shall be made to the institutions best qualified to carry out the projects in question. Such a policy makes good sense to practical business-minded men, but its execution will serve to deepen the existing foundations of science rather than to broaden them or to build new ones.

The administrative structure of the Foundation as proposed in the vetoed bill would have concentrated too much power in the hands of too few, without a single effective control from scientists, the Congress, or the President. Let us grant that the choice of scientists would fall upon men in whom there is complete public and professional confidence. The full Board is required to assemble but once a year, and effective control rests with an executive committee of 9. Everyone will agree that the advice and guidance of such men is imperative to the success of a Foundation; yet, regardless of the character of the men who will be selected, and who will undoubtedly give sincere and disinterested service to the public and to science, is it wise to leave American scientists without recourse or appeal from the acts of the Foundation, save through the slow machinery of presidential appointment or through violent death by the withholding of appropriations?

Already Government-financed research and not a little industrial research are guided and, to some extent, controlled by a small group of scientists. Let it be said they have done their job well. But many scientists are as deeply concerned about close professional control as they are about the hazards of political control. If the Smith bill (S. 526) assures freedom from the latter, it certainly invites and almost prescribes professional control, which may quite conceivably be identified with the group directing so much industrial and military research. That there may be something to fear is suggested by the way in which S. 526 was introduced and maneuvered in Congress, the limited sources from which advice was sought, and the studied disregard of preferences expressed by the Inter-Society Committee, which had the broadest possible base among U. S. scientists.

There are those who sincerely believe that no such danger exists, but this belief is not held by many who were close to the situation in Washington. It certainly was not held by President Truman, who has persistently shown a genuine concern about the welfare of science. Is it not reasonable, now, to urge that those who have tried to get a particular type of legislation passed and have twice failed, relinquish the task to disinterested, scientists, who will view the problem more broadly and dispassionately? There are many such men, and there is no hostility toward science either in the Congress or in the White House. The Senate has, by passing S. 1850 in 1946 and S. 526 in 1947, demonstrated that it is trying to give scientists what they want. What it needs now is the advice of representatives of science rather than advocates of a partisan point of view. Surely the Association's Inter-Society Committee comes closer to the requirements of the present situation than a group determined to give science what is supposedly good for it, whether it wants it or not. This is the time for leaders in the Inter-Society Committee to take over and to act.

NEWS *and Notes*

Since many scientists will not have seen the complete text of President Truman's Memorandum of Disapproval of S. 526, dated August 6, and since many others will undoubtedly wish to refer to it in the coming months, the veto message is presented in full below:

I am withholding my approval of S. 526, the National Science Foundation Bill.

I take this action with deep regret. On several occasions, I have urged the Congress to enact legislation to establish a National Science Foundation. Our national security and welfare require that we give direct support to basic scientific research and take steps to increase the number of trained scientists. I had hoped earnestly that the Congress would enact a bill to establish a suitable agency to stimulate and correlate the activities of the Government directed toward these ends.

However, this bill contains provisions which represent such a marked departure from sound principles for the administration of public affairs that I cannot give it my approval. It would, in effect, vest the determination of vital national policies, the expenditure of large public funds, and the administration of important governmental functions in a group of individuals who would be essentially private citizens. The proposed National Science Foundation would be divorced from control by the people to an extent that implies a distinct lack of faith in democratic processes.

Moreover, the organization prescribed in the bill is so complex and unwieldy that there is grave danger that it would impede rather than promote the Government's efforts to encourage scientific research. The Government's expenditures for scientific research and development activities currently amount to hundreds of millions of dollars a year. Under present world conditions this work is vital to our national welfare and security. We cannot afford to jeopardize it by imposing upon it an organization so likely to prove unworkable.

Under S. 526, the powers of the proposed Foundation would be vested in 24 members appointed by the President by and with the advice and consent of the Senate. These members would be part-time officials, required to meet only once each year. This group would, in turn, select biennially from among its 24 members an executive committee of 9 members and would exercise its powers through the executive committee. This 9-member executive committee would also be a part-time body required to meet only 6 times a year.

The Foundation would have a chief executive officer, known as the Director.

