy. Now, how would the passage of one of these bills do anything to really disrupt that policy? Would it be contrary to what you hope to do or are doing down there, the passage of one of these bills?

Mr. CLEVELAND. It would depend, of course, on who ran the commission and whether he was dedicated to those policies. But presumably, he would be. It is just that it would add another layer in a bureaucratic arrangement that is already pretty complicated, but not so complicated that it steps on its own feet.

Mr. HALEY. Mr. Cleveland, of course, we have layer on top of layer in the Government now and we keep building it up.

Mr. CLEVELAND. This is why I would dissuade you from adding another one.

Mr. HOSMER. Would the gentleman yield?

Mr. HALEY. I yield.

Mr. HOSMER. You just established this committee which you are representing here, the policy group, did you not?

Mr. CLEVELAND. Yes.

Mr. HOSMER. Is that in the category of another layer, or is it so ineffective that it could never be considered in that category?

Mr. CLEVELAND. This is a layer that already exists for supervising the three elements of the program that are central to it.

Mr. HOSMER. You say it is a layer that already existed?

Mr. CLEVELAND. That already exists, yes.

Mr. HOSMER. Well, it existed in the form of an informal interdepartmental ad hoc group, or something of that nature?

Mr. CLEVELAND. Yes. Well, it exists in the form of the responsibility carried by the Assistant Secretary of Defense for International Affairs, by the Director of the National Science Foundation, and by myself for supervising the three main inputs into this program.

Mr. HOSMER. Now you have a different name for it, is that it? Is that the difference?

Mr. CLEVELAND. Now we have established, or the Secretary of State has established, those same people as a more formal group, with a capital "G," to report as a body to the Secretary and through him, to the President on the operation of this program.

Mr. HOSMER. Do I understand, then, that your previous group reported to no one?

Mr. CLEVELAND. The previous group reported in the same manner, but it did not have this degree of formality.

Mr. HOSMER. Then let's find out what happened when the "G" was capitalized that is different from what the situation was before.

Mr. CLEVELAND. It describes in formal terms the manner in which this program has in fact been operating, under supervision of these three offices.

Mr. HOSMER. In other words, would you say there has been no change?

Mr. CLEVELAND. A change in the degree of formality is a change in the Government's business, as you well know.

Mr. HOSMER. Mr. Cleveland, I have difficulty understanding when you tell us it does the same thing but does it formally instead of informally.

Mr. CLEVELAND. That is the thing.

Mr. HOSMER. Particularly when this was established in such close context, timewise, to the happenstance of these hearings. Now, perhaps I am pretty dense, but could you give us a little more feel for what this new capital "G" organization does to further and protect the interests of the United States in the Antarctic which have not been protected in the past?

Mr. CLEVELAND. As the operation gets a little larger each year, a little more complex each year, there is a requirement for more central reporting, of which the message from the President is an example. There is a requirement for a somewhat more frequent exercise by the three political officers of the Government that are responsible for the three parts of the program, to meet together and to make joint determinations. Our hope, for example, would be that we can officially issue what I referred to in my testimony as a rolling 5-year plan, in which each year we are considering the 5-year period ahead. For that purpose, it seemed useful and orderly to establish a body that would make the decision on behalf of all of the agencies concerned and thus on behalf of the President, as to what changes if any are needed to be made in the 5-year plan when it was presented, and give it the formal blessing, essentially, of the President. The President, obviously, should not have to see everything that goes on in the executive branch, or he would never get any work done.

Mr. HOSMER. Did he in fact give his formal blessing to the establishment of this capital "G" group?

Mr. CLEVELAND. His office has; yes.

Mr. HOSMER. What do you mean by that? Do you think he has ever heard of it?

Mr. CLEVELAND. The Budget group which operates on these matters on his behalf cleared this proposal. Whether they have discussed this proposal specifically with him, I do not know. He did, of course, transmit the message last fall.

Mr. HOSMER. As I understand, the prior group held a meeting every other Wednesday at 2 p.m. in the State Department. Is that the practice of this capital "G" group?

Mr. CLEVELAND. No; this is the practice of a group that operates at the so-called working level of some of us who hold—

Mr. HOSMER. This is an operating group rather than a formal group?

Mr. CLEVELAND. Yes. The operating group is an interagency committee for coordination of all the many details that go into this program.

Mr. HOSMER. And that meets separately?

Mr. CLEVELAND. Yes.

Mr. HOSMER. When it runs across a policy problem, it notifies this policy group?

Mr. CLEVELAND. Yes; it comprises a different cast of characters, consisting of people such as Mr. Simsarian from my office and Dr. Jones from Dr. Haworth's organization, and so on.

Mr. RIVERS. Would the gentleman yield?

Mr. HOSMER. Yes.

Mr. RIVERS. I am curious to know what the name of this group is. Since it has been formalized, does it have a name?

Mr. CLEVELAND. Antarctic Policy Group. The word "committee" is out of favor in the Federal Government.

Mr. HOSMER. The President does not like interdepartmental committees, so they call them groups now?

Mr. CLEVELAND. No, the President has ruled that he does not want to establish himself interdepartmental machinery in fields where one of the officers of the Cabinet already holds the responsibility for coordination in that field. In this case, the Secretary of State, under the arrangements by which the Operations Coordinating Board was abolished in 1961, the Secretary of State has and exercises through my office that responsibility. It is therefore in the Secretary of State's hands to establish more formal machinery if, in his judgment, he thinks it is necessary.

Mr. HOSMER. May I just ask one more question?

Mr. HALEY. The gentleman may proceed.

Mr. HOSMER. Then you have in effect established these two groups, one operational and one policy?

Mr. CLEVELAND. The operational one has been going on for some time.

Mr. HOSMER. Now you have a separate, a policy group?

Mr. CLEVELAND. Well, it is just the next level up.

Mr. HOSMER. And you say in the latter part of your testimony it would be a mistake to divorce policy from operational necessities on which it must rationally be made.

Are you violating this dicta?

Mr. CLEVELAND. No, Mr. Hosmer, because what we have in the policy group is the supervisory level in the very agencies that carry this responsibility. The bills before you suggest another level of supervision which would, presumably, on behalf of the President, operate at some higher level than the Secretary of State and the National Science Foundation Director and the Secretary of Defense.

Now, it is perfectly possible for the President to have bodies within the White House structure that have this kind of coordinating responsibility. Most of the bodies that have previously been established in the executive branch of that character have not survived and have tended to be absorbed into the regular machinery. This is, as you know, the history of public administration in the Federal Government.

Mr. HOSMER. Then, under that sort of thing, we can look to the disestablishment eventually of the Atomic Energy Commission and NASA and things like that, which have a specialized job to do?

Mr. CLEVELAND. No; those are independent agencies of the Federal Government. If what you are suggesting in these bills—this is a new idea for me, I must say, what you are saying—but if what you are suggesting in these bills is that Admiral Reedy's Task Force, the scientific work of the Antarctic part of the National Science Foundation and the political determinations of the Secretary of State should all be removed and placed in a new independent agency of the Federal Government, then I can think of quite a lot more reasons why it is not a good idea.

Mr. HOSMER. Well, I think I was talking about NASA and the AEC in the context that they do some defense related work, they do non-defense-related work, and they have problems of coordination and problems of policy. As a matter of fact, the Atomic Energy Commission is a successor to the National Science Foundation in the days of Vannevar Bush, in 1939 and 1940, or 1941. So I do not think that we violate any principles of political science when we have an agency that reaches the point that it gets beyond the coordination possibilities in an informal way of the various organizations of the Government that are participating.

For instance, we have had in this game Rear Adm. Richard E. Byrd, who was the officer in charge of the Antarctic Project Office; his successor, Admiral Dufek, and Admiral Dufek's successor, Admiral Tyree, all of whom, having had experience on the job, suggesting that a Commission be set up to carry it on. Admiral Reedy very properly last year, and I assume this year, did not make a judgment because he is the current occupant of the Office, and this kind of thing is beyond his operational function.

We have the Defense Department, just as Admiral Byrd was appointed, that said it was looking forward to the creation of an agency to take care of this problem. Now we have negative testimony from you despite all of this long history of the experts, people actually dealing with the problem day by day, year by year, suggesting that the better organizational structure would in fact allow the program to be carried on better.

Mr. CLEVELAND. Well, in the history of this program, there was a time when there was an assumption in the Department of Defense, perhaps more widely, that the whole of the program would be lodged within the Defense Establishment; that is, the scientific work also.

Mr. HOSMER. Yes; but that must have been some time about which I was not talking, some time prior to 1955. At the time of Admiral Byrd's appointment, or whenever that date was, because at that time, the Defense Department was already talking about not lodging it within its own structure.

Mr. CLEVELAND. I think within the Defense Department, and Assistant Secretary McNaughton can speak to this better than I, the arrangements, looked at from where we see them, seem to work very well. Admiral Reedy seems to be in thorough charge of the support force of the Antarctic situation.

Mr. HOSMER. I do not think it is a matter of whether these arrangements are working well or not. There has been considerable accomplishment, considerable money spent, there have been lives lost. The question is whether it can work better. You told us last year that this could not possibly work any better; you were negative on the bills then. Then the—in the intervening months, you do restructure, if in

fact, it was stipulated that this was a substantive change rather than a capitalization of a "G." So I think that there is some inconsistency.

I shall yield back to you gentlemen.

Mr. HALEY. I thank the gentleman, because you have explored just about the same field that I was going to. I know the gentleman has been down there and I am sure is more knowledgeable about this than I am.

Mr. CLEVELAND, you have never been down there; have you?

Mr. CLEVELAND. Well, I was just on my way and the Greek and Turkish Cypriots decided to start killing each other and I had to stay around here and help invent a U.N. peacekeeping force for that situation.

Mr. HOSMER. Of course, Mr. McNaughton and Dr. Haworth have both been down there; have they not?

Mr. CLEVELAND. I do not know.

Mr. HALEY. I just want to say, and put the gentleman from Maryland on notice, that I withdraw the invitation that he go back on my time and I shall extend that invitation to Mr. Cleveland.

Mr. O'BRIEN. Mr. Morton?

Mr. MORTON. Mr. Cleveland, I do not think we are as far apart as we sound here. Let me ask you this: As we develop knowledge that the Weather Bureau develops down there, as we develop knowledge that is of a nonmilitary nature that the Navy may develop down there, knowledge which the public can use, which business can use, where would anyone go to get this knowledge? This is one of the things. I think we are not separating this management into layers, but more, we are bringing it in together, into focus.

Now, today, let us assume that some of this Antarctic knowledge was of some value to some specific industry in America. Where would they go to get that knowledge?

Mr. CLEVELAND. They would go to the National Science Foundation, which is coordinating, really, all of the scientific research on the matter.

Mr. MORTON. Well, there is a lot of knowledge, but that is not altogether true, Mr. Cleveland. The Navy, the Seabees are learning how to operate this—in your own testimony you said the Seabees had put a hard-surface road down there. This is a new technology. I talked to the fellows on the bulldozers that were putting that road down there. I talked to a boy on a bulldozer who was operating it in a temperature way below zero up at pole station, and there were some specific problems that were inherent in that operation because of the hostile climate. Now, a contractor has a job, let us say, up at my good friend from Alaska's district; this knowledge that the Seabees have developed becomes a valuable proposition. Where does he go to get it? He does not know about it. He does not know that the Seabees have done this. There is no place to turn, the public or the Congress, to turn to in this program.

We are not trying to divorce the State Department from it, we are not trying to create another overhead or layer of management. We are trying to bring this thing in—it is big enough and substantive enough to have a headquarters. That is all we are trying to do, create a headquarters which will absolutely, in my opinion, reflect more of the State Department's desires and more of the National

Science Foundation's goals into the program, more of the Navy's goals, rather than isolate them from their mission, and bring them closer to their mission. That is all we are trying to do.

I think you evidently have realized that yourself. I cannot believe that you would have responded to the invitation of these hearings and changed your organizational structure just because this was going on. You must have changed it because there was a need to bring together in terms of management control a little tighter organization as it affects the policies under which this whole program operates. Is that not correct?

Mr. CLEVELAND. Yes, and to formalize the——

Mr. MORTON. What does "formalize" mean, Mr. Cleveland?

Mr. CLEVELAND. It means that it is then possible for Congress, for other elements of the executive branch, and for outsiders when they ask, What is the ultimate authority, short of the President, for policy decisions about Antarctica? It is possible to answer that question in fewer words and less bureaucratic terminology than it was last week.

On the question of businessmen and outsiders who want information about this program, if I were a businessman in Alaska seeking information about this kind of thing, I would not go to either the current coordinators in the State Department or to a new Antarctic Commission; I would go to the Seabees and ask them, or to the Navy, and see what they say. In other words, this kind of thing can be derived from reports that the Defense Department Antarctic Projects Office regularly puts out.

Other kinds of information and knowledge of other kinds of research and findings is available from the National Science Foundation's periodic reports on its program. From the point of view of the people interested in the detailed elements of this exercise, there are really only two possible places to go. One is the Defense Department Antarctic Projects Office, and the other is the National Science Foundation. That is not very many places, compared to most programs in the Government, to have to turn.

Mr. MORTON. Well, let me just, under the functions of the Commission that we have, let me see if these bases are covered by the original structure that you are now using. First is to maintain a depository of information relating to the Antarctic, including all the records of the Commission. Well, this would be all the records of your committee; original copies of records within the executive branch relating to the Antarctic.

Now, where are those records brought together so that somebody who is really studying this proposition would know where to go to study it?

Mr. CLEVELAND. Well, the National Science Foundation has been given by the Budget Bureau the responsibility for being the clearinghouse and the source of information about the existence and location of Antarctic records anywhere in the Government. But I do not know that you need to have copies of all of them available in one central place. That is not the way the Government works.

Mr. MORTON. I realize that.

Mr. HOSMER. Will the gentleman yield on that?

Mr. MORTON. Let me just ask one more question.

We were shown that there were some new buildings there in McMurdo. There was a progression of buildings: those that had been established in 1955, I think, or whenever it was first organized; then we had new types of buildings and new types of equipment that had been added. We all admit that this is going to be a permanent installation, or we hope it is going to be a permanent installation.

Now, who is responsible for the engineering, the selection of materials, the planning that is necessary for what McMurdo is going to look like in 1970? Is this a Navy responsibility?

Mr. CLEVELAND. It is a Navy responsibility, based on the requirements for scientific work that is laid on the Navy by National Science Foundation. This is what we are trying to—

Mr. MORRISON. This is this on-going, rolling 5-year plan that you are talking about?

Mr. CLEVELAND. That is right.

Mr. MORRISON. Who is responsible to kick that thing so that it rolls over and goes? Your committee, the State Department, the Science Foundation, or the Navy?

Mr. CLEVELAND. The procedure involves starting with the National Science Foundation, their projection as to what they feel is going to be useful and necessary to do in Antarctica on the scientific side. This then becomes a requirement, as it is called, in the Defense Department, a requirement on the Antarctic Projects Office in the Defense Department. Obviously that first requirement is going to be larger than Admiral Reedy and his colleagues think they can actually do. In fact, they are going to say, we cannot do this, as they have already said, unless we have two more planes by next year or the year after that.

The question then becomes—first of all, this is how much we can do within the budget that we can see ahead, and secondly, a recommendation that the budget be increased, perhaps. That will then be considered by three departments concerned, and if we all agree with it, we in the State Department and the National Science Foundation will try to assist in making sure within the Defense Department's budget process and at the Budget Bureau that enough money is set aside for Antarctic purposes.

One usefulness of this group with a capital "G" will be to make a little bit more formal representations to the Budget Bureau at budget time, making sure that there is enough money for this Antarctic program, that it does not get lost. It is not very big; it is only \$27 million for the whole thing. That gets lost in the Federal budget.

It is our job to make sure that it does not get lost.

Mr. MORRISON. Well, let us take some of the nonscientific developments, such as the work that the Seabees are doing, but more than that, things like those that you mentioned, the commercial air routes. There probably will be in short order down there some kind of commercial fishing interests, and that sort of thing. Who is going to do this work? This is not the National Science Foundation's area; it has to do with the development of an air route. Perhaps the aeronautics authority should be involved in it. Whom are they dealing with, the State Department?

Mr. CLEVELAND. That depends upon what their problem is. Commercial fishermen can go down there now just on their own. It is a

free world. But if he needs help from the Navy, then he has to go to the Navy and see whether that help is available. The Navy will probably raise the problem as a policy issue, since this would be the first time that they had helped a commercial fisherman from this point of view. This would come up through this machinery to the group.

Under the proposed bill, that same question would come in the same way through the same machinery, but it would require one additional layer of decision; namely, the Commission itself.

Mr. O'BRIEN. Would the gentleman yield?

Mr. MORTON. Just 1 second, Mr. Chairman, and I am through.

I think the very argument when the Cypriot crisis came up, that you could not go down there, is the best argument in the world for having a good, solid, management commission that can do that. This is no reflection, sir, on you or on the State Department, both of whom I have great admiration for, but I think you people are looking at the dark side of the wall on this thing. If you go down there, and I have all the regard in the world for Admiral Reedy—he has done a terrific job—but that place is not what it ought to be. That is all I have to say.

Mr. O'BRIEN. May I ask how many of the countries which have bases in the Antarctic now have separate Antarctic Commissions? Do you know?

Mr. CLEVELAND. I am not sure we can answer that quite in those terms.

Mr. O'BRIEN. Does Australia?

Mr. CLEVELAND. Most of the other governments are organized sort of the way we are—that is, several different parts of the government have a piece of the problem. The French have a French polar institute, as they call it. But there is also an Antarctic unit in the Foreign Office, what is their State Department.

Mr. O'BRIEN. They do have separate agencies of the type contemplated in the legislation before us today?

Mr. CLEVELAND. My impression is that they have operating agencies that are perhaps more comparable to the Antarctic Projects Office in the Defense Department. Only one other nation regularly uses military personnel, so that we have a rather special setup in that respect. So there are operating agencies that are comparable to the Antarctic Projects Office. But I do not know of any other Government that has an overall commission into which—Mr. Hosmer was explaining it—the operational authority over the whole program, analogous to the atomic energy program, is placed in a single independent agency of the Government.

Mr. O'BRIEN. Mr. Rivers?

Mr. RIVERS. No questions, thank you.

Mr. O'BRIEN. Mr. Hosmer?

Mr. HOSMER. Thank you, Mr. Chairman.

You said you did not know of any that had this Antarctic commission setup. Do you know what all these Governments have, what their various organizations for this are?

Mr. CLEVELAND. In some cases, we do.

Mr. HOSMER. The answer is not responsive in the sense that you do not know what the answer is?

Mr. CLEVELAND. Maybe it would be useful for us to query them on their exact bureaucratic arrangements and submit them here.

(The information will be found on p. 54.)

Mr. HOSMER. Well, I think we can probably establish what is best for the United States and what they have established is what is best for their own particular situation.

Mr. CLEVELAND. We have very different problems. For one thing, we operate on so much larger a scale. The other thing is we do use our military as the support force, whereas others do not.

Mr. HOSMER. Mr. Cleveland, you talked of this figure of \$27 million, or level of effort. How long has that been the level of effort?

Mr. CLEVELAND. In my time, which is since 1961, it has run about \$19 to \$20 million on the Navy side and about \$7 million or \$7.5 million on the National Science Foundation side.

Mr. HOSMER. That is for the last 3 years, or 4 years?

Mr. CLEVELAND. The last 4 or 5 years; yes.

Mr. HOSMER. Does that mean that we have now, since 4 years have elapsed, actually a 20-percent smaller effort in the Antarctic than we had 4 years ago because of the escalation of 5 percent per year on costs, which is the usual figure for these governmental activities?

Mr. CLEVELAND. That is right, and in my judgment, it is not enough. I think we should be stepping up the rate at a higher rate.

Mr. HOSMER. But you have not—either have not pushed it or have not been successful in pushing it to greater amounts; is that correct?

Mr. CLEVELAND. I think that it is only quite recently that the scientific possibilities developed by the National Science Foundation have indicated a justification for a somewhat more intensive program. This is one of the things that we want to look at now in this policy group, to see whether we should recommend essentially to the President a somewhat higher level of activity, both on the science side and on the defense side.

Mr. HOSMER. Do you not think that if we had an Antarctic Commission in operation over these periods of years since Admiral Byrd and these people first wanted to have it, that problem would have been recognized and dealt with, not in 1966 or 1967, but in 1960 or 1961?

Mr. CLEVELAND. Well, I do not know. It certainly would have been more costly on the Washington end because of the cost of the Commission itself.

Mr. HOSMER. Well, the Antarctic projects office has some costs that you would save on this sort of thing, does it not?

Mr. CLEVELAND. I am sorry, sir?

Mr. HOSMER. I say the Commission would take up most of the duties of the Antarctic project office, so all of the expense of the Commission is not an add on.

Mr. CLEVELAND. I am not clear from the legislation. The legislation indicates that this is to be a supervisory level, not in substitution for anything now going on. But some of what you have said is not quite the same as what I understood from the legislation. If you are talking about an Atomic Energy Commission—

Mr. HOSMER. I understand this Antarctic projects office is going to take the Antarctic and the activities there and start giving them some cohesive directions, as well as the word on policy matters, such as when I questioned you before you had seven policy objectives there.

I essentially added an eighth one, preserving and protecting the interests of the United States in the Antarctic. Apparently, that is not a part of our policy.

Mr. CLEVELAND. On the contrary.

Mr. HOSMER. Or not what you specified to be a part of our policy?

Mr. CLEVELAND. That is the basic part of our policy, which I think I made clear in my statement.

Mr. HOSMER. No; you did not even list it. If that is the basic policy, it should have been listed as No. 1.

Let us get back to this business ———

Mr. CLEVELAND. I would like, Mr. Hosmer, not to leave any doubt at all in the record on this point. It would be fantastic to support that in testimony on this subject before this committee, I was leaving open the question of whether the U.S. Government had the responsibility of defending the interests of the United States in Antarctica. This is precisely what we were trying to do in the Antarctica Treaty itself.

I said in the statement how enormously advantageous it is to us as the largest country with the greatest capability for research and logistical support to be able to operate all over the place, instead of just one wedge that we might claim. That is why the United States decided never to make a claim. Certainly, that is the central objective, and the seven policy points are subheads of it, if you will.

Mr. HOSMER. Then who is it in the U.S. Government who says, "This is what we need to be done to further and protect the U.S. interests in the Antarctic?"

Mr. CLEVELAND. If you need one person, it is the President or the Secretary of State on his behalf.

Mr. HOSMER. Who in the U.S. Government tells the President of the problem so that he knows enough to say this?

Mr. CLEVELAND. The Secretary of State and the Secretary of Defense and the Director of the National Science Foundation.

Mr. HOSMER. Well, how about the Secretary of Commerce? Maybe there are some weather matters that have to be taken care of, the Federal Aviation Agency—we went through that. Who knows what else?

Mr. CLEVELAND. Well, everything is related.

Mr. HOSMER. This group is not ———

Mr. CLEVELAND. Everything is related to everything else, as you know. But the fact is that other agencies of the Government do not have primary responsibilities in relation to Antarctica. These three agencies do.

Mr. HOSMER. I am bothered by the same things Mr. Morton was bothered about. You are worrying about Cypress and Mr. McNamara is worrying about Vietnam; Dr. Haworth is worried about where to put the new accelerator, and nobody is worried about the U.S. interests in the Antarctic, unless you have some telephone calls and lunches, but your mind is really not on it.

Mr. CLEVELAND. I would take exception to that. My mind is on it, as I tried to convey in 12 pages of testimony—which I wrote myself, by the way.

Mr. HOSMER. The language is nice.

Mr. CLEVELAND. It presents the substance of the program. I think that this program has gotten a good deal of attention at the upper

levels in all three of the agencies, and in an effort to make sure that it does in the future, as the problems become more complex and as we need more attention, not less, and probably more money—

Mr. HOSMER. The Federal agencies apparently are giving it 20 percent less attention than we did 4 years ago.

Mr. CLEVELAND. We are spending 20 percent less money on this, and a good many other things, on a budget that the President has held even for a period of several years.

Mr. HOSMER. This 5-year plan, for instance, the rolling 5-year plan—I do not know what is in it. Has anybody run an analysis on this \$27 million breakaway to find out what is needed?

Mr. CLEVELAND. For the years from now on, that process is starting now in the National Science Foundation. My hope would be that—

Mr. HOSMER. You mean they have their present 5-year plan without any consideration of how much logistics support the Navy can give them on \$20 million a year?

Mr. CLEVELAND. No, I do not mean that, Mr. Hosmer.

Mr. HOSMER. I did not think you did.

Mr. CLEVELAND. I mean that in the 5-year plan that we shall be considering this summer and early fall, for the next 5 years, one of the questions that the policy group will raise is whether we are doing enough, whether the scientific possibilities that have now been developed, which, as I tried to indicate in my statement, are really enormously important, do not justify a somewhat more intensive effort of investigation, and therefore, a somewhat more intensive attention on the logistical side.

Mr. HOSMER. There is a 5-year plan in operation or in being, as you say, at the moment, rolling or otherwise. My question was directed to the specific issue of whether or not that 5-year plan is dovetailed to this \$20 million-\$7 million break, and if so, at the end of 5 years, obviously, you have another 25 percent diminishment in activity. I just do not think that the 5-year plan which is existing now shows a 25 percent diminution in activity.

Mr. CLEVELAND. The question about thinking 5 years ahead would imply a somewhat higher level of support and some investment in facilities that we do not now have, including more planes, for example. But in order to establish that in a current year with the Budget Bureau and in competition with all the other ways of spending Federal money that has been developed over the years, we are going to have to make that case very strongly this fall at budget time, and we are getting geared up to do just that. This is one of the reasons for the policy group.

Mr. HOSMER. Well, I understand, then, or you imply, at least, that the 5-year rolling plan is adjusted to the amount of money that is being spent, and that somebody, the Navy and the National Science Foundation and the Weather Bureau, and anybody else who is interested—the State Department—is each going in separately to try to get the boost that is needed to make it all come out coordinated in the end. Is that right?

Mr. CLEVELAND. This is, of course, the way the Government works on most matters. The agency that is going to spend the money defends it before the Budget Bureau as part of its budget and defends it before the relevant Appropriations Committees of the Congress.

Mr. HOSMER. Usually, one agency is spending the money. Here we have an activity going on where several agencies are spending the money, getting the money from different appropriations subcommittees.

Mr. CLEVELAND. I find it impossible to think of a program in which all the money is being spent by one agency.

Mr. HOSMER. Well, you do not have many programs like this one, where you have three or four Government agencies or more having to coordinate with the budget?

Mr. CLEVELAND. Oh, yes; this is actually relatively simple, this one, compared to most programs that get into international affairs. The atomic energy program itself, the combination of bilateral arrangements and the multilateral arrangements through the International Atomic Energy Agency, creates more coordination problems than this does, for example.

Mr. HOSMER. In what respect? We have the authorization and the appropriations bills and the AEC supports most of those activities. Where we do not, where we had a situation of the establishment of these \$250,000 grants for research training, we ended up with putting out better than \$7 million in some 20 countries around the world of the money that the AEC had. Then the AID organization did not come along and fund the operation part of it, so we are getting a lot less on our investment than we ever should be getting; which is not an example of things working very well where you have these divided authorities.

Mr. CLEVELAND. I did not present it as things working well, I just presented it as something more complex than what we have here. In the atomic energy field, the funds for international agencies for this purpose are funded in the State Department appropriation and are administered in my office, for example. So that you have at least three different kinds of money involved in international atomic energy alone. Here you have essentially two different kinds of money with fringe activities by a few other agencies. It is relatively a clear situation.

Now, in every Government program, you have a long road ahead and a lot of problems, but that is what we live with, the problems.

Mr. HOSMER. Well, I think that you have hinted, at least, that we have a problem here which you say is solved by your policy coordinating group, which some people think ought to be solved in a little bit different way. That is what the basic issue here, I suppose, is.

Mr. CLEVELAND. That is right, whether you need one more layer or not.

Mr. HOSMER. I dispute that "one more layer" terminology, simply because it is not descriptive of what the actual situation is.

Thank you.

Mr. O'BRIEN. Any questions?

Mr. BURTON of California. No questions.

Mr. O'BRIEN. Mr. Bingham?

Mr. BINGHAM. Thank you, Mr. Chairman.

First of all, I would like to say that it has been a pleasure to welcome Mr. Cleveland here at this hearing today. We have been associated in many activities over a number of years, and it is a pleasure to listen to him in this context.

I would like to ask one or two questions about the treaty, Mr. Cleveland. Do we have title to any territory in Antarctica?

Mr. CLEVELAND. No.

Mr. BINGHAM. Do we under the treaty have control of any particular territory?

Mr. CLEVELAND. Control in practice. The territory of our own base, our own bases there; yes. And what we build, we own.

Mr. BINGHAM. Is that a matter of operations that is worked out with the other signatories of the treaty?

Mr. CLEVELAND. Well, there is no clearance process with the other signatories. In practice, there is so much ice that the question of two countries wanting to operate a base on the same little piece of the ice has not so far arisen.

Mr. BINGHAM. Do we have any joint operations with any other countries in the Antarctic?

Mr. CLEVELAND. I think Mr. Simsarian can answer that.

Mr. SIMSARIAN. We had the point station with Australia. Then that was closed out after a period of years. We worked together with Argentina in the joint station at Ellsworth. Then we closed that out. We now have a joint station at Hallett Station with New Zealand, which is continuing during the summer months. Stations go on for a period of years, and then we often move to another area in order to develop new parts of the Antarctic.

Mr. BINGHAM. What is the nature of some of the questions that have arisen at the meetings of the treaty signatories that you referred to in your statement? You say that there were a number of cases where recommendations were made, that 26 measures from 3 such meetings have already been approved by governments since the treaty went into force in June 1961. Could you give us some examples of the type of arrangements that were worked out at these international meetings?

Mr. CLEVELAND. The text of all these recommendations are contained as one of the annexes to the President's report. Perhaps the most interesting one at the moment is a recommendation about conservation, trying, in effect, to get agreement on the subject of the conservation of such flora and fauna as there are in that part of the world, because otherwise, the possibility would be that with the growing human population in that part of the world, you might actually lose some of what is already there. So that is the recommendation from the latest meeting, which is now, I think, in clearance for approval by governments.

There was a very important recommendation about exchange of information. The treaty specifies that countries will tell each other what they are doing. This recommendation from the meeting spelled out the procedure whereby that would be done, and categories of information that should be reported, and this kind of thing.

Now, there is really quite a range. There is a recommendation about reports on the condition of tombs, buildings, or objects of historic interest, and so forth.

Mr. BINGHAM. Thank you. If that is part of the President's report, that will serve, I think.

Would it be fair to say that the problem of relations with other governments in connection with this whole operation is a very important part of the total complex?

Mr. CLEVELAND. Yes, indeed. Indeed it is. Partly because we want to be sure that the precedents we set are precedents for action that we would be prepared for any of the other countries, including the Soviet Union, to take; partly because we want to make sure that the precedents they set are ones that we think we can live with. So, we, for our part, watch the other countries' operations with some care.

Mr. BINGHAM. Is there any parallel here at all with our relationship with the NATO Treaty operations, our operations with regard to the NATO Treaty, in the sense that there are political, military, and economic operations involved, but that there is no single agency, separate from the Department of Defense, Department of State, and other departments, that is given central responsibility for our relations with the NATO complex?

Mr. CLEVELAND. There is not a Mr. NATO, sort of, in the Government.

I think that analogy works up to a point. The point beyond which it does not work is that NATO, of course, is a treaty that established an organization, as you know, both an international civilian political organization and a force, an internationally controlled force. The Antarctic Treaty is peculiar, and, I think stunningly successful partly because it did not establish an organization, but provided workable principles whereby individual governments could pursue parallel scientific investigations in a common area. The extraordinary thing about the Antarctic Treaty is that it works with so little machinery, both internationally and also within the Government.

Mr. BINGHAM. One final question. Would it be fair to say that in this recent setting up of a policy group, there was no essential change in the responsibility for the U.S. Government operations in Antarctica insofar as the agencies primarily concerned are affected?

Mr. CLEVELAND. That is correct. The policy group formalizes the responsibility of the three parts of the Government most concerned with these operations and places personally on the political executive involved, the responsibility for working together and coming up with joint recommendations for consideration if necessary by the Cabinet level and the President.

Mr. BINGHAM. Thank you very much.

Mr. O'BRIEN. I want to say, Mr. Secretary, that we are grateful to you. You have been sitting there for nearly 2 hours. I think that you must realize that that is indicative of the deep and growing concern on the part of this committee.

I have a feeling, after listening to the testimony and the questions and answers this morning, that if there ever was a silent partner in any activity of the Government, the Congress is the silent partner with regard to the Antarctic. We just seem to have no place where we can touch it directly. It is obvious that this committee, beyond the legislation before us, has very limited authority. I have an idea that very often, the distinguished Committee on Appropriations flies blind in this field.

One of the things that has impressed me is that every Member of the Congress who has gone to the Antarctic has come back in favor of some kind of a central organization. I do not believe that they are alone, but that they are expressing the views of some of the very distinguished people who are serving as project officers there. I do

not think we are trying to set up the structure for a battle for power between the two ends of Pennsylvania Avenue, but I do know that some of the suggestions that have come from the executive branch have weathered some rough sledding in Congress. But I also know that when Congress presumes to suggest something to the executive branch, it very often gets even shorter shrifts from the executive branch of the Government.

I do not know myself what the merits of this legislation may be, but I would like to repeat what I said at the beginning that we have been talking about this for years, we are all concerned about it, and as far as I am concerned, we are going to have a vote in this subcommittee, either up or down, to dispose of this matter once and for all.

I should like to say before we adjourn that I would like to offer the congratulations of the committee to a very distinguished gentleman, Dr. Jim Mooney, who was honored over the weekend, I understand, by being made a life member of the Explorer's Club. I want to congratulate him for myself and for the committee.

If I may add a personal note, I am very happy to have a group from my hometown here today, the distinguished Supreme Court Justice, Harold Koreman, his charming wife and his two lovely daughters.

(The following information is referred to by Mr. Cleveland on p. 47.)

ASSISTANT SECRETARY OF STATE,
Washington, June 21, 1965.

HON. LEO W. O'BRIEN,
Chairman, Subcommittee on Territorial and Insular Affairs,
House of Representatives.

DEAR MR. CHAIRMAN: In the course of my testimony before your subcommittee, I was asked to provide information on the way in which other countries organized their Antarctic activities.

Up-to-date information is now available on that subject, and enclosed is a summary of how countries plan and conduct their Antarctic programs. The summary deals only with the major organizations concerned in each country. Each of these organizations, of course, seeks advice on special problems from a variety of governmental and private expert sources.

You will see from this summary that the arrangements in most countries are roughly comparable to those now prevailing in the executive branch of our own Government.

The summaries do not deal with legislation and, therefore, do not cover the participation in the national Antarctic programs of legislative bodies such as your own committee.

If the transcript of our hearings before your committee has not already gone to press, you may wish to consider including this letter and its attachments in the record.

If there is any other information you require, please do not hesitate to let me know.

Sincerely,

HARLAN CLEVELAND.

ORGANIZATION OF ANTARCTIC PROGRAMS

ARGENTINA

1. Policy and planning

Policy is the joint responsibility of the Ministry of Foreign Affairs, and the Ministry of Defense.

2. Scientific programs

(a) The Argentine Antarctic Institute has primary responsibility for scientific activity. The Institute is administratively and financially under the Navy, but operates fairly independently.

(b) The University of Buenos Aires plays a minor role in the science program.

(c) The Naval Hydrographic Office plays an important role in its specialty.

3. Operations

For the most part, Argentine stations in Antarctica are operated either by the Army, the Navy, or the Air Force. One station is, however, operated by the Argentine Antarctic Institute, but the Navy supplies the transportation.

AUSTRALIA

1. Policy and planning

The primary responsibility for Antarctic policy and coordination rests with the Antarctic Division of the Ministry of External Affairs.

2. Scientific programs

Coordination of the science program and international matters is provided by an interagency committee. The committee includes the Departments of National Development and Interior, plus the Australian Academy of Sciences. Other Departments are consulted as necessary. Meteorology and mapping are carried out under the auspices of the Department of Meteorology and the Department of National Mapping.

3. Operations

Operations are the responsibility of the Antarctic Division of External Affairs. The Armed Forces provide for air and vehicle operations, as well as advisory services.

BELGIUM

1. Policy and planning

National scientific policy is determined by a Cabinet committee which includes the Ministries of Defense, Agriculture, Economics, Education, Public Health, and Finance.

Implementation of policy rests with the same agencies, plus the Ministries of Foreign Affairs, and Public Works.

2. Scientific programs

Science policy is determined by the Cabinet committee. Belgium works with the Netherlands in conducting its Antarctic programs.

3. Operations

Operations are in the hands of the Belgian-Netherlands Antarctic Committee. Finances and personnel are two-thirds Belgian and one-third Dutch. The program is also partially supported by the private entities.

The Belgian Armed Forces have supported Antarctic programs by loaning communications and other equipment such as light aircraft. Belgian Navy and Air Force personnel have sometimes participated in expeditions.

CHILE

1. Policy and planning

Policy and planning is the joint responsibility of the Foreign Ministry, the Army, the Navy, and the Air Force.

2. Scientific programs

Science programs are coordinated by the Chilean Antarctic Institute, which is under the Directorate of Frontiers in the Foreign Ministry.

3. Operations

The three military services provide the logistic support needed. The Chilean Army operates one station, the Navy one station, and the Air Force two stations.

FRANCE

1. Policy and planning

Policy is determined by the Terre Adelle Section of the French Austral and Antarctic Office in the Ministry of Overseas Territories.

2. Scientific programs

Nominally, scientific programs are under the auspices of the French National Committee for Antarctic Research of the French Academy of Science. However, the following agencies formulate and finance their own programs:

- The National Center for Scientific Research.
- The National Center for Space Studies.
- The National Center for Telecommunication Studies.
- The Institute for Global Physics.

In addition, there is the French Polar Expeditions which is a private group. This group has a written contract with the French austral and Antarctic office to organize expeditions.

3. Operations

Logistic support including construction work and management is provided by the Office of Overseas Scientific Research of the Ministry of Cooperation. The Navy furnishes a limited number of naval personnel for Antarctic ship duty.

JAPAN

1. Policy and planning

Antarctic programs and operations are chiefly the responsibility of the Ministry of Education, of which the Japan Antarctic Research Expedition (JARE) and the Polar Division of the National Science Museum are the agencies directly concerned. The membership of the Headquarters of the JARE is composed of the Minister of Education and the vice ministers of other participating agencies named below. In formulating plans, the Headquarters JARE relies heavily upon advice and recommendations from the Japan Science Council and, on occasion from individual members of the academic community.

2. Scientific programs

The Science and Technology Agency is responsible for coordinating Antarctic activities with other science programs being undertaken by the Government.

3. Operations

The Polar Division of the National Science Museum is chiefly responsible for carrying out Antarctic programs. It procures supplies and exercises general supervision over all activities of the Antarctic expedition. The Maritime Self-Defense Force provides transportation. The Geographical Survey Institute (Ministry of Construction) performs map-making services. Radio research at the Antarctic is carried out by the Radio Research Laboratories (Ministry of Posts and Telecommunications) and meteorological and oceanographic studies are carried out respectively by the Japan Meteorological Agency and the Maritime Safety Board, both of the Ministry of Transportation.

NEW ZEALAND

1. Policy and planning

Policy and planning is done by the Ross Dependency Research Committee, a body including scientists and representatives from governmental and nongovernmental organizations.

2. Scientific programs

Scientific programs are planned by the Ross Dependency Research Committee. The programs are carried out by the Antarctic Division of the Department of Scientific and Industrial Research. There is also a University Grant Committee, and New Zealand Universities operate independent research programs.

3. Operations

Scientific operations are under the control of the Department of Scientific and Industrial Research. Transportation is provided by the New Zealand Navy.

NORWAY

1. Policy and planning

The Norwegian Antarctic program is currently inactive. Coordination and planning would be done by the Norwegian Polar Institute which also deals with Arctic projects. The Institute is financially dependent on the Ministry of Industry.

2. Scientific programs

The Polar Institute receives broad policy guidance from the Norwegian National Committee for Antarctic Science, which is appointed by the Norwegian Academy of Sciences.

3. Operations

For its activity at both poles, the Institute has a small permanent staff. Expeditions are made up of small specialized parties from any interested governmental or private body. These parties are normally financed by the sponsoring body, but the Polar Institute sometimes provides financial support from its budget.

In principle, the Institute is responsible for its own logistics, but it works closely with the military authorities, and sometimes obtains equipment from them.

SOUTH AFRICA

1. Policy and planning

Planning is a function of an interdepartmental committee consisting of representatives of the Ministries of Transport (chairman) and Foreign Affairs, and the Council for Scientific and Industrial Research.

2. Scientific programs

Recommendations for the scientific program are developed by the South African Committee for Antarctic Research. The Committee for Antarctic Research is also represented on the Interdepartmental Committee.

3. Operations

The Department of Transport is responsible for implementing the research program and maintaining the South African station in Antarctica.

UNITED KINGDOM

1. Policy and planning

The focal point for policy and planning is the British Antarctic Survey. The Survey reports to the Governor of the Falkland Islands, who is also the High Commissioner for British Antarctic Territory. The High Commissioner, in turn, is responsible to the Secretary of State for the Colonies.

2. Scientific programs

Recommendations for scientific programs come from the British National Committee on Antarctic Research. This is a committee of scientists acting in their individual capacities. In addition, the Scott Polar Research Institute maintains close liaison with both the Antarctic Survey and the National Committee. The Polar Institute is, however, an independent research organization connected with Cambridge University.

3. Operations

In general, operations are the responsibility of the British Antarctic Survey. Others involved are the Royal Navy, which annually sends a supply ship to the Antarctic and provides helicopter support when necessary. The Directorate of Overseas Surveys is responsible for mapping, and the Hydrographic Department is responsible for hydrographic charting.

U.S.S.R.

1. Policy and planning

Basic logistical and scientific operational support, as well as the coordination of research operations in Antarctica, is provided by the Arctic and Antarctic Scientific Research Institute under the Administration of Arctic and Antarctic Studies, in the main administration of the Hydrometeorological Service, and attached to the Council of Ministers, U.S.S.R.

2. Scientific programs

The planning and development of basic Antarctic research is by various institutes of the Academy of Sciences, U.S.S.R. The Interdepartmental Commission on Antarctic Research coordinates the plans and activities within the Academy and with the Arctic and Antarctic Scientific Research Institute. Scientists of the Academy also participate in the sessions of the Scientific Council of the Arctic and Antarctic Scientific Research Institute.

3. Operations

Basic logistics support is provided by the Administration of Arctic and Antarctic Studies. Ship operations are provided by the Ministry of the Merchant Fleet, and air operations are provided by the Ministry of Civil Aviation, U.S.S.R.

UNITED STATES

1. Policy and planning

The Antarctic Policy Group is responsible for overall planning. The group is composed of representatives of the Department of State (Chairman) and Defense, and the Director of the National Science Foundation,

2. Scientific programs

Scientific programs are planned, coordinated, and directed by the National Science Foundation.

3. Operations

Logistic support is the responsibility of the Department of Defense.

We stand in recess until 9:45 tomorrow morning.

(Whereupon, at 12:25 p.m. the hearing was recessed until the following day, April 13, 1965, at 9:45 a.m.)

ANTARCTICA REPORT—1965

TUESDAY, APRIL 13, 1965

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TERRITORIAL AND INSULAR AFFAIRS
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:55 a.m., in room 1324, Longworth House Office Building, Hon. Leo W. O'Brien presiding.

Mr. O'BRIEN. The Subcommittee on Territorial and Insular Affairs will be in order.

We will continue hearing on H.R. 555 by Mr. Zablocki, H.R. 2211 by Mr. Hosmer, H.R. 4658 by Mr. Saylor, and H.R. 5494 written by Mr. Morton, for Antarctic study and research programs.

Our first witness this morning will be our colleague, the Honorable Robert B. Duncan.

STATEMENT OF HON. ROBERT B. DUNCAN, A REPRESENTATIVE IN CONGRESS FROM THE FOURTH CONGRESSIONAL DISTRICT OF THE STATE OF OREGON

Mr. DUNCAN. Mr. Chairman and gentlemen, I will take only a moment or two of your time. I am grateful for the pleasure of coming back once again to this room where I spent so many happy hours last year. Perhaps I can thank again publicly the chairman for his very gracious consideration of all freshmen members of his committee. I hope Mr. Craley here can testify that this is so.

Mr. CRALEY. I do.

Mr. DUNCAN. I am also grateful for the opportunity I had last year of visiting the Antarctic Continent. This represented not only a trip that I felt would be of value to me in my duties as a Member of Congress, but it represented the culmination of a longstanding ambition. As I told some of the people I met down there, when I was a youngster, my fondest ambition was to be an Antarctic explorer and I was always disappointed when at the age of about 15, Admiral Byrd did not see fit to include me on one of his expeditions down there. So this meant the fulfillment of a youthful ambition.

We were down there only for a few days and I do not come back to you as any expert, although I will say Admiral Reedy and Dr. Waterman and the rest of the staff did their best on our short trip down there to make us experts.

First of all, I was impressed with the continent, not only from a scientific standpoint but from the standpoint of the security of United States. I was impressed with our activities down there, I was im-

pressed with the scientific work going on and with the logistical supply work, by the military and transport service and by the Navy. I think it is of vital importance that we be there. As Mr. Morton said yesterday, I think it is well for us to recognize right now that we should be there, our activities on the continent should be a continuing and long-range proposition. I think this is important from a scientific standpoint as well, as I mentioned just a moment ago, as from the standpoint of national security.

I think we are learning much in both areas. I think as we talk about the costs of this operation, we ought to realize that we have going down there not only a scientific investigation program but I think the mere presence of our logistical supply unit is important to us as we seek to learn how to operate militarily in the adverse climate of the Antarctic and the Arctic. I think that while this is not a primary objective, perhaps not even a nominal objective, but the mere fact that the military is down there in a supply capacity, means we just cannot help but learn much about how to operate under extremely adverse climates.

With all due respect and apologies to those people who are down there, and I reiterate once again the fact that I was impressed with the way each one of them was conducting his own individual job, I could not help but feel from time to time as though I had been transported back to World War II and there, from my completely subordinate position, the amazing thing to me was not the reverses that we suffered in World War II but that we were achieving so much from a war that seemed to be kind of fighting itself in certain respects. If I had been in the top levels, I might have seen this was extremely well planned. But to the casual observer in Antarctica and to the subordinate Navy pilot in World War II, it seemed that the thing was kind of fighting itself, kind of conducting itself, and perhaps even the results we are accomplishing down there, and I think they are significant results, we are accomplishing in spite of ourselves rather than because of ourselves. We have heard it said many, many times that too many cooks spoil the broth. I am convinced we can do as much, maybe more, with the expenditure of no more money than we are putting into the operation and perhaps less.

Of course, one of the obvious things is the difficulty of maintaining an inventory down there. Storage problems are physical problems of maintaining the proper types of warehouses. This is, of course, very difficult in such a remote area. But I think that there is entirely too much reliance on air transportation. I could not help but analogize to the situation I find myself in at home.

Many, many years ago, when I was a youngster and we did not have a grocery store on every corner, my mother would buy the supplies and they would last every week. When I was in Alaska, we would go out and buy supplies once every 2 or 3 months. As a grocery store appears on the corner, it is inevitable that two or three times on Sunday, somebody has to run down to the corner store for butter or a quart of milk or something that could have been there if the planning had been done.

I am not sure there is not too much reliance on the marvelous air transport system we have to get material down there. Admiral Byrd, Scott, Shackleton, all the rest of them, were not able to call on a four-engine jet transport to bring supplies out of New York, Washington, California, or Hickam or wherever they might be. I would suggest this is one of the areas in which we could improve our operation.

Once again, getting back to the question of overall management, it seems to me that the overall direction is entirely too diffused. I think we have not the proper overall control. Each one of these men in charge of their particular operation, I am convinced, is doing an excellent job. What I think we need and what I think the bills before you gentlemen today attempt to give us is some overall top drawer management of the entire operation.

Going on to the bills themselves, they are all substantially the same and I think I used particularly Mr. Morton's as I went through it. There are two or three things in there that strike me specifically. One, I am pleased, of course, at finally getting an overall top management. I am also pleased as a Navy pilot that the logistical supply operation is given to the Navy. I think it is important that it be given to one or the other services, far more important that it be given to one than it is which one gets it. However, I think the history of the Navy in Arctic and Antarctic exploration is such that this is properly within their area.

The thing that I would emphasize even more in section 4, subparagraph 2, on page 3 is, in addition to the gathering, evaluating, and dispersing of information, I would put specific language in in regard to program, cataloging, and indexing. I think it would be well if we had more screening of the scientific worth of the projects that we are conducting down there. I am a layman. I am not in a position to say that this project is good and that project is bad. I have no specific information that any of them are such that they ought to be discontinued. But I do have the feeling of some doubts as I talk to people here, there, and elsewhere in the operation as to whether or not each one of these projects really justifies the money that is being spent on it. I think the top drawer, overall management by this Richard Byrd Antarctic Commission would perhaps—

Mr. ASPINALL. I would like to ask my colleague a question. You don't think, do you, you are not optimistic enough to think, that we are going to get to a detailed study of this bill with the adverse reports that we have against it?

Mr. DUNCAN. Probably not, and perhaps I ought to, for that reason, Mr. Chairman, cut my testimony a little short. I am about through anyway.

Mr. ASPINALL. I am not objecting. I just wanted to know if you are still optimistic?

Mr. DUNCAN. I am convinced that something of this sort is going to come someday. I am willing to take one step at a time, and if having a hearing this year will help us next year or the year after to achieve what ought to be done, I am all for having these hearings.

As a matter of fact, Mr. Chairman, I am not so certain that it would not be just as well to gather together under one commission not only our Antarctic expeditions but also the operations we have going in the Arctic. I make that statement, too, with full knowledge of all the mechanical, legal, and congressional problems.

Mr. ASPINALL. You had better speak to Congressman Anderson, of Tennessee, about going to the pole before we go to foreign lands.

Mr. DUNCAN. I agree.

Just commenting very briefly that even in regard to the projects that are being carried out down there, I was impressed with the tremen-

dous volume of scientific data that was being accumulated. I recall the maser counter, in particular, grinding out miles of tapes with recordings of the maser bombardment of the Antarctic Continent at McMurdo. This thing I could not help speculating about is what are we doing with these tapes once we get them? I am sure there are answers and I am sure somebody is looking at them, but no one has yet supplied me with the answer that I wanted; namely, that they were carefully reviewed, the knowledge being accumulated on those tapes was being evaluated, and even more importantly, being stored under such circumstances that it can be readily retrieved and the information thereon made available to the scientific community without going back and redoing projects over and over again, which I suspect on more than one occasion has been done.

The other thing that I would comment on as far as the bill itself is concerned is the references therein to the national defense, the exception of any purely military expeditions or operations from the supervision of this commission. I did not reread the Antarctic Treaty. I would be very skeptical of this specific language in there, however, as it is my recollection that the Antarctic Treaty was entered into with the specific purpose of keeping the Antarctic Continent on a nonmilitary basis. While all of us realize the importance of our military presence there, I think I would be skeptical of this language in the bill with respect to our treaty.

Mr. MORRISON. Specifically what language do you refer to?

Mr. DUNCAN. Specifically I am thinking of page 3, line 12, where the dissemination of information is limited to that consistent with the interest of national security and the public interest. I would be inclined to strike interest of national security, because I think public interest covers it. There are two or three other spots in there where I think the same thing ought to be done.

Then I think there is another problem which perhaps has not arisen yet, but it is one which the American Government ought to do something about before the question does arise. That is the question of legal jurisdiction in Antarctic Continent at our bases down there. I think we are in a kind of limbo, a kind of no man's land. Sooner or later, we are going to have problems of a legal nature down there and I think we ought to have some sort of a code with some sort of a jurisdictional base upon which these people can operate. I think at this point, with such an intermixture of civilian and military personnel on the continent, and intermixture of nationals from many different nations and some Supreme Court decisions over the past 8 to 10 years ago involving the rights of civilians on military bases overseas, I think this ought to be worked out and some kind of guidance and help given to people on that basis.

That is all I really have for you gentlemen. Once again, my thanks to you for permitting me to appear again before you.

Mr. ASPINALL. Mr. Chairman, may I thank our former colleague on this committee for taking the trip down there with Mr. Morton and others, and also for his valuable and effective work as a member of this committee and in Congress, and for his contribution today.

I think that you have in mind what most of us think is necessary. We have obstacles, of course, that it seems like it is impossible to surmount at this time.

That is all I have.

Mr. DUNCAN. I found when I served 2 years on this committee that most of my comments and observations were superfluous and redundant, that the chairman of this committee anticipated everything I could possibly think of.

Mr. O'BRIEN. I might say to the distinguished gentleman that I too, think, he got a great deal from this trip down there. I think that in many instances, we are invited down there for the purpose of observing the very fine work that is being done, and there is fine work. But it has been significant to me through the years that every time a Member of Congress goes down there, he comes back and reports at a seminar such as this that he is impressed but he also thinks that we should do a little bit more. I know that the distinguished chairman of the full committee has been through more battles than I have and I know that he will fight as long as there is the slightest chance to win. But it does seem to me that in the face of adverse reports, and I am not committing myself now for or against this legislation, that there are times when Congress, even if it is an exercise in futility, should express its views rather than just roll over and play dead because we get some unfavorable reports from downtown. That is why I would hope at least this year that we could crawl forward that would-be tiny inch and at least have a vote up or down on one of these bills, at least in the subcommittee, and perhaps in the full committee.

Mr. DUNCAN. Mr. Chairman, I like to think that the people downtown are members of the executive branch and are there to carry out the policy which the Congress enunciates. While I realize that there are difficulties in this, I nevertheless am not yet prepared to abdicate our legislative responsibility. If they are not in agreement with what we do, it is still their obligation to carry it out.

Mr. O'BRIEN. Well, I think that we would all benefit, uptown and downtown, if we could just once have a full-fledged debate on this matter in the House of Representatives. I cannot predict the outcome. I have not the vaguest idea what the outcome will be. But I think there is this great interest on the part of the few people who have gone down there and in every instance, they have agreed. They have been people from both parties, various parts of the United States, and they all agree. I do not think that there has been any mutual brainwashing; these have been individual opinions. So there is an uneasiness and where there is an uneasiness, I think Congress has a responsibility for the long look.

Mr. DUNCAN. I am not one for asserting prerogatives just for the sake of asserting them, but where the executive branch is in error as I think they are in this instance and in the instance of certain hospital closings around the country, I think the Congress has a prerogative it should retain.

My criticism is not a criticism of certain individuals down there, but I hope they are taken as constructive criticism, much as I would welcome someone engaged in this opportunity to come into my office and make suggestions for improving what I am doing down there.

Mr. O'BRIEN. I agree with the gentleman. I see nothing said by any Member of Congress that is critical of what is being done with the tools and materials available. Not criticizing, but proposing, perhaps, a better method of doing a better job. It could be that when we

get all through with the debate in the House, we might agree with the position of the people responsible now for the program. In fact, I think it might be a good idea to get it beyond the expressions of opinion by the handfull of people who have undertaken this very difficult trip.

Mr. DUNCAN. I would agree, sir.

Mr. O'BRIEN. Mr. Haley?

Mr. HALEY. May I thank the gentleman for a statement? I think you have done a real service to the Congress and to this committee with your trip down there. It certainly gave you a chance to observe things on the ground instead of sitting here week after week taking testimony. So I do think your trip was a real service to Congress in going.

You spoke, however, a little while ago, Mr. Duncan, about our hazardous authority down there, or not hazardous authority, but our lack of understanding. It is my understanding, Mr. Duncan, that in all of these projects down there, each nation has a right to observe what other nations are doing. Now, suppose we asserted our sovereignty, you might say, over some parts of this continent and other nations, of course, would do the same thing. Do you think we would be better off if we did not find out, for instance, what the U.S.S.R. is doing down there?

Mr. DUNCAN. That we not find out?

Mr. HALEY. Yes.

Mr. DUNCAN. No, I think it is important that we know what they are doing down there and I do not think that we are occupying in the sense of asserting our sovereignty in these portions of the Antarctic Continent. Rather, it is a de facto occupation. I think it is important that it be as widespread as it is and perhaps even more so. But I think I see no problems at this point in an interchange of ideas between all of the powers involved on the Antarctic Continent. As a matter of fact, it may be one area in which we can prove our ability to get along with each other.

Mr. HALEY. You do not advocate, then, the cutting of the pie up?

Mr. DUNCAN. No, sir.

Mr. HALEY. And you do think it is important that we know what is going on on the whole continent?

Mr. DUNCAN. Yes, sir; I certainly do.

Mr. HALEY. Thank you, Mr. Chairman.

Mr. DUNCAN. I might say that one of the same things, for hometown consumption, at least, that impressed me down there was the fact that they have used in our operation, as well as in the British expeditions, the ones that transversed the whole continent, a product called the Tucker Snow Cat which is made by a former client of mine in my little old hometown of Medford. I was glad to see a lot of them down there. I was disappointed that I did not see many of them moving at the time.

Mr. MORTON. I was told that the dogs that the New Zealanders had are a lot more effective than those Tucker Snow Cats.

Mr. DUNCAN. You were not told that, but you opinioned that a time or two.

Thank you, Mr. Chairman.

Mr. O'BRIEN. Our next witness will be Hon. John T. McNaughton, Assistant Secretary of Defense for International Security Affairs. He will be accompanied by Rear Adm. James F. Reedy, U.S. Navy, U.S. Antarctic projects officer; Capt. Price Lewis, Jr., USNR, Inter-Agency Affairs Officer, U.S. Naval Support Force, Antarctica; Comdr. Ronald K. McGregor, Office of Chief of Naval Operations; Col. Marshall E. Sanders, Chief, Policy Division, Policy Planning Staff, office, Assistant Secretary of Defense for International Security Affairs; and Dr. James E. Mooney, Deputy Antarctic Projects Officer.

STATEMENT OF HON. JOHN T. McNAUGHTON, ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY AFFAIRS; ACCOMPANIED BY REAR ADM. JAMES R. REEDY, U.S. NAVY, U.S. ANTARCTIC PROJECTS OFFICER; CAPT. PRICE LEWIS, JR., U.S. NAVAL RESERVE, INTERAGENCY AFFAIRS OFFICER, U.S. NAVAL SUPPORT FORCE, ANTARCTICA; CMDR. RONALD K. MCGREGOR, OFFICE OF CHIEF OF NAVAL OPERATIONS; COL. MARSHALL E. SANDERS, CHIEF, POLICY DIVISION, POLICY PLANNING STAFF OFFICE, ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY AFFAIRS; AND DR. JAMES E. MOONEY, DEPUTY ANTARCTIC PROJECTS OFFICER

Mr. McNAUGHTON. Mr. Chairman, members of the committee, I wish to thank you for inviting me up here to testify. This is the first time that I have testified before this committee. I have no prepared statement for you, Mr. Chairman. I would like to make a few comments; first to associate myself fully with the statement made by Assistant Secretary Cleveland yesterday.

The Antarctic is not a crisis area. This is partly because of the physical situation there and partly because of the treaty. Nevertheless, the United States has several important interests. If I may, Mr. Chairman, I shall read a sentence from a document that was drafted and adopted in 1962, which states the basic objective of the United States with respect to Antarctica, under, of course, the terms of the treaty. It is as follows:

To take advantage of present and possible future uses of Antarctica, political, scientific, economic, and other, that benefit the security and welfare of the United States, and to prevent any use of Antarctica which would be detrimental thereto.

In more particulars, this means to explore and chart the continent, to master the harsh environment, to press the scientific programs, to conserve the indigenous life there, to be alert to the economy potential, to further international cooperation, and not least to enhance U.S. prestige.

The interests of the Department of Defense are, I would think, four. The first is the general interest of any servant of the Government, to infuse ideas and enthusiasm into the program. The second is personified by Admiral Reedy, who is here with me, to provide efficient logistical support. The third was referred to by Congressman Duncan in his testimony earlier, to profit incidentally from all of the things we are doing down there, both in Admiral Reedy's department and in the National Science Foundation activities; the incidental learning.

Fourth is a negative item, to insure that all nations comply with the treaty and that no misuse of the continent is made to our national detriment.

As a government, I think we have three levels of activity that we must engage in. The first is to keep the objectives in mind, the objectives to which I have referred. The second is to do a good job of planning the program, keeping in mind the specific actions, the level of effort, the continuity of effort. The third is to do a good job of executing those programs. This is, under the present arrangement, largely a function of the cooperation between the National Science Foundation and Admiral Reedy's Task Force 43. It is my judgment, Mr. Chairman, that the program has been going well. I have two people on my staff who handle Antarctic matters, both of whom have been to Antarctica, although neither I nor Secretary McNamara has been there. Both of my staff advisers, and of course, Admiral Reedy, from whom I receive advice, have either been there or spent a considerable amount of time there. It is my view that the program is going well, can be improved, and it will be improved. That, I think, is all I would care to say by way of a statement, Mr. Chairman.

Mr. O'BRIEN. Well, I might say, Mr. Secretary, that I appreciate your being here and your statement. I am a little curious as to why, in view of the importance of the Department of Defense in this operation, we never received a report from the Department of Defense, which was requested 2 months ago. We received reports from the Department of Interior, the Department of State, unfavorable, it is true. But we never heard from the Defense Department.

Mr. McNAUGHTON. I am told we can have it, Mr. Chairman, in a matter of hours. I apologize for not having produced it sooner.

Mr. O'BRIEN. It would be helpful if we have it, even though it might be contrary to the views of some of the members of the committee. I think it would help round out the record.

Mr. McNAUGHTON. Mr. Chairman, I can say that it will be, I think, contrary to the views of certain members of the committee. Point No. 2, I shall see that it is produced promptly.

(The report referred to follows:)

GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE,
Washington, D.C.

Hon. WAYNE N. ASPINALL,
*Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: This is in reply to your request for the views of the Department of Defense regarding H.R. 555, H.R. 2211, and H.R. 4658, 89th Congress, bills to be cited as the "Richard E. Byrd Antarctic Commission Act of 1965."

The purpose of the bills, as stated in the title, is "To provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica, which shall include, but shall not be limited to, gathering, evaluating, correlating, and dispersing of information and knowledge obtained from exploration, research, and other mediums relating to weather, communications, travel, and other areas of information; also to coordinate Antarctic activities among those agencies of the U.S. Government and private institutions interested in or concerned directly with the promotion, advancement, increase, and diffusion of knowledge of the Antarctic; and to direct and administer U.S. Antarctic programs in the national interest."

Although the many benefits envisaged in the proposed legislation are recognized, it is felt that the establishment of an independent Antarctic Commission is not

required to reap these benefits. Allocations of responsibility among the interested departments and agencies of the executive branch for the various elements of the U.S. Antarctic program which have applied in the past continue to work effectively. Moreover, the present arrangements for effecting interagency coordination of Antarctic affairs in our view are adequately providing for a well coordinated and effectively integrated national Antarctic program.

The Department of Defense is responsible for the planning and carrying out of operations in support of scientific and other programs in Antarctica. The Commander, U.S. Naval Support Force, Antarctica, is the senior U.S. representative in Antarctica. He is responsible for determining the feasibility of and ensuring the success and safety of Antarctic operations while making all reasonable efforts to provide the support necessary to fulfill the objectives of the Antarctic program. The Department of Defense provides funds for the logistic support of scientific and other Antarctica activities.

The National Science Foundation exercises the principal coordinating and management role in the development and carrying out of integrated U.S. scientific programs in Antarctica, including relationships with private interests active in Antarctica. The National Science Foundation also provides for funding of scientific programs in Antarctica.

Interagency coordination of U.S. Antarctica activities continues to be accomplished effectively through direct, continuous collaboration between the Department of the Navy and the National Science Foundation in relation to the integration of scientific and logistic support programs and through an interagency Antarctic coordinating committee, chaired by the Department of State and involving participation by all departments and agencies with interests in Antarctica, for other matters. In addition, this Department recently joined with the Department of State and the National Science Foundation, and with the concurrence of the Departments of Commerce and Interior, in the establishment of an Antarctic Policy Group, to be chaired by the Assistant Secretary of State for International Organization Affairs and with the Director, National Science Foundation and Assistant Secretary of Defense, International Security Affairs as members. This group is charged with—

(a) Defining U.S. policies and promulgating overall U.S. objectives and guidelines for action in Antarctica.

(b) Reviewing and approving plans for U.S. activities and programs in Antarctica.

These arrangements for coordination of Antarctica activities at the working and staff levels and for high level review and approval of objectives, policies, and programs should accomplish what is envisioned by the authors of the Antarctic Commission bills, without incurring the expense which would be involved in the formation of a new organization. These arrangements are also in keeping with the President's desire that the Department of State assure continuing coordination of activities involving several departments and agencies which have a bearing on U.S. foreign policy.

In view of the satisfactory manner in which the responsible departments and agencies are presently accomplishing and conducting their assigned tasks with respect to our Antarctic programs, and in view of the increased high level executive branch attention which the policy group will give to Antarctic matters, we believe that existing and proposed arrangements render unnecessary the establishment of a new institutional organization to handle Antarctic affairs.

Accordingly, the Department of Defense does not support the enactment of subject bills.

The Bureau of the Budget advises that, from the standpoint of the administration's program, there is no objection to the presentation of this report for the consideration of the committee.

Sincerely,

L. NIEDERLAHNER,
Acting General Counsel.

Mr. ASPINALL. I do not quite understand, Mr. McNaughton, about a meaning to give to your phrase, "This is not a crisis area." The Defense Department does not necessarily have a plan of operation waiting for a crisis area before it makes recommendations, does it?

Mr. McNAUGHTON. It does not. The purpose of the phrase was to address what I think is the fundamental issue that the committee is

interested in, which is in effect, the degree of attention that is paid to Antarctica. I think this is what the fundamental question is. I wanted honestly to reflect that Antarctica finds its place among a whole world of problems in the U.S. Government and that it is a terribly important, at present, largely scientific, undertaking down there which may blossom into other things. It is quite an important political undertaking down there, but it does fall into place with other problems in the world and by its nature, it happens not to be a crisis area. That is not to say that it does not deserve attention, which it does get.

Mr. ASPINALL. The main reason that it is not a crisis area under that meaning that you give to it at the present time is because of the approach that we have taken to keep it from becoming a crisis area as far as an international situation is concerned, is that not right?

Mr. McNAUGHTON. That is one of two reasons, I believe, sir.

Mr. ASPINALL. What is the other one?

Mr. McNAUGHTON. The other reason is because no people live there.

Mr. ASPINALL. I do not know as I could go along with you on that, because if I understand what we are doing toward the moon, we are giving special attention to the moon for certain reasons, and no people live on the moon.

Mr. McNAUGHTON. I did not differ with you, sir, on the question of attention. Attention is deserved in many places which are not crisis areas. But I do not consider Antarctica to be in the category, let us say, with Vietnam, with Cyprus, with the Congo a few months ago, with Brazil a year ago, with Berlin in the last 11 days. I must say that I probably have spent as much time on Antarctica as I have on at least two of those crisis areas. So I did not mean to imply that it does not deserve nor receive attention.

Mr. ASPINALL. What you meant was that it is not a temporary crisis area?

Mr. McNAUGHTON. I think that is a fair statement.

Mr. O'BRIEN. Perhaps a problem area.

Mr. McNAUGHTON. Among others, yes, sir; it is a problem area.

Mr. O'BRIEN. May I ask this, and it is the only question I will ask—Do you foresee a time in the development of the Antarctic where it might be necessary to have a separate agency such as proposed in these bills?

Mr. McNAUGHTON. Mr. Chairman, I do not foresee that in the next 20 years; no, sir.

Mr. O'BRIEN. 20 years?

Mr. McNAUGHTON. Yes, sir; the chances are less than even, I think, in the next 20 years.

Mr. O'BRIEN. We have a situation here where, over a period of time, I think we have spent about \$300 million in the Antarctic; it has cost 27 lives, and it is a project that never comes squarely before Congress except with regard to money. With all due respect to our colleagues, with one or two exceptions, on the committee which handles the money, they are not personally familiar with the situation there. Even these hearings have an air of futility, because while this legislation is referred to us, there is some question of our overall jurisdiction there.

At the executive level, you have a number of departments, all with able representatives, all participating when they find time from their other duties, in handling this problem. I cannot for the life of me understand why there should be an objection to it. I have heard Mr. Cleveland mention "overlapping." Well, NASA overlaps to a certain extent. So does the atomic energy agency overlap to a certain extent. I just am not able to comprehend the opposition to it. Congress very often accepts what is going on because remarkable things have been done there under adverse conditions. Some members of this committee feel that one of the adverse conditions is the lack of overall central authority and responsibility in this matter.

That was hardly a question.

Mr. ASPINALL. Mr. Chairman, will the chairman yield to me?

Mr. O'BRIEN. Yes.

Mr. ASPINALL. I think I can ask the question. Why is it that the executive department in certain operations, such as taking care of natural resources, when it has the power at the present time to give an Executive order to correlate the activities, why is it that the executive department asks for statutory status for these advisers that it has and does not ask for a statutory status for this particular operation in the Antarctic?

Mr. McNAUGHTON. Mr. Chairman, I cannot, of course, address the problem in the Congress itself. But on the executive side, it does get down, as you implied, to a question of good management. I think there is a point, a critical point, in any type of operation, whether it is atomic energy or something of this sort, where you have sufficient reason for having a separate agency to deal with that problem, whether it is space or atomic energy. It is very similar to the problem of indexing or of library arrangement.

A question asked yesterday, I have forgotten by whom, perhaps by Congressman Morton, perhaps by Congressman Hosmer, with respect to a central depository for the books. Anybody who does indexing or arranging for a library has the question, Do you put biology books under "Biology" or do you put Antarctic biology books under "Antarctic," or do you do both? Now, at some point, when the geographic area achieves sufficient need and importance from the point of organization and management, you require a separate head to add another layer of management. This point may come. At the present time, in practically all of the activities here, and I think Dr. Jones is much better able to address this point than I am, practically all the activities there are scientific, supported by Admiral Reedy. It is a simple management operation. Two parties, the National Science Foundation and the travel support force largely, under the general supervision of, or, in effect, the team captain on the State Department, with my role being the policy role of the Defense Department. It is a simple management proposition at the present time. Therefore, we come to the conclusion that this critical point, where you have so many aspects which must be brought together, has not yet been reached. You asked me the question, how long it would be. I just predict, looking forward, I do not see it for the next 20 years, the need for a layer to pull things together when there is not much that needs to be pulled together. It is a fairly simple management problem now. This does not address the problem to the congressional side, it addresses it solely on the executive side.

We need to see that we keep our eye on the ball. We should not be doing as Congressman Duncan said, sending ships down and perhaps sending for pieces by aircraft that have been forgotten. We believe we are doing a good job, in a program that is fairly simple, involving a few executive agencies.

Mr. ASPINALL. Who has oversight over your activities?

Mr. McNAUGHTON. My activities?

Mr. ASPINALL. No, the whole operation. Who has the oversight authority?

Mr. McNAUGHTON. The general oversight authority vests in the State Department. In fact, I think all the programing goes through the National Science Foundation.

Mr. ASPINALL. Does it seem rather peculiar to you that bills were introduced which came from a member of the Committee on Foreign Affairs in the House of Representatives and has been lodged with this committee? They take no interest. You do not appear before them.

Mr. McNAUGHTON. As I say, Mr. Chairman, I can only address the problem on the executive side, one of management. We have this under control on the executive side.

Mr. ASPINALL. Well, you do have it under control and you do not have it under control. You measure the matter of whether or not you have it under control by your own guidelines and you do not have to answer to Congress except as you come up to a committee which apparently has very little jurisdiction except that we have a bill before us.

Now, the power to take care of all of this rests in Congress, and you know that, because it is the power of money, it is the power of making available the funds that are needed, with Congress having that power under the Constitution and with the executive department working like it is. Yesterday I brought up this question.