He would be appointed by the 9-member executive committee unless the 24-member body itself chose to appoint him. The power and duties of the Director would be prescribed by the executive committee and exercised under its supervision.

There would be within the Foundation a number of divisions, each exercising such duties and performing such functions as the Foundation prescribed. There would be no limit upon the number of divisions which the Foundation could establish. For each division there would be a divisional committee. In the case of the Committee for the Division of National Defense there would be a limit of 36 members, half of whom would be appointed by the Foundation and half of whom would be representatives of the armed services. In other cases, there would be no limit upon the number of members of each divisional committee and all of the members would be appointed by the Foundation. Not only would these part-time committees furnish advice and make recommendations concerning the Government's scientific research program, but each divisional committee would also "exercise and perform the powers and duties of its division."

The Foundation would also be empowered to appoint commissions in various fields of research. Three such commissions are specified in the bill, and the Foundation could appoint as many additional special commissions as it saw fit. Each such commission would consist of 6 eminent scientists and 5 members from the general public. After making a survey of public and private research already being carried on, each of these commissions would recommend a research program within its field and constantly review the manner in which such a program was being carried out.

Apart from the conflicts and confusion which would result from this complex organization, the bill would violate basic principles which make for responsible government.

The Constitution places upon the President the responsibility for seeing that the laws are faithfully executed. In the administration of this law, however, he would be deprived of effective means for discharging his constitutional responsibility.

Full governmental authority and responsibility would be placed in 24 part-time officers whom the President could not effectively hold responsible for proper administration. Neither could the Director be held responsible by the President, for he would be the appointee of the Foundation and would be insulated from the President by two layers of part-time boards. In the case of the divisions and special commissions, the lack of accountability would be even more aggravated.

The members of the Foundation would also be authorized to appoint the full-time administrative head of an important agency in the executive branch of the Government, as well as more than 70 additional part-time officials in whom important governmental powers would be vested. This represents a substantial denial of the President's appointing power, as well as an impairment of his ability to see that the laws are faithfully executed.

The ability of the President to meet his constitutional responsibility would be further impaired by the provisions of the bill which would establish an Interdepartmental Committee on Science. The members of this committee would be representatives of departments and agencies who are responsible to the President, but its chairman would be the Director of the Foundation. It would be the duty of this committee to correlate data on all Federal scientific research activities and to make recommendations to the President, to the Foundation, and to the other departments and agencies of the Government concerning the performance of their functions in this field. Thus, an officer who is not appointed by the President, and not responsible to him, would be the man primarily charged with the performance of functions which are peculiarly within the scope of the President's duties—that is, the coordination of the work of executive agencies. This is especially unwise when the activities concerned are so intimately related to the national welfare and security.

There are other compelling reasons why control over the administration of this law should not be vested in the part-time members of the Foundation. The Foundation would make grants of Federal funds to support scientific research. The recipients of these grants would be determined in the discretion of the Foundation. The qualifications prescribed in the bill for members of the Foundation would insure that most of them would be individuals employed by institutions or organizations eligible for the grants. Thus, there is created a conflict of interests which would inevitably give rise to suspicions of favoritism, regardless of the complete integrity of the members of the Foundation.

It is unfair to individuals asked to accept public office that they should be put in such a vulnerable position. Moreover, colleges and universities and other organizations seeking aid for scientific research deserve the assurance that the manner and extent of their participation in a national program will be determined on a completely impartial and objective basis.

Adherence to the principle that responsibility for the administration of the law should be vested in full-time officers who can be held accountable will not prevent the Government from utilizing with great advantage the services of eminent scientists who are available only for part-time duty. We have ample evidence of the patriotic and unselfish contributions which such citizens can make to the success of governmental programs. The role to be played by such part-time participation, however, is more appropriately one of an advisory nature rather than of full responsibility. In other governmental programs of vast national importance, this method is used to obtain advice and recommendations from impartial experts as well as from parties in interest. There is no reason why such a system cannot be incorporated in legislation establishing a National Science Foundation.

For the reasons I have indicated, I believe that this bill raises basic issues of public policy. There would be no means for insuring responsible administration of the law. If the principles of this bill were extended throughout the Government, the result would be utter chaos. There is no justification in this case for not using sound principles for normal governmental operations. I cannot agree that our traditional, democratic form of government is incapable of properly administering a program for encouraging scientific research and education.