It cannot be a matter of pure activation because of the President's authority over international matters because it was said not to be a foreign affairs matter. So we are trying to find out how do we get this operation before Congress so that somebody in Congress knows exactly what is going on all the time and evaluates your opinion or your activities, which ever it may be, as to their value to the national interest. I do not know. I do not believe you do.

Under our system of government, it is not fair that the executive department is the sole judge of the moneys that it spends. You are aware of that.

Mr. McNAUGHTON. That is absolutely correct.

Mr. MORTON. Will the Chairman yield for a question?

Mr. ASPINALL. I yield.

Mr. MORTON. Mr. McNaughton, following up Chairman Aspinall's point, is it not essential as far as all of the branches of the executive department are concerned, that close liaison be made with the Congress, and is it not part of the management system throughout executive departments?

It seems to me that the Antarctic program falls short of having good liaison and communication with this Congress. That is the thing that has motivated all of us to introduce this legislation. How do you feel as to a responsibility to the Congress? Should you report to the Congress?

Mr. McNAUGHTON. Unfortunately, sir, I am not an expert on the question of committee jurisdiction. I am willing, however, at any time you gentlemen wish, to make information available with respect to this program. I should be delighted to do so. I just, unfortunately, cannot make any judgment as to how the Congress can best get hold of its constitutional responsibility here.

Mr. ASPINALL. Of course, this is the trouble here. You make the information available to us and we have always appreciated this. But there is not anything we can do about it. We cannot report to anybody. The hearings are open. We are very careful that we do not have anything here that could be considered an infringement upon material that should not be brought out in the open. We are very careful of that. You folks are, too. But there is not anything we can do with the material that you give except to let it go out as news stories, which by and large, I think, are pretty well covered. I think the people of the United States are very well satisfied with the overall program in the Antarctic.

Mr. McNAUGHTON. Mr. Chairman——

Mr. O'BRIEN. I have had a feeling from time to time that our problem here is that some people in the executive fear that we might be attempting in a roundabout way an innovation of the very delicate field of international foreign policy. I do not think that that is true at all. I do not think that any of the authors of these bills or any member of this committee wants to, say, change the treaty or do anything except to continue as we are with perhaps a more efficient, overall operation, strictly in the domestic sense, strictly within our rights under the treaty. But it does scramble the egg beautifully as far as we are concerned.

Here is a bill or bills which perhaps might go to the Foreign Affairs Committee, but that would not be possible under the rules of the House. So we get them. We have the experience, as the chairman said, of a member of the Foreign Affairs Committee coming over here and testifying instead of carrying his story to his own committee.

I think that our problem is that in spite of the magnificent job that has been done under the present system, and we all agree to that, there can be improvement. I think there is another side to this thing that perhaps the chairman might have to wrestle with, to provide more complete jurisdiction for this committee or some other committee over this job. That is my feeling in the matter.

Mr. HALEY. Mr. Chairman, will you yield to me?

Mr. ASPINALL. I yield.

Mr. HALEY. Mr. Chairman, you spoke a little bit ago about the treaty. I do not believe that the treaty has been made a part of the record here, so I ask unanimous consent that the treaty which is set forth on pages 26, 27, 28, 29, 30, and 31 of House Document 358 of the second session of the 88th Congress be made a part of the record.

Mr. ASPINALL. Mr. Chairman, reserving the right to object, but certainly I should not object. It should be distinctly understood that as we insert this in here, it is purely for informative matters. We have no desire at all to take any jurisdiction over this particular treaty which belongs to another committee. Certainly, I wonder how we kept from having the treaty entered in the record this long.

I withdraw my objection.

Mr. O'BRIEN. I might say before putting the question that I think the gentleman has a good idea, because in this instance, I think the inclusion of the treaty in the record would be a limitation upon our activities here and a demonstration by the treaty itself that we are not attempting to invade the international field.

Mr. HALEY. Certainly, Mr. Chairman. It is not my desire to invade the field of any executive or any other department of government. I think that the fact that the treaty was part of the record would certainly give us some knowledge of the situation and be helpful in reaching some conclusions.

Mr. O'BRIEN. There is no doubt about that I think it will be helpful to have it.

Hearing no objection, it is so ordered.

(The document referred to follows:)

Annex III
Doc. No. 3

THE ANTARCTIC TREATY, DECEMBER 1, 1959¹

The Governments of Argentina, Australia, Belgium, Chile, the French Republic, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States of America,

Recognizing that it is in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord;

Acknowledging the substantial contributions to scientific knowledge resulting from international cooperation in scientific investigations in Antarctica;

Convinced also that a treaty ensuring the use of Antarctica for peaceful development of such cooperation on the basis of freedom of scientific investigation in Antarctica as applied during the International Geophysical Year accords with the interests of science and the progress of all mankind;

Convinced also that a treaty ensuring the use of Antarctica for peaceful purposes only and the continuance of international harmony in Antarctica will further the purposes and principles embodied in the Charter of the United Nations;²

Have agreed as follows:

ARTICLE I

1. Antarctica shall be used for peaceful purposes only. There shall be prohibited, *inter alia*, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as well as the testing of any type of weapons.

2. The present Treaty shall not prevent the use of military personnel or equipment for scientific research or for any other peaceful purpose.

ARTICLE II

Freedom of scientific investigation in Antarctica and cooperation toward that end, as applied during the International Geophysical Year, shall continue, subject to the provisions of the present Treaty.

¹TIAS 4780. This treaty entered into force June 23, 1961. Instruments of ratification were deposited with the Government of the United States on May 31, 1960, by the United Kingdom; on June 21, 1960, by the Union of South Africa; on July 26, 1960, by Belgium; on August 4, 1960, by Japan; on August 18, 1960, by the United States; on August 24, 1960, by Norway; on September 16, 1960, by France; on November 1, 1960, by New Zealand; on November 2, 1960, by the Soviet Union; and on June 23, 1961, by Argentina, Australia, and Chile. Instruments of accession were deposited with the Government of the United States on June 8, 1961, by Poland and on June 14, 1962, by Czechoslovakia.

²TS 993; 59 Stat. 1031.

ARTICLE III

1. In order to promote international cooperation in scientific investigation in Antarctica, as provided for in article II of the present Treaty, the Contracting Parties agree that, to the greatest extent feasible and practicable:

(a) information regarding plans for scientific programs in Antarctica shall be exchanged to permit maximum economy and efficiency of operations;

(b) scientific personnel shall be exchanged in Antarctica between expeditions and stations;

(c) scientific observations and results from Antarctica shall be exchanged and made freely available.

2. In implementing this Article, every encouragement shall be given to the establishment of cooperative working relations with those Specialized Agencies of the United Nations and other international organizations having a scientific or technical interest in Antarctica.

ARTICLE IV

1. Nothing contained in the present Treaty shall be interpreted as:

(a) a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica;

(b) a renunciation or diminution by any Contracting Party of any basis of claim to territorial sovereignty in Antarctica which it may have whether as a result of its activities or those of its nationals in Antarctica, or otherwise;

(c) prejudicing the position of any Contracting Party as regards its recognition or nonrecognition of any other State's right of or claim or basis of claim to territorial sovereignty in Antarctica.

2. No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim, or enlargement of an existing claim, to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.

ARTICLE V

1. Any nuclear explosions in Antarctica and the disposal there of radioactive waste material shall be prohibited.

2. In the event of the conclusion of international agreements concerning the use of nuclear energy, including nuclear explosions and the disposal of radioactive waste material, to which all of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX are parties, the rules established under such agreements shall apply in Antarctica.

ARTICLE VI

The provisions of the present Treaty shall apply to the area south of 60° South Latitude, including all ice shelves, but nothing in the present Treaty shall prejudice or in any way affect the rights, or the exercise of the rights, of any State under international law with regard to the high seas within that area.

ARTICLE VII

1. In order to promote the objectives and ensure the observance of the provisions of the present Treaty, each Contracting Party whose representatives are entitled to participate in the meetings referred to in Article IX of the Treaty shall have the right to designate observers to carry out any inspection provided for by the present Article. Observers shall be nationals of the Contracting Parties which designate them. The names of observers shall be communicated to every other Contracting Party having the right to designate observers, and like notice shall be given of the termination of their appointment.

2. Each observer designated in accordance with the provisions of paragraph 1 of this Article shall have complete freedom of access at any time to any or all areas of Antarctica.

3. All areas of Antarctica, including all stations, installations and equipment within those areas, and all ships and aircraft at points of discharging or embarking cargoes or personnel in Antarctica, shall be open at all times to inspection by any observers designated in accordance with paragraph 1 of this Article.

4. Aerial observation may be carried out at any time over any or all areas of Antarctica by any of the Contracting Parties having the right to designate observers.

5. Each Contracting Party shall, at the time when the present Treaty enters into force for it, inform the other Contracting Parties, and thereafter shall give them notice in advance, of

(a) all expeditions to and within Antarctica, on the part of its ships or nationals, and all expeditions to Antarctica organized in or proceeding from its territory;

(b) all stations in Antarctica occupied by its nationals; and

(c) any military personnel or equipment intended to be introduced by it into Antarctica subject to the conditions prescribed in paragraph 2 of Article I of the present Treaty.

ARTICLE VIII

1. In order to facilitate the exercise of their functions under the present Treaty, and without prejudice to the respective positions of the Contracting Parties relating to jurisdiction over all other persons in Antarctica, observers designated under paragraph 1 of Article VII and scientific personnel exchanged under subparagraph 1(b) of Article III of the Treaty, and members of the staffs accompanying any such persons, shall be subject only to the jurisdiction of the Contracting Party of which they are nationals in respect of all acts or omissions occurring while they are in Antarctica for the purpose of exercising their functions.

2. Without prejudice to the provisions of paragraph 1 of this Article, and pending the adoption of measures in pursuance of subparagraph 1(e) of Article IX, the Contracting Parties concerned in any case of dispute with regard to the exercise of jurisdiction in Antarctica shall immediately consult together with a view to reaching a mutually acceptable solution.

ARTICLE IX

1. Representatives of the Contracting Parties named in the preamble to the present Treaty shall meet at the City of Canberra within two months after the date of entry into force of the Treaty, and thereafter at suitable intervals and places, for the purpose of exchanging information, consulting together on matters of common interest pertaining to Antarctica, and formulating and considering, and recommending to their Governments, measures in furtherance of the principles and objectives of the Treaty, including measures regarding:

(a) use of Antarctica for peaceful purposes only;

(b) facilitation of scientific research in Antarctica;

(c) facilitation of international scientific cooperation in Antarctica;

(d) facilitation of the exercise of the rights of inspection provided for in Article VII of the Treaty;

(e) questions relating to the exercise of jurisdiction in Antarctica;

(f) preservation and conservation of living resources in Antarctica.

2. Each Contracting Party which has become a party to the present Treaty by accession under Articles XIII shall be entitled to appoint representatives to participate in the meetings referred to in paragraph 1 of the present Article, during such time as that Contracting Party demonstrates its interest in Antarctica by conducting substantial scientific research activity there, such as the establishment of a scientific station or the despatch of a scientific expedition.

3. Reports from the observers referred to in Article VII of the present Treaty shall be transmitted to the representatives of the Contracting Parties participating in the meetings referred to in paragraph 1 of the present Article.

4. The measures referred to in paragraph 1 of this Article shall become effective when approved by all the Contracting Parties whose representatives were entitled to participate in the meetings held to consider those measures.

5. Any or all of the rights established in the present Treaty may be exercised as from the date of entry into force of the Treaty whether or not any measure facilitating the exercise of such rights have been proposed, considered or approved as provided in this Article.

ARTICLE X

Each of the Contracting Parties undertakes to exert appropriate efforts, consistent with the Charter of the United Nations, to the end that no one engages in any activity in Antarctica contrary to the principles or purposes of the present Treaty.

ARTICLE XI

If any dispute arises between two or more of the Contracting Parties concerning the interpretation or application of the present Treaty, those Contracting Parties shall consult among themselves with a view to having the dispute resolved by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement or other peaceful means of their own choice.

2. Any dispute of this character not so resolved shall, with the consent, in each case, of all parties to the dispute, be referred to the International Court of Justice for settlement; but failure to reach agreement on reference to the International Court shall not absolve parties to the dispute from the responsibility of continuing to seek to resolve it by any of the various peaceful means referred to in paragraph 1 of this Article.

ARTICLE XII

1. (a) The present Treaty may be modified or amended at any time by unanimous agreement of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX. Any such modification or amendment shall enter into force when the depositary Government has received notice from all such Contracting Parties that they have ratified it.

(b) Such modification or amendment shall thereafter enter into force as to any other Contracting Party when notice of ratification by it has been received by the depositary Government. Any such Contracting Party from which no notice of ratification is received within a period of two years from the date of entry into force of the modification or amendment in accordance with the provisions of subparagraph 1(a) of this Article shall be deemed to have withdrawn from the present Treaty on the date of the expiration of such period.

2. (a) If after the expiration of thirty years from the date of entry into force of the present Treaty, any of the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX so requests by a communication addressed to the depositary Government, a Conference of all the Contracting Parties shall be held as soon as practicable to review the operation of the Treaty.

(b) Any modification or amendment to the present Treaty which is approved at such a Conference by a majority of the Contracting Parties there represented, including a majority of those whose representatives are entitled to participate in the meetings provided for under Article IX, shall be communicated by the depositary Government to all the Contracting Parties immediately after the termination of the Conference and shall enter into force in accordance with the provisions of paragraph 1 of the present Article.

(c) If any such modification or amendment has not entered into force in accordance with the provisions of subparagraph 1(a) of this Article within a period of two years after the date of its communication to all the Contracting Parties, any Contracting Party may at any time after the expiration of that period give notice to the depositary Government of its withdrawal from the present Treaty; any such withdrawal shall take effect two years after the receipt of the notice by the depositary Government.

ARTICLE XIII

1. The present Treaty shall be subject to ratification by the signatory States. It shall be open for accession by any State which is a Member of the United Nations, or by any other State which may be invited to accede to the Treaty with the consent of all the Contracting Parties whose representatives are entitled to participate in the meetings provided for under Article IX of the Treaty.

2. Ratification of or accession to the present Treaty shall be effected by each State in accordance with its constitutional processes.

3. Instruments of ratification and instruments of accession shall be deposited with the Government of the United States of America, hereby designated as the depositary Government.

4. The depositary Government shall inform all signatory and acceding States of the date of each deposit of an instrument of ratification or accession, and the

date of entry into force of the Treaty and of any modification or amendment thereto.

5. Upon the deposit of instruments of ratification by all the signatory States, the present Treaty shall enter into force for those States and for States which have deposited instruments of accession. Thereafter the Treaty shall enter into force for any acceding State upon the deposit of its instrument of accession.

6. The present Treaty shall be registered by the depositary Government pursuant to Article 102 of the Charter of the United Nations.

ARTICLE XIV

The present Treaty, done in the English, French, Russian and Spanish languages, each version being equally authentic, shall be deposited in the archives of the Government of the United States of America, which shall transmit duly certified copies thereof to the Governments of the signatory and acceding States. (Here follow the French, Russian, and Spanish texts of the foregoing.)

IN WITNESS WHEREOF, the undersigned Plenipotentiaries, duly authorized, have signed the present Treaty.

DONE at Washington this first day of December, one thousand nine hundred and fifty-nine.

(Here follow the French, Russian, and Spanish texts of the testimonial paragraphs.)

For Argentina :

ADOLFO SCILINGO

F. R. BELLO

For Australia :

HOWARD BEALE

For Belgium :

OBERT DE THIEUSIES

For Chile :

MARCIAL MORA

E. GAJARDO

JULIO ESCUDERO

For the French Republic :

PIERRE CHARPENTIER

For Japan :

KOICHIRO ASAKAI

T. SHIMODA

For New Zealand :

G. D. L. WHITE

For Norway :

PAUL KOHT

For the Union of South Africa :

WENTZEL C. DU PLESSIS

For the Union of Soviet Socialist Republics :

V. KUZNETSOV

For the United Kingdom of Great Britain and Northern Ireland :

HAROLD CACCIA

For the United States of America :

HERMAN PHLEGER

PAUL C. DANIELS

Mr. O'BRIEN. Mr. Haley?

Mr. HALEY. I have no more questions, Mr. Chairman.

I just want to say in response to the gentleman from Colorado, who a little while ago was talking about the moneys we were expending to get to the moon, I just sometimes wonder if we are not making those expenditures with the hope that there will be some people on the moon so we could send our foreign aid program.

Mr. O'BRIEN. Mr. Burton?

Mr. BURTON of Utah. No questions.

Mr. O'BRIEN. Mrs. Reid?

Mrs. REID. No questions.

Mr. O'BRIEN. Mr. Bingham?

Mr. BINGHAM. No questions.

Mr. O'BRIEN. Mr. Morton?

Mr. MORTON. I think you have tried to make the case as well as you could. There is one other thing. It seems to me, Mr. McNaughton, that the Bureau of the Budget, because of the triparty nature of the top management of this program, in effect becomes the management control over the whole program. There is no way that this program can singly come before the Appropriations Committees of Congress. It would seem to me that the Bureau of the Budget becomes a sort of referee manager in this particular instance, having to evaluate the difference in the amounts of money appropriated for scientific endeavor and appropriated for logistic support. I would like to hear you speak to that one point; do you believe that the Bureau of Budget, in effect, because of the triparty nature of this management, actually, becomes the key management control factor?

Mr. McNAUGHTON. I do not, Congressman Morton. I think that in essence, it is the Defense Department which—

Mr. MORTON. Then how can the State Department be the captain of the team? How is this thing funded? How do you decide on how many dollars are going to be put into this effort? Who does it?

Mr. McNAUGHTON. Mr. Congressman, as I see the thing working, the main money is the logistical money, the \$20 million, the \$19.9 million. There is an additional \$7 million for the scientific program, which is not affected in the way I have just described by the Defense Department. The Bureau of the Budget, of course, is the hub, the funnel through which all of these plans must pass. But over the past few years, it has been much more the case that items which appear in the Defense Department budget are sequestered and are massaged, to use that word, inside the Defense Department and very little, relatively speaking, in the Bureau of the Budget.

The point that was raised at the very beginning about Antarctica not being a crisis area, being an important area, an important planning and problem area but not a crisis area, becomes germane when you are looking at how you are going to expend your funds over all the responsibility which Congress has. The Defense Department in effect puts \$20 million in for Antarctica. This question is raised each year: Should it be more, should it be less? It could very well be some \$10 million more, could be \$5 million less; it could be some different amount but this is where, in effect, we come out.

This is not a unilateral thing, Mr. Congressman. It is similar to the way we work, for example with the military assistance problem. That is also in my area of responsibility in the Department of Defense. That is not to say that the Secretary is not the captain of the team. He is the captain of the team by statute in that case. But the recommendations I make and Secretary McNamara makes are talked over with Secretary Rusk and Administrator Bell, and in this consultation we work out what the military assistance figure should be. This figure is then included in the Defense Department budget request for military assistance.

It is a similar process with respect to Antarctica. So you have a captain of the total team, being the State Department. You have the National Science Foundation laying out what it would like to do. At the present time, to completely support its 5-year program would

call for roughly a 40-percent increase, as I understand it, of the Defense Department expenditures during the ensuing 5 years, as compared with the current \$20 million yearly level.

Admiral Reedy, here, I am sure is interested in some additional aircraft, which would add \$3 million a piece if we added this in. He does not see how we can absorb those in a \$20-million ceiling. These things we talk over in house, we talk over with National Science Foundation, the question of whether certain programs are important, whether they cannot be slipped. These things are negotiated out.

The State Department, captain of the team, is interested primarily in the international implications of these things. It is to some extent the Bureau of the Budget, but not solely, as you would indicate.

Mr. MORRISON. Let me put it this way: Do we decide first what scientific program we want to carry out and then is Admiral Reedy requested to support that specific scientific program, or is the decision made as to how much he can support and then the scientific program tailored to what Admiral Reedy is able to support? Which way is that done?

Mr. McNAUGHTON. Admiral Reedy will be following me, I understand, Mr. Chairman, and he can address this himself. It is my understanding that this is an interacting project in which the National Science Foundation, having an idea of how much logistical support would be available, makes proposals as to what they want to do. They lay this out over time and then they get together with Admiral Reedy's team. He says:

This is not safe; you have to do it another way. Or, this one we cannot do if you are going to do that one, because it takes the same airplane at the same time.

It shakes itself down.

Then he says:

This is going to take 50 percent more effort than I can put into it on the money I have. You have to slip it for a year.

The National Science Foundation proposes, he tries to fulfill. He says, "But I can only do this much" and they say, "We will tailor it as follows." This is an interacting process.

I think you should have in mind that in dealing with relative matters here, I am told by all the people who advise me and the Secretary of Defense on this subject, our program is probably 50 percent larger than the Soviet program, which is the second largest program down there. From the logistical side, Admiral Reedy says it is many, many times greater in the size of operations. So we are not doing a small operation down there.

Mr. ASPINALL. If my colleague will yield?

Mr. MORTON. Yes.

Mr. ASPINALL. You are not appearing before any committee of Congress to try to get any help on your program, is that true?

Mr. McNAUGHTON. I am not sure, sir, what kind of help you are referring to.

Mr. ASPINALL. Are you appearing before any committee of Congress to try to get help for your program? You speak of being not unilateral. You are not unilateral as far as your operation down there is concerned, but you are unilateral as far as your governmental operation is concerned. You have to go before nobody except the Appro-

priations Committee. The Appropriations Committees do not necessarily become defenders or critics of what you are doing.

Mr. McNAUGHTON. Mr. Chairman, I am fully aware of the views of this committee and I do not consider it insignificant.

Mr. ASPINALL. But you see, this committee does not have any authority.

Mr. McNAUGHTON. I am not aware of that and I am not behaving as if what you say is true. I am assuming that this committee has authority. That is why I am here.

Mr. ASPINALL. We have authority over a bill for the simple reason that the bill, having been introduced in the first instance by a member of the Committee on Foreign Affairs, was taken without any intervention on the part of any members of this committee during the last several years and assigned to this committee by the Parliamentarian because there is no place else for the bill to go.

Mr. McNAUGHTON. Mr. Chairman, with respect to your initial question, we do not at the present time feel that we need help in the sense, I think, that you imply.

Mr. ASPINALL. The crisis will come when you need help and then you will come up here and ask for us to take over, is that it?

Mr. McNAUGHTON. At the present time, sir, we have a fairly simple proposition of a science program interfacing with a logistic program and it is working quite well. It does not mean we cannot improve it.

Mr. ASPINALL. All done without any consideration by Congress. Do you know that to get a little park that costs \$30,000, they have to have a congressional authorization, Congress has control over all these operations, evidently, except this particular one. If you would say it has to do with international relations and comes under the jurisdiction of the President of the United States solely, I think we would then be satisfied. But you do not make that statement. We recognize the power of the President of the United States over foreign affairs. If that were true, then the legislation is proposed and the whole group of people associated with it would go before that committee. But that is not true.

Mr. McNAUGHTON. Mr. Chairman, as it now stands, I believe, the \$19.9 or the \$20 million appears in the Defense Department budget as a line item which is seen by the Congress, as you state, solely by the Armed Services and Appropriations Committees.

Mr. ASPINALL. Purely as a logistical operation to support the scientific operations and the international agreements that you have.

Mr. McNAUGHTON. That is right.

Mr. ASPINALL. That is the only reason that Defense has any right being in there at this time; is that not right?

Mr. McNAUGHTON. This is correct, sir.

Mr. ASPINALL. This is what bothers me.

Thank you, very much.

Mr. MORTON. Following that, just one more question. Let's assume for a second, that the Defense Subcommittee of the Appropriations Committee of the House reduced this line item, which is Admiral Reedy's budget, and arbitrarily reduced it in an effort to cut down the total appropriation of the Defense Department. This, then, would really not be a reflection in anyway on what was done down there but would be simply an arbitrary mechanism that would affect the whole

Antarctic program, and in fact, they might not consider the program as important as some other committees of Congress consider it. It would seem to me that the Defense Department, the National Science Foundation, and the State Department inasmuch as each influence the program, would welcome a method through which they could go to the Congress to insure the on-going, permanent aspect of this operation. The thing I cannot for the life of me see is what the objection is to this, because I think your arguments and I think Secretary Cleveland's arguments have all proven up the necessity for a tighter management control at the top of this program.

In fact, I think he pointed out that you have just gone through a reorganization or restructuring phase, bringing together a more formalized relationship between State, Defense, and the National Science Foundation. Therefore, what you are in fact trying to do is create the very kind of thing that we are trying to create here in order that we can deal with the program better.

I just want to know what the objections are. I think that the statements that the chairman of the full committee made are very valid. What is the real objection to this? Somewhere there must be somebody against this for some reason and I cannot get the reason, because all the arguments that are being made seem to point up the fact that there should be this type of vehicle.

Mr. McNAUGHTON. The objection is the fairly simple one, that we have a simple relationship now which works. It is not sufficiently large, it has not reached that critical mass of complication which requires something in the nature of a Commission, which requires another layer of people acting independently, and in effect, calling upon your management skills, your creative effort, your time, creating new bilateral relationships. This is sometimes worth the effort.

As anyone in management knows, there is a time when it is worthwhile going to a new telephone system or getting a new director of a division or a department. This time has not arrived in Antarctica. It is a simple arrangement down there primarily with two operating agencies. They have no difficulty or very little difficulty working together.

I am not saying that it operates perfectly. Please do not misunderstand me. I am sure Admiral Reedy would not claim that his operation is a perfect operation. I know in my own shop, we have efforts to keep our eye on the ball, do better planning, better execution. But that is not to say we have reached the critical sides which requires another layer of management be put on the top, which would only confuse matters.

Mr. MORRISON. Of course, I do not regard this as another layer of management on top. I regard this as a better substitute for management that is already existing. Obviously, the members of the proposed board of governors would be the very people who are involved most deeply in this program and the Director himself would be a person who has had very broad experience in dealing with this program. So I do not feel that we are planting on top of our present management concepts a whole new layer of people. I think what we are doing is trying to designate with more authority and more clearly defined job-responsibilities specific individuals with whom everyone can deal, with whom State can deal, the Department of Defense can deal, the Navy can deal, the Congress can deal, so that we have a centrally organized,

responsible body that will insure coordination and permanent development of the Antarctic in the national interest. That is all we are trying to do.

I have the feeling that you people think that we are trying to push something over on you. We are not trying to do that. Everybody who has been to Antarctica has fallen in love with the job that Admiral Reedy has done and with his leadership, and the job the National Science Foundation has done. But for some reason, we are unable to grab hold of this thing anywhere. The Defense Subcommittee of the Appropriations Committee, I am sure, have had the same frustrations in trying to deal with this particular program.

We are not asking for much. We are not asking for anything here that costs any money, because I feel that the man-hours used by this Commission are going to more than compensate for the man-hours used by those who now are involved. I do not understand what the objection is.

Mr. ASPINALL. I understand from testimony that has been given, the scientific operation, or the operation for scientific advancement, is the primary objective. Yet as I understand it, even though others engaged in these programs and projects appear before the Committee on Science and Astronautics, which has jurisdiction over National Science Foundation programs, there has never been, there has never been an appearance by Dr. Waterman or any of those who work in that activity before the Committee on Science and Astronautics to make the case for appropriations. Am I right or am I wrong?

Mr. McNAUGHTON. I am not familiar with that part of the problem. This, again, Mr. Chairman, is on the congressional side of this apparently serious problem that has not been a primary concern of mine. My primary concern has been to assist in making an efficient program in the Antarctic for the money we have and also to help determine what that money level should be. I think, Mr. Chairman, in response to Mr. Morton's remark about another layer, there should be no question in the mind of the committee about this. There will be another layer unless the Commission is planning to take over the National Science Foundation's activities, which may be what you have in mind for the Commission. In the Defense Department, I will still be responsible for the policy matters. I will still have to have advice with respect to the Defense Department's interests in this and a staff roughly the size that I have. Admiral Reedy is going to have his task force supporting this Commission. What you are going to do is create a layer of management on what is now a fairly simple operation.

This does not mean that it is not wise for other reasons, Mr. Chairman.

Mr. ASPINALL. But you do not appear before the Committee on Foreign Affairs, which has jurisdiction over all the activities of the State Department, for anything that you do down there in the Antarctica.

Mr. McNAUGHTON. We do not for our Defense Department budget, either, Mr. Chairman, and everything we do in the Defense Department is in support of international affairs.

Mr. ASPINALL. I am going to sign off here with just one thought. I understand our Government is a three-departmental form of government. It just does not seem to me that a program as important as

this should be controlled entirely by the executive branch of Government. I think the Congress should have something to say.

Mr. McNAUGHTON. I agree, sir.

Mr. MORTON. I yield back my time.

Mr. O'BRIEN. Mr. Smith?

Mr. SMITH. No questions.

Mr. O'BRIEN. Mr. Hosmer?

Mr. HOSMER. Mr. Secretary, where were you in April 1945?

Mr. McNAUGHTON. I was in Okinawa, sir.

Mr. HOSMER. At that time, 20 years ago, did you foresee that the Nation would have a need for you as Assistant Secretary of Defense for International Affairs?

Mr. McNAUGHTON. Not specifically, sir; no.

Mr. HOSMER. I think perhaps your foresight with respect to the 20-year period with no need for a Commission might be subject to some little probation, too; might it not?

Mr. McNAUGHTON. I said 50 percent probability.

Mr. HOSMER. Let's see if we cannot examine things on a little shorter time here.

You keep reiterating, as Mr. Cleveland did, about this gummy layer of fat that is going to superimpose its weight on the existing structure that is working well, am I paraphrasing you correctly?

Mr. McNAUGHTON. What was the latter part of the question?

Mr. HOSMER. Would you read it, please?

(The question was read by the reporter.)

Mr. McNAUGHTON. No; I do not think you are, sir.

Mr. HOSMER. Let us clarify what your thoughts are about this layer, then? Would you do so?

Mr. McNAUGHTON. I have to infer, Mr. Congressman, from the reading of the bill exactly what you have in mind. But I gather there will be a Commission of roughly a dozen members, something of this nature.

Mr. HOSMER. Well, there would be a Director, two Deputy Directors, a Board of Governors of 11 people of which 7 would include the Secretaries of Commerce and State, or their designees, and so forth, most of the people already mixed up in this, plus four public members.

Mr. McNAUGHTON. Who presumably would have some responsibility for doing something, either laying out the plans or carrying out the implementation.

Mr. HOSMER. Obviously, they would take over the duties of the policy group.

Mr. McNAUGHTON. They would take over some of the duties of the policy group.

Mr. HOSMER. Yes.

Mr. McNAUGHTON. Because they would not be able to arrive at ultimate policy without consulting with the very people who are on the policy group today.

Mr. HOSMER. But, sir, these very people are today's members of the policy group.

Mr. McNAUGHTON. Some of them?

Mr. HOSMER. No. What's the policy group? You, who have never been to the Antarctic, Mr. Cleveland, who has never been to the Antarctic, and Dr. Haworth, who has never been to the Antarctic.

This Board consists of the President of the National Academy of Sciences, the Director of the National Science Foundation—that is Haworth—Secretary of Defense, Secretary of State, Secretary of the Interior, Secretary of Commerce, or their designees. That includes in the designee category you and Mr. Cleveland.

So, there you are.

Mr. McNAUGHTON. I think you are correct in your earlier statement, that it will take over the functions of the policy group. That is correct.

Mr. HOSMER. With this, then, we take away one existing layer, which is the policy group. Now, we have an operating group. Would that not be taken away, too, consolidated into this thing?

Mr. McNAUGHTON. I doubt it very much. It might or might not.

Mr. HOSMER. Well, do you know?

Mr. McNAUGHTON. I do not.

Mr. HOSMER. Then you cannot say that this is a total superimposition, can you?

What about the Antarctic Projects Office. Would not that function be largely absorbed into this Commission?

Mr. McNAUGHTON. No, I would think not.

Mr. HOSMER. Do you know for sure?

Mr. McNAUGHTON. I am reasonably sure, because at the present time, he advises Admiral Reedy and me—I beg your pardon, correction, please. Admiral Reedy is the Antarctic project officer at this time. It is his deputy that is both on his staff and mine. So you would not eliminate Admiral Reedy.

Mr. HOSMER. This would handle the Washington affairs of the task force while the task force is tramping the wastes of the Antarctic, is that not correct?

Mr. McNAUGHTON. That is not quite correct, but Admiral Reedy can address himself to this.

Mr. HOSMER. I am talking to you, you are the expert, Mr. McNaughton. You are giving the profound testimony. If I may paraphrase this, never has so much opposition with so few reasons been given by the executive branch to a proposal by the congressional branch. It is said nothing but these gummy layers of fat are going to be added, and then we find we are actually incorporating some things that actually seems to have a fair chance of supporting this whole operation; maybe as well to see that it works and to do it better.

Now, Mr. Cleveland, whose testimony you adopted, yesterday said that the United States had seven major policies in the Antarctic, one of which is we pursue variously our efforts to explore and chart the south polar region. He mentioned some traverses being made out at the pole, as well as some other activities in connection with exploration. But he did not say much about charting, did he? You were here.

Mr. McNAUGHTON. I do not recall.

Mr. HOSMER. Well, you adopted his testimony, as a matter of fact, there is only one photographing plane on the Antarctic mission?

Mr. McNAUGHTON. I am not aware of this.

Mr. HOSMER. Wait a minute, Mr. McNaughton. You are the witness. You presumably have all of this knowledge and facts at your fingertips upon which you base your judgment.

Mr. McNAUGHTON. I am advised, sir, that there are two aircraft so equipped.

Mr. HOSMER. What kind of aircraft are they?

Mr. McNAUGHTON. 130's and a Connie, I believe.

Mr. HOSMER. A 130 and a Connie?

Mr. McNAUGHTON. That is correct.

Mr. HOSMER. Which Connie is this? Has there been a Connie equipped for photographic exploration?

Admiral REEDY. Yes, sir.

Mr. HOSMER. Does its range extend to that of the 130?

Admiral REEDY. Not quite.

Mr. HOSMER. You might as well take over, Admiral Reedy.

Admiral REEDY. Not quite, sir, because we can put the 3,600-gallon internal tank in the C-130 and extend its range extensively.

Mr. HOSMER. This is a peculiar arrangement for a short time, is it not?

Admiral REEDY. No, sir; it can be put in and taken out. The Constellation is also limited by the fact that we have only one ice runway on which it can land, which is at McMurdo.

Mr. HOSMER. So that does not have the capability in any way, shape, or form of the C-130?

Admiral REEDY. No, sir.

Mr. HOSMER. Last year, we heard testimony that there were various areas of the continent that had not even been seen, let alone photographed.

Is that right, Mr. McNaughton?

Mr. McNAUGHTON. I am advised by Admiral Reedy that that is not the case.

Mr. SAYLOR. Mr. Chairman, I am going to have to object to Mr. McNaughton's leaning over and asking Admiral Reedy for answers to his question. Mr. McNaughton, the Assistant Secretary of Defense was sent here as an expert. He is the one who is claiming that the Members of Congress who have been down to Antarctica know less about it than he who has never been there. This is true of Mr. Cleveland, who has never been there, and these others in the executive branch of Government. Mr. McNaughton says that we are going to impose another layer of fat. We just want to find out how much fat exists among the people who are supposed to be experts. The more I read the testimony of yesterday and the more I hear the witness before us today, the more I am convinced that the fat is in the executive branch of Government in those who are opposing this legislation.

So, Mr. Chairman, hereafter, when Mr. McNaughton has a question directed to him, I will ask that he answer it and not turn to Admiral Reedy for advice.

Mr. O'BRIEN. If the gentleman will permit, when the Secretary took the stand, we did arrange that he be accompanied by Admiral Reedy.

Mr. SAYLOR. I have no objection to his being accompanied by Admiral Reedy, because Admiral Reedy is an expert. But he is only an employee of the Department of Defense. Mr. McNaughton is appearing and telling this committee, who has over the years held a series of hearings on this legislation and similar legislation, that we are trying to impose another layer of fat. I think it is the purpose

of these hearings, to show that the fat already exists and that what we are trying to do is eliminate some fat down there and to get the operating groups to have some say in what is going on. I am sure some of us have been connected with this before Mr. Cleveland or Mr. McNaughton put in their appearance in their respective agencies. We have seen a time when the present treaty was not in effect. We know some of the things that went into the background of the treaty negotiations. I recall the opposition from then members of the Defense Department to the action of the State Department in asking for the approval of the treaty.

Now, if these people are going to appear before this committee as experts, they being the committee that they have suddenly decided to superimpose over the Antarctic projects to handle Antarctic problems rather than take the course proposed by this legislation, I think they should answer the questions.

Mr. HOSMER. Did I understand you to say that since last year, the situation has changed and that now all of the Antarctic has been flown over?

Mr. McNAUGHTON. I did not make that statement.

Mr. HOSMER. You said Admiral Reedy advised you that all of it had been seen. That is in conflict with what you just said.

Mr. McNAUGHTON. It is not in conflict with what I just said, sir. If you will have the testimony recounted, I shall be glad to stand on what I said.

Mr. HOSMER. Has it or has it not?

Mr. McNAUGHTON. I understand from Admiral Reedy that it has been, sir.

Mr. HOSMER. Is that right, Admiral Reedy?

Admiral REEDY. Substantially; yes, sir. The last flight we made this past year of 5,000 miles covered an area which had not been seen and the continent has, in effect, been looked at either by ground traverse or by air flights. I am counting in those of the 1947 Operation High Jump, which covered almost the entire coast of Antarctica to a depth of several hundred miles. I think with the flights we have made in the past 2 or 3 years, we could say substantially that there is no portion of Antarctica which is a mystery to us anymore.

Mr. HOSMER. There are a few gaps, but—

Admiral REEDY. There are a few minor gaps, but we can safely say they are covered with ice.

Mr. HOSMER. Now, as this work has been done over the last year, were there topographical notes made?

Admiral REEDY. Yes, sir; it was recorded photographically. This photographic work is in the possession of the Coast and Geodetic Survey for mapping.

Mr. HOSMER. Were any new mountains discovered?

Admiral REEDY. Not this past season; no, sir.

Mr. HOSMER. All flat and ice?

Admiral REEDY. Nothing out there but ice. We had hoped to find some new ones.

Mr. HOSMER. How much of the continent now has been photographed in percent?

Admiral REEDY. Roughly about 25 percent. I cannot answer that question absolutely correctly, but I would estimate about 25 percent

has been thoroughly photographed and the geographical fixtures pinpointed to where we can make accurate maps.

Mr. HOSMER. Now, last year—before we got off on this particular angle, I was talking about last year, when we were talking about the paucity of photographic airplanes down there. You say that since then, you have rigged up the old Connie. Is that the one you used to fly down to Christchurch?

Admiral REEDY. Last year, the only one we had operating photographically for the trimetrogon photographic work was the Connie. This past season, we had the services of a C-130, which had been rigged with the trimetrogon photographic equipment. It increased our capability more than 100 percent in getting photographic coverage of that part of Antarctica which was laid out for photography.

Now, this is a continuing part of the 5-year plan. It is an increased photographic coverage of Antarctica.

Mr. HOSMER. Mr. McNaughton, in connection with that 5-year plan, of course, no one in Congress has been informed of what it is or has any opportunity to check it over, even though it does involve plans for considerable future expenditures, is that correct?

Mr. McNAUGHTON. I do not know, sir, whether that is correct or not.

Mr. HOSMER. You do not?

Mr. McNAUGHTON. You said had an opportunity to. I am not sure.

Mr. HOSMER. It is not presented?

Mr. McNAUGHTON. I do not believe it is presented.

Mr. HOSMER. Wait a minute. You are the man who has been on this committee for a while, this policy group that suddenly became a policy group with a capital "G". Do you not know?

Mr. McNAUGHTON. I know we put a line item in for \$20 million in the Defense budget.

Mr. HOSMER. In the Navy budget?

Mr. McNAUGHTON. That is correct.

Mr. HOSMER. Talking about the overall 5-year plan, has anybody in the Congress ever seen it or had an opportunity to approve it in any other manner than a piecemeal annual appropriation?

Mr. McNAUGHTON. As I understand it, the answer is no. I could be wrong.

Mr. O'BRIEN. If the gentleman will yield, in our hearings last year, we did have inserted records and documents projecting the Antarctic scientific program for 1964-69. Is that what you are referring to?

Mr. McNAUGHTON. I do not know what one he is referring to, sir.

Mr. HOSMER. It is a rolling plan, with a new variation each year.

Mr. McNAUGHTON. Whether the new one has been made available to Congress I do not know.

Mr. HOSMER. The only reason we would happen to have them is we happened to have hearings and happened to ask them. There is no routine procedure for submitting this to Congress, is there?

Mr. McNAUGHTON. Not any further than a line item.

Mr. HOSMER. That is a line item for 20 percent this year of a 5-year plan?

Mr. McNAUGHTON. That is correct.

Mr. HOSMER. So you open up the coat a little bit and give us a peek, but that is about all, in effect, is that right?

Mr. McNAUGHTON. This is the way the Defense Department budget is handled.

Mr. Hosmer. Sir, I am not talking about the Defense Department budget. I am talking about the 5-year plan.

Mr. McNAUGHTON. The Defense Department budget, Mr. Hosmer, is based upon the 5-year plan.

Mr. Hosmer. This year's Defense Department budget?

Mr. McNAUGHTON. That is right.

Mr. Hosmer. And also the Defense Department budget for the next 4 years ahead, but we do not see that?

Mr. McNAUGHTON. I think that is correct.

Mr. Hosmer. Has any Comptroller of the Navy ever gone down to the Antarctic to take a look at it?

Mr. McNAUGHTON. I do not know.

Mr. Hosmer. Are you sure of that?

Mr. McNAUGHTON. I am sure I do not know, yes, sir.

Mr. Hosmer. Have any admirals ever gone down to the Antarctic and taken a look at it other than the admirals in charge of it?

Mr. McNAUGHTON. I am not sure. I am sure you can ask Admiral Reedy, who probably knows.

Mr. Hosmer. Outside of Task Force 43, has he proposed any organization such as a commission?

Mr. McNAUGHTON. Recently?

Mr. Hosmer. Recently or any time?

Mr. McNAUGHTON. I understood, sir, that some of the prior incumbents of Admiral Reedy's position had taken that position.

Mr. Hosmer. Like Adm. Richard E. Byrd?

Mr. McNAUGHTON. I do not know what his position was on this. I think the Defense Department at that time had proposed a commission, thinking, obviously, that Admiral Byrd would probably be the incumbent, primary incumbent.

Mr. Hosmer. Incumbent of what?

Mr. McNAUGHTON. The head of the commission, obviously.

Mr. Hosmer. What about Admiral Dufek?

Mr. McNAUGHTON. I am not sure of his position.

Admiral Tyree, I believe, has testified here before the committee in favor of it.

Mr. Hosmer. It is my understanding that all three of them are in favor of this thing. It is also my understanding that recently there was some kind of recommendation generated internally within the Navy of some kind of division of administration. As I incorrect or do you know?

Mr. McNAUGHTON. I do not have the same sources that you have, apparently.

Mr. Hosmer. That is not a response to my question.

Mr. McNAUGHTON. I do not have that information.

Mr. Hosmer. Do you or do you not know?

Mr. McNAUGHTON. Do not know what?

Mr. Hosmer. Do you or do you not know whether such a recommendation was made for a study, document, or such?

Mr. McNAUGHTON. I have not heard of such a recommendation.

Mr. Hosmer. Despite all the answers to my questions today, you come very positively, and I suppose you are still very positive, and

state that the best interests of the United States of America require the defeat of the legislation before this committee, is that correct?

Mr. McNAUGHTON. I take that position, yes. This is unanimous—there is no member of the group which advises me on this subject which is pressing for a commission. This includes the admiral sitting at my side.

Mr. HOSMER. Not pressing for a commission. You are actively opposing a commission. Does everyone you talk to actively oppose this commission?

Mr. McNAUGHTON. Not everyone I talk to actively opposes this commission. It is a question of what the commission would be.

Mr. HOSMER. It is a mystery to me, Mr. McNaughton, why you cannot accept the many reasons that have been given for this commission, why we are packed up two or three rows deep here with DOD witnesses, and State, and whoever else is around, with such specious objections. Is there not something else behind this that you have not told us why you do not want it?

Mr. McNAUGHTON. Nothing that I am aware of.

Mr. HOSMER. Nothing to do with our international relations?

Mr. McNAUGHTON. No, that came as something of a surprise. I had not heard that thought suggested.

Mr. HOSMER. Is there anything to do with you and Dr. Haworth and Mr. Cleveland just wanting to keep control of this thing?

Mr. McNAUGHTON. We are going to have to be in this, as you pointed out before, no matter how it is run.

Mr. HOSMER. Is it anything to do with not wanting Congress to have a chance to take part in the overall support of the U.S. interests?

Mr. McNAUGHTON. Not in the slightest.

Mr. HOSMER. I think that is all.

Mr. O'BRIEN. May I suggest to the committee at this point that our next witness is Admiral Reedy and I assume that when we resume these hearings, the admiral might not be as available as he is today. I think at this point, it might be desirable if we proceeded directly to Admiral Reedy, because we will have to recess at quarter to 12.

Mr. SAYLOR. Mr. Chairman. I reserve the right to object and I will not object. I would like to have Mr. McNaughton prepare and give to this committee an outline of his background, what he did before he became Assistant Secretary of Defense for International Security Affairs. I would like to have Mr. Cleveland give us a background of what he did before he became Assistant Secretary of State for International Organization Affairs.

Mr. McNAUGHTON. I should be glad to do so, sir.

(The information requested follows:)

JOHN T. McNAUGHTON, ASSISTANT SECRETARY OF DEFENSE FOR INTERNATIONAL SECURITY AFFAIRS

John T. McNaughton has acted as Assistant Secretary of Defense (International Security Affairs) since his nomination by President Johnson in March 1964. He was confirmed by the Senate on June 26, 1964.

Educator, attorney, newspaper columnist and editor, and government official, Mr. McNaughton had served a year as Deputy Assistant Secretary of Defense for Arms Control when he was appointed General Counsel of the Department of Defense on July 1, 1962. He was General Counsel until he assumed his present position.

He was born in Bicknell, Ind., the son of F. F. and Cecille (McMillan) McNaughton on November 21, 1921. He attended elementary schools and high school in Pekin, Ill. He received his A.B. degree from DePauw University (Greencastle, Ind.) in 1942, and his LL.B. from Harvard Law School in 1948. A Rhodes scholar, he was granted a B. Lit. from Oxford in 1951. He received an honorary LL.B. degree from DePauw University in 1963. During World War II, Mr. McNaughton served as a lieutenant, U.S. Naval Reserve. He first commanded a Navy guncrew on a merchant ship in the Caribbean and North Atlantic and then served on a destroyer escort in the Pacific.

His newspaper experience includes serving as columnist for the *Pikin (Ill.) Daily Times*, of which he was editor from 1951 to 1953. He was legal counsel for the newspaper during the same period.

Admitted to the Illinois bar in 1948 and the Massachusetts bar in 1956, he was appointed assistant professor of law at Harvard Law School in 1953 and became a full professor in 1956. Mr. McNaughton was on leave of absence from Harvard during 1961-62.

His Government experience includes serving as Assistant General Counsel, Office of the U.S. Special Representative, Economic Cooperation Administration, in Paris from 1949 to 1951. He also served several periods as assistant district attorney, Middlesex County, Mass., 1957-61. He was a candidate for Congress from Illinois in 1952.

He is a member of the American Bar Association, the American Society of International Law, the Council on Foreign Relations, the Institute of Strategic Studies, and Phi Beta Kappa. He is author (with W. Barton Leach) of "Handbook of Massachusetts Evidence" (1956), of "8 Wigmore, Evidence" (McNaughton revision 1961), and of books of experimental law-teaching materials, as well as of articles.

Mr. McNaughton is married to the former Sarah Elizabeth Fulkman and has two sons, Alexander, aged 15, and Theodore, 9. Their home in Washington, D.C., is at 5031 Lowell Street NW.

HARLAN CLEVELAND, ASSISTANT SECRETARY OF STATE FOR INTERNATIONAL ORGANIZATION AFFAIRS, DEPARTMENT OF STATE

Harlan Cleveland, an administrator, editor, and educator, was sworn in as Assistant Secretary of State for International Organization Affairs on February 23, 1961.

Mr. Cleveland was born in New York City, N.Y., on January 19, 1918. In 1934 he was graduated from Phillips Academy at Andover, Mass. In 1938, Mr. Cleveland graduated with high honors in politics and received his bachelor of arts degree from Princeton University. In 1938-39, Mr. Cleveland was a Rhodes scholar at Oxford University.

For 13 years beginning in 1940, Mr. Cleveland was associated with the U.S. Government. He started as a writer for the Farm Security Administration in the U.S. Department of Agriculture. From 1942 to 1944, he was an official with the Board of Economic Warfare and its successor the Foreign Economic Administration. From 1944 to 1945 he was Executive Director of the Economic Section of the Allied Control Commission in Rome. He was also a member of the U.S. delegation to the third session of the UNRRA Council held in London in 1945.

From 1945 to 1946, Mr. Cleveland was Acting Vice President of the Allied Commission in Rome. Thereafter, he was associated with the United Nations Relief and Rehabilitation Administration (UNRRA) as Deputy Chief of Mission in Italy and, at the age of 29, as Director of the \$650 million China program of UNRRA with headquarters in Shanghai. He then served as Director of the China aid program for the Economic Cooperation Administration in Washington and was appointed by Administrator Paul G. Hoffman to supervise the building of five other U.S. aid programs in the Far East during 1949-50. At the end of 1951, he became Assistant Director of the Mutual Security Agency, in charge of its European program.

In 1953 he was appointed executive editor of the *Reporter* magazine in New York City, and later served as publisher of that magazine.

In 1956 he was appointed dean of the Maxwell Graduate School of Citizenship and Public Affairs of Syracuse University. In this capacity, Mr. Cleveland supervised the Nation's oldest graduate program in public administration, and directed a Carnegie Corp. study of Americans abroad which produced two books, "The Art

of Overseamanship" and "The Overseas Americans" (McGraw-Hill, 1960). He has written and lectured widely on economic development, public administration, and U.S. foreign policy; he was editor of "The Promise of World Tensions," published by Macmillan in early 1961, and coeditor of "Ethics and Bigness," and "Ethics of Power," published by Harper, 1962.

Mr. Cleveland holds the U.S. Medal of Freedom for his work with the Army in Italy and has been decorated by the Government of Italy and the Government of the Republic of China. Since 1956 he has been awarded honorary degrees from five institutions—an Lh. D. from Alfred University (1958) and LL.D.'s from Rollins College (1958); Franklin and Marshall College (1960); Kent State University (1962); and Middlebury College (1962).

Mr. Cleveland is married to the former Lois W. Burton and is the father of three children. Though still a resident of Syracuse, N.Y., and on leave from the university as professor of political science, he has moved his family to Washington where they now live at 2738 McKinley Street NW.

Mr. O'BRIEN. Thank you, very much, Mr. Secretary.

Mr. BINGHAM. May I say for the record, Mr. Chairman, before Mr. McNaughton leaves the stand, that I do not want to be associated in any way with some of the harsh comments that I believe have been directed toward him today by some of our colleagues, and that I regard Mr. McNaughton as an outstanding public servant.

Mr. McNAUGHTON. Thank you.

Mr. O'BRIEN. May I say that I think Mr. McNaughton's record speaks for itself. I think we are confronted here with a problem largely of frustration and sometimes frustration leads to an exchange that might be a little sharper than ordinarily.

We are very grateful to you, sir, for your testimony and we realize the problems that you have at your end and I am sure you realize the problems that we have at this end.

Mr. McNAUGHTON. Thank you, very much.

Mr. O'BRIEN. Admiral, may I say before you give your statement, you have been listening for 2 days. I know I speak for all of my colleagues when I say that no critical remarks are aimed in your direction at all. From my conversations with members of this committee and others who have gone there, they think that you have been doing an extraordinarily able job. The only disagreement might be that they feel that your successor might be able to do it even better if we were to provide him with tools that are just a little bit less rusty.

Admiral REEDY. Thank you, Mr. Chairman.

Since this may be the last occasion I will appear before this committee as commander, U.S. Naval Support Force, Antarctica, I should like to take this opportunity to read a brief statement.

First, I wish to extend my appreciation to this committee for the interest its members have shown in Antarctic affairs. This interest has continued throughout my association with Operation Deep Freeze and I am grateful that several members of the committee have been able to visit Antarctica during that time. From their experience there they have certainly learned a great deal more about Antarctic operations than I can tell you here in the brief time available.

Antarctic policy determination, and the coordination of Antarctic Affairs among the various U.S. agencies concerned have been matters of concern to this committee for sometime. I am convinced that arrangements for the solution of these problems are satisfactory. They provide an adequate means for defining U.S. objectives in Antarctica and establishing a program suitable to their accomplishment.

The newly established Antarctic Policy Group will further provide a means of reporting Antarctic matters, or problems, of particular importance to the Executive Office of the Government.

In addition to the policy group, it is expected that the present methods of interagency coordination will continue. These provide a ready means of planning the Antarctic operations in support of our national objectives. In the planning of operations in support of the U.S. scientific program, my naval staff works closely with the cognizant members of the National Science Foundation. These same people then coordinate, and are responsible for the success of, the program in Antarctica. This method insures that the proposed Antarctic program is realistic and feasible. All involved are well aware of the limitations imposed by the Antarctic environment, of the forces and material available to them, and of the latest developments and technological improvements which can improve our capabilities.

The requirements from agencies other than the National Foundation are not ignored or submerged. As U.S. Antarctic projects officer, the commander, U.S. Naval Support Force, Antarctica is in a position to, and does, evaluate the feasibility of their proposals, and is able to work directly with the agencies involved to insure that their requirements receive proper consideration. Their support is then planned in the same manner as that provided the U.S. scientific programs. This avoids any duplication of effort in Antarctica. It often enables the Naval Support Force to utilize planned support for scientific programs to meet other objectives as well.

On the subject of cooperation and coordination in the actual operation, I wish to add that at present the relations between the agencies involved are excellent. Since most of the effort of the Naval Forces in Antarctica is directed toward support of the scientific program, we have had our most extensive contact with representatives of the National Science Foundation. A 5-year program exists, worked out in detail with respect to objectives to be obtained and logistic support required. Their consistent effort in support planning, in furnishing detailed definitions of their requirements, and their good understanding of our Antarctic operations have been key factors in the success of the U.S. program in that area. I am most appreciative of their wholehearted cooperation and am confident of the continuance of this uniformly good relationship between the two agencies. I am confident that our scientific programs will be adequately supported, and further, that any worthwhile project consonant with U.S. objectives in Antarctica will be given consideration on a sufficiently high level.

Mr. O'BRIEN. Thank you, very much, Admiral.

Admiral, in this whole picture, am I correct in stating that you are not responsible for the overall policy of our operations in the Antarctic beyond forming, and I might add performing brilliantly, your part of the operation? In other words, the policy is decided somewhere in Washington and at the moment, I am a little confused as to where, but certainly in Washington? You do not make the policy for the Antarctic?

Admiral REEDY. We do not make the policy with respect to all U.S. objectives, but by conference with the Science Foundation representatives and representatives of the State Department, the consonance of

interests of the science people and the State Department people are made clear and the planned operation takes this into consideration.

For instance, as an illustration, we went ahead with the establishment of a new biological station at Anvers Island, which is in the Antarctic Peninsula. This was solely to meet U.S. objectives in Antarctic as much as it was for scientific purposes.

Mr. O'BRIEN. Mr. Saylor?

Mr. SAYLOR. Admiral, I welcome you before the committee. I want to commend you for the tremendous job you have done in charge of U.S. Navy Support Force, Antarctica. All of the reports that I have read and all of the conversations I have had, not only with Members of the Congress but members of the Navy, Army, Air Force, who were in Antarctica under your command, have nothing but the highest praise for the manner in which affairs were conducted in Antarctica. They say that everything that was done was done in the highest and best Navy tradition. Many of the things that caused comment and objection in some other trips have been remedied. I want to say that everyone sings your praises for your overall operation.

Now, on the bottom of the first page, the sentence appears:

The newly established Antarctic Policy Group will further provide a means of reporting Antarctic matters, or problems, of particular importance to the Executive Office of the Government.

Admiral Reedy, how have you been led to believe that this new Antarctic policy group will provide a means of reporting matters of particular interest to the executive branch that is not already done by the Antarctic projects office of the Navy?

Admiral REEDY. If I understand your question, sir, it is how do I believe that this newly established policy group will report these matters in a way not already done by the U.S. Antarctic projects office?

Mr. SAYLOR. Yes, sir.

Admiral REEDY. Only to this extent, that they would have the co-operation in the reports of the representatives of the Science Foundation and the State Department itself. As far as the Antarctic projects office is concerned, their report would be part of this and probably, in effect, would constitute the major part or all of the report.

Mr. SAYLOR. The reason I ask that, Admiral, I read with interest these project reports that cross my desk everytime they are put out and I notice there that there is a section devoted to the action of the State Department and its representatives; there is a section there with regard to the Department of Defense. All of these things are already covered in the record. Very frankly, I do not know how people who have never been to Antarctica, who are only going to have to take somebody else's word are going to improve on the work that your projects office already does.

Admiral REEDY. The improvement, sir, would simply consist in giving it a higher standing in the community, the way I would look at it. If the information is there, it is compiled, and it has been an excellent production on the part of the very limited staff in the Antarctic projects office. It draws upon the Science Foundation for information and it publishes all this information. The only thing that I can see that the Policy Group contributes here would be to put it out on a higher plane than it now is distributed.

Mr. SAYLOR. Admiral, I have spoken to representatives from New Zealand, Australia, Argentina, Chile, and the United Kingdom. These are basically the nations which still have an interest in Antarctica outside of ourselves and the Soviet Republic, and they have nothing but the highest praise for this report. In fact, I just had cross my desk a few days ago a publication from New Zealand in which this report was so highly recommended that they felt that it was the best thing that was turned out as far as Antarctica is concerned.

Now, if the nations who are already there are receiving and commenting so favorably upon our report, I just want to know what else is going to get this report? What other countries are going to have an interest in this, because they do not send anybody down. They have not sent anybody down since the International Geophysical Year. This is a problem that some of us on this committee have with regard to this newly established group. If this is the only purpose that they are going to serve, then I think maybe this committee had better take another real good look at the so-called Antarctic Policy Group.

Now, Admiral, on the last page you once again commented on the 5-year program. Would it be possible for you to furnish to the committee a copy of the updated 5-year program?

Admiral REEDY. Yes, sir; I am quite sure it would be.

Mr. SAYLOR. Mr. Chairman, I ask unanimous consent to have included at this point in the record by reference the 5-year program referred to by Admiral Reedy. A copy of the 5-year report is in the committee files.

Mr. O'BRIEN. Without objection, it is so ordered.

(This report will also be found in hearing on Deep Freeze 1963-64 Operations entitled Antarctica Report—1964, p. 63.)

Mr. SAYLOR. Thank you, Admiral, for your fine statement.

Mr. O'BRIEN. Mr. Bingham?

Mr. BINGHAM. No questions.

Mr. O'BRIEN. Mr. Burton?

Mr. BURTON of Utah. Admiral, do we publish all our research data that we find or are making down there? Are these all published?

Admiral REEDY. Research data, sir, would be a function of the National Science Foundation. I am quite sure that all of the data which is taken by our representatives in Antarctica is published. But I cannot answer the question absolutely certainly.

Mr. BURTON of Utah. Do the other nations that maintain bases there publish their findings, too? In other words, is data that is compiled by the Soviet Union available to us? Do you know that?

Admiral REEDY. It is as far as I know, sir, through the agency of International Data Centers in which it is assembled and distributed to all the signatory nations of the Antarctic Treaty. I have personally seen Russian publications, so I would assume that their data is published.

Mr. BURTON of Utah. Thank you, I have no more questions, Mr. Chairman.

Mr. O'BRIEN. Mr. Craley?

Mr. CRALEY. I have no questions.

Mr. O'BRIEN. Mr. Smith?

Mr. SMITH. No questions, Mr. Chairman.

Mr. O'BRIEN. I would like to state again that we are not operating now as Members of Congress but just ordinary American citizens for what you and your predecessors have done. I have a funny idea in the back of my head that if we do not succeed in doing what some Members of the Congress want to do, the best thing to do might be to turn the whole thing over to the Navy. That is personal opinion, of course.

Mr. SAYLOR. If the gentleman would yield to me for comment, I think it appropriate at this time to say that we could go further and do worse and unless we adopt this bill before the committee, we probably will.

Mr. O'BRIEN. Yes, Captain.

Thank you very much, Admiral.

We again arrive at that situation where the bells are going to ring in a moment. Obviously, we cannot finish with one more witness. I think indicative of the seriousness with which the committee approaches this problem each year, we will not follow our biannual custom of adjourning the hearings at this time and sending another dusty document to wherever dusty documents go in Washington. We will have the hearings open and we will have further hearings next month. With that understanding, the committee stands adjourned.

(Whereupon, at 11:45 a.m., the subcommittee adjourned, subject to call.)

ANTARCTICA REPORT—1965

THURSDAY, MAY 6, 1965

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TERRITORIAL AND INSULAR AFFAIRS
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 9:55 a.m., in room 1824, Longworth House Office Building, Hon. Leo W. O'Brien (chairman of the subcommittee) presiding.

Mr. O'BRIEN. The Subcommittee on Territorial and Insular Affairs will be in order.

This is a continuation of the hearings on several bills relating to the Antarctic study and research programs.

I might explain, due to the fact that the House is meeting at 11 o'clock today, and some of our colleagues have requested an opportunity to be heard are not here yet, that the witness at the time the Member comes in will be requested to permit our colleague to testify in regard to this subject.

Our first witness is our colleague, the Honorable Clement J. Zablocki of Wisconsin. We will be glad to hear you now.

STATEMENT OF HON. CLEMENT J. ZABLOCKI, A REPRESENTATIVE IN CONGRESS FROM THE FOURTH CONGRESSIONAL DISTRICT OF THE STATE OF WISCONSIN

Mr. ZABLOCKI. Mr. Chairman, at the outset I want to commend you and the members of the Subcommittee on Territorial and Insular Affairs for your continued interest in establishing the Richard E. Byrd Antarctic Commission to plan, develop and coordinate Antarctic activities of the U.S. Government.

As an original sponsor of legislation to create the Byrd Antarctic Commission, I am heartened by the determination expressed by you, Mr. Chairman, that this matter must be resolved during the current session of Congress.

Like you, I have grown weary of the succession of unfavorable reports which year after year have been sent by the executive departments on this legislation. Their arguments in favor of the status quo on Antarctica have been characterized by superficiality of approach and a paucity of valid reasons for opposing the commission.

As you know, I have come before this subcommittee on many past occasions to urge the approval of legislation establishing the Byrd Antarctic Commission. My last appearance was in May of 1964.

The arguments which I have advanced on behalf of the commission are well known to you and the members of the subcommittee, Mr. Chairman. For that reason I shall restate them very briefly.

At the present time 14 U.S. Government agencies are active in, or have an interest in, Antarctic matters. Not one of these agencies is specifically empowered or directed to coordinate our national effort in the Antarctic.

The United States is currently the only nation of all those interested in the Antarctic which has no single overall agency to handle Antarctic affairs.

I believe that we must have an overall policy for the Antarctic, and overall coordination and implementation of that policy. Our interests in that last great unexplored continent on the globe are so significant that they cannot be served by haphazard, "informal" intergovernmental coordination.

With each passing year the importance of the Antarctic to the United States increases.

Just last week scientists announced that a project would be undertaken to drill 8,000 feet into a south polar icecap in order to obtain a record of the cosmic dust which has fallen on the earth for the past 100,000 years. This research is being done by the U.S. Army's Cold Regions Research and Engineering Laboratories.

Another important project being carried on at the present time is the use of earth satellite measurements to study the distribution of pack ice on a continental scale and to accurately position the Antarctic coastline to record changes in the shape of the ice sheets.

Further, the United States has stepped up its participation in exchanges of research data with other members of the Antarctica Treaty Conference and the Scientific Committee for Antarctic Research. We also are working with the World Health Organization on medicine and public health in the Antarctic.

Antarctic experts see even further U.S. involvement in that polar region, as science and technology progress. Some of the likely developments may be:

Increased emphasis on the earth and life sciences as programs in terrestrial and marine biology are increased.

The creation of aircraft and landing facilities that can operate in the Antarctic winter on an intercontinental basis. This would allow Antarctic air routes serving the huge populations of the Southern Hemisphere.

The working of Antarctic mineral deposits as world shortages in such materials develop. The exploitation of Antarctic marine life as an untapped source of food for the world's population.

Some visionaries are even talking of a tourist industry for the Antarctic—a possibility which, of course, is precluded now by the lack of accommodations, transport and safety facilities. Yet it cannot be ruled out completely for the future.

It is evident, Mr. Chairman, that the challenge of this virtually untapped continent demands a close coordination of U.S. efforts which heretofore has been lacking.

To the 14 separate U.S. agencies which presently carry on Antarctic operations, soon may be added the National Aeronautics and Space Administration and the Federal Aviation Agency as the Antarctic

becomes more important in space exploration and communications, and in international air travel.

The response of the executive agencies involved to the dazzling prospects and national challenge of the Antarctic has been one of resistance to change and passionate defense of the status quo.

The sole development since last year has been the formation of an Antarctic Policy Group by the Department of State, the Department of Defense, and the National Science Foundation. This Antarctic Policy Group was created ostensibly to coordinate Antarctic activities.

Because it was established so recently, however, there is good reason to believe that the challenge to which these departments were reacting was not that of the Antarctic, but rather that posed by this subcommittee.

It seems apparent that the Antarctic Policy Group was formed only as a means of heading off favorable action on legislation to create the Byrd Antarctic Commission.

This transparent maneuver emphasizes the superficial, ad hoc nature of present policies on Antarctica. It points up the need for continuing, overall supervision of our Nation's many and complex interests in the Antarctic by a commission authorized by Congress and reporting to Congress.

In short, Mr. Chairman, the situation requires the Richard E. Byrd Antarctic Commission as established by H.R. 555 and similar bills which have been introduced.

Therefore, I strongly urge you and the members of the subcommittee give speedy and favorable consideration to this proposal and others of similar intent which have been introduced into the 89th Congress.

Mr. O'BRIEN. Thank you very much, Mr. Zablocki. You mentioned 14 agencies are involved in this activity. Do you not also consider it significant that you, as a member of the Committee on Foreign Affairs of the House, find this the only arena in which you can express your views?

Mr. ZABLOCKI. Yes.

Mr. O'BRIEN. And that this in itself is somewhat a doubtful arena, because we do not know exactly who has jurisdiction?

Mr. ZABLOCKI. That is exactly right. And, Mr. Chairman, as I said before, in the past I have been astounded when inquiring of the Department of State about the Antarctic, how little its officials knew about it, or our policies or activities in that very important part of the globe.

Mr. O'BRIEN. Do you, under the present situation, know of any single committee of Congress which has an opportunity to express the congressional will or to present the congressional understanding of this whole problem?

Mr. ZABLOCKI. I do not know of any.

Mr. O'BRIEN. That is, any authorized committee?

Mr. ZABLOCKI. Any authorized committee? No. And therefore, Mr. Chairman, I do hope that your committee will act favorably on this legislation. Having a report on Antarctica by the Commission to the Congress annually will give us some control, some supervision, some better understanding of our policies there.

Mr. O'BRIEN. Thank you.

Mr. Aspinall?

Mr. ASPINALL. Mr. Chairman, I, of course, want, once again, to congratulate our colleague from Wisconsin who serves so ably on another committee for the interest that he has in this matter and for his willingness when this bill has been introduced to appear before this committee and make a case for it. None of us, of course, have any intention or desire to belittle the activities made by the arrangements heretofore had. In fact, we think it is a very outstanding operation.

I think that bothers me—and I expect it bothers you—is to determine whether jurisdiction on these matters lies. Is that not right, Mr. Zablocki?

Mr. ZABLOCKI. Mr. Chairman, that is exactly right, sir. I am surprised at the success that has been accomplished with the lack of cooperation or coordination and the lack of direction by one jurisdiction.

Mr. ASPINALL. I shall read now from a release under date of April 26, 1965, as to the reorganization of the elements of the ISA staff.

This is to announce that this establishment of Antarctica project office, the establishment of the position of assistant to the Assistant Secretary of Defense, ISA, for Antarctica matters. Dr. James E. Mooney—

and this is not in the letter that I am reading from, but we all recognize his great contribution—

Dr. James E. Mooney is designated assistant to the Assistant Secretary of Defense, ISA, for Antarctica matters, and will be located in room 4-B-729.

Just reading this, Mr. Zablocki, and knowing nothing about the operation in Antarctica, where would one think that the jurisdiction for Antarctica is placed?

Mr. ZABLOCKI. Mr. Chairman, I think that you have put your finger on the very reason for this legislation that I am urging the committee to act favorably upon. If there is any scientific group or college, even a Member of Congress, who wants any information on Antarctica, they just do not know where they can go to get it, in what single agency to find it. As I pointed out in my prepared statement, we are the only Nation interested in Antarctica that is in such a position, of having no formal coordination—of not having a specific commission. Mr. Chairman, you have really come to the nub of the problem that we are trying to correct.

Mr. ASPINALL. Thank you very much.

Mr. O'BRIEN. Mr. Saylor?

Mr. SAYLOR. Mr. Zablocki, I want to commend you for an excellent statement and for your continued interest over the years in the establishment of such a commission.

My recollection is that your position on the Committee on Foreign Affairs of the House is No. 2, is that correct, sir?

Mr. ZABLOCKI. That is correct.

Mr. SAYLOR. Well, now, did anybody from the Department of State come to you, or tell you as the No. 2 man on that committee that on May 1, 1965, there was going to be established an Antarctica Policy Group?

Mr. ZABLOCKI. No, sir.

Mr. SAYLOR. Do you know whether or not Dr. Morgan, chairman of your committee, was even advised about such a thing—that such a thing was in prospect?

Mr. ZABLOCKI. I have not asked Dr. Morgan, but I presume he was not advised or he would have informed me.

Mr. SAYLOR. I can only tell you, from my conversations with Dr. Morgan, that your answer can be no. He was not advised. I am sure that the members of this committee were not advised. And I am also informed that the chairman of the Armed Services Committee was not advised.

Mr. ZABLOCKI. That is my understanding, Mr. Saylor.

Mr. SAYLOR. This indicates how little regard the people downtown have in the Antarctic and in their trying to bypass this committee and to bypass the Congress, and that they do not even bother to come and tell us what they are doing.

Mr. ASPINALL. What my colleague is saying is that the responsibility of Congress is the responsibility of overseeing the operations of Antarctica, and unless we ourselves try to ferret out what is going on, we do not know.

Mr. SAYLOR. That is correct.

Mr. ASPINALL. We appreciate the cooperation that we have, but it so happens that there is nothing offered to us until we make our demands.

Mr. SAYLOR. That is correct. In other words, there is no volunteering of information from downtown. Very frankly, I have not seen—and I doubt if any member of this committee has seen—any news release of the establishment of such a policy group.

Mr. ZABLOCKI. Mr. Chairman, may I further submit that the Congress ought not only to be advised of the fact, but be consulted before the fact.

Mr. SAYLOR. Correct.

Mr. ZABLOCKI. With that I heartily agree.

Mr. O'BRIEN. It is my understanding that we have a release here, a general news release which came to us unofficially, this document. Presuming that we are the committee with some jurisdiction, we do not have officially a copy of the news release establishing this policy group, the Antarctica Policy Group. It seems to me that this is a matter of urgency of at least the interest, even though the interest does not please some people, on the part of this committee to send us a copy of the news release, at least, to be informed simultaneously with the press.

Mr. ZABLOCKI. Mr. Chairman, it is customary for good public relations with Congress to advise the Congress of such a release prior to releasing it publicly to the press.