It is unfortunate that this legislation cannot be approved in its present form. The withholding of my signature at this time, however, will not prevent the Government from engaging in the support of scientific research. Research activities are carried on extensively by various executive agencies under existing laws, and would continue to be carried on whether or not this bill became law. The

only funds made available by the Congress for expenditure by the Foundation are funds which might be transferred from other agencies, thereby reducing the amounts which those other agencies could spend for similar purposes. No funds were made available for the scholarships and fellowships authorized in the bill. Thus, there would be no immediate gains which would justify accepting the risks involved in the approval of this legislation.

I am convinced that the long-range interests of scientific research and education will be best served by continuing our efforts to obtain a Science Foundation free from the vital defects of this bill. These defects in the structure of the proposed Foundation are so fundamental that it would not be practicable to permit its establishment in this form with the hope that the defects might be corrected at a later date. We must start with a law which is basically sound.

I hope that the Congress will reconsider this question and enact such a law early in its next session.

About People

Dorwin Cartwright has been named director of the Research Center for Group Dynamics, Massachusetts Institute of Technology, succeeding the late **Kurt Lewin.**

Kenneth E. Caster, on leave from the University of Cincinnati for the past two years while serving as director, Department of Geology and Paleontology, University of São Paulo, Brazil, in connection with the State Department's program of cultural cooperation, will terminate his work there at the end of this year. He will remain in South America until September 1948, however, in order to complete geological studies supported by a Guggenheim Fellowship. Upon his return to Cincinnati the Brazilian paleontologists, **Josué Camargo Mendes** and **Setembrino Petri,** will assist in the preparation of stratigraphic and paleontologic reports covering some 50,000 kilometers of Brazilian travels.

Rafael Rodríguez-Molina, recently discharged from the Medical Corps, U.S.A., with the rank of Lt. Colonel, has been appointed chief of the Medical Service, Veterans Administration Center, San Patricio Hospital, San Juan, Puerto Rico. Dr. Rodríguez-Molina was formerly assistant professor of tropical medicine, University of Puerto Rico and Columbia University.

Gordon H. Pritham, head, Department of Chemistry, University of Scranton, has been named associate professor of physiological chemistry, Department of Agricultural and Biological Chemistry, Pennsylvania State College, and **Eva Ruth Hartzler,** associate nutritionist, University of Hawaii, has accepted a position in vitamin research in the same Department.

Arthur C. Bevan, state geologist of Virginia, Charlottesville, and chairman, Division of Geology and Geography, National Research Council, has been appointed principal geologist in charge of the Geological Resources Section, Illinois Geological Survey, Urbana. Dr. Bevan succeeds **Ralph E. Grim,** who will devote more time to the Survey's research program on clay minerals.

T. G. Blocker, Jr., professor of plastic and maxillofacial surgery, has been appointed director, Post-Graduate Training Program, University of Texas Medical Branch, Galveston.

W. N. Bangham, formerly director, Plant Research Department, Goodyear Rubber Plantation Company, Costa Rica, has been appointed editor of *La Hacienda,* a Spanish journal covering agricultural and allied industrial subjects, with offices at 20 Vesey Street, New York City.

Richard B. Goldschmidt, of the University of California, has returned from New Zealand and Australia, where he has been for the past 6 months. In New Zealand he delivered a large number of lectures under the auspices of the Royal Society, the University of New Zealand, and the Council of Scientific and Industrial Research in all universities and agricultural colleges of the Dominion. In Australia he gave a series of lectures at Sydney University and the Department of Scientific Research in Canberra.

Warren Andrew, professor of histology and embryology, Southwestern Medical College, Dallas, has been appointed professor of anatomy and chairman of the Department, George Washington Medical School, Washington, D. C.

John T. Buchholz, professor of botany, University of Illinois, has been granted a year's leave of absence to collect gymnosperms and other plants in New Caledonia. He will also visit the Fiji Islands, Tasmania, and Australia. Dr. Buchholz may be reached % Biological Station, Noumea, New Caledonia.

John H. Weitz, Pennsylvania Topographic and Geologic Survey, has been appointed assistant professor of geology, Lehigh University.

Emanuel D. Friedman, chairman, Department of Neurology, New York University College of Medicine since 1927, retired September 1 as professor emeritus. Dr. Friedman has been on the College of Medicine staff for 37 years.

Oswald Tippo has been named acting head of the Department of Botany, University of Illinois, succeeding **Neil E. Stevens,** who transferred to the Department of Horticulture, College of Agriculture, on September 1.

Grants and Awards

The Biological Stain Commission has made two grants for research on stains and staining methods: (1) $1,500 (renewal) to Northwestern University Medical School for research in methods of neurological microtechnic under the direction of H. A. Davenport; and (2) $1,800 to McGill University for work in cytochemistry under the direction of C. P. Leblond. The latter work will deal with the Feulgen reaction and the significance of cytological structures giving that reaction.

George C. Supplee, president, G. C. Supplee Research Corporation, Bainbridge, New York, will be the recipient of the 1947 Borden Company prize of $1,000 and a gold medal for research in the chemistry of milk to be presented September 15 at the 112th national meeting of the American Chemical Society in New York. Dr. Supplee, who is credited with developing the first practical methods for commercial irradiation of milk to increase its vitamin D content, will deliver his award address September 18 at a symposium on the biochemistry of milk.

The American Allergy Fund has announced the availability of grants-in-aid for research which will be made to investigators in the biological sciences, both medical and nonmedical, whose problems meet the requirements of the Scientific Advisory Council. Preference will be given problems with immediate relationship to allergy, although investigations in physiology, biochemistry, pharmacology, immunology, genetics, and other basic

sciences are solicited. The grants will be made for one year in amounts not to exceed $3,500 and may be renewed from year to year if continuation is warranted. Applications (7 copies) should be addressed to the American Allergy Fund, 525 Erie Building, Cleveland 15, Ohio, Attention: Scientific Council, and should contain the following information: a statement of specific research problems and an outline of the method or methods of procedure to be followed; a description of research facilities in the institution where investigator will employ the grant; a tentative budget; and a statement of the applicant's research record, accompanied, if possible, by publications or reprints.

The American Allergy Fund, organized a little more than a year ago, has a five-point program embracing the following aims: to finance research in basic sciences; to keep physicians informed of the latest developments in allergy; to encourage medical students in the study of allergy; to promote public education in allergy; and to help provide care for needy allergic children and adults. Jonathan Forman, editor, *Ohio State Medical Journal*, is president of the Board, and Anton J. Carlson, University of Chicago, is chairman of the Scientific Advisory Council.

Colleges and Universities

A Department of Statistics has been established within the Division of Science, Iowa State College. **Raymond J. Jessen,** resident collaborator, Bureau of Agricultural Economics at the College, will be acting head of the new Department and also of the Statistical Laboratory.

The effect on animals and humans of changes from one altitude to another has been studied this summer by members of the Zoology Department, University of Chicago, under the direction of Carl R. Moore, chairman of the Department. These experiments, conducted with four separate animal colonies maintained in the zoology building at the University of Chicago (600 feet), at Idaho Springs, Colorado (7,500 feet), at the summer geological and biological field station of the University of Colorado (9,600 feet), and in the cosmic ray laboratory on the crest of Mt. Evans (14,260 feet), were suggested by earlier work by Carlos Munge, of the University of Peru, who was interested in the problem of altitude sickness in humans and that of sterility induced in certain breeds of sheep imported from low altitudes to pastures above 12,000 feet in the Andes. The results of the experiments should be of interest not only to scientists but also to mountain travelers, pilots, and stock raisers.

Reed College has announced the inauguration of a new course entitled "The Development of the Experimental Sciences," to be given during the fall and spring semesters of 1947–48. The course is described as "an inquiry into the history of the sciences in relation to society and a study of the methods of science in gaining and applying new knowledge." It has been organized by Frank H. Hurley, associate professor of natural science, and is based on a similar, but less extensive course first given during the summer of 1944. The new course is offered at the junior level and is open to all students who have had one or more years of study in the laboratory sciences.