Mr. ASPINALL. When Secretary McNaughton discussed presumably that the committee has jurisdiction, he based that statement upon the fact that the military, the Defense Department, denies that it has jurisdiction and the State Department itself denies that it has jurisdiction. What we have here is a floating operation without any conception of the responsibility at any particular department of Government. Is that correct?

Mr. SAYLOR. That is correct.

Mr. O'BRIEN. That is my feeling. I said earlier at these hearings and the hearings last year that I am developing a feeling of complete frustration; that we want to take something that is good and reshape it, but even good things sometimes need direction or, at least guidance. At the present time the only jurisdiction that Congress has is to appropriate a number of dollars every year. That is fine. That is one of its functions, that is one of the functions of Congress, but I think that occasionally we should have some knowledge about the spending of that money. If we establish nothing more by the creation of a commission or some other plan, at least we will have pinpointed the jurisdiction of a congressional committee. I have a feeling that sometimes these bills come to us only as bewilderment on the part of the parliamentarian—here we are.

Mr. ZABLOCKI. Mr. Chairman, with that I do not agree. I am sure that the parliamentarian sends them to the committee that is most able to deal with the problem.

Mr. O'BRIEN. We are flattered.

Mr. HALEY. I just want to welcome our colleague back again before the committee.

Mr. ZABLOCKI. Thank you.

Mr. HALEY. This is getting to be an annual affair. He comes here and gives us his views which, I think, are very fine. He is very logical about the situation and very honest about it. And from a reading of the testimony and the questions during the last year there has been no change in that situation, as I see it. And in the introduction of these bills, we are trying to pull together something that the chairman said is floating around up in the air. And nobody apparently is having any responsibility on it.

I commend the gentleman for his continued interest in this part of the world which will be very valuable to us someday.

Mr. ZABLOCKI. Thank you very much.

Mr. O'BRIEN. Mr. Morton?

Mr. MORTON. I certainly want to express our appreciation in having Mr. Zablocki with us here today. He is a distinguished member of the Committee on Foreign Affairs of the House.

I would like to ask this question, because I think it underlies all of the testimony that we have had from the various agencies who have testified in support of the status quo or in taking a negative position as to the proposal at hand. It constantly creeps into the testimony that our proposal will create another layer of management—and create, therefore, additional overhead expense.

How do you feel, Mr. Zablocki, about that particular argument, sir?

Mr. ZABLOCKI. There is no doubt that the Commission would be an additional expense as far as administrative personnel is concerned, but I think it would be worth the expenditure, because we would have direction and coordination, and we would have certainly a better policy evolved. At the present time I think it is a very specious argument to say that keeping the status quo is best, when we know that there is a haphazard and very informal intergovernmental cooperation and there is no real place, Mr. Morton, that anyone may go to and get information, valuable information on a very valuable

continent of the globe still unexplored. I think the expense that might be involved is worth it.

Mr. MORTON. I have made the argument, and I think that I could substantiate it that this Commission would save some money, because it would tighten up the communications involved in the management progress.

I am really at a loss—I do not know why the arguments are being made so strongly against this Commission.

Have you in talking with people of various agencies learned any reason that there should be this negative reaction?

Mr. ZABLOCKI. Mr. Chairman, if I would know any I would certainly share them with the committee. I do not know any sound arguments or reasons for the perpetuation of the status quo.

I might add further, Mr. Morton, that in discussing this with some of the agencies, they say have claimed the additional cost is unwarranted. Yet, when I questioned whether there was duplication of effort in the 14 agencies—the answer was that they were wearing two hats, they were working and being paid for and carried under the budget of the agency involved as well as doing some work for the Antarctica effort. I do think that you are so right, if there is a Commission there would not be a greater expenditure but a saving.

But, coming back to your direct question, I cannot shed any light as to what their reasoning might be.

Mr. MORTON. The very fact is that the makeup of the Commission, as described in your bill, H.R. 555, involves the very people who are now part of the Antarctica program management complex. It seems to me that there would not be a new layer of overhead or additional expense put into the program. These same people who now have specific responsibility would continue to have specific responsibility. By the establishment of this Commission we would be bringing together a proposition which the Congress can deal with as an entity. I think this is the thing that concerns the chairman of this committee so much. It certainly should concern every member of the committee. But in the responsibility of oversight we do not have a specific way to get at this problem of congressional oversight. Therefore, I cannot see why any of these arguments of additional overhead, actually hold water.

I just wondered if you had any thought as to the other side of it. I am trying to put myself on their side of the desk to see why I would object and I cannot find any good reason for objecting.

Mr. ZABLOCKI. Mr. Morton, I am with you right along. I cannot see any reason for objecting. Therefore, I cannot shed any light as to what they may have as a reason. The only possible additional expense would be the Director and whatever immediate secretarial staff he would require and whatever cost the Board of Governors would be. But in this case, again, as you so well pointed out, they would be representatives of agencies already now interested in Antarctica.

Mr. MORTON. I certainly want to thank you for your help. Thank you very much.

Mr. O'BRIEN. Thank you very much, Mr. Zablocki. Let me say that it may be certainly proper to say that papa knows best, but our proposition is that we do not know who is papa.

Mr. Rivers?

Mr. RIVERS of Alaska. I would like to ask a question. I would first like to welcome you to the committee.

Dr. Haworth makes a statement on page 3 of his statement which we have before us—on page 3 he says:

Again the National Science Foundation is the agency of our Government which is in constant touch with the total science community of the country. Because of the Foundation's relation with the working scientists of our country, it is in a position to plan and develop programs that take into consideration the advice and the interests of the entire group. In this way our Nation can be assured that the most useful and valuable program will be developed and supported.

This means to me that Dr. Haworth is saying that they are very closely in touch with the scientific community, as he states here, and that there is no one at a loss as to where to look to get the information. You go to the National Science Foundation. I would like your remarks on that.

Mr. ZABLOCKI. To the extent that Dr. Haworth deals in the field of science, that is correct, but as I pointed out, there are other agencies, that is, governmental agencies that are also expending effort and are interested in the development and the progress in Antarctica. The very argument he puts forth for the preparation of this status quo, because we do have the National Science Foundation, and it would be a part of the Byrd Antarctica Commission—his argument, as a matter of fact, would strengthen the motivation for adopting legislation which would create a Commission. The Commission would bring all of the Antarctic activities, that is, all of the governmental activities under the direction of one Board and a Director in the Commission. Scientists could then obtain information, research, and development data from the Commission, and there would be no need, as the doctor states, for a "parallel of scientific competency."

I disagree with his argument that creating the Commission would necessitate a parallel scientific competence to be established.

Mr. RIVERS of Alaska. Would this Commission be made up of persons from the Department of Defense and the Department of State and the National Science Foundation on an ex officio basis bringing together an Antarctica policy group made up of people who are knowledgeable in the field already, but with an executive and an office and the name of a Commission?

Mr. ZABLOCKI. The best reason for a Commission is seen as the creation of this policy board. The agencies involved have realized that there has to be some guidance—there has to be some coordination—and, therefore, they established a board in the 11th hour, so to speak. If we have the Commission and it will be answerable to the Congress, I think this will give an opportunity for Congress to look into Antarctic affairs and have a greater jurisdiction. I think that is the proper way to do it.

Mr. RIVERS of Alaska. I compliment you. Thank you very much.

Mr. MORTON. If the gentleman from Alaska will yield—

Mr. RIVERS of Alaska. I do.

Mr. MORTON. The completion of this whole thing has changed considerably since it started. It has been changed in the organizational

structure. I do not know whether they are responsive to the fact that these hearings are going on, but there have been changes in the organization of this program. I would not want to hazard a guess as to why they have come about.

Mr. ZABLOCKI. As I stated earlier the very purpose would be to try to prevent the Congress from creating a Commission. I think it is to bypass the Congress.

Mr. RIVERS of Alaska. It would not necessarily mean any overlapping or duplication of establishment. Your thinking is that this Commission would draw upon the various agencies that now contribute so much to this program, is that what you are saying?

Mr. ZABLOCKI. Exactly that. It is very clearly spelled out in the bill what the functions of the Commission would be. And that of the board members and what their duties would be—and there would be no duplication. There would be coordination. I think certainly a better direction of policy.

Mr. RIVERS of Alaska. Thank you. I yield back the balance of my time.

Thank you, Mr. Chairman.

Mr. O'BRIEN. Mr. Carey?

Mr. CAREY. I would like to take the time, Mr. Chairman, to express my appreciation to Mr. Zablocki whom I consider a most knowledgeable Member of the Congress in the field of foreign affairs, and to indicate how much I do appreciate his coming here this morning. Obviously, there is great demand upon his time in many vital and important matters, such as internal security and the like.

My brief question is this: Is it not true that at least one of the agencies opposing the creation of the Commission itself was a multifacet agency in the departments of Government and was brought together by creating the National Science Foundation?

Mr. ZABLOCKI. That is exactly correct.

Mr. CAREY. The arguments submitted against this Commission on Antarctica at one time could have been made against the creation of the National Science Foundation?

Mr. ZABLOCKI. The gentleman is exactly right.

Mr. CAREY. The State Department, at least, or someone in the other departments, and by the Foundation, on behalf of the State Department, these statements indicate that a commission of this kind might create a problem along the lines of a communication break—a probable loss with regard to our foreign policy objectives. Have you experienced such an idea in what our foreign policies are in Antarctica at this time—have you any comments to make on that?

Mr. ZABLOCKI. No, Mr. Carey; I do not.

Mr. CAREY. I certainly should like to find out where our foreign policy objectives fit into this Commission in working with close communication with the State Department or other agencies, whether it would have any deliterious effect on our foreign policy objectives, whatever they may be. This seems to me to be a very valid objective.

Mr. ZABLOCKI. I fully agree. We of the Foreign Affairs Committee, those of us who have shown an interest, have from time to time tried to determine what the policy objectives are in Antarctica. As I stated earlier, I was astounded at the lack of information that some of the people in the State Department have expressed.

Mr. CAREY. I hope that by the introduction of this bill in these hearings it will give this committee and, hopefully, the Members of the House and the Senate, a better understanding of what the present and future objectives may be. This in itself, I think, is very, very basic as a consideration.

Mr. ZABLOCKI. Mr. Carey, this is one of the prime objectives of the legislation: That Congress would be in a position to understand and be advised and be informed and be consulted as to what our policy objectives are in Antarctica.

Mr. CAREY. Thank you, Mr. Zablocki.

Mr. HALEY (presiding). Are there any further questions?

If not, thank you very much, my colleague.

Mr. ZABLOCKI. Thank you, Mr. Chairman.

I do want to express my appreciation for the courtesy extended me, despite the fact that I was late, by being permitted to go ahead. I thank you very much.

Mr. HALEY. Our next witness is Dr. Leland J. Haworth, Director of the National Science Foundation. We are very glad to have you here and we will be glad to hear from you now, sir.

STATEMENT OF DR. LELAND J. HAWORTH, DIRECTOR, NATIONAL SCIENCE FOUNDATION; ACCOMPANIED BY DR. THOMAS JONES, HEAD, OFFICE OF ANTARCTIC PROGRAMS, NATIONAL SCIENCE FOUNDATION

Dr. HAWORTH. May I bring Dr. Jones with me to the witness table?

Mr. HALEY. The witness is accompanied by Dr. Thomas Jones who is the head of the Office of Antarctic Programs, National Science Foundation.

Mr. ASPINALL. May I join in welcoming Dr. Haworth before this committee. It was my pleasure to work and listen to him when he was with the Atomic Energy Commission. I served on that committee. It is nice to resume the relationship, Dr. Haworth.

Dr. HAWORTH. Thank you.

Mr. HALEY. You may proceed.

Dr. HAWORTH. Mr. Chairman, on May 1, 1965, the President announced the establishment of the Antarctic Policy Group, noted the success of international cooperation in Antarctica and called for the extension of such cooperation into other fields of international endeavors. His announcement coincides with the 10th anniversary of the establishment of the arrangements to mount one of the most purposeful large-scale efforts of exploration the United States has ever undertaken, the International Geophysical Year Antarctic effort.

In the previous hearings on these bills you have heard testimony from two of the three executive branch agencies bearing major responsibilities in the Antarctic affairs of the United States. As Director of the National Science Foundation and the third participant of the Antarctic Policy Group, I wish to present my comments on the proposed legislation and to describe to you something of our program.

As previously testified, the primary responsibility for policy concerning Antarctica resides in the three members of the Antarctic Policy Group, which consults as necessary with other agencies of the Government having Antarctic interests. In this group we formulate policy, determine objectives to implement this policy, and agree on long-range plans which conform with these objectives. This arrangement for policy development and review will permit the inclusion in the program on a relative priority basis of the activities of private citizens and organizations which are determined to be in the interest of the United States and compatible with operational capabilities. There is present in this arrangement also the means by which matters affecting the policies and objectives of the United States can be brought to the attention of the President.

Over the years the coordinating responsibility in managing Antarctic affairs has worked out very well. The formalizing of an Antarctic Policy Group has sharpened up this coordinating responsibility. The presence of this group now identifies the place to which those having an interest in Antarctica can turn. The composition of the Antarctic Policy Group puts at its immediate disposal the staffs and capabilities of the three agencies which in their own spheres are specially qualified to carry out these tasks.

While the objectives of the proposed Richard E. Byrd Commission are worthy ones, I note that the proposed legislation provides for the inclusion on the Commission of representatives of the same agencies that now bear primary Antarctic responsibilities. I do not see how the proposed Commission would improve on the present arrangements for policy review and interagency coordination within the executive branch. Furthermore, I note that the functions set forth for the Commission duplicate responsibilities presently discharged by the Foundation and other agencies. This is notably apparent to me in such areas as the support of research, retrieval and dissemination of information, and the support of publications.

If the Commission is to ban administrative organization, it would insert another administrative layer over the present Federal agencies with Antarctic responsibilities. If it is to be an operational organization, it would be essential for the Commission to develop staffs duplicating those already in the Foundation and other agencies of the Government. Clearly international policy regarding Antarctic affairs is and should remain the responsibility of the Department of State; the capabilities of the Navy are unquestioned, and unless the Commission is prepared to develop its own air fleet and ice-breakers it will have to turn to the Department of Defense for such services. Again the National Science Foundation is the agency of our Government which is in constant touch with the total science community of the country. Because of the Foundation's relation with the working scientists of our country, it is in a position to plan and develop programs that take into consideration the advice and the interests of the entire group. In this way our Nation can be assured that the most useful and valuable program will be developed and supported. The Commission, to do these things, would have to establish a parallel scientific competence.

The Federal agencies directing and conducting our Antarctic program have achieved their present expertise through a process of

growth and development over the past decade. The experience of the Foundation is illuminating. The very modest scientific effort in the Antarctic underwent a great intensification in the International Geophysical Year, which was supported in the United States chiefly through Foundation funds. When, in 1958, the United States decided to continue a substantial scientific program in Antarctica, the National Science Foundation was designated by the President to fund and manage these activities, called the U.S. Antarctic research program (USARP). Thus the budget for the entire scientific program, including the scientific activities of other Government agencies, rests in the Foundation. In directing this program the Foundation recognizes that the United States has a long-term interest in Antarctica; consequently planning of the program content is predicated upon the assumption that it must serve as the basis for a continuing effort of many years' duration.

If we are to understand the role of Antarctica in our environment and to seek out the beneficial uses Antarctica may provide for mankind, we must encourage the application of a wide variety of talent and divergent points of view in its study. Thus the U.S. Antarctic research program provides a broad approach to the scientific exploration of Antarctica by incorporating the research interests of private institutions and Federal agencies alike. Furthermore, it amalgamates a spectrum of biological and physical sciences into a single integrated and coordinated program. It includes support of important related projects such as the analysis of data from scientific investigations, the publication of scientific results, and the retrieval and dissemination of this information. In addition, we are pursuing a long-range effort to map the continent. When necessity dictates, arrangements for specialized research facilities can be made. In fact, under the authority of the National Science Foundation it is possible to arrange for the conduct of any legitimate research activity which will extend our understanding of the continent, its surrounding regions, and their effect on the world-wide environment. All of this will serve to guide us to the ways to make Antarctica beneficial to mankind.

Long-range plans for U.S. Antarctic efforts are developed in the following manner: The National Science Foundation, in consultation with other interested agencies, prepares a 5-year projection of scientific program requirements. This projection is based upon the known research interests and capabilities of Federal agencies, of universities, and of other private organizations and is put together in full cognizance of overall U.S. national interests. The 5-year plan has annually been brought up to date by revisions which extend it an additional year. This 5-year plan is provided to the Department of State and the Department of Defense. The Department of Defense responds with a corresponding 5-year plan for logistic support requirements. The Department of State reviews these plans in the light of U.S. foreign policy objectives and provides guidance and suggested priorities. Obviously it is necessary to reconcile differences which may occur such as the provision of logistic support capabilities for proposed future scientific programs. Therefore, in the preparation of the respective plans, close staff cooperation is main-

tained. Policy problems which may arise out of this planning procedure are resolved by the Antarctic Policy Group.

The research interests of other Federal agencies are included in the National Science Foundation long-range U.S. scientific program projection. All of them are funded through the appropriation of the National Science Foundation, which transfers funds as needed. As a result, the following Federal agencies have or have had research programs which are in addition to those carried out by universities and other private research organizations, under grants from the Foundation:

- Air Force Cambridge Research Laboratory.
- U.S. Coast and Geodetic Survey.
- U.S. Weather Bureau.
- National Bureau of Standards.
- U.S. Geological Survey.
- Bureau of Mines.
- U.S. Naval Oceanographic Office.
- U.S. Army Signal Corps.
- U.S. Army Corps of Engineers (Cold Regions Research and Engineering Laboratory).

Smithsonian Institution.

The Foundation has also been working with NASA in the introduction of satellite data programs in Antarctica and in developmental aspects of NASA's moon program where Antarctica might provide certain test opportunities.

Supporting the policy review and promulgation process, there is continuous staff coordination to achieve immediate objectives. This coordination is primarily between the National Science Foundation and the Department of State, Department of Commerce, Department of Interior, and the Department of Defense, with other agencies included where they may have an interest. Particularly important in this process is the constant coordination between the Head, Office of Antarctic Programs in the Foundation and the commander, Naval Support Force, Antarctica, to develop and implement the yearly programs.

Six to nine months prior to each Antarctic field season, the Foundation presents its scientific field requirements to the U.S. Naval Support Force, Antarctica, first in general terms and then in succeeding more detailed form. In this process again the Foundation speaks to the Navy not only for the private research community but for Federal agency scientific groups with Antarctic interests, thus providing the Naval Support Force with a coherent set of requirements and priorities. In this regard there was in January 1965 a week's planning conference in New Zealand between the commander, Naval Support Force, Antarctica, and his staff, and the Chief Scientist and the Program Director for Field Requirements and Coordination representing the Head, Office of Antarctic Programs of the Foundation. At this meeting the amalgamation of scientific program requirements and logistic support capabilities for the 1965-66 effort commenced, coordinating information from detailed plans.

The effectiveness of the planning and coordinating which exists is illustrated by some of the achievements of the last several years. In 1962 the United States established the Eights Station in the Ells-

worth Highland to extend the U.S. network of stations for the first time since the close of the International Geophysical Year. At the same time, there was introduced into the program the first full-time Antarctic research vessel, which has given the United States a unique capability to explore the very rich ocean regions surrounding Antarctica. The United States is the only country engaged in such a program of research and exploration of the southern oceans.

The United States also exercised its right of inspection under the Antarctic Treaty during the 1963-64 austral summer. I believe this is one of the most important actions that the United States has taken in connection with our national Antarctic policy.

This season we established the new Palmer Station on Anvers Island off the Antarctic Peninsula, extending our capability into this area where our Nation has not been represented since 1947. We hope, with the consent of Congress, to augment this program by constructing a wooden trawler to work in conjunction with this station in exploring both land and ocean areas of the peninsula. We have also begun the exploration of the last unknown area of the continent—the region between the South Pole and Queen Maud Land. An oversnow traverse has carried a U.S. geophysical team into this new area which lies between areas previously explored by the British, the Belgians, and the Soviets. We hope to establish a station for a year or so in the middle of this area while we conduct our exploration.

Finally, we are commencing a series of research projects which utilize satellite data.

The United States has improved its network of useful stations by concentrating its efforts in those Antarctic areas of greatest future interest to us. The strengthening of this network has not been the result of haphazard planning nor has it developed in the absence of interagency coordination.

Perhaps one of the most gratifying aspects of Antarctica is the spirit of international cooperation which exists in this region. The Antarctic Treaty assures the freedom of scientific investigation anywhere in the treaty area for at least 30 years. While pursuing our own scientific interests over much of Antarctica, we have also cooperated with nearly every other country party to the treaty in the carrying out of specific research programs. The treaty has encouraged such cooperation and has insured that our scientists may have access to data and scientific results from areas of Antarctica being explored by other countries. We believe that the treaty has provided to U.S. scientists a freedom of access to Antarctica and information about it that they might otherwise never have enjoyed. Furthermore, the provisions of the treaty encourage the establishment of protective measures safeguarding for man's study and use the unique features of the Antarctic environment. For example, the Foundation in cooperation with the Department of State, the Department of Defense, with the advice of the Department of Interior and the Smithsonian Institution, is in the process of instituting procedures to insure that unnecessary harm is not caused to Antarctic fauna and flora by our activities on the continent.

Considering that the continent of Antarctica covers an area as large as the United States and Western Europe combined, and that 10 years ago we had hardly begun its systematic exploration, remark-

able progress has been made. Never before in so short a time has man explored so large an area so thoroughly and with so few people. In fact, today we know more about certain facets of Antarctica and its environment than we do about large areas of Asia, Africa, and South America.

Since 1957 14 major U.S. oversnow traverses have crisscrossed much of the interior of the continent. From these traverses, we can now sketch out the surface elevations, ice thicknesses, gravity and magnetic fields, the average annual temperature, and the amounts of annual snowfall over nearly three-quarters of Antarctica. Although other countries, particularly the U.S.S.R., have also made notable journeys into the interior, the tracks of the U.S. traverses amount to nearly three times the combined accomplishments of all other nations. The vital facts gathered in this manner have laid the groundwork for other programs: the mapping, the geology, and the rheology of the Antarctic ice. This information has also made it possible, figuratively speaking, to lift off the ice cover of Antarctica and reveal the conformation of the subice topography and the relationship one to another of the various geophysical provinces which comprise Antarctica. We now know how deceptive in appearance is the ice cover of Antarctica. For example, if ice were melted off west Antarctica, the area in which the United States has carried out the majority of its activities would be under water with the exception of the mountain ranges, which would form island arcs.

The knowledge gained from the traverses plus the reconnaissance aircraft flights has identified the ice-free and other areas of interest and the United States has proceeded with the mapping of these features. Aerial photographic coverage is now complete for many of the major mountain ranges and the areas along the coast of the Amundsen Sea. Considerable ground control has been established and accurate maps have been or are in the process of compilation. Future coverage will include the coasts of the Bellingshausen Sea, the southern areas of the Antarctic Peninsula, and the Queen Maud Land ranges along the coast facing Africa.

Simultaneously with the production of aerial photography and cartographic maps, teams of U.S. geologists from the U.S. Geological Survey, the University of Minnesota, Ohio State University, and several other universities have ranged over the accessible ice-free mountains studying the rock formations. In one more season the reconnaissance geology of the major ranges of West Antarctica will be completed. Literally tons of rocks and fossils from which the ages and formations can be determined have been brought back to U.S. laboratories. With this history of the geological formations, the likely areas of value for minerals can be further examined.

With nearly 95 percent of the continent covered with ice, the isolated interior areas will never be as well known geologically as the temperate latitude lands; nevertheless, the ice-free areas if brought together would be the size of some of our larger States, such as Colorado. So far no mineral deposits which are commercially significant today have been discovered. But the research which has been carried out will now make it possible to narrow down any likely possibilities.

U.S. glaciologists, from the traverse work and from detailed studies at the permanent stations and other local areas, have gained con-

siderable knowledge in the movement of the ice. For example, they can judge from knowledge of the ice flow off the continent annually, the cooling effect that it has on the waters of the oceans. At present, we are well along on the development of a special drill that will penetrate to the deepest ice layers and reveal information on the internal temperatures and rate of heat flow near the bottom of the ice. From these, the fundamental behavior of ice flow can be deduced and predictions made on possible future slowing down or speeding up of the ice movement, with consequent changes in oceanic sea level. It is sufficient to bear in mind that 2 percent of the earth's water is locked up in Antarctica as salt-free ice. This is enough water, if the ice were melted, to raise the world ocean level 250 feet. The geology of Antarctica tells that it has not always been a frozen desert. Fossils and petrified trees indicate that the continent once had a very different and much warmer climate. It therefore is important for man to know what changes, if any, may be occurring in the Antarctic icecap.

Mr. HALEY. Under the rules of the committee, when that bell rings, we have to stop. We are meeting today an hour early. Would this be a good place for you to stop and continue tomorrow?

Dr. HAWORTH. Yes; this is as good a place as any, Mr. Chairman.

Mr. HALEY. I understand that you have various appointments tomorrow. Would coming back to the committee here tomorrow inconvenience you in any way?

Dr. HAWORTH. I have a meeting of one of the three standing committees of the National Science Board tomorrow. I could come back, providing I do not have to be here all day and I am sure that you do not want me all day. It would not be too inconvenient.

Mr. HALEY. What time, say, is convenient, is as early as 9:45 o'clock convenient?

Dr. HAWORTH. That would be all right.

Mr. HALEY. And you probably could finish here then?

Dr. HAWORTH. All right.

Mr. HALEY. We would appreciate it if you would do that. We do not want to inconvenience you any more than is necessary.

Dr. Jones, we have a witness who comes from quite a distance and I understand that he is pressed for time—would it be all right so far as you are concerned, to put Dr. Laurence Gould on ahead of you?

Dr. JONES. I had figured that because as Dr. Haworth is now able to come to the second session of these hearings I would not find it necessary to insert a statement, that is, in the record. I will be glad to testify and to answer any questions you may have.

Mr. HALEY. Dr. Jones, do you have a statement that you would like to file for the record?

Dr. JONES. No; I think that Dr. Haworth's statement will be sufficient.

Mr. HOSMER. Is he going to file a statement?

Mr. HALEY. Dr. Jones, I understand, is not going to file a statement. Is that right?

Dr. JONES. That is right.

Mr. MORTON. And Dr. Haworth's entire statement will be put into the record as of today's session? And if there are any questions, we will have those tomorrow? Could that be done?

Mr. HALEY. Does the gentleman make that request?

Mr. MORTON. I do.

Mr. HALEY. Without objection it is so ordered. We will still want him back here tomorrow for questions. The statement will be placed in the record as if he had read it.

(The statement referred to follows:)

Dr. HAWORTH. Major efforts have gone into meteorology and the outer atmosphere studies. The continent is a tremendous heat sink and vast quantities of relatively warm air flow at high levels from the equator into the south polar regions. Antarctica is not, as had once been suspected, a breeding ground for polar storms. Instead, we know that these storms develop in the surrounding ocean areas where westerly winds prevail. A fuller understanding of the relation between those storms and the high gravity winds which sweep off the high plateau to the coastal areas remains an important problem to be studied.

As the south geomagnetic pole and auroral zone lie in Antarctica, many studies have been made of the charged particles that come in from the sun and are deviated along magnetic lines to the polar regions. Free from the interference of electrical noises, either man made or due to electrical storms, the continent is a good area to monitor the electromagnetic signals that reveal the structure of the outer inosphere and the potentials of long-range radio communication. The United States has been fortunate that its area of operations is magnetically conjugate to eastern Canada as this circumstance allows scope in studying radio propagation paths across the globe. Special long antennas have been installed over the inland ice to allow U.S. scientists to experiment with manmade, controlled, very-low-frequency radio signals.

By virtue of the high latitude location, satellite readout stations can monitor polar satellites very efficiently, a few stations being able to read all of the satellite passes. Already the United States has meteorological, geodetic and orbiting-geophysical-observatories (OGO) satellite readout stations and our long-range plans call for still further installations as part of the networks.

Most of the living forms of Antarctica are either in the seas or along the coast, close to the water. We feel we have been very successful in exploring vast areas of waters north of the Antarctic with our research vessel. The *Eltanin*, which is operated for the Foundation by the Military Sea Transportation Service, is larger than most U.S. research vessels and accommodates more than 30 scientists from more than a dozen universities and Government agencies with many diverse programs of meteorology, ionospheric soundings, and physical, chemical and biological oceanography and submarine geology. In nearly 3 years of continual operations in the high latitudes of the Southern Hemisphere, thousands of miles of cruise tracks have been made in the areas of the South Pacific and between South America and Antarctica. The *Eltanin* has maintained a record of better than 290 days a year at sea and is the only research vessel which is today exploring these oceans on a full-time basis. Large ocean areas of high biological productivity lie near the Antarctic convergence where the intermixing of cold waters from the continent and warm waters from the north bring up nutrients from the ocean floor. It was the richness of these oceans that brought our sailors first to Antarctica and led to the early

exploration of the continent. It may be the marine resources of Antarctica that will again become Antarctica's chief benefit to mankind.

In developing an integrated scientific program in Antarctica, the Foundation is advised by the Committee on Polar Research of the National Academy of Sciences. The chairman of this committee is Dr. Laurence M. Gould, now at the University of Arizona. The committee provides the Foundation with recommendations for long-range scientific objectives. The Academy committee also represents the U.S. Antarctic scientific community on the Scientific Committee on Antarctic Research (SCAR) of the International Council of Scientific Unions (ICSU). It is through SCAR that international coordination of scientific programs is achieved. Dr. Gould is presently serving a 3-year term as president of SCAR. The Foundation also receives advice from Government agencies with scientific bureaus which have an interest in Antarctica as well as from private research organizations through the normal means available to the Foundation.

There is a legitimate concern on the part of this Committee that information about Antarctica which is required for wise planning and informed implementation of projects in Antarctica shall be available to all those who may have an interest or responsibility in this area. It should be pointed out that the National Science Foundation was directed in 1960 to serve as a clearinghouse and source of information concerning Antarctica. Whereas it is considered undesirable to establish a central depository for all information dealing with Antarctica, a project that would entail the disruption of a number of existing libraries and well-established depositories of records and data, the National Science Foundation has during the last 4 years supported projects and activities which have made it possible for anyone interested in Antarctic problems to locate information about Antarctica which may be required. In addition to maintaining a service designed to direct inquiries to appropriate sources, the Foundation has supported such projects as the preparation of an Antarctic bibliography, the cataloging of type and location of existing data, results and specimens worldwide, the summation of scientific knowledge of Antarctica in folio form, and other projects which insure that the contribution of U.S. scientists and those from other countries working in Antarctica are made available to other established information collecting and disseminating organizations. The Foundation supports the publication of information and scientific results derived from the research program including such publications as the "Antarctic Research Series." The Foundation also supports the activities of polar research centers such as the Institute of Polar Studies at the Ohio State University, and the Geophysical and Polar Research Center of the University of Wisconsin.

It should be pointed out that the miles of traverses, the tons of rich samples or barrels of fish specimens have a value that goes much beyond their individual import. A program of basic research for Antarctica seeks to relate its particular physical characteristics to the laws of nature as we now understand them. It provides a unique opportunity to extend our understanding of how nature works, for Antarctica is a natural laboratory of extreme conditions not found anywhere else on the surface of the earth. Here we have life surviving and evolving at the limits of endurance. We have a Pleisto-

cene condition similar to that which covered parts of the Northern Hemisphere thousands of years ago. We have physical forces of the greatest magnitude at work in the atmosphere and the oceans around Antarctica. Eight years of research have told us that Antarctica has a profound effect upon the world as we know it, and our research work there may provide solutions to some of the great questions about our environment that remain unanswered today.

The understanding that comes from basic research is the first necessary step to the practical utilization of what nature has provided man. The National Science Foundation realizes in its direction of the U.S. Antarctic research program the possibility that from research in Antarctica will come our knowledge of practical benefits for mankind. We realize that geologic and geophysical studies will narrow down possible areas of mineral potential. Our research on marine fauna and flora will serve to define the reserves of food for man in the oceans and how he can best use them. Our radio sciences experiments may aid satellite communications. But, we should not justify our basic research solely by the presence or possibility of such specific practical uses. The general understanding developed, and its relationship to the earth as a whole, are equally important.

We must not discount either the fact that the Antarctic experience has great educational value. Antarctica, because of its harshness, reduces human activity to simple functions and it teaches the individual scientists initiative, ingenuity, and perseverance. Furthermore, it provides opportunity for original work to the student as well as to the veteran researcher. Today, our scientific manpower in the United States is stretched very thin. We encourage students to seek their advanced academic degrees on Antarctic problems because there is a real opportunity for them to do original research and because we believe it is in the interest of the United States to increase the number of research scientists with polar experience. Today some of our most promising geophysical and biological research is being pursued by young men who began as students 8 years ago in Antarctica and are now well launched in the scientific community.

It is our intention to see to it that the Foundation continues to pursue an active and dynamic research program in Antarctica. This program will continue to serve as broad a variety of Federal and private research interests as possible. I am confident that the results will benefit science and mankind and that the program will carry forward the interests of the United States in Antarctica. Today, we are better represented on the continent than at any time in our long history of exploration. Never before have we enjoyed the flexibility of movement or variety of ways to pursue our exploration. We have maintained the tradition of leadership which our country has enjoyed and successfully used it to encourage peaceful international cooperation in Antarctica. The knowledge and understanding which we are gaining, I am confident, will benefit this Nation and repay the investment of dollars and hard work that we have made.

Mr. HALEY. We will now adjourn until 9:45 o'clock in the morning. Thank you.

(Whereupon, at 10:50 a.m., the subcommittee was in recess, to reconvene on Friday, May 7, 1965, at 9:45 a.m.)

ANTARCTICA REPORT—1965

FRIDAY, MAY 7, 1965

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TERRITORIAL AND INSULAR AFFAIRS
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 9:55 a.m., in room 1324, Longworth House Office Building, Hon. Leo W. O'Brien (chairman of the subcommittee) presiding.

Mr. O'BRIEN. The Subcommittee on Territorial and Insular Affairs of the Committee on Interior and Insular Affairs will be in order. This is a continuation of the hearings on several bills relating to the Antarctic study and research programs.

When we hurriedly suspended yesterday, Dr. Haworth had completed the major part of his statement. We put the entire statement into the record yesterday, Dr. Haworth. Do you want to proceed from the point where you left off?

Dr. HAWORTH. I would like to do so.

Mr. O'BRIEN. All right. But before we do that, we have two more reports on the bills, one from the National Science Foundation, for one, and one from the Department of Commerce, both unfavorable, and unless there is objection they will be made a part of the record at this point.

Hearing no objection, it is so ordered.

(The reports referred to follow :)

NATIONAL SCIENCE FOUNDATION,
OFFICE OF THE DIRECTOR,
Washington, D.C., May 4, 1965.

HON. WAYNE N. ASPINALL,
*Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: This is in further reply to your request of February 12, 1965, for the views of the National Science Foundation on H.R. 555, H.R. 2212, and H.R. 4658, to provide for continuity and support of study, research, and development of programs for peaceful uses in science, commerce, and other activities related to Antarctica * * *.

Among other things, the proposed legislation would establish in the executive branch of the Government the Richard E. Byrd Antarctic Commission. Included among the functions of the proposed Commission would be the gathering and dissemination of information relating to Antarctica and the coordination of Antarctic activities among Federal agencies and private organizations. While we consider the objectives of the bills worthwhile, we do not believe that establishment of an Antarctic Commission is either necessary or desirable. In our view, existing mechanisms within the executive branch for carrying on Antarctic activities are proving satisfactory. Under these arrangements, the National Science Foundation has primary responsibility for coordinating and managing the development and carrying out of an integrated U.S. science program for

the Antarctic. The research interests of other Federal agencies are included in the long-range Antarctic research plans prepared by the Foundation. As a result, a number of agencies have Antarctic research programs in addition to those carried out by universities and other private research organizations. The Department of Defense provides for the planning and carrying out of operations in support of the scientific and other programs in the Antarctic. There is direct, continuous cooperation between the Department of Defense and the National Science Foundation relative to the carrying out of the Antarctic program. Moreover, the Department of State reviews Antarctic research and logistics plans in the light of U.S. foreign policy objectives and provides guidance and suggested priorities.