Meetings

An International Conference on the Earth Sciences and Civilization will be held September 21–23 at South Duxbury, Massachusetts, under the auspices of the Commission on Continental and Oceanic Structure, and the Committee on the Social Value of the Earth Sciences, International Union of Geodesy and Geophysics. Members of the latter organization or of the American Geophysical Union who wish to attend should notify R. M. Field, South Duxbury, or J. A. Fleming, 1530 P Street, N. W., Washington, D. C.

The 8th Pittsburgh Conference on Applied Spectroscopy, sponsored by the Spectroscopy Society and the University of Pittsburgh, will be held in the Mellon Institute Auditorium, November 13–15. Sessions on both emission and absorption spectroscopy are planned. Those desiring to submit papers for the Conference should send in the title and a brief abstract by October 4. Inquiries or offers of papers should be addressed to Mary E. Warga, University of Pittsburgh, Pittsburgh 13, Pennsylvania.

The American Academy of Dental Medicine will hold a luncheon meeting prior to the Greater New York Dental Meeting at Hotel Pennsylvania, Sunday, December 7, at 12:30 P.M. A round-table discussion will follow. All members and interested dentists and physicians are invited to attend. Communications should be addressed to Dr. William M. Greenhut, secretary, 124 East 84th Street, New York City.

Recent Deaths

George Matthai, of the Zoological Laboratory, Cambridge University, and an authority on corals, was found dead June 25.

Alexander W. Winkler, 38, assistant professor of internal medicine, Yale University, died June 26 in New Haven Hospital.

Elliott Carr Cutler, 59, Moseley professor of surgery, Harvard University, and surgeon-in-chief, Peter Bent Brigham Hospital, Boston, died August 16 at his home in Brookline, Massachusetts. Dr. Cutler was known for his work in heart and thyroid surgery.

Ernst Laqueur, 68, professor of pharmacology, University of Amsterdam, Holland, who first isolated testosterone in 1935, died August 19 while vacationing in Switzerland. In 1946 Dr. Laqueur re-received the Berzelius Medal, awarded by the Swedish Medical Society.

Cullen Warner Parmelee, 73, professor emeritus of ceramics engineering, University of Illinois, died August 20 at his summer home at Pilgrim, Michigan.

Sir Clive Forster-Cooper, 67, director, British Museum of Natural History, died August 23.

James T. Saldana, 64, professor of physics, St. John's University, Brooklyn, for 27 years, died August 23 after a long illness.

Clark Wissler, 76, curator emeritus, Department of Anthropology, American Museum of Natural History, died August 24 after a brief illness. Dr. Wissler had served on the Museum staff since 1902.

Just 13 months after receiving the first shipment of a pile-produced isotope from the Clinton laboratories, E. V. Cowdry, of the Barnard Free Skin and Cancer Hospital, St. Louis, had the privilege of announcing to the delegates assembled for the Fourth International Cancer Congress in St. Louis the Government's decision to embark on a program of distribution of radioactive isotopes to foreign research centers and hospitals. The

items listed as available are restricted to the following: antimony 122, 124, 125; argon 37; arsenic 76, 77; bromine 82; calcium 45; carbon 14; chlorine 36; cobalt 60; copper 64; gold 198, 199; iodine 131; iron 55, 59; mercury 197, 203, 205; phosphorus 32; potassium 42; silver 108, 110, 111; strontium 89, sulfur 35; sodium 24; and zinc 65, 69. Conditions under which foreign shipments may be made include approval by the Commission prior to shipment in the manner followed with domestic requests; the making of progress reports every 6 months; and the opening of laboratories in which the isotopes are used to qualified scientists irrespective of nationality.

The total destruction of the archives and library of the Experimental Station for Sugar Cane at Pasuruan, East Java, by order of the Indonesian Republican authorities has been reported by the Government Botanic Gardens, Buitenzorg, Java, to Frans Verdoorn, editor of *Chronica Botanica*. This planned destruction of detailed data on hybrid cane species, plant diseases and resistant strains, test plantings, soil conservation, and irrigation is an immeasurable loss to the science of sugar cane cultivation and processing in general and to the Java sugar industry in particular.