In examining the effectiveness of these arrangements, the Department of State, the Department of Defense, and the National Science Foundation have agreed that the periodic review of Antarctic policy and formulation of objectives would benefit by making these arrangements more formal. With the concurrence of the Departments of Commerce and Interior, therefore, an Antarctic Policy Group has been established consisting of the Assistant Secretary of State for International Organization Affairs (Chairman), the Assistant Secretary of Defense for International Security Affairs, and the Director of the National Science Foundation. This policy group is charged with—

1. Defining U.S. policy and promulgating overall U.S. objectives and guidelines for action in Antarctica.

2. Reviewing and approving plans for U.S. activities and programs in Antarctica. These arrangements for high level review and approval of objectives and policies of the programs are supplemented by existing arrangements for coordination of activities at a working and staff level.

The effectiveness of existing planning and coordination is illustrated by some of the new activities added to the programs during the last several years. In 1962 the United States established the Elights Station in the Ellsworth Highland to extend the U.S. network of stations for the first time since the close of the International Geophysical Year. At the same time, there was introduced into the program the first full-time Antarctic research vessel, which has given the United States a unique capability to explore the very rich ocean regions surrounding Antarctica. The United States also exercised its rights of inspection under the Antarctic Treaty during the 1963-64 austral summer season. I believe this is one of the most important decisions that the United States has made in connection with our national Antarctic policy.

This season the United States has established its new Palmer Station on Anvers Island off the Antarctic Peninsula, extending our capability into this area where the United States has not been represented since 1942. We hope, with the consent of the Congress, to augment this program by constructing a trawler to work in conjunction with this station and provide a capability to explore equally both the land and ocean areas of the peninsula. Establishment of the Palmer Station has been made possible by discontinuing winter programs at Hallett Station. Exploration of the last unknown area of the continent—the region between the South Pole and Queen Maud Land has also been begun. An oversnow traverse has carried a U.S. geophysical team into this new area which lies between areas previously explored by the British, the Belgians, and the Soviets. We hope to establish a mobile station for a year or so in the middle of this area while the exploration is conducted. Finally, a series of projects of research which utilize satellite data are being commenced. The United States has improved its network of useful stations by concentrating its efforts in those Antarctic areas of greatest future interest to us.

Close coordination between agencies is the essence of U.S. success in Antarctica. We do not believe that establishment of the proposed Commission would improve that coordination. As we have stated on previous occasions, we believe it would be undesirable to establish an independent commission, and thereby add to the number of executive agencies already in existence, in order to carry out activities which are being accomplished in an efficient manner through existing mechanisms. Therefore, as stated earlier, we recommend against enactment of the proposed legislation.

The Bureau of the Budget has advised us it has no objection to the submission of this report from the standpoint of the administration's program.

Sincerely yours,

LELAND J. HAWORTH, *Director.*

GENERAL COUNSEL OF THE DEPARTMENT OF COMMERCE,
Washington, D.C., April 15, 1965.

Hon. WAYNE N. ASPINALL,
Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in further reply to your request for the views of this Department concerning H.R. 555, H.R. 2211, and H.R. 4658, similar bills which would establish a Richard E. Byrd Antarctic Commission.

The functions of the Commission would cover a wide range of activities designed to support, coordinate, develop, and administer programs of the Federal Government relating to the Antarctic. Our review of these bills indicates that the activities of the proposed Commission would be so far ranging as to affect, or replace, virtually all current nonmilitary Federal programs dealing with the Antarctic. Its activities could have an effect upon the functions of several bureaus of this Department. It could have a major effect upon work of the Coast and Geodetic Survey and the Weather Bureau and a lesser effect upon the work of the Bureau of Standards.

This Department opposes enactment of these bills. While there is no question as to the importance of adequate Antarctic research to our national welfare the Department doubts the wisdom of setting up a special Commission to carry out such work. Various aspects of Antarctic research are now spread among the several departments and agencies, each according to its own special responsibilities. Insofar as this Department can determine, the necessary coordination of these activities has been carried out efficiently, with little interagency friction.

Specifically, we feel that the Antarctic programs of this Department have been carried out efficiently under the present system and we see little reason for single agency management of the various specialized Antarctic programs.

Furthermore, the Department feels that the National Science Foundation adequately coordinates interagency aspects of the scientific programs dealing with Antarctic research. The Foundation also provides the necessary liaison function between civilian and military activities in this area. It appears, therefore, that there is little actual justification for superimposing a Commission, such as that contemplated in these bills, on the work of the several Federal agencies involved in the Antarctic.

We have been advised by the Bureau of the Budget that there would be no objection to the submission of this report from the standpoint of the administration's program.

Sincerely,

ROBERT E. GILES.

STATEMENT OF DR. LELAND J. HAWORTH, DIRECTOR, NATIONAL SCIENCE FOUNDATION, ACCOMPANIED BY DR. THOMAS O. JONES, HEAD, OFFICE OF ANTARCTIC PROGRAMS, NATIONAL SCIENCE FOUNDATION

Dr. HAWORTH. Mr. Chairman, when I have finished with my earlier statement, I have another little brief statement prepared overnight that I thought might be useful to you in the light of the discussion yesterday about sources of information.

Mr. O'BRIEN. That would be very helpful, yes.

You may proceed.

Dr. HAWORTH. This will be, Mr. Chairman, a little bit redundant, because I wanted it to be complete in itself and will say over again some of the things I have already said, but it is fairly short. As I said, I would like to emphasize briefly one item in the prepared statement, in view of the discussion yesterday.

The National Science Foundation is specifically charged, by direction of the President in Bureau of Budget Circular A-51, with the responsibility to serve as the clearinghouse and source of information regarding the existence and location of Antarctic records, files, docu-

ments, and maps maintained within the various executive agencies and nongovernmental organizations. Such a clearinghouse has now been in operation in the Foundation for more than 2 years. It covers all subjects, not merely scientific ones.

With the aid of a reference library and an extensive card indexing system, the Foundation is in a position to answer most direct inquiries for information or it can immediately direct the inquiry to the appropriate source for the particular information required. To aid in the maintenance of these information files and to assist any and all who desire information on Antarctic activities, the Foundation supports the preparation of the Antarctic Bibliography at the Library of Congress.

Requests for biological and geological specimens, or data on specimens, are referred by the Foundation to the Smithsonian Institution, which, through National Science Foundation support, maintains complete records of all specimens brought back to the United States from Antarctica and the Antarctic seas. Observational data from the disciplines are, like similar data obtained throughout the world, deposited with and available from the World Data Centers. Through the Data Center mechanism and through active exchange programs of publications, U.S. scientists can take full advantage of the results of research done by scientists from other nations. In the case of maps, these are available from a central Antarctic map library maintained at the U.S. Geological Survey through a transfer of funds from the National Science Foundation. The Foundation cooperates closely with the two main Government depositories for scientific and technical information: the Science Information Exchange and the Clearinghouse for Federal Scientific and Technical Information.

The National Science Foundation also strives to assure that all the important scientific information available on Antarctica is promptly made available to scientists and others interested in Antarctic activities. I have brought with me today several samples of publications (if you care to see them) prepared by the Foundation or with Foundation funds. They include the Antarctic Report, issued monthly by the Foundation, and two brochures describing the program in general terms. I have four volumes of the Antarctic Research Series and two folios in the Antarctic Map Folio Series, as well as 2,000 cards from the Antarctic Bibliography. All of these are readily available to interested parties who desire information on current progress. There are other reports as well, including published translations of significant work done by other nations.

I thank you.

Mr. O'BRIEN. Thank you, Dr. Haworth. I should say at the outset that apart from some questions we are really not on different teams—it is just that we in Congress are trying to get on some team, if possible.

I have some rather specific questions, but I am curious to know whether you have read the books entitled "Where Science and Politics Meet," and "The New Priesthood."

Dr. HAWORTH. The book by Jerome Wiesner, "Where Science and Politics Meet," I just received about 2 days ago, but I find that with one exception I had read all of the papers when they were originally prepared. This is a very interesting collection, I might say.

Mr. O'BRIEN. Yes. And it does point up, I think, the problem that you scientists recognize as well as we do in the Congress.

Dr. HAWORTH. Yes, sir.

Mr. O'BRIEN. That during a very brief period of time our expenditures have gone up enormously, to something like \$16 billion. And I have been impressed with that fact. I had a small part to do with the writing of the law that created NASA. The other day we appropriated \$5 billion for NASA. We had a bill which went through without any difficulty. The committee that had that in charge knew what was in the bill—had held hearings on all of the appropriations. And here we have a situation where an activity—it is important to the people to know where it is, it is an orphan, so far as any committee of Congress is concerned.

We had before us yesterday a distinguished gentleman from the House Committee on Foreign Affairs, and he did not know whether the legislation we are discussing here today belonged here or not. I have no criticism of what has been accomplished in this field in the Antarctic. I think that a magnificent job has been done. I think that every Member of the Congress who has gone down there agrees with that, but even the best programs sometimes can get out of hand unless somebody other than the scientists themselves are running the show. I think that we need curbs on any group.

We have had great concern about a big military. And now we have science. The thing that disturbs me is that any suggestion, no matter how minor that we have offered that we set up lines which would enable these matters to come squarely before the committees of Congress are opposed by every agency of the Federal Government. It is possible that those agencies are correct, and that we are wrong, but I hope that you can understand our misgivings, since we feel that if there is any responsibility in Congress, by any committee, it apparently rests here, at least, in the judgment of the Parliamentarian who assigned the bills to us. I realize that it is not a question, but I am trying to explain the best I can why we are so deeply concerned.

Mr. HALEY?

Mr. HALEY. I will reserve my time until later in the morning.

Mr. O'BRIEN. Mr. Morton?

Mr. MORTON. Dr. Haworth, I appreciate that this type of hearing can develop some misunderstandings. I have only within the last year had the privilege of going down to Antarctica and visiting the projects there. I want to emphasize that I do not have any misgivings about the quality of work going on in the various scientific and nonscientific categories down there.

I was a little bit disturbed, however, by remarks that many younger, junior people have made as to whether the data that they were expensively selecting would ever receive the review of senior people back in their own universities. I think that it was a normal gripe which you find among young people, whether it be in the military or in science or what-have-you.

The question that comes to my mind is this, are you confident that the programs are established with a full understanding of the high cost involved in maintaining scientists there, and understanding the difficulties that are involved?

Dr. HAWORTH. Yes. I do know that anything of this sort is never perfect, of course, but the program, as I am sure you know, is reviewed very carefully not only by the Foundation staff, but by individuals and groups of knowledgeable scientists in all parts of the country. And I think that it is fair to say, not only in this program, but in all of our scientific programs where those processes are used—and they are used in all of the Foundation programs and in all of the NIH programs, et cetera, that this is taken very seriously by these people, if for no other reason than that the scientific fraternity does not feel that there is enough money to do everything. And so from their own standpoint of self-interest they want to be sure that the best things are done, quite apart from their feeling that they want to do the best job that they can. Of course, science is always an unknown. If no one knew what was going to happen, what you are going to find out, you would not have to do it. Sometimes things do not work out and it turns out that a particular piece of research in this field, as in any other field, may not turn out to have as valuable results as was hoped, but I believe that as competent a job as can be done is being done. It is taken very seriously. Just this fact that you mentioned—that it does cost a lot to support a man in Antarctica; obviously it costs a lot more than to support a man in most fields of science at home.

Mr. MORTON. I believe that the figure is \$240,000 per man.

Dr. HAWORTH. There are a few fields of science other than those in Antarctica that are that high, but not very many. That very fact, of course, adds to our concern—a “let us be sure that none of our money gets wasted,” concern—and makes a stronger incentive than usual to be careful.

Mr. MORTON. Will you explain to me, Dr. Haworth, and I think the committee would be interested in knowing, just exactly who and how and what is involved in the scope of the program—who determines the scope of the program and how they are created and where the decisions are made. What is the scientific organization? We saw universities represented from all over the country there, who were participating in programs and were receiving grants. Who makes the decision of what programs are going to be carried out, what priorities are going to be established so far as the programs are concerned, and what university and where the facilities will be for doing the job?

Dr. HAWORTH. The ultimate decision on individual research programs is made by the Foundation. I will have to modify that a bit when I speak about cases where we give support to another agency, but in the universities that is the way it is determined. The ultimate decision is made by the Foundation. And that means taking into account the kind of advice that I was speaking of before, including the capability of the Navy from a logistics standpoint and all of the other factors.

Mr. MORTON. Well, now when you say “by the Foundation,” Dr. Haworth, do you mean a group of people within the Foundation who are specifically assigned to this?

Dr. HAWORTH. Yes, by Dr. Jones and his staff. We have the Office of Antarctic Programs in the Foundation headed by Dr. Jones. Dr. Albert P. Crary is the chief scientist. They have a staff. And their sole function is this program. They draw upon others for assistance and advice. They have a scientific staff of their own, but they also,

I repeat, get appropriate advice from the biologists and the physicists and so on in the other parts of our organization, and from scientists and others outside. They draw upon those in other divisions of the Foundation who run the more regular programs.

You see, our normal organization is one that is divided up by scientific disciplines. We have a section on physics and so on. In this case all of it, regardless of content, is grouped together under the antarctic program, but in order to get more specific detailed advice in a given field the antarctic program often draws on advice from other sections of the Foundation.

Mr. MORTON. Does this same group of people evaluate the program? Let us say the programs that were carried on in 1963 and 1964, as to whether they should be continued, as to whether more data should be collected, whether they should be enlarged or diverted from one area to another area.

Dr. HAWORTH. Yes.

Mr. MORTON. The on-going procedure that determines the decision as to whether this should be continued or discontinued; is that it?

Dr. HAWORTH. They do just that. And, incidentally, this kind of thing is a very important feed-in to the preparation of the 5-year plan that I mentioned and I believe was also mentioned a few weeks ago in testimony. This 5-year plan is, obviously, more detailed and specific for the first year than it is for the fifth year, and each year it is reviewed, brought up to date, and extended a year. And the results of what has happened in the past year are very important factors in determining the new additional plan, so to speak. And it may be decided that there is enough material acquired in this area or that area or that it has turned out not to be as promising as we had hoped. On the other hand, maybe something new turned up that we ought to start, and so on.

Mr. MORTON. In the determination of the cost of the scientific part of the total program do you go through the Bureau of the Budget for the approval of these things on a progressive basis, of how is the money obtained for this?

Dr. HAWORTH. The totality of our Antarctic program is a line item in the budget that we submit to the Bureau of the Budget. It is a line item in what is ultimately considered by the Appropriations subcommittees in both the House and the Senate.

Now in general, with this kind of item the Bureau of the Budget does not say, "You can have just this much, or "that much." But we, of course, have a framework in which we have to fit our total activities. And within limits we are allowed to use our own judgment ultimately in doing this. Ultimately the President's budget states as to just how much goes to this particular program. It is not broken down into so much for geology and so much for whatever else there may be.

Mr. MORTON. Yours is broken down that way within your own agency, though, in the determination of the work and the people who are going to go and what equipment will be supplied?

Dr. HAWORTH. Yes. I am speaking of the budget.

Mr. MORTON. How much of the scientific program is carried on by universities through the grant process versus what you carry on by the Foundation itself—what percentage is that?

Dr. HAWORTH. The Foundation itself? We do not do any research ourselves.

Mr. MORTON. You farm it all out?

Dr. HAWORTH. We are like the Atomic Energy Commission. It is all farmed out. But I can give you some figures as to how much is done by the private organizations, mostly universities, except in a few cases, like an oceanographic institute and that type of organization. This year a bit more than \$4 million will be spent by private agencies, universities, et cetera, and not quite \$3.5 million by other Federal agencies. This includes the Bureau of Standards, the Weather Bureau, the Geological Survey, and so on. Of course, we have their needs in mind when the original plan is made up and when our budget is made up.

Mr. MORTON. When these contracts are farmed out—say, to a university like Johns Hopkins—do you have any sort of interim system of reporting, so that you know the progress being made?

Dr. HAWORTH. Yes. They make regular progress reports. This is true of all of our work.

Mr. MORTON. The thing that prompted this question is that there was some criticism again by some of the junior people in the scientific community in Antarctica that a great deal of the data that they collected had been duplicated—that there was a duplication of information, because there was a lack of communication. This might have been the normal griping or, again, it might focus on a weakness in the communication structure and the organization of the scientific program.

Dr. HAWORTH. I am sure that the problem includes some griping, because I did the same myself when I was a young scientist. Perhaps Dr. Jones would want to speak to this.

Dr. JONES. In a few cases we have encouraged duplication of measurements, but by different techniques, as a method of checking to see whether the two techniques were getting comparable data. A young man may not have known of the other purpose of this. When two proposals come in to get at the same information in two slightly different ways, we can use this to give us a doublecheck, to see if the information is correct.

Mr. MORTON. I did not take it too seriously.

Dr. JONES. I can assure you that there is not a knowing—absent-minded duplication—let us put it that way, of effort.

Mr. MORTON. One of the areas in which this came up was in the area of aerial photographs that have been made. And this particular young man said that there were thousands, literally hundreds of thousands of aerial photographs that had been made and that they were stacked away and nobody had looked at them. I do not know whether this is an accurate statement or not. That is what he said.

Dr. JONES. There are a lot of photographs that were taken that are stacked up. They have all been looked at. No maps are being prepared from them because they were not of sufficient quality with which to prepare good maps. It is one of those cases where the camera mechanisms were not working properly. We had an awful lot of difficulty with the first set of cameras, as I recall, in one of the aircraft. The moisture got into them when they flew to higher altitudes, giving photographs which were not of such quality as to be usable. This it not

the case any more. There are very few photographs being taken for this purpose which are not of good quality, and they are being used for the making of maps. Mapping is a real complex problem. It takes several years before good quality maps can come out. And in addition, good ground control has to be taken before the mapping photographs can be used to make the maps.

The photographs are also studied from another aspect. They are often preliminary to certain geological studies that will follow.

Mr. MORTON. One final question: I take it that you feel that the organizational relationship which exists between the State Department, the Department of Defense, the Navy and the National Science Foundation is well enough knit together that no other organizational formation or structure is needed for the better management of the program in Antarctica; is that your position?

Dr. HAWORTH. Are you addressing that question to me, sir?

Mr. MORTON. Yes.

Dr. HAWORTH. Yes, it is. I am not attempting to speak from the standpoint that the chairman spoke of a while ago—as to the congressional need—not in that sense; but, from the standpoint of guiding the plans for carrying out the program, I feel that it is very satisfactory. There has been close cooperation over the years. For example, although the Policy Group did not exist at that time, some of the equivalent people were very much involved in the discussions and the decisions with respect to the inspection, the antinuclear inspection of a year or two ago. There have been innumerable discussions of this sort—sometimes only two agencies, sometimes all three agencies.

The Policy Group gives a framework for meeting formally, of having an agenda and doing the work in a little more shipshape manner than we had been doing it.

Mr. MORTON. I have reference to a question that was brought up by the chairman of the full committee here yesterday, that it is a problem of congressional oversight. This is a problem that we have. In my opinion, it is necessary for Congress to have a simplified as possible system of maintaining congressional oversight. A good management system takes less time of the agency people, it takes less time of the congressional committees involved. I think everybody understands this.

Dr. HAWORTH. We do.

Mr. MORTON. I think that the people in the scientific field understand it. This is the reason I am having a hard time finding out why there is so much objection to what appears to us as a very straightforward way of creating an organization or structure with which the Congress can deal.

Dr. HAWORTH. I suppose that it may be that moving this way might make a simpler organization for you but a less simple one for us. I say that this is a question of judgment. I cannot say anything other than that. But to me it would be more complicated for us. I admit that I am not quite sure what the ultimate effect of the legislation would be in terms of who would have to do the work, et cetera. The legislation, as I read it—and I am not an expert on studying legislation—gives a good deal of latitude. So that there might be a commission that itself was a sort of a supervisory commission. On the

other hand, it could also be one that undertook to do the work or a part of the work itself.

As I said in my statement—and in retrospect I think I did not make one point very clear—I feel that if it is a supervisory commission, with the work still being done in the same agencies where it is now being done, it would put in an extra administrative layer that would make things more complicated for us. On the other hand, if it undertakes to carry out the program, then, of course, it would have to duplicate some of the present capabilities. I suppose it would not try to duplicate the capabilities of the Navy, but it would have to duplicate some of the capabilities, certainly, of the Science Foundation. And it was in that connection that I tried to make the point that the Science Foundation has, by virtue of its total programs, an intimate contact with the scientific community that has taken, of course, years to establish, and it results not merely from the Antarctic activities, but from the broader sweep of our total activities.

Mr. MORTON. Thank you. That completed my inquiries.

Mr. O'BRIEN. Mr. Hosmer?

Mr. HOSMER. On that point, I imagine Dr. Jones' organization is a part of the National Science Foundation?

Dr. HAWORTH. That is right.

Mr. HOSMER. Is it any more difficult for Dr. Jones and his group to perform their work or would it be, if they were a part of a commission organization, rather than a part of the National Science Foundation?

Dr. HAWORTH. In my opinion they would lose a lot by not being in the context of the total National Science Foundation, if you will pardon me.

Dr. HOSMER. In the National Science Foundation they would not be apart from it.

Dr. HAWORTH. Let me make the point in a case that we both are familiar with; I think that a given division of the Atomic Energy Commission would lose a lot if it were removed into a separate agency and was not a part of the Atomic Energy Commission, and I use the Atomic Energy Commission as an example, because there is a lot of cross-feeding of knowledge and ideas, and so forth.

Mr. HOSMER. Actually, that is not quite true there, either. You have possibly licensing and things of that sort there, do you?

Dr. HAWORTH. That is a different matter.

Mr. HOSMER. There are areas of difference, however, between Government and others.

Dr. HAWORTH. I was speaking of the scientific aspects.

Mr. HOSMER. Here we have a little different thing. You would have ready consultation on different operations because you would be within the same organization. So there must be some reason to suspect that there is a possibility of having difficulty.

Dr. HAWORTH. The reports that Dr. Jones makes are to the same Associate Director as those of heads of the Biological Sciences Division and others. They have weekly staff meetings, and so forth. There is considerable individual interplay of ideas.

Mr. HOSMER. What would happen if Dr. Jones was rendering an organization responsibility to the Commission?

Dr. HAWORTH. These exchange of ideas would not happen as readily and as easily.

Mr. HOSMER. He would not be out of the shop where he is now.

Dr. HAWORTH. I would not say that.

Mr. HOSMER. You would not let him talk to people who are in your organization?

Dr. HAWORTH. Certainly I would.

Mr. HOSMER. How?

Dr. HAWORTH. Certainly I would let him. This is done all of the time.

Mr. HOSMER. You would or you would not?

Dr. HAWORTH. I would.

Mr. HOSMER. And Dr. Jones would have the same scientific people to lean on that he has now, would he not?

Dr. HAWORTH. I know that the interchange between people within a given organization are always closer than between organizations, not because anybody gets complex about it, but because it is the way of organizational groups.

Mr. HOSMER. I suppose that is true in other organizations, with three organizations today, the Science Foundation, the Defense Department, and so forth. Maybe the scientists would open up and communicate. But you do not see it that way?

Dr. HAWORTH. I think it is working very well. I would not hesitate to say that a part of my reluctance is that I am a great believer in the idea that when something is going well, one should keep doing it that way. If you will pardon this analogy—it is pretty far-fetched—I remember that about 15 years ago the Boston Red Sox were in third place when Ted Williams got hurt and they could not use him. They then won 26 out of the next 29 games and were in first place. And then Williams was able to play. Obviously, it was to their interest to put Ted Williams back in. They did, and they lost the pennant. I think that when something is going well one should be careful about changing to something else. That is a part of my feeling.

Mr. HOSMER. I think that you have expressed that twice within a very few moments. Did you make any loud, anguished protest when this Policy Group change was made and then the Antarctic project office was abolished? It had been working well. It was taken out of its home and pressed into some dark corridor in the Pentagon. That looks like a substantial change.

Dr. HAWORTH. Let me answer that in two parts. The setting up of the Policy Group was a formalizing and sharpening of the way that we were already doing it. We did not change anything, except—

Mr. HOSMER. But you do have a chance.

Dr. HAWORTH. As I said a while ago, we made it a tidier and more shipshape operation.

Mr. HOSMER. What have you accomplished by having it run out of the White House and having the President put his blessing on top of it—this was compared with what was being done already?

Dr. HAWORTH. I do not know the answer to your second question. Our major contact has been with Admiral Reedy who, of course, has had two hats. The Science Foundation's main connection with the Department of Defense has been, of course, the logistics operations. And that has not in any manner been changed. I do not really have

very much knowledge about the change in DOD of which you speak. This probably could be better discussed by the Department of Defense.

Mr. HOSMER. I see. Then everyone has been closely in touch with everything that is going on in that effort, is that correct?

Dr. HAWORTH. Not in the sense of the detail of the internal operations.

Mr. HOSMER. You do depend upon the Navy for logistics or support in this effort?

Dr. HAWORTH. Yes.

Mr. HOSMER. You are interested that it be done with the greatest zeal possible?

Dr. HAWORTH. Yes. Problems regarding these bills are within the province of Mr. McNaughton, who is the Assistant Secretary.

Mr. HOSMER. Whom? What is he?

Dr. HAWORTH. Assistant Secretary of Defense for International Security Affairs.

Mr. HOSMER. Do you go to him now rather than to Admiral Reedy with the question?

Dr. HAWORTH. We go at different levels for different purposes.

Mr. HOSMER. So you really have not any experience with the setup and do not know whether it will work or not?

Dr. HAWORTH. We certainly have not had any experience.

Mr. HOSMER. I would like to address some other questions later.

Mr. O'BRIEN. Certainly. I believe that on this question I think we are all agreed that the Navy had played a very basic role in the work. I find that the Navy is not mentioned at all in this. I can only hope that is an oversight.

Dr. HAWORTH. I could not speak to that, Mr. Chairman.

Mr. O'BRIEN. That is, in looking at the release, I do not see them mentioned.

Dr. HAWORTH. I certainly agree with you that the Navy has played a very major role, and still does.

Mr. O'BRIEN. Mr. Taylor?

Mr. TAYLOR. In November 1962 the gentleman from California was on the same ship with me down there. I did not hear any criticism of the scientific policies down there. I recall two sailors who were going to volunteer for the winter down at the South Pole station. And one of them said when requested, "Are you kidding?" I guess that is typical, the normal American way, a typical American sailor. I was impressed by the program that the Navy has done in its contribution. I do not have any questions. I felt it was fabulous.

Mr. O'BRIEN. Mr. Burton?

Mr. BURTON of Utah. No questions.

Mr. O'BRIEN. Mr. Craley?

Mr. CRALEY. I have one question which is a technical, as to a statement in your statement on page 12. You state:

It is sufficient to bear in mind that 2 percent of the earth's water is locked up in Antarctica as salt-free ice.

Dr. HAWORTH. Yes.

Mr. CRALEY. How come?

Dr. HAWORTH. Dr. Jones, would you explain that?

Dr. JONES. The ice comes down by the process of precipitation as snow, which is clean, and because of the low temperature in Antarc-

tica it remains there and will remain there as it has between 100,000 and a million years. We do not know the exact length of time it has been there.

Mr. CRALEY. This is not from the ocean?

Dr. HAWORTH. That is right.

Dr. JONES. There is, however, an ice cover on the ocean that extends out and away from the continent. In some places, in the winter, as much as 200 or 300 miles. This is not salt-free ice, but it is not that which we speak of here.

Mr. CRALEY. Thank you.

Mr. O'BRIEN. As to your relationship with the Navy in planning—for example, will you tell the Navy that during the summer of 1965-66, that you will have 200 scientists and their aids who will go to Antarctica? Do you tell them to get the necessary logistical support? Or do you say to them how much logistical support will they give you and then you go ahead?

Dr. HAWORTH. It is neither. It is in between. Eight or ten months before the Antarctic summer is to come we tell the Navy what we would like to do, and then, to oversimplify it, the admiral and Dr. Jones and their staffs work out schemes in which, using the Navy's capabilities in terms of aircraft and everything else and the priorities—and, incidentally, relative costs of the different scientific things that we would like to do—we try to sort out and fit together a jigsaw puzzle to maximize the efforts; but not everything that we would like to do gets done. As a matter of fact, to some extent we suggest a totality just a little beyond our own budget, because if we tried to spell out exactly what we wanted to do, we might miss something easier for the Navy to do than something we had included. We try to leave flexibility in the program so as to work out a program that is sensible and within the capabilities of both agencies.

Mr. O'BRIEN. I might say that the supplementary statement you made this morning is rather significant. I think it is one of the best we have had in these hearings, because we never really have had a good answer to this proposition before. This is material that was flouting out in space. I think this is very important to have that in the record.

Dr. HAWORTH. Thank you, Mr. Chairman. Of course, we would be happy at any time to help you from this standpoint as well as all other standpoints. And if you desire it we could make a little more detailed statement to put in the record of all of these various information services.

Mr. O'BRIEN. I think that would be helpful if that could be done. That would be helpful to a great many people.

Dr. HAWORTH. I did not want to take the time this morning to do it.

Mr. O'BRIEN. That would be most helpful if you will do that.

(The information referred to follows:)

AVAILABILITY OF INFORMATION ON ANTARCTICA—A STATEMENT SUBMITTED BY THE NATIONAL SCIENCE FOUNDATION

In Bureau of the Budget Circular A-51, which formalized responsibilities for the Antarctic program within Government agencies, the National Science Foundation was assigned, as part of its functions, the task of serving as "the clearinghouse and source of information regarding the existence and location of antarctic records, files, documents, and maps within the various executive agencies and nongovernmental organizations." Such a clearinghouse has been operated in the National Science Foundation since 1962.

Among the tools employed in the acquisition and dissemination of current antarctic information (including science, logistics, exploration, political geography, etc.) is the Antarctic Bibliography, prepared under National Science Foundation funds at the Science and Technology Division of the Library of Congress. This bibliography is issued on standard 3 by 5 library cards containing informative abstracts and a subject index, plus indexes to the geographic area, station, or both where the work was performed; author and coauthors; grantee institution; and, in some cases, the expedition.

The Antarctic Bibliography cards are available to universities, Government agencies, and other organizations in the United States with a bona fide interest in Antarctica. Sets are being sent abroad to the agency or organization in each country with which the National Science Foundation regularly exchanges publications on Antarctica. However, the number of cards issued to date makes it cumbersome to handle except at libraries. Therefore, cumulative volumes will be issued periodically, each containing 2,000 abstracts with indexes. Volume 1 will be available this spring. In order to assure the permanent conservation of the antarctic records, every document abstracted for the Antarctic Bibliography is microfilmed in toto at the Library of Congress.

Information on current scientific activities in Antarctica is provided in the Antarctic Report. This multilithed report, issued monthly by the National Science Foundation, is a continuation of the Antarctic Status Report, begun in 1950. Containing brief articles and items of general interest, in addition to the progress reports of fieldwork, the Antarctic Report provides a means of direct communication among the various elements of the U.S. Antarctic research program and other agencies and individuals, national and foreign, concerned with antarctic research.

Biologists and geologists who have collected specimens in the Antarctic, or who wish to obtain information on antarctic specimens available in the United States, have at their disposal the central records of antarctic specimen collections maintained with National Science Foundation funds at the Smithsonian Oceanographic Sorting Center. These files include, in addition to complete records of antarctic specimens in the U.S. National Museum, all available data on antarctic collections deposited with, or under study at museums and universities throughout the country. The task of indexing, sorting, copying, and distributing the bottom photographs obtained in antarctic seas by the National Science Foundation's research vessel, the USNS *Ellanin*, is carried out also by the Smithsonian Oceanographic Sorting Center as part of the antarctic specimen records project. A data processing system is being devised for the antarctic specimen records that is compatible with the systems used by the National Oceanographic Sorting Center and other Government offices.

In close coordination with the antarctic specimen records project, a sorting operation of USARP specimen collections is being carried out at the Smithsonian Oceanographic Sorting Center with Foundation support. This arrangement is particularly useful and economical for sorting and distributing large collections of antarctic materials such as the marine biological collections obtained aboard the USNS *Ellanin*.

During the first year of operation of this project, nearly 2 million antarctic specimens were sorted by the Smithsonian Oceanographic Sorting Center, principally materials from the USNS *Ellanin* but also 11 other benthic collections and a special collection of 30,000 biological specimens obtained in 1963 during a survey of potential sites for Palmer Station in the Antarctic Peninsula.

In order to insure that specimen collections made with Government funds are not thoughtlessly disposed of or otherwise lost upon completion of a research project, the Foundation has made their preservation a condition of the research grant. Each grantee is required to provide NSF with a general description of any biological or geological materials obtained by any members of his field party and to inform the Foundation of any dispositions made of these collections and the pertinent field data. The Foundation reserves the right to direct the eventual disposition of all collections and field data. As a general rule, it will permit title to collections and field data to vest in grantee institutions where adequate facilities for collections and public accessibility for study purposes are guaranteed; however, the grantee institution is required, as a condition of the grant, to forward a representative set of the collections to the U.S. National Museum.

The *Ellanin's* program of sampling the antarctic seas includes continuous coring of the bottom sediments. During the next decade this operation may be expected to produce close to 40,000 feet of bottom cores, which must be preserved

for study by contemporary scientists and future generations. Under grant from the National Science Foundation, construction is expected to begin soon on a 9,300-square-foot core storage facility at Florida State University, where the cores will be kept under controlled temperature and humidity conditions. From there, sections of the cores will be made available on request for study by specialists throughout the country.

To represent the national effort in international polar research, to provide a representative medium for national antarctic scientific efforts, and to accommodate monographic or fuller treatments, the Antarctic Research Series has been created. Published by the American Geophysical Union with the aid of a grant from the National Science Foundation and under the supervision of a board of associate editors, four volumes have appeared to date in this series. Volume I was entitled "Biology of the Antarctic Seas," volume 2, "Antarctic Snow and Ice Studies," volume 3, "Polychaeta Errantia of Antarctica," and volume 4, "Geomagnetism and Aeronomy." Volumes on geology, glaciology, meteorology, and pedology will appear in the series.

In order to summarize the present knowledge of the Antarctic, a project entitled the "Antarctic Map Folio Series" has been instituted at the American Geographical Society with funds provided by the National Science Foundation. This series is to contain some 20 folios prepared by more than 50 contemporary experts in the various scientific disciplines. In addition to serving as a general reference source for antarctic information, the series is intended to be a working tool for scientists carrying on continued studies or initiating new research in the Antarctic.

The production of maps represents an important facet of the U.S. antarctic research program. The antarctic aerial photography and map library is located at the Branch of Special Maps of the U.S. Geological Survey, where prints and negatives of aerial photography flown for mapping and for other special purposes are filed. Included in the latter category is low-altitude photography of penguin rookeries, special areas of geological interest, etc. Maps and charts produced as part of the U.S. mapping program in Antarctica, special large-scale maps, and maps received from foreign countries through the Scientific Committee on Antarctic Research are on file in this library.

Like the exchange of scientists between national expeditions in Antarctica, the exchange of publications with foreign agencies engaged in Antarctic research contributes significantly to the current awareness of operations and results of research by other nations, vital in the efficient conduct of a national program operating with limited funds. The National Science Foundation carries out an active publications exchange program with the 11 foreign countries most active in Antarctic research.

Russian activities in Antarctica are reported regularly in the Information Bulletin of the Soviet Antarctic Expedition, which, in turn, is being translated into English by the American Geophysical Union under grant from the National Science Foundation. Of the 48 original issues, 44 have been translated. The first 30 issues were published in 8 volumes, each containing 10 bulletins; subsequent translations have been published in single issues of two bulletins each. Translations of other foreign materials are being prepared and issued as feasible, using excess foreign currencies available to the U.S. Government in Israel.

In order to assure maximum availability of reports on Antarctic research, the National Science Foundation deposits a copy of each such report prepared with Government funds, with the Clearinghouse for Federal Scientific and Technical Information of the U.S. Department of Commerce. This agency, in turn, announces the reports' availability in its publication, U.S. Government Research Reports, and reproduces copies on request. The Foundation furthermore encourages its grantees for Antarctic research to report their current activities to the Science Information Exchange, where all available data on nonclassified Government-sponsored research are kept on file.