Make Plans for—

American Chemical Society, September 15–19, New York City.

Clinical Conference on Diagnosis and Treatment of Poliomyelitis, September 15–17, Warm Springs, Georgia.

American Geophysical Union, 21st Regional Meeting, September 17–20, Wesleyan University, Woods Hole Oceanographic Institution, and Harvard University.

American Institute of Electrical Engineers, Middle Eastern District Meeting, September 23–25, Dayton, Ohio.

Oregon Geography Council, fall conference, October 4, Oregon State College, Corvallis.

American Association for the Advancement of Science, 114th Meeting, December 26–31, Chicago, Illinois.

COMMENTS
by Readers

We wish to register a protest against two recent articles by Representative J. Parnell Thomas of New Jersey, chairman of the Congressional Committee on Un-American Activities. These are: "Russia Grabs Our Inventions" (*American Magazine*, June) and "Reds in Our Atom Plants" (*Liberty*, June 21).

Mr. Thomas' articles are inaccurate to the point of absurdity. Thus, in one, he says that the National Bureau of Standards tests patents, which will be news to the Bureau and the Patent Office. Nevertheless, his attacks on the patriotism and honesty of American scientists are bound to be taken seriously by many people and will do harm.

We are particularly aroused at the treatment accorded Dr. Edward U. Condon, director of the Bureau of Standards, who, by inference and innuendo, is made to appear engaged in reprehensible and subversive activities.

Dr. Condon is a distinguished scientist, the director of a great national institution, a former president of the American Physical Society, sometime adviser to the Senate on matters concerning atomic energy, and a former associate director of the Westinghouse Laboratories. By no stretch of the imagination is he a Communist or an unloyal American.

Mr. Thomas especially attacks Dr. Condon for his membership on the board of directors of the American-Soviet Science Society. This organization, which has received a grant from the Rockefeller Foundation, is in no way connected with any pro-Soviet agency. It exists solely for the purpose of furthering international exchange of scientific information (something scientists everywhere favor), particularly by making Russian scientific papers available in English.

Mr. Thomas furthermore plainly implies that Dr. Condon is dodging testifying before the Thomas Committee. Dr. Condon, however, can hardly be an unwilling witness, since he has never been invited to testify, although he was visited in March by two of the Committee's investigators, with whom he cooperated completely.

Mr. Thomas owes Dr. Condon and the Nation a retraction and an apology for his innuendoes concerning a distinguished scientist. (IRVING LANGMUIR, D. A. MACINNES, GEORGE B. PEGRAM, I. I. RABI, W. M. STANLEY, and HAROLD C. UREY.)

Bacteriostasis is an important phase in the recent development of chemotherapy, and the quest for new natural and synthetic agents will, no doubt, pursue its course (H. W. Florey. *Brit. med. Bull.*, 1946, **4**, 248; V. C. Barry. *Nature, Lond.*, 1946, **158**, 863). The factors underlying bacterial inhibition extend, however, beyond the interaction of some specific substances with normal metabolic products of certain bacteria. Thus, in the absence of regulated administration, the bacteriostatic treatment itself may evoke in bacteria an environmental adaptation or an acquired resistance, as manifested by functional (p-aminobenzoic acid, enzymes) and structural (genes, chromosomes) changes (F. R. Selbie. *Brit. med. Bull.*, 1946, **4**, 267).

Again, the physical aspect of this problem is not without consequence. The fatty covering of some bacteria, as in the case of *tubercle bacilli*, may prevent contact between the organism and the agent, which is essential to bacteriostasis. These protective coverings could probably be removed and interaction made possible by the addition of a suitable solvent, such as acetamide, to the solution or colloidal suspension of the agent. Acetamide has a high solvent power, and both it and its hydrolytic products are nontoxic. Furthermore, its constitutional affinity to antibacterial substances, such as allantoin, urea (M. Copisarow. *Chem. Ind.*, 1942, **61**, 67), and sulfonamide, suggests the possibility of its synergic action in bacteriostasis. This may ultimately lead to the reassessment of the effective range of the bacteriostatic agents. (MAURICE COPISAROW, *1 Gildridge Road, Manchester, England.*)