Mr. TAYLOR. Will you yield?

Mr. O'BRIEN. Yes.

Mr. TAYLOR. You have a scientific climate in which you develop or interchange with others, is that right?

Dr. HAWORTH. Yes.

Mr. TAYLOR. Do you get much information of value from the other countries and how extensive is it and are their programs?

Dr. HAWORTH. I will answer it in a general sense, but will ask Dr. Jones to amplify. We do get a good deal of very useful information. We get useful information even from the Soviets. And as you recall, I spoke of translations. A part of these are Soviet translations. I do not believe that I specifically stated so in my statement. If I did not I should have. As to the exchanges in Antarctica, we have had people stationed with the Soviets at the Soviet stations and they have had people work at our stations. They have had people on the *Eltanin*. And so far as we can tell they give us all of the information they get. But I will let Dr. Jones talk more about that.

Dr. JONES. There is a complete arrangement for exchange of all publications and all data with the International Data Centers and through the exchanges in SCAR which takes place. Also there is exchange through our office and all of the other scientific offices of the other 11 centers. We have an arrangement by which everything published is exchanged—everybody is sent a copy—a copy is sent to each of these centers, and we receive from them one of everything.

On top of that, the Soviets have arranged with us, for example, relative to this long traverse that is coming up, ways to make our data more compatible. We are, on our traverse, stopping at two or three stations where their traverse has stopped, so that we can make a similar measurement ourselves and thus make sure that we can compare their data to our data very precisely. This is how uniquely the arrangement works.

Mr. TAYLOR. I understand your program of cooperation is working in all respects?

Dr. JONES. It is so much better than anticipated—the Soviets are even operating some of our electronic equipment. We are constantly getting through the TWX—through the wire system—information sometimes that it does not work today, and asking what can they do to help keep it in repair—they are sending data from their Vostok station where we have mounted equipment to get data. This means that we do not have to have another man there.

Dr. HAWORTH. I might take the time, Mr. Chairman, to give a very interesting sidelight on the traverse operation; at least it was to me. In the traverse that Dr. Jones was speaking of, our people stopped at one of the Soviet stations. They knew that we would be there sooner or later. They had left complete instructions on how to use the diesel engines and so forth, and they left a supply of cigarettes for our people—deliberately, of course. So we see that between the people at this level there is a very warm relationship. Incidentally, I have had a good deal of contact with the Soviet scientists in other fields, particularly with regard to large accelerators in physics and so on. And that same spirit exists and prevails. It is a very friendly, person-to-person type of thing.

Mr. O'BRIEN. Those cigarettes, they did not bear a health warning, did they?

[Laughter.]

Dr. HAWORTH. I am afraid not.

Mr. O'BRIEN. How about the data obtained prior to the IGY—was anything done to classify that?

Dr. HAWORTH. You mean to analyze it?

Mr. O'BRIEN. Yes.

Dr. HAWORTH. And so on? Yes.

Mr. O'BRIEN. Will that be available or is it in preparation now?

Dr. HAWORTH. Of course, it is a very small amount. The scientific data then were very small in amount compared to what has been done since.

Mr. O'BRIEN. A great deal of it, I assume, is also covered in the later material that you have in there?

Dr. HAWORTH. Yes.

Mr. O'BRIEN. Thank you.

Mr. Hosmer?

Mr. HOSMER. Dr. Haworth, with what committee or committees of Congress do you deal with as to the 5-year plan?

Dr. HAWORTH. As such it is not reviewed. However, as I have said, this is a line item in our budget. And the Subcommittee on Independent Offices of the House Appropriations Committee always spends a fair amount of time in hearings about this program.

Mr. HOSMER. This year's?

Dr. HAWORTH. I beg pardon?

Mr. HOSMER. This year's part?

Dr. HAWORTH. Yes; that is the specific purpose, but what happened last year and what we expect to do in the next few years is always discussed. I would say that Mr. Thomas' subcommittee spends a good deal more time, per dollar, on this program than on most programs that we take before it. I say, per dollar, more than in other programs.

Mr. HOSMER. Do you know Dr. Taub?

Dr. HAWORTH. I do not know him.

Mr. HOSMER. Chairman of the Board of Documentation?

Dr. HAWORTH. I do not know him.

Mr. HOSMER. Do you know him, Dr. Jones?

Dr. JONES. Yes.

Mr. HOSMER. He is eminently qualified, is he not?

Dr. JONES. Yes; I believe he is.

Mr. HOSMER. He is?

Dr. JONES. I say that he is. I believe he is. I am not sufficiently familiar to be able to judge, but I would assume so.

Mr. HOSMER. He is not some kind of a nut, is he?

Dr. JONES. I have not been apprised with the fact that he is some kind of a nut.

Mr. HOSMER. He says, "A power elite, economic, scientific, or priestly, whether its base is the National Academy of Science"—and we might interpolate, the National Science Foundation—the multi-versity, described by President Kerr of the University of California, or the executive agencies, will never monitor itself, nor reform itself.

"Congress is the only instrument in our society that can properly undertake this task."

Dr. Haworth, do you generally agree or generally disagree with Dr. Taub's observation?

Dr. HAWORTH. Well, I disagree with the statement as made on two counts. I believe that the National Science Foundation, if you want to include that, and other governmental agencies, do monitor themselves. I have great confidence in the National Academy of Sciences, and on the other hand I thoroughly agree that Congress has a role—an important role in this, too, but I do not think that you should put the one in opposition to the other. I think it is a mutual thing.

Mr. HOSMER. You understand the effort that Congress is making in the form of these bills is to deal with this problem, do you not?

Dr. HAWORTH. Yes. I understand.

Mr. HOSMER. Do you have any alternative suggestion as to how it might go about it?

Dr. HAWORTH. I am not qualified to try to judge how Congress should go about its business.

Mr. HOSMER. Well, now, in another area I think you also feel that Congress ought to be kept pretty far away, as, for example, as I understand it, in the administrative setup for the high energy field—which should be carried on in scientific areas.

Dr. HAWORTH. I do not feel that Congress should be set apart from that at all.

Mr. HOSMER. That was my question, whether it should be.

Dr. HAWORTH. No; I do not feel that at all.

Mr. HOSMER. You related a great amount of progress and accomplishments and things like that in connection with Antarctica. What has not been done that should have been done?

Dr. HAWORTH. Well, I would rather say what remains to be done.

Mr. HOSMER. That is not my question. We are trying to find out whether any deficiencies have shown up to the present moment.

Dr. HAWORTH. In all such programs one wishes that he could have accomplished more up to a given time than he has accomplished. And if you would allow me to change that to say what has not been done that would be good to have been done had the capabilities and the funds and all of the rest been there—

Mr. HOSMER. No; I want to know what has not been done that should have been done.

Dr. HAWORTH. Well, I do not know that I can say anything in that sense—in the sense as I interpret your question to mean—in the sense of failure on somebody's part.

Mr. HOSMER. In other words, you assess the present structure as having done that which should have been done?

Dr. HAWORTH. I believe I would say that. I can say this impersonally, Congressman Hosmer, of course, because the vast majority of it was done before I had anything to do with it.

Mr. HOSMER. You have not been down to Antarctica?

Dr. HAWORTH. No.

Mr. HOSMER. I believe others have been, but you have not been there?

Dr. HAWORTH. I am very sorry to say that I cannot go for reasons of a personal disability that cannot be taken care of there.

Mr. HOSMER. Having assessed the accomplishments of the Antarctica program, what would not have been accomplished if we had had a commission as outlined here, rather than the structure that exists today?

Dr. HAWORTH. I would not even hazard a guess. I would not even claim that there is anything that has been done that would not have been done. The chances are that some different things would have been done, because one group of people would make some different decisions than another group of people, but I would not attempt to make any comparisons as to that.

Mr. HOSMER. You do not see any real danger in the form of a deterioration of the effort that this legislation would create?

Dr. HAWORTH. No, not——

Mr. HOSMER. In this field?

Dr. HAWORTH. Not anything that I would call a serious danger, no. As I said earlier, on the other hand, I consider it a matter of judgment.

Mr. HOSMER. It is a matter of organization, too, that we are talking about here, is it not?

Dr. HAWORTH. That is right.

Mr. HOSMER. As I understand it you come from a large background of organization and administration experience?

Dr. HAWORTH. Fairly well.

Mr. HOSMER. You testified to that before one other committee.

Dr. HAWORTH. I have had a fair amount of it.

Mr. HOSMER. But your basic discipline is what?

Dr. HAWORTH. It is physics, but I have not been a research physicist for 17 years.

Mr. HOSMER. You participated in the operation of the Atomic Energy Commission?

Dr. HAWORTH. That is right.

Mr. HOSMER. And now you are the Director of the National Science Foundation?

Dr. HAWORTH. That is right.

Mr. HOSMER. Did any of these prior activities involve extensive fieldwork?

Dr. HAWORTH. No. The only activities that I have ever had that involved extensive fieldwork were during the war when I worked at the Massachusetts Institute of Technology Radiation Laboratory that developed microwave radar, et cetera. We had fieldwork there, even then with the troops.

Mr. HOSMER. You mentioned in your testimony as one of the accomplishments in Antarctica the inspection under the provisions of the Antarctic Treaty, did you not?

Dr. HAWORTH. Yes.

Mr. HOSMER. That has nothing to do with any of this organizational problem, does it?

Dr. HAWORTH. No; but the organization worked very smoothly and——

Mr. HOSMER. It came about after the test ban because of the criticisms about the special provisions that we wanted to have on inspections?

Dr. HAWORTH. It was before that.

Mr. HOSMER. What?

Dr. HAWORTH. It was before that.

Mr. HOSMER. But it was not carried out?

Dr. HAWORTH. It was not carried out.

Mr. HOSMER. You have a lot of advice given you by the National Academy of Sciences?

Dr. HAWORTH. That is right.

Mr. HOSMER. Is that paid for?

Dr. HAWORTH. In some instances. We have a contract with the National Academy under which they have tasks; some of them are to prepare, occasionally, a report for us, but the majority of it is for such activities as the exchange of scientists with the Soviet Union, such things as helping evaluate our fellowship applicants, and so forth.

Mr. HOSMER. Is it generally a satisfactory arrangement?

Dr. HAWORTH. Yes.

Mr. HOSMER. It is an arrangement which would be impossible for a commission rather than the National Science Foundation to carry out?

Dr. HAWORTH. It would be quite possible for the commission to do so.

Mr. HOSMER. As a matter of fact, Dr. Laurence Gould, was he not at one time an Eagle Scout in the antarctic program?

Dr. HAWORTH. He has spent a great deal of time in the Antarctic.

Mr. HOSMER. Well, I understand that generally your conclusion is that you can see that there would be no deterioration of the program in the Antarctic if this commission were established, but that you think that organizationally it might not be the best way to do it—is that a good wrapup or a summary of what you have said?

Dr. HAWORTH. I would put it a little differently. I cannot say that there would be a deterioration, but I think that you would get a more cumbersome way to do it from the executive standpoint.

Mr. HOSMER. You cannot either say that there would be an improvement?

Dr. HAWORTH. That is right.

Mr. HOSMER. Involved in it—there might be?

Dr. HAWORTH. There might be—it might be either way.

Mr. HOSMER. You and some of the other people who have been doing the job might not be quite as enthusiastic about it due to the fact that they are there, to get the job done.

Dr. HAWORTH. I am sorry, I did not hear you.

Mr. HOSMER. We have been giving opportunities to your predecessors on the witness stand to make self-serving statements about the quality of the organizational work that has been done. And properly you have grasped these opportunities to the best advantage possible. We have heard that it has the finest type of organization in the world, with skills, and that it is making tremendous accomplishments which I think is all true. But possibly that there is an opportunity to do an even better job.

Dr. HAWORTH. I might say one thing, going back for a minute or so to what you were saying before. One thing, of course, that is very important in any of these things is who is it that does the work. I mean, the people in the organization are perhaps even more important than the organizational structure. The following may be an agency self-serving statement, but it is not a personal self-serving statement; namely, I think that Dr. Jones and Dr. Crary are among the most effective people on the Foundation's staff, and that no small part of the fact that as much has been done as has been done is because they have been effective and because Admiral Reedy and his predecessors and their staffs have been effective.

Mr. HOSMER. I think that is true, but we are talking about an in-generated effectiveness. You are not talking about the type of organization where somebody else would suggest ideas and have a ready means to get this input across.

Dr. HAWORTH. I was making that merely as an illustration.

Mr. HOSMER. Thank you, Mr. Chairman.

Mr. O'BRIEN. I thank you, too, Dr. Haworth, for your testimony.

Mr. HOSMER. There is one further question that I want to ask. Do you have a term of office in the National Science Foundation?

Dr. HAWORTH. Yes. I believe the language of the act says—the term will be to serve for 6 years unless sooner removed by the President.

Mr. HOSMER. That is not true of Mr. McNaughton?

Dr. HAWORTH. No, I believe not.

Mr. HOSMER. It is not true of many others. And the commission that we would set up would have a director who would have a 6-year term and the commissioners would have 6-year terms. That would seem to me to give—assuming that they do handle the policy matters—a great deal more continuity than exists in the policy group setup because of the fact that only one of the three members of the policy group would have that tenure.

Dr. HAWORTH. Possibly so.

Mr. HOSMER. Is there not some value in some continuity in the policy group tenure?

Dr. HAWORTH. Certainly, there is value in having continuity. I do not know how it might work out, which would turn out to be the best, as many people would be involved.

Mr. HOSMER. Thank you. What is the normal expectation that we are concerned with?

(No response.)

Mr. O'BRIEN. Apparently, our problem is made more difficult by the fact that you are doing a good job, a very good job. Of course, right now, whether a better job could be accomplished under the plans that have been submitted to the Congress, is the question and, at least, we have had the value of hearing—we would have the value of hearing once in a while what was going on down there and we would have that opportunity. It does not mean that it could not be done better if we had this continuity that Mr. Hosmer spoke about. We just do not know.

Dr. HAWORTH. That is right.

Mr. HOSMER. The buildings are in lousy shape. The equipment is not decent equipment—they do not buy decent equipment. I just do not want the record to indicate that there are not questions as to the wisdom or the unwisdom of some of the actions that have been going on.

Mr. O'BRIEN. I think that some of those difficulties to which Mr. Hosmer refers might be well corrected if the Congress had a greater role to play in this. I assume that those who would ask for the appropriations would get them—I think, perhaps, if we had an agency which we dealt with more directly we could take care of some of these situations. Do you agree that there could be great improvement there in the physical facilities? And how do we go about it?

Thank you very much, Dr. Haworth, and Dr. Jones, for your testimony.

Dr. HAWORTH. Thank you, Mr. Chairman. It has been very pleasant.

Mr. O'BRIEN. We will ask permission to place in the record a paper at this point, a statement by the Honorable Robert M. Mangan, Deputy Under Secretary of the Department of the Interior. He had a problem today and cannot be here. I took the liberty of suggesting that we place his statement in the record. Apparently, he has even less to say about it than we do. If there is no objection, it will be made a part of the record at this point.

(The statement referred to follows:)

STATEMENT OF ROBERT M. MANGAN, DEPUTY UNDER SECRETARY, DEPARTMENT OF THE INTERIOR

Mr. Chairman and members of the Subcommittee on Territorial and Insular Affairs, I am pleased to be here today to present the Department of the Interior's interest in Antarctic programs and to comment on H.R. 555 and related bills which would establish a commission for the handling of U.S. Antarctic programs.

My name is Robert Mangan and I am Deputy Under Secretary of the Department. I have with me today Mr. Rupert Southard, Assistant Chief Topographic Engineer for Plans and Program Development, of the U.S. Geological Survey. Mr. Southard has been connected with the topographic mapping activities in the Department in Antarctica and since November 1963, has handled a major amount of our program coordination with other agencies. Also with me is Mr. William Terry, Director, Office of International Relations of the Fish and Wildlife Service. Mr. Terry is a specialist in international matters concerning conservation and has been cooperating with the Department of State, National Science Foundation, and other agencies on development of measures for conservation of living resources in the Antarctic. These gentlemen will be able to answer questions you may have about the details of our work with the Antarctic program.

As many of the committee members will recall, the Department has participated extensively in antarctic explorations and research since the start of the International Geophysical Year in 1957 and 1958. We first specialized in geological, geophysical, and mineralogical explorations in cooperation with the National Science Foundation. Since the end of IGY we have continued geological work, and performed extensive topographic mapping. The Department, through its Board of Geographic Names has handled for the United States, the assigning of geographic names to areas and features of the Antarctic.

More recently we have had a prime responsibility for the development of conservation measures which hopefully will be followed by all nations having programs in the Antarctic. This should provide protection to the seals, penguins, other birds and aquatic life found in the Antarctic Treaty zone.

Our policy has been to bring the competence of our specialists to bear on research and conservation in the Antarctic as we do on other areas in which the United States has a strong interest. This scientific effort has been in cooperation with the National Science Foundation. The NSF has been assigned major responsibility for funding and coordinating of U.S. research in the Antarctic. At this stage of development of knowledge about Antarctica the program is of a research and exploratory nature and we expect that it will be for some time in the future.

A major portion of the work handled by the Geological Survey has been topographic mapping in support of the U.S. Antarctic program. Maps and charts are needed to plan, carry out, and interpret the results of the many and varied scientific programs, as well as to assist the logistic effort of the supporting organizations. The maps are made in Washington using aerial photography flown by the Navy following specifications set forth by the Geological Survey. To establish field control for this mapping the Geological Survey has sent two to eight topographic engineers to the Antarctic each astral summer since IGY. Modern equipment used by these field parties include helicopters and electronic distance-measuring instruments. Each year since 1960, we have stationed a photographic expert in New Zealand to inspect all film as the programmed missions are accomplished, and to advise Navy personnel on necessary reflights. The primary product of the topographic mapping effort is a series of reconnaissance maps at a scale of 1:250,000. To date, 60 maps at this scale, covering approximately 250,000 square miles, have been published or are in various stages of compilation.

The Department has maintained a continuing program of field geologic studies in Antarctica, staffed chiefly by career scientists. The scope of this research program spans all of the earth sciences and for the past 6 years one or more Geological Survey field teams have conducted antarctic research in geology, glaciology, and related disciplines. These investigations have been located chiefly in the Thiel Mountains, the Neptune Range, the Patuxent Mountains, and in North Victoria Land. The field studies are coordinated with those of U.S. university and foreign geologic teams and are supplemented by diversified research in the Geological Survey's laboratories in the United States. Scientific

results of these studies have been published. Though the program is oriented toward research in the earth sciences, the data gathered are essential for mineral resources evaluation which is a byproduct of the scientific work. For example, coal deposits in the Transantarctic Mountains have been examined and partially evaluated by geologists of both the Geological Survey and the Bureau of Mines.

The other witnesses who have appeared before me have described in detail the planning and coordinating mechanisms which are being used to execute the antarctic program. For purposes of illustration I will describe briefly how Interior has participated.

Responsibility for overall coordination of the Department's antarctic interests was placed with the Secretary's science adviser in the spring of 1962. Representation on the Interagency Antarctic Coordinating Committee was handled directly by this office for over a year and was then transferred to the Geological Survey. Program requirements are thus handled by scientists who have first-hand knowledge of the work being carried out. The science adviser maintains contact with activities and when appropriate calls upon departmental specialists outside the Geological Survey. For example, development of a U.S. position on measures for conservation was drafted by the staff of the Fish and Wildlife Service. Arrangements for biologists to join U.S. teams making inspections under the Antarctic Treaty were handled by the science adviser.

As we view the U.S. interests in Antarctica at the present time, there are three major areas of responsibility. The first concerns international aspects which require administration of agreements under the Antarctic Treaty and maintenance of a favorable U.S. position in the Antarctic. Responsibility and leadership in this area falls naturally to the Department of State.

The actual program involves physical and biological exploration and research into the unique phenomena in the Antarctic. This is a little known area of the world which may hold useful resources. Also, it offers unique opportunities for location of operational bases for weather observations, satellite tracking, communications and transportation. As I stated previously, these programs consist mainly of the scientific research and exploration which are still necessary to learn more about the Antarctic before it can be put to more practical use. Overall responsibility for this aspect of U.S. activities in the Antarctic has been assigned to the National Science Foundation.

The total effort requires the third area of responsibility which is extensive and specialized logistics support on land, at sea, and in the air. This has been carried out very effectively in our opinion by the Navy all through the International Geophysical Year expeditions as well as for programs in more recent years.

Department of the Interior's immediate part of the scientific effort is the geophysical and mineralogical investigations and the topographic mapping which I described previously. Our programs have been designed to meet requirements of the total scientific effort. While Interior's work in the Antarctic has been an essential part, it has not been large or necessarily a dominating factor in planning the total.

From this point of view, we have found the present coordinating mechanisms satisfactory. The logistics support furnished by the Navy for field parties and the flights for aerial photography in the mapping program have been outstanding. In the general area of planning there has been good communication among responsible staffs, and, when necessary, agency positions have been quickly attained.

In view of the apparent effectiveness and flexibility of present procedures for both policy and operations, we believe that a separate coordinating commission is not needed. We express this opinion from the point of view of our experience in the Antarctic as gained from the past work and program responsibilities that we have had to date. However, we are very interested in the subject and therefore appreciate the opportunity to express our views on these bills before the subcommittee.

Mr. O'BRIEN. The next witness is an old friend of many members of the committee, a very able gentleman, Rear Adm. David M. Tyree, U.S. Navy (retired), former U.S. antarctic projects officer.

**STATEMENT OF REAR ADM. DAVID M. TYREE, U.S. NAVY
(RETIRED), FORMER U.S. ANTARCTIC PROJECTS OFFICER**

Admiral TYREE. Mr. Chairman and members of the subcommittee, it is nice to be here. It is a privilege to be permitted to testify once again before this subcommittee on the important matter of organizational planning and the conduct of antarctic affairs. I appear, of course, as a private citizen and not in any official capacity, but after a year and a half of retirement I still maintain a vital interest in the antarctic region.

I apologize for not having a typewritten statement to distribute, but living as I do now on a farm down in Virginia I do not have ready access to stenographic services.

Mr. O'BRIEN. And no mimeograph machine on your farm?

Admiral TYREE. No, sir, I do not have one. No paperwork.

With your permission, Mr. Chairman, I would like to talk from the notes that I have made.

Mr. O'BRIEN. Fine.

Admiral TYREE. Since last appearing here on May 28, 1964, I have reviewed in some detail the records of the hearings conducted in the past several years which pertain to the establishment of an Antarctic Commission and other materials which bear on this matter, and this review has strengthened my conviction that an Antarctic Commission should be established.

First, I would like to reemphasize certain points in the statement I made last year. So far as I know, the Bureau of the Budget Circular A-51, issued August 3, 1960, is the document still governing the division of responsibility for the antarctic program, except that the duty of coordination for the totality of antarctic activities was assigned to the State Department upon the disestablishment of the Operation Coordination Board in 1961.

Commencing in 1961 this coordination has been accomplished through informal discussions in a committee composed of representatives of the numerous departments or agencies having antarctic interests, a committee chaired by the State Department representative.

No statement of national policy and objectives, no plans for the totality of antarctic activities, no adequate overall guidance for a total program has been issued under this arrangement prior to my release as U.S. antarctic protocol officer in 1963.

As I have learned from testimony given earlier in these hearings, an Antarctic Policy Group has been established recently, consisting of the Assistant Secretary of State, the Assistant Secretary of Defense for International Security, and the Director of the National Science Foundation. This should contribute as one step toward a possible solution for the complicated problem of planning the coordination and administration of the antarctic activities. However, I hope it will not be thought impertinent if I say that in my opinion it has certain shortcomings.

As you know, during my first 2 years as U.S. antarctic project officer and commander of U.S. naval support force I said, in effect, that I believe that time should be allowed for a trial of the organizational arrangements established for the post-IGY period before attempting to change its organization. By the end of my third year in command

I had concluded that an Antarctic Commission was needed if the United States was to get the maximum return from its antarctic activities. However, after my return from the ice in the spring of 1962, with the end of my third year, because of continuing opposition within the executive department and agencies to an Antarctic Commission, I recommended a substitute solution which I thought might at least partially alleviate some of the shortcomings which I believed to be inherent in the existing organization.

Three years ago, then, I recommended a three-man policy and coordinating committee be appointed by the President, composed of representatives of State, Defense, and the National Science Foundation, and provided with a permanent secretariat, and that the members of this committee be those persons at the highest level of full-time responsibility for antarctic activities.

Under the organization existing in State at that time this would have been Mr. George Owens, who had the antarctic desk there. In NSF, Dr. Jones, as the head office of the antarctic program. And in Defense myself as U.S. antarctic project officer.

I further recommended that this committee be given responsibility for recommending national policy and objectives for the Antarctic, to be submitted through proper channels to higher authority for approval, and that it be given authority to provide guidance for the budgeting and conduct of operations within the framework of approved policy.

In December of 1962 I was informed by the Chief of Naval Operations that this recommendation had been disapproved. How far it got I do not know.

I have discussed this with Dr. Jones and Mr. Owens and their reaction appeared to be favorable, but as far as I know there was no active support for this proposal given by State or NSF.

I would like to emphasize, though, that as far as I was concerned this recommendation was a stopgap measure to accomplish strictly by Executive action a partial attainment of the objectives of the Commission, a Commission which was posed at that time by the executive branch. To me its disapproval was symptomatic, of the lack of understanding at that time of the problems inherent in the existing Antarctic organization.

Returning now to the recently established policy group, although the level of authority within their respective departments which the members of this committee hold has many advantages the effectiveness of the group may be handicapped because of the many pressing responsibilities not related to Antarctica which each of its members have.

Second, it should have a permanent secretariat to provide records, study papers, and continuity. It may happen, but I have not heard it mentioned.

And, third, I am becoming more and more concerned that increasing attention must be paid to commercial and economic potentials in Antarctica. Neither the present Policy Group nor the group I proposed in 1962 seems altogether suited to this.

Going back now to the Bureau of the Budget Circular A-51 this document made a clear separation of responsibility for the scientific effort under the National Science Foundation and the conduct of operations in support of the scientific or other programs in Antarctica under the Department of Defense.

Based on all that I have heard about the Antarctic program I feel sure that each is discharging its separate responsibility with competence. As, in fact, all departments and agencies concerned with antarctic activities, as far as such activities pertain to their own particular spheres of responsibility. This is not an unexpected, because each department or agency is competent in its own specific area to carry out its individual antarctic responsibility. This is not enough to insure an efficient, economic program thus designed to further our national interests. Too often responsible agencies have pulled in different directions with quite honest differences of opinion. Examples of this may be found in the planning for the new Byrd Station, the implementation of the Joint Atomic Energy Commission authorization for the reactors, planning for mapping, proposals for stations, in the peninsula, establishment of the fly routes to South America, and so forth.

Many times differences of opinion have been resolved through the informal discussions of the interdepartmental committee, but informal agreements thus reached are apt to be inadequate in the justification of funding for required projects. U.S. interests thus may be injured through lack of authoritative, firm objective total planning. There is no single agency in which our complex interests in Antarctica come to a focus.

Five-year plans are formulated by different departments or agencies, but there is no single agency responsible for producing a 5-year plan for the totality of our antarctic efforts. And to say this is what needs to be done to further protect the U.S. interests in Antarctica. When funds and resources become a limiting factor there is no single agency responsible for establishing priority, so that first things will be done first. This involves more than separate determination of priority for scientific projects. Priorities for technological improvements or priorities for development of possible commercial applications in the future.

Acquisition of knowledge of the Antarctic through scientific research and the use of unique characteristics of Antarctica to investigate problems of worldwide scientific significance presently is concerned and considered by many, probably by most people, to be our principal reason for being there.

The provisions of the Antarctic Treaty give that as impetus to this idea.

I believe, though, that our reason for being there is more basic than just science; that it is to keep the United States in a position of leadership in the Antarctic both for our own security and in order that we may have a potent voice in the progressive development of this area of the world and to meet the future needs of mankind.

The Antarctic Treaty projects the use of Antarctica for peaceful purposes only. It prohibits measures of a military nature, but permits the use of military personnel or equipment for scientific research or for any other peaceful purposes. Incidentally, at least four other countries, to my knowledge, either are using or have used military personnel in Antarctica operations commencing with the IGY. I mention this because I think the question was asked in earlier testimony. The treaty deals specifically with the freedom of scientific investigation and exchange of scientific information, and so forth.

It deals specifically with the matter of territorial claims by placing claims on it and the basis of the claims in a status quo for the duration of the treaty. It has not come to grips with the total question of jurisdiction over persons in the Antarctic. It does not deal with commerce or economic resources in the Antarctic.

I said earlier that the Antarctic Treaty gives impetus to the idea that our only important aim in Antarctica is scientific research. This is because the treaty has provisions which deal specifically with scientific investigation. Scientific knowledge, certainly, is an important objective of our activities in the Antarctic today, but I see nothing in the treaty which prohibits the development of Antarctica commercial and economic potentials, provided its development is for peaceful purposes.

Technological advances in coping with the antarctic environment has significant importance both to improve our ability to support scientific programs and to make possible the development of this area for practical use.

Introduction by Admiral Byrd and extensive use by the United States of aircraft and track vehicles, for example, has had a profound effect on our ability to cope with the Antarctic environment and it has made possible most of our current expensive scientific investigation and is a major factor in putting the United States in the position it now holds in Antarctica.

Technological improvement in communications, aircraft, both fixed- and rotary-wing vehicles, photomapping, nuclear power, construction techniques, and other things which improve our ability to work and live in Antarctica must not be neglected in the competition for dollars. An Antarctic Commission would provide a focus for a community of Antarctic interest. It would provide a governing agency responsible under the President for a program designed to fulfill our national interests and objectives in the Antarctic. An agency that would be answerable to the President, the Congress, and the American people. It would provide a budget in a single passage that would stand or fall on its own merits which would be a measure of how fast and how far it could go in this region. It should provide the kind of organization needed to look beyond the immediate horizon, to find ways and means of utilizing an area that accounts for over 10 percent of the earth's land area, possibly closer to 15 percent and, perhaps, most importantly, it will provide continuity for our total effort in Antarctica.

In going over testimony given in the past it seemed to me that the most vehement arguments against the Commission, given by those who look upon science as the only reason of any important information and expenditure of effort in Antarctica, and where it is said, I think, that our basic reason for being there is to keep the United States in a position of leadership in that region, I do not belittle the importance of science in Antarctica—but I do wish to point out that Antarctica has potentials for supporting Southern Hemisphere transpolar air, tourist travel, satellite tracking, manufacture approaching protein-rich foods said to be abundant in this surrounding ocean—some of these things already have been mentioned by Dr. Haworth in his statement. Permit me to quote from Paul Siple's statement published in the record

of the 1960 hearings. This is Dr. Paul Siple who has, probably, wintered over more in Antarctica than any other man:

It is my firm conviction that Antarctica will become increasingly important as the rest of the world is growing overpopulated and short of land space. And, specifically, the South Pole will gain in importance with the advancement of the satellite age. The great mass of almost chemically pure snow and ice may become significant to industry whose competition for water with the increasing population and agricultural demands grow stronger each day. Approximately, the type of industry first to use Antarctica will be that with a high fresh water demand, and a need for space unencumbered by dense population and consequential animal and plant life. Antarctica coal reserves may become eventually sources of second carbon-bearing raw materials for the manufacture of much-needed byproducts.

These are just some of the things that may take place in Antarctica. I think it is no longer true that scientific knowledge will be the only export from Antarctica in the foreseeable future, although it will surely be one of the most important. I predict that some of these other things I have mentioned will come about in this decade.

I have not mentioned minerals other than coal, because the geologists say that we simply do not know whether or not there are mineral deposits of economic importance, but with the rapid advances being made today in technology to perform various tasks it is not inconceivable that such deposits will be found and means will be developed for exporting them.

All of this is simply to say that the Antarctic has commercial and economic significance as well as political and scientific significance.

In the bills being considered by this committee this fact is recognized. In the first sentence in the preamble of these bills it says—

A bill to provide for continuity and support of studies, research, and development programs for peaceful purposes in science, commerce, and other activities related to Antarctica—

and so forth.

I recognize that it may be pretty premature at this point in the hearings to discuss in detail the provisions of the bills. However, in order to indicate how I visualize such a commission might operate I would like to make a few brief comments on these provisions.

It is noted that the bills for the Antarctic Commission which have been introduced are similar in intent. There are some differences in the degree to which some of the mechanics are spelled out. I believe that Mr. Hosmer's bill, Mr. Saylor's bill and Mr. Morton's bill are identical. I would like to confine my remarks to H.R. 5494, the most recent bill to be introduced. It is suggested that section 4, clause 2, be modified to read, "conduct or arrange to have conducted." The words "arrange to have conducted" would be added.

Mr. O'BRIEN. What number was that again?

Admiral TYREE. Section 4.

Mr. O'BRIEN. I mean what bill number?

Admiral TYREE. H.R. 5494. That was the last one introduced. As I say, Mr. Hosmer's bill, Mr. Saylor's bill I think, are identical to this. They go into a little more of the mechanics and the financial arrangements than does Mr. Zablocki's bill. But it is suggested that section 4, clause 2, be modified to read "conduct," and then add the words---

or arrange to have conducted such field and laboratory studies and evaluations as is considered advisable to further the knowledge of the Antarctic and science, commerce, and related activities—

et cetera. That is, to read after the inclusion of the words, "arrange to have conducted such field and laboratory studies and evaluations," and this would be added, "and pilot developments," to go ahead of "as it considers advisable to further the knowledge and exploitation"—the words, "and exploitation" would be added there, and to continue, "of the Antarctic in science, commerce, and related activities," and so on.

As I say, I realize it is premature to discuss in detail these provisions or to suggest corrections.

Mr. O'BRIEN. May I suggest at this point, Admiral, that it is not premature at all. As a matter of fact, it is almost too late, because you are the first witness I have heard who has even discussed any provisions of the bill. We have had a solid array of witnesses who have just said, "No." Presumably, of course, perhaps nothing is going to happen, but I think that it is very valuable that you have taken the time and the trouble to give your opinion of the Antarctic, to discuss the details of the legislation actually sponsored by so many distinguished members of this committee. I, for one, think that you are not premature at all.

Admiral TYREE. Well, I feel that these comments that I do make on changes will indicate to some extent the way in which I would visualize that this Commission would work. And so considering the suggestions suggested by the National Science Foundation, which has built up an organization for the conduct of an Antarctic research through grants to universities and other Government agencies, and so forth, that we have heard about this morning, and it is my opinion that the best way to implement the scientific program under a commission organization, at least, initially may be through utilization of the services of the foundation on a reimbursible basis. The Commission should at least have the option of doing this to the extent desirable as experience develops and the alternative, of course, would be to absorb the major part of the National Science Foundation's Office of Antarctic Programs in the Commission itself.

Likewise, the Commission should have flexibility for arranging with the Department of Defense, the Department of Commerce, the Department of Interior and other governmental agencies or private industry, as necessary, for the conduct of Antarctica activities. The Commission should be permitted to conduct or arrange to have conducted pilot development as well as studies in evaluation and the door should be left open for exploitation.

Section 4, clause 4, I think it was commented on once before—the words, "the national defense," should be deleted because of the restrictions of the Antarctic Treaty.

It is suggested that clause 2 of section 4 be expanded to permit contracts for logistic support with private industry if this at any time becomes necessary.

It is recommended that section 4(b), be expanded to include as a function a requirement that the Commission present to the President through the Secretary of State recommendations as to the national policy and objectives in the Antarctic. I assume that such proposals would also come before the National Security Council.

Moving now to section 9, it is my opinion that this section should provide that the board of governors be responsible for establishing

commission policies and for reviewing and approving commission programs. The board of governors is a part of the Commission and should have the ultimate authority within the Commission. The Directors should manage the Commission's affairs, consistent with the policies and guidance established by the board.

It is suggested that the first sentence of section 9 be modified to say, "the board—consisting of 11 members—including the director, who is a member *ex officio*," and so forth. The wording there is not quite clear.

Section 9, clause (d)—I may be using "clause" and "paragraph" in the wrong sense, but clause (d) which is over on page 10, and item 4 under that, requires the board to make recommendations to the commission.

Section 3 includes the board of governors as a part of the commission and I believe that the board's function should include the establishment of such policies and requirements as are considered appropriate for the advancement and dissemination of knowledge, the development of commerce and exploitation of economic resources of Antarctica. In other words, the board would be a board of directors, you might say, for the commission.

It is recommended that clause (e), of section 11, be qualified to require the Navy to provide only such support as it has available without interfering with its primary mission.

And clause (a) of this section may cover this, but clause (c), as it now reads might be misinterpreted.

It is suggested that section 11(b) be expanded to specifically provide for advice by the polar committee of the National Academy of Sciences.

I feel confident that in these hearings much wiser people than I in administrative matters and in legislative matters would grind out a bill which would say just exactly how this commission would operate, and it would be based on the consensus of the best thinking that could be brought to bear upon it. And I have abiding faith that this could be done. I would hope that the staff of the Antarctic Commission would be relatively small in numbers. That is, sufficient only to permit the commission to recommend national policy, establish supporting policies, promote an overall broad plan, review and approve supporting plans prepared by other agencies, budget and administrative appropriate funds for the total antarctic activities and monitor the execution of antarctic programs. To do this with a small staff would require maximum utilization of the services of other departments and agencies and private organizations. I feel that success would be achieved if the commission, as far as possible, avoids becoming involved in the actual detailed conduct of operations.

In conclusion, I believe that such a concept of organization is the best solution available to the U.S. Government to insure that the best interests of this nation will be served by our antarctic program and I therefore favor enactment of either H.R. 555, H.R. 211, H.R. 4658, or H.R. 5494, with appropriate amendments to establish such an organization.

Mr. O'BRIEN. Thank you very much, Admiral Tyree. I might say, as I have said before, that you are the only person who has bothered to discuss the details of the bill. I think that we will have to vote either up or down on this legislation here. I think that we have gone beyond

the stage of having an annual party with which someone could emerge and get a little moment to explain what was going on, and that we are not going to do anything about these bills, but we are going to vote them up or down. It is ridiculous if we do not.

May I ask if you might be able to offer further assistance when we get to the point of marking up these bills?

Admiral TYREE. Yes, sir; I would be happy to be here.

Mr. O'BRIEN. You are a private citizen as you have said and live on a farm quite some distance away, but the point is that what you are saying and what you have said is from your own experience, right on the frontline of this whole operation. And may I ask you this question, while you were in the Antarctic, outside of occasional visits, was there ever anyone there along side of you to speak with authority for the overall program; in other words, was anybody as a representative from the State Department, other than yourself, who was in authority?

Admiral TYREE. Yes, sir. There was a senior representative there for the National Science Foundation to coordinate and direct the scientific activities on the continent, and we worked very closely together. As I have said before, our cooperation on the continent itself has never been the thing which has concerned me. There was no one, however, in authority in the Antarctic who had complete and total authority over the entire program. It was a question of cooperation. This worked down there. It does not always work back here in Washington.

Mr. O'BRIEN. Let me ask you this, at least, during your last year down there you had a commission of the kind proposed in operation, that is, if you had had this kind of commission as proposed, would it have added any difficulties to your work or would it have helped it?

Admiral TYREE. Mr. Chairman, I think it would have helped. I think it would have made it a more clean-cut operation. I think that these things that we try to do in logistics—it is not just logistics down there—not just the carrying of groceries—it is trying to develop a technology which will be useful in the Antarctic and to take advantage of the latest things that come along, and there was considerable discussion the last summer I was in Washington before I went back to the Antarctic concerning the usefulness of the Byrd Station. We had a very difficult problem on our hands at that time, because when the Byrd Station had been conceived—well, to go back a minute—the operations coordinating board, when it was in existence, issued an annual plan, and in preparation for the transition from the IGY to the permanent, long haul in Antarctic, they issued a plan, and they said among other things that bases will be maintained at the Byrd Station, McMurdo, Heller, and so forth, and various dispositions were made of the other three stations that had been built during the IGY. And this is my directive. And my directive then was to maintain a station in Roberta, the Roberta Byrd Station. Well, it was obvious that the Byrd Station was going to have to be replaced and it was becoming critical even before I relieved George Dufek, and when I went down there in the first year of my command there was considerable pressure to do something about the situation as quickly as possible. And after an inspection of that station it was obvious to me that if we were going to continue to stay there that we must do something.

In the meantime, the Bureau of Yards and Docks had been studying various concepts that could be used for the construction of this station,

including the one that would be patterned after Camp Century in Greenland. Really the idea was a forerunner of the thing that we used later at Astrup which would be a sled-mounted type of thing that could be hauled out of the snow each year, put back on top, so that it would not be crushed. And we considered an elevated station which we found to be quite expensive, and really involved more logistics than the others. But we concluded that if we were going to keep a station in Marysburgland that we should build it at a permanent station, something that we could be proud of and use for years to come.

And in addition to the scientific need up there it was obvious that the activity of expanding out there to the areas around Roberta, that we needed a staging station up there. And so we went ahead. I sent a message back to Washington that we must get started on this as quickly as possible. The funds were made available. The planning was expedited. By the time it got back the station was well in the mill. We had concluded that the station that should be built would be an undersnow station, such as patterned after Camp Century. We had hardly gotten into this when we began to get objections here and there from the Science Foundation. And we delayed. We delayed the procurement of such material, because we waited to get their ideas as to how best to establish the scientific facilities there. The station was built. The original concept included a nuclear reactor. It would be a large enough station for such. And this was part of the program which had been authorized by the Joint Atomic Energy Committee. In the summer of 1962 there was a problem that came up in connection with the installation of the nuclear reactor. The reason for finally abandoning this project was that it was too complex. I do not think it is of particular interest at the moment to go into that, but one of the things that we were anxious to determine at that time was what is the future—what will be the future usefulness of this station to the scientists? And at that time, in a conference over in the Office of the Chief of Naval Operation, the statement was made by those connected with the Office of Antarctic Programs in the National Science Foundation that they could not guarantee the Byrd Station's usefulness beyond certainly 5 years. They just simply could not see any further than that, and that they questioned whether it would have any essential usefulness for the long haul.

Well, this was a little disconcerting. It had a bearing on the question of putting a nuclear reactor into the Byrd Station. We backed off from that.

As I say, there were many other reasons for that, besides this. We cut back on our plan for completing the station up there and tried to reduce it down to a size where we could support it by this burning of fuel oil that goes on year after year, but we today find, at least, it appears to me, that the Byrd Station is expanding, and this is 3 years after this discussion. A new tunnel, I think, was cut last year. I think I saw that in some plan where another tunnel was going to be cut next year.

There are some very important projects going into the Byrd Station. However, the Science Foundation should speak for this.

I feel that this is an example of the kind of thing that disturbed me in which we feel that a commission would have been able to say right in the beginning, "This is what we want—let us do it."

Mr. O'BRIEN. Then that would be a case where not only we would know what you were going to do but we would also determine whether it would be more economical.

Admiral TYREE. Yes; that is right.

Mr. O'BRIEN. So that, as a matter of fact, it brings up a subject about which we have heard so much, at least, that there must be some direction, and that that would be very helpful.

Admiral TYREE. Yes.

Mr. O'BRIEN. As to these other countries that are in the Antarctica, to your knowledge, do you know whether they have, most of them, a single agency or a commission in charge of their antarctic endeavor?

Admiral TYREE. I think that most of them do, sir. They vary in form and organization, but most of them have a single authority in which the antarctic program is handled.

Mr. O'BRIEN. I know this is perhaps a delicate question in view of the treaty, but I will put it in a general way. Is it not a fact that any country which is there obtains from its operations far more than scientific knowledge? It also obtains military knowledge. In other words, you are in a position to observe the impact of the extreme weather on both men and machines, is this not correct?

Admiral TYREE. Yes, sir.

Mr. O'BRIEN. And that is the kind of knowledge that is not necessarily limited to the Antarctic, but could be—but could have usefulness elsewhere?

Admiral TYREE. That is right.

Mr. O'BRIEN. I am not speaking now just of the United States—I am speaking of others. There is, as you said, much more importance than science, must more value to it than that.

Admiral TYREE. The experience that is gained in the Antarctic cannot help but give a byproduct of experience that would be useful in other areas of any country.

Mr. O'BRIEN. Yes.

The aircraft alone.

Admiral TYREE. That is right. We learned a great deal about operating aircraft in the polar regions there, through this operation.

Mr. O'BRIEN. In fact, I learned a lot about that myself one day. We landed at the South Pole. We were overflying it. I was very happy that we had learned a great deal about it at that particular time.

Admiral TYREE. We try not to be too rough, Mr. Chairman.

Mr. O'BRIEN. Mr. Taylor?

Mr. TAYLOR. I am glad to join the chairman in welcoming you before the committee. Mr. Hosmer, I, and others were down there at the time when you transferred command.

Admiral TYREE. I certainly do remember that time.

Mr. TAYLOR. I have listened with interest to your testimony since you are in a position to be a very valuable witness in regard to this legislation, because your statements are based on experience and knowledge of having been there. You made this statement that our primary mission is to keep the United States in a position of leadership in the Antarctic.

Admiral TYREE. That is right.

Mr. TAYLOR. Would you elaborate on that a little further? Why we find it so important that we maintain this position?

Admiral TYREE. To put it very concisely, sir, I think it is important because we want to have a say in what happens in the Antarctic in the future, and we can best have an important influence on what happens in Antarctica in the future if we are in a position of leadership there. If we maintain a program that others will look up to, that really is basically what I had in mind.

I might point out that we took the leadership in promoting the Antarctic Treaty. As you know, back a number of years ago various other schemes were discussed. We have never made any claims there. The condominium with Australia and New Zealand was discussed, but after the IGY was well underway, and the Soviets were in there, after an absence of a hundred years or so, and the IGY was working—was coming to an end—well, I will go back a minute and say that during this period of the IGY a great spirit of cooperation grew up among the people who were operating down there and the United States issued an invitation then to the other countries to consider having a treaty to preserve the area for peaceful purposes and to eliminate military competition in the cold war down there.

I think this is an example of the kind of leadership we have exerted in the Antarctic. If somebody discovers gold down there I think that we would want to be in a position of leadership to try to figure out some way of preventing this from causing a major amount of trouble. So to put it simply, I think it is important that we maintain a position of leadership so that we will have a major say in whatever dispositions are made in Antarctica in the future.

Mr. TAYLOR. Do you think that the leadership has military value, scientific value in maintaining world prestige or is a contribution to world peace?

Admiral TYREE. I think it indirectly contributes to our prestige worldwide to have this position in Antarctica. I think it has an indirect benefit.

Mr. TAYLOR. You are convinced that a commission should be used as a planning and coordinating agency?

Admiral TYREE. Yes, sir.

Mr. TAYLOR. I read from the report of the Department of the Interior dated April 9, 1965, which says:

Coordination and direction handled by a small advisory committee. Lines of communication are excellent, decisions are reached quickly, and program direction and content seems adequate.

Do you have any comment on that?

Admiral TYREE. I think that they are referring to the interdepartmental committee which is chaired by State and which has representation from a number of the departments and agencies who have antarctic interests. As I said in my statement, I believe that many times problems are resolved through informal discussions which take place in this committee, but what kind of a directive does this committee ever issue on which we can hang a justification for obtaining funds to do what the committee thinks should be done? There is nothing concrete that comes out of this committee that you can put your hand on and say, "This is what we need to do down there now, Mr. Secretary of Defense. We have got to have this money to do it."

Mr. TAYLOR. The commission would lead and cover the entire program?

Admiral TYREE. The commission, as I visualize it, would have the authority to run the entire program, to plan it in broad outline, and not in detail, but in broad outline, to say what things or what kind of things they thought should be done there, and to go before the Congress with the single budget which would be justified on its own merits. It would take it out of competition, for example, with the strategic requirements that face the Department of Defense. I should think that the Department of Defense would welcome this.

Mr. TAYLOR. Thank you. That is all.

Mr. O'BRIEN. Mr. Hosmer?

Mr. HOSMER. I want to join the others in complimenting you on your vast experience and for bringing it to the committee. There is one thing that I would like to ask you about and it is this, you were wearing two hats down there, one as task force commander, and one as the head of the antarctic project office?

Admiral TYREE. Yes, sir. I was commander of the Naval Support Force which was a unit under the commander in chief of the U.S. Fleet. And I was the U.S. antarctic project officer.

Mr. HOSMER. What about the abolishment of the project office—how does that affect the program, in your opinion?

Admiral TYREE. It is a difficult thing to assess.

Mr. HOSMER. What about the value of this move?

Admiral TYREE. I think it is a bad move. I think that the project office—

Mr. HOSMER. That is, the abolishment of it.

Admiral TYREE. I think it has performed a very fine function. The project office has been limited, to some extent, in being able to perform the function that I think was originally envisioned for it when the office was established under Admiral Byrd. At the time I came into the program the charter was limited, and instead of being able to authoritatively coordinate, which I think was the original intention of the project office, we simply tried to get cooperation and so on. The effectiveness of the office was curtailed right about that time. Recently, I think, it has been bypassed more and more and it has made it rather difficult for the office to perform its intended function.

Let me say that when I was commander of the naval force and was U.S. antarctic project officer and was on the ice, if I needed representation in Washington, I cited the example of getting the funds for the Byrd Station, there were many other things which came up when I was on the ice which I needed representation in Washington on to the Department of Defense, to the National Science Foundation, to other agencies, to try to get a program, a major project on the road, I turned to my deputy in the project office to do that. I think there has been a recent tendency to bypass the project office for matters to be resolved directly between the task force and the National Science Foundation.

In the charter of the project office that was set up the task force commander had no authority to deal with the National Science Foundation—maybe the Chief of Naval Operations has now given them authority for direct liaison—I do not know—but during my tenure of office that was never given. The way the charter was worded—the way the directives were worded to the Chief of Naval Operations, I, as task force commander, dealt with the project office and the project office would keep the Chief of Naval Operations informed, et cetera. And

I could deal as U.S. antarctic project officer with any agency in Washington. The task force commander is a commander of a group—a command under the commander in chief of the Atlantic Fleet, and reporting to him to the Chief of Naval Operations. And, as I say, without the project office, certainly, the Chief of Naval Operations must authorize some kind of direct liaison for the task force commander to consult with these other agencies and to bypass the chain of command. I do not know whether this has been done or not, but it should be done.

Mr. HOSMER. How is the task force commander going to get over into the Office of the Assistant Secretary of Defense—he has to go through CNO and the Secretary?

Admiral TYREE. That is correct.

Mr. HOSMER. He has to do that. There is not any avenue there in any other way.

Admiral TYREE. He will not have direct access to the Secretary of Defense unless the Chief of Naval Operations has authorized direct liaison for him to do that. I think it is going to make the operation more difficult.

Mr. HOSMER. Thank you.

Mr. O'BRIEN. Thank you very much, Admiral Tyree.

Admiral TYREE. Excuse me, sir, I would like to add that I feel that Dr. Mooney as my deputy here when I had to turn to him for assistance, while I was away, gave that assistance very ably. And today I feel that he would not—I feel that we would not have been able over the years to do what we did, and we would not have the facilities today or the capabilities that we have in Antarctica right now, without that help. I feel that he has contributed to this program in such a way.

Mr. O'BRIEN. I do not believe that I have met very many men in Washington who are more dedicated to the responsibility to this through the years I have served here in Congress than Dr. Mooney. I only hope that this does not mean in the slightest degree that the people of the United States will be deprived of his vast knowledge and ability in a position that requires such enormous knowledge. I want to thank you very much, Admiral Tyree. You have contributed in a substantial way to the record. And I would like to renew my request that as we proceed to the detailed consideration of the bills we would appreciate your being helpful to us.

Admiral TYREE. Thank you.

Mr. O'BRIEN. I think it might be pertinent to draw attention of the committee to the fact that we have in the room a distinguished gentleman, Admiral Bakutis. We are glad to have you here.

Admiral BAKUTIS. I am glad to be here.

Mr. O'BRIEN. Do you have any comments to make?

Admiral BAKUTIS. No; I appreciate very much being here.

Mr. O'BRIEN. Unless there is objection, we have a statement by Capt. Finn Ronne, U.S. Naval Reserve (retired), which will be made a part of the record at this point, if there is no objection.

(The statement referred to follows:)

STATEMENT BY CAPT. FINN RONNE, U.S. NAVAL RESERVE (RETIRED)

Mr. Chairman, I am happy to be here to present to you some comments on a bill before this committee to establish a permanent Antarctic Commission and/or Polar Commission as a central agency to look after our interests in the Antarctic. I am speaking to you now in a simple and direct language of a field explorer.

First, let me tell you that in 1960 I presented this committee with a statement and recommendations as to what I then considered our operational structure should be, in conducting our antarctic activities. These recommendations were formed as a result of my active participation in antarctic operations, both military and civilian, over a period of more than 25 years. The recommendations I presented you with at that time, I thought would at least take care of our interests in the best possible manner for the present and immediate future, to have the National Science Foundation with a free hand to plan and issue contracts with universities and research organizations, through other agencies, even outside the Government, to execute the scientific programs. It appeared to me at the time, that such a setup was workable, efficient, and the simplest structure possible. Adm. David Tyree in the field with his task force, General Erskine and Dr. James Mooney in Washington were doing a tremendous job in carrying out our Navy's responsibilities to provide logistic support, planning, and policy development of our antarctic interests. It also appeared to me at the time, that the National Science Foundation was also proficient in planning the scientific programs. Those were my bases for not recommending the establishment of a separate independent agency at that time to deal with our antarctic problems.

Since that time, however, I have had a chance to reevaluate my thinking on the entire matter. In November-December 1961 I visited the Antarctic for the seventh time to commemorate the 50th anniversary of Roald Amundsen's party first reaching the South Pole on December 14, 1911. Incidentally, I may mention that my father was a member of that expedition, which, when I grew up, brought me into the exploration field. I learned on this trip how the Navy and the National Science Foundation executed their responsibilities and how the system worked—the one that was in effect at the time. As indicated in my written report to the Navy upon my return, I had the highest respect for the logistic support the Navy provided to the men sent down there by the National Science Foundation. It would be a misstatement to call all of them scientists; technicians would be a more fitting description of most of the men engaged in their scientific research down there.

Another reason for the reevaluation of my thinking was that in the fall of 1961 I had completed and had published my latest book, "Antarctic Command." It dealt with my experiences at the Ellsworth Station under the International Geophysical Year, 1956-58, when serving as military commander and science leader. While down there over a period of more than a year, I wrote a diary of more than 1 million words, most of it describing the scientific staff's doings. This book reflects some of my observations. Mr. Chairman, they are in this book—some eye openers—and I urge the honored committee members to read it. They are all true facts. It is worthwhile reading. I can assure you, before making a decision on the proposals in this bill now before the committee. I am proud to present you and your committee with this volume.

A central agency is needed, as suggested in this bill. I would like to go a step farther, though—namely, to also take into the bill our activities in the Arctic as well—in order to get complete as possible the correlation and relationship of our polar activities in the U.S. interest and those of other nations. If I remember correctly, I believe that Senator Henry Jackson, of Washington State, introduced a bill to that effect some years ago.

National Polar Commission would be a proper designation for such a Government administrative body. It would be similar to what is now in effect in most countries having interests in the polar regions—north and south.

By having a centralized agency for our polar activities, information pertaining to the subject would not be scattered over a dozen or so Government departments. It would all be available in one spot for ease in handling, administration, and centralized responsibility. I personally get dozens of written requests from schoolchildren studying the Antarctic, and others from all over the country every month. The need for a central agency is great; it should be established now for the benefit of the taxpayers.

Had such a centralized agency existed when I returned from my own Antarctic expedition in 1948 with 14,000 aerial trimetrogon photographs, most of them with ground control points, they would not have been fled away in a vault. They would have been worked up immediately and used for topographical purposes in planning future activities. But as it was, no one wanted to work them up, no one cared, and no agency had funds to finance such a job.

It was not before 1959 or 1960 that the photographs from this American expedition of mine were released to the British, and they made topographic maps from them over a large area of Palmer Peninsula.

Other witnesses appearing before this committee are closer to the present operations we are now conducting in the Antarctic. They are, therefore, more capable to give details than I; but, I would recommend passage of this bill in order to get more return for each tax dollar spent. There should be a more careful screening of practical, worthwhile projects of science to be investigated, no overlapping efforts, and a stop to the unrealistic demands made in the presently complex Government machinery of U.S. antarctic activities. Surely there would be opposition to a change, but, I believe it would be a betterment.

Thank you, gentlemen.

Mr. O'BRIEN. I requested earlier unanimous consent to have placed in the record a statement by the Deputy Under Secretary of Interior, but I do not think that I put the question, so unless there is an objection, his statement will be placed in the record as previously noted.

I believe that concludes our list of witnesses. I hope that these hearings have had something of value to all of us, and for the Congress and for the country and for the benefit of the subcommittee at an early date we will get together and consider the specific legislation that we have before us.

The hearing is over.

Thank you.

(Whereupon, at 12:10 p.m., the subcommittee was adjourned.)

ANTARCTICA REPORT—1965

TUESDAY, JUNE 15, 1965

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TERRITORIAL AND INSULAR AFFAIRS
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 9:55 a.m., in room 1324, Longworth House Office Building, Hon. Leo O'Brien (chairman of the subcommittee) presiding.

Mr. O'BRIEN. The Subcommittee on Territorial and Insular Affairs will be in order. The hearings today are on four bills. The first one, H.R. 555, H.R. 2211, H.R. 4658, H.R. 5494, the antarctic study and research program. This will be a comparatively brief hearing because we are rounding out the record mainly to receive the testimony of Dr. Laurence M. Gould, Chairman of the Committee on Polar Research of the National Academy of Science.

Dr. Gould is unable to be here, but Dr. H. W. Wells, Executive Secretary of the Committee on Polar Research of the National Academy of Science is here and we are very pleased to hear from you at this time.

I might say at the outset that unless there is an objection, the statement of Dr. Gould will be placed in the record at this point.

(The statement follows:)

STATEMENT OF DR. LAURENCE M. GOULD, CHAIRMAN, COMMITTEE ON
POLAR RESEARCH, NATIONAL ACADEMY OF SCIENCES

Circumstances beyond my control have made it impossible to accept any of your invitations to testify in person during the recent series of hearings on proposed antarctic legislation. I hope you will accept the following prepared statement with the understanding that I still look forward to the opportunity of meeting with you gentlemen and of amplifying or clarifying any of my statements in the following document which, unfortunately, has been rather hastily prepared.

My interest in the scientific exploration of Antarctica began in 1928 when I went to the ice-clad continent as geologist, senior scientist, and second in command of the first Byrd Antarctic Expedition.

My interest was rekindled with the creation of the International Geophysical Year in which antarctic exploration played a major role. Indeed the uncovering of the scientific secrets of Antarctica was an achievement of the IGY second in importance only to the development of our satellite program.

U.S. participation in the International Geophysical Year was under the direction of the National Academy of Sciences. I was a member of the Academy's U.S. National Committee and Chairman of the Subcommittee on Antarctica. In the latter capacity I represented the Academy at a meeting in Paris in July 1955 sponsored by the International Council of Scientific Unions for the purpose of bringing together representatives of the 12 nations which were to carry out programs in Antarctica. Here we arrived at a satisfactory arrangement of spheres of activity for all of the nations involved. Here began one of the most highly successful enterprises in international scientific cooperation which has ever been held anywhere.

With the initiation of field activities I became director of the U.S. IGY antarctic program. I went to Antarctica in 1956 and 1957 with Admiral Dufek at the time our scientific bases were being established. It still seems to me that the establishment of the South Pole and Byrd stations, which were the first inland stations ever to be established in Antarctica, under the superb leadership of Admiral Dufek was, and remains, the greatest logistic achievement in the history of antarctic exploration.

Upon the termination of the IGY on December 31, 1958, the responsibility for managing our national program in Antarctica was transferred from the National Academy of Sciences to the National Science Foundation. Most of the personnel who had worked so successfully together during the IGY were transferred to the new operation under the National Science Foundation.

To continue its interest in the polar regions in its traditional advisory capacity, the National Academy of Sciences established the Committee on Polar Research in January 1958 of which I am Chairman. In this capacity I attended the meeting at The Hague in February 1958 when the Scientific Committee on Antarctic Research, now always referred to as SCAR, was created by the International Council of Scientific Unions. In 1963 I was elected President of SCAR.

The Committee on Polar Research (CPR) is the adhering body of the National Academy of Sciences to the Scientific Committee on Antarctic Research (SCAR) of the International Council of Scientific Unions. Through the CPR, American scientists (1) advise on U.S. programs of research in the polar regions, and (2) discuss results and objectives of antarctic research with representatives of the 12 SCAR nations, Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, United Kingdom, U.S.S.R., and United States) at regular international meetings or symposia. The Chairman of the CPR is assisted by outstanding polar scientists as members of the Committee or panels, and by a small professional staff. Activities are funded through the Office of Antarctic Programs of the National Science Foundation.

Finally, in addition to my other polar responsibilities, I am Chairman of the Advisory Committee on Antarctic Programs for the National Science Foundation.

Please forgive me, gentlemen, for this lengthy personal statement but it is against that background of interest and experience that I wish to comment about the establishment of an Antarctic Commission. Although these remarks do not represent a formal position of the CPR—time just has not permitted this action—I can state without reservation that they do represent the sentiment of a large cross-section of the American scientific community and reflect opinions which have been expressed in numerous conversations with prominent antarctic scientists.

I appeared before this same committee on June 14, 1960, and I want to quote a paragraph from the statement I made then about the effective partnership between the Department of Defense and the scientific community.

"It seems to me that this partnership of science and large scale logistics support through the Department of Defense has worked with outstanding success and harmony. I am unable to praise too highly the magnificent job which Adm. George Dufek, and now his successor, Adm. David Tyree, have performed during the past 5 years. I do not believe that our IGY program could have been mounted so quickly, nor the extensive scope of the program sustained over these years, without the full, sympathetic, and enthusiastic support of these leaders and all of the personnel associated with task force 43. In my opinion, this harmonious partnership will continue in future years to work as effectively as it does at present. I would be most hesitant to endorse an organizational change in arrangements whose success has been proved without the most careful study of the proposal in the present legislation."

I made that statement in 1960 and subsequent events have fully vindicated it. Admiral Reedy who succeeded Admiral Tyree has carried on in the tradition of goodwill and effective support of our scientific programs which began with Admiral Dufek and the IGY. In other words, the present arrangement has worked extremely well and there is every expectation that it will continue to do so.

I have a deep concern that nothing shall be done that may in any way disturb the smooth working of the Antarctic Treaty which I consider a very great document. In fact, it was the first treaty in human history designed to protect a scientific program, to outlaw military objectives or installations, to defer all territorial claims, and to recognize the rights of inspection. International coordination of the scientific program was then left in the hands of a nongovernmental agency; namely, SCAR.

Lest we lose sight of the significance of the Antarctic Treaty, I would like to quote a few lines from testimony which I made before the Senate Committee on Foreign Relations when the Antarctic Treaty was being considered.

"We know that civilization has evolved largely on the basis of precedents and that a peaceful world depends on the chance of international cooperation. I think it was our hope during the IGY that the intergovernmental cooperation which characterized this vast program would find its way into some kind of permanent cooperation. I believe the Antarctic Treaty is a breakthrough of historic importance. I believe the IGY and especially the Antarctic program has laid new foundations for unifying our planet. It ushered in a new world of cooperation. I believe if the spirit which obtained during the IGY and which finds expression in the Antarctic Treaty is nourished and spreads as it should history may take a new and more hopeful direction in our time. The Antarctic Treaty is indispensable to the world of science, which knows no national or other political boundaries. But it is much more than that. I believe it is a document unique in history, which may take its place alongside the Magna Charta and other great symbols of man's quest for enlightenment and order."

I have read the proposed legislation which appears to be essentially unchanged from earlier proposals. My previous testimony has not favored the legislation. My position today is unchanged since practically every function mentioned in the proposed bills is already being performed efficiently and effectively. Whatever need there has been in the executive branch of the Government for any other body to increase the effectiveness of our operations in Antarctica has now been filled by the creation of the Antarctic Policy Group.

It seems to me that many of the reasons which have been set forth for the establishment of an Antarctic Commission are unrealistic. Establishment of the proposed Antarctic Commission indeed, in my opinion, would not be in the national interest unless the people of the United States, acting through Congress, should demand a greatly expanded antarctic research program. This, I predict, will not happen in the foreseeable future.

The creation of yet another agency would, I repeat, complicate matters and tend toward the maintenance of a larger and more expensive operation in Antarctica than we are likely to need in the future. While we recognize science as an endless frontier this is approached only through careful analysis and appraisal. Certain areas can be and are mined out while other new scientific challenges are investigated. Effective performance requires great flexibility of programming to probe the frontiers of knowledge.

For example, among the toughest, hardest of all tasks in Antarctica, have been the glaciological traverses. The primary purpose of these has been to determine the thickness of the inland ice sheet and therefore to know the underlying topography of the bedrock. A great deal of knowledge has been acquired in this survey. When it is completed the need for the particular type of logistic support used on this survey will disappear. The same comments can be made about mapping and geological exploration. Once these scientific explorations have been completed, a large part of the present expensive heavy logistic support of the Navy may be released or redirected to new scientific endeavors.

This does not mean that we do not have permanent interests in Antarctica. I think we do, and I think we should. But I see no reason to suppose they will continue indefinitely to require the present type of logistic support. I submit that the creation of an Antarctic Commission could in itself become a Government bureau would tend to perpetuate itself whether there was a long-continuing need for it or not.

It is unrealistic to pretend that we need an Antarctic Commission to promote Antarctica as a tourist attraction. Not by any stretch of the imagination is the Antarctic continent proper apt to become a large-scale tourist attraction in the predictable future. I remind you it is not only the coldest, driest, and most lifeless desert in the world; it is also the windiest of all continents. A more totally unsatisfactory combination of weather and climate is not to be found on planet earth. The existing organization is flexible enough to satisfy the needs of any individuals or groups seriously interested in tourism or Antarctica.

It is equally unrealistic to suppose that the creation of yet another agency is needed for the exploitation of possible mineral resources. I am a geologist and I repeat a statement I made before the Senate Committee on Foreign Relations; namely, I would not give a nickel for all of the known mineral deposits in Antarctica. This is not to deny their possible existence, but it is misleading to defend antarctic exploration on the positive assumption that mineral riches will

be found. To be sure, there are deposits of coal, most of which is low grade, and all of which is inaccessible. This is a fantastically important geologic discovery but one which would have little or no economic value even if found right here in the United States. According to Alvin Weinberg, Director of the Oak Ridge Nuclear Institute, during the past year nuclear energy achieved the threshold of economic feasibility. In the years ahead we may anticipate a steady decline in the use of fossil fuels, especially in remote or isolated locations.

Among the most unrealistic of reasons given for making further investments in Antarctica is that of its potential importance in the world of air travel. Look at the globe and you will note that most of the land of the earth lies in the Northern Hemisphere. The Southern Hemisphere is largely one of water. Indeed, 90 percent of all of the peoples of the world live in the Northern Hemisphere. It is natural that not only sea routes but air routes are therefore confined to a large extent in the Northern Hemisphere. No stretch of the imagination can lead one to believe that the southern land masses will ever have the strategic importance to each other that those which surround the Arctic do. If and when populations of southern South America, South Africa, and Australia become large enough to demand frequent air service, the supersonic airplane of the future will be making nonstop flights of only a few hours' duration. Our Navy already knows the difficulty of maintaining airstrips even under the best of antarctic conditions. Airstrips and related facilities for year-round commercial use in Antarctica would be fantastically expensive and totally unrelated to their economic usefulness.

I believe that for the predictable future, and that means a great many years, the chief defense for antarctic operations will be scientific investigations. I believe the export of scientific information will continue to be Antarctica's most valuable contribution to the welfare of mankind. Antarctica is the world's greatest geophysical laboratory. Indeed there is no single field of geophysics which does not demand for its completion data which can come only from Antarctica.

Our national objectives in Antarctica are being ably served and maintained by the agencies presently in charge. I believe it would be a grave mistake to alter the present arrangements which have worked so well over so many years. I can see neither a need nor an excuse for an overall antarctic agency, whatever it might be called.

In support of my statement concerning the satisfactory status of performance under the present administrative arrangement, I am submitting for your examination copies of the following documents which give examples of (1) long-range guidance of antarctic research prepared by the Committee on Polar Research in collaboration with the scientific community, (2) the effective international exchange of data, (3) some national and international sources of information on antarctic research, and (4) examples of international cooperation in planning of activities as well as presentation of research results through SCAR-sponsored symposia:

Science in Antarctica, parts I and II.
 Guide to International Data Exchange.
 Catalogue of Data, WDC-A.
 U.S. Report to SCAR, Proposed 1965 Program.
 International Research in Antarctica, IG Bulletin.
 Review of Antarctic Geology, IG Bulletin.
 SCAR Bulletin No. 18.
 One copy each:

Symposium on Antarctic Logistics, 1962.
 Symposium on Antarctic Biology, 1962.
 Symposium on Antarctic Geology, 1963.
 Scientific American, September 1962.
 One set of Reports to SCAR from—
 Argentina, proposed 1965.
 Australia, proposed 1964.
 Belgium, proposed 1964.
 Chile, proposed 1965.
 France, proposed 1964.
 New Zealand, proposed 1963.
 Norway, proposed 1964.
 Japan, proposed 1964.
 South Africa, proposed 1965.
 United Kingdom, proposed 1965.
 U.S.S.R., proposed 1965.

**STATEMENT OF DR. H. W. WELLS, EXECUTIVE SECRETARY,
COMMITTEE ON POLAR RESEARCH, NATIONAL ACADEMY OF
SCIENCES**

Dr. WELLS. Thank you, Mr. Chairman.

Mr. O'BRIEN. There is some supporting material, reports, and so forth, which, without objection, will be made a part of the files.

Dr. WELLS. Thank you, Mr. Chairman.

As Dr. Gould points out in his statement, which I am pleased to note, you will accept as part of the record of the hearings, he has been unable to attend, but he would like the opportunity to appear whenever it could be worked out to your convenience, in order to answer any questions or to amplify any statements which are made in his testimony.

In addition to the formal statement Dr. Gould has submitted a number of documents which I think have been distributed to all. I would merely like to call these to your attention to point out that this represents composite material submitted in support of certain statements which he has made in his formal statement.

I may also point out that there are some 25 copies of these documents. There is one master copy which includes the proceedings of several symposia—international symposia—on Antarctic research. These are listed on the last page of his testimony, both the documents which are supplied in full and those which are supplied one copy each only. The one copy each has a Symposium on Antarctic Logistics held in Boulder, Colo., in 1962; proceedings of the Symposia on Antarctic Biology held in Paris in 1962; the proceedings of a Symposium on Antarctic Geology held in Capetown, South Africa, in 1963; a copy of Scientific American, which was devoted entirely to the results of antarctic research; and one set of reports to the Scientific Committee on Antarctic Research, the International Organization of the International Council of Scientific Unions, from all the other SCAR nations as listed on the last page of his testimony.

Mr. O'BRIEN. Thank you very much, Doctor. I think this will round out the record very nicely. I would like to note the presence in the room of Rear Admiral Bakutis of the Department of Navy, Dr. Mooney of the Department of Defense, Mr. Roberts of the State Department, and Dr. Thomas O. Jones, National Science Foundation.

Are there any questions?

Mr. ASPINALL. Mr. Chairman, I understand now that you are closing the hearings on this legislation as of today; is that correct?

Mr. O'BRIEN. I think, Mr. Chairman, that might be desirable.

Mr. ASPINALL. With that understanding, I would ask unanimous consent that the chairman and the ranking committee member and any other members of the committee who desire, as well as the staff, have 10 days in which to ask any questions of Dr. Gould and get the answers back for inclusion in the record.

Mr. O'BRIEN. Without objection, it is so ordered. Thank you, Doctor, and the hearing is concluded.

(Whereupon, at 10 a.m., the subcommittee adjourned.)