tion of major reaction patterns have been approved. Such exhibits enrich the visitor's concept of the psychobiological aspects of animal life and increase his perspective and understanding of human behavior.

THE ELECTROCHEMICAL SOCIETY AND THE KILGORE BILL

THE following resolution was adopted unanimously by the Electrochemical Society at its eighty-third meeting, held in Pittsburgh from April 8 to 10:

WHEREAS, It appears that enactment of the Kilgore-Patman Bill S-702, HR2100 for the establishment of an Office of Scientific and Technical Mobilization

(a) Would confuse the war effort by creating at this time a new agency for the direction of the scientific and engineering program which is now so effective in the prosecution of the war and

(b) Might develop in peace-time a gigantic bureaucracy which would impede scientific and technical progress, be it

Resolved, Therefore, that members of the Electrochemical Society be urged to examine this bill and communicate their views on it to their congressmen, and furthermore be it

Resolved, That the Electrochemical Society in convention assembled, express its general opposition to the enactment of any measure which embodies government supervision, regimentation and control of the scientific and technical resources of the nation in peace-time.

THE AMERICAN ACADEMY OF ARTS AND SCIENCES

AT the annual meeting of the American Academy of Arts and Sciences, held on May 12 at its house, 28 Newbury Street, Boston, the election of twenty-seven fellows was announced:

MATHEMATICAL AND PHYSICAL SCIENCES

Bradley Dewey, Dewey and Almy Chemical Company, Cambridge.

Enrico Fermi, professor of physics, Columbia University.

Philipp Frank, lecturer on physics and mathematics, Harvard University.

Edwin Powell Hubble, astronomer, Mount Wilson Observatory, Pasadena, Calif.

Edwin Herbert Land, president, Polaroid Corporation, Cambridge.

Cecilia Payne-Gaposchkin, astronomer, Harvard College Observatory.

Donald Charles Stockbarger, associate professor of physics, the Massachusetts Institute of Technology.

Hugh Stott Taylor, professor of chemistry, Princeton University.

NATURAL AND PHYSIOLOGICAL SCIENCES

Arlie Vernon Bock, professor of hygiene, Harvard University.

David Bruce Dill, professor of industrial physiology, Harvard University.

Chester Scott Keefer, professor of medicine, Boston University.

Lewis Don Leet, associate professor of geology, Harvard University.

Brenton Reid Lutz, professor of biology, Boston University.

SOCIAL SCIENCES

Augusta Fox Bronner (Mrs. William Healy), director, Judge Baker Guidance Center, Boston.

Ada Louise Comstock, president, Radcliffe College.

Benjamin Morris Selekman, associate professor of business administration, Harvard University.

Payson Sibley Wild, Jr., associate professor of government, Harvard University.

Charles Edward Wyzanski, U. S. district judge for Massachusetts.

THE HUMANITIES

Leonard Bacon, poet and teacher.

Willa Cather, novelist.

Carleton Stevens Coon, associate professor of anthropology, Harvard University.

Angus Dun, dean, Episcopal Theological School, Cambridge.

Hugh O'Neill Hencken, curator of European archeology, Harvard University.

Perry Gilbert Eddy Miller, associate professor of history and literature, Harvard University.

Jean-Joseph Seznec, associate professor of Romance languages and literature, Harvard University.

Randall Thompson, composer and teacher.

Thornton Niven Wilder, novelist and dramatist.

The officers elected for the year 1943–44 were:

President, Harlow Shapley.
Vice-Presidents, Percy W. Bridgman, S. Burt Wolbach, Sidney B. Fay and Fred N. Robinson.
Corresponding Secretary, Abbott Payson Usher.
Recording Secretary, Hudson Hoagland.
Treasurer, Horace S. Ford.
Librarian, Frederick H. Pratt.
Editor, Robert P. Blake.

The Academy voted to award the Rumford Medals to Charles Edward Kenneth Mees, of the Eastman Kodak Company, for his contributions to photography.

SCIENTIFIC NOTES AND NEWS

THE doctorate of science was conferred on May 9 at the commencement exercises of Syracuse University on Dr. William M. Smallwood, professor emeritus of zoology of the university, and on Dr. Charles Hurd, professor of organic chemistry at Northwestern University.

ST. LAWRENCE UNIVERSITY, Canton, N. Y., conferred at commencement an honorary degree on Dr. Leonard Carmichael, president of Tufts College, formerly professor of psychology at Brown University and at the University of Rochester.

DR. HENRY F. JOHNSTONE, professor of chemical engineering at the University of Illinois, was presented at the thirty-fifth semi-annual meeting on May 10 with the award of the American Institute of Chemical Engineers. The medal is awarded annually for "an outstanding contribution to chemical engineering literature within a three-year period." It was presented by James G. Vail, chairman of the award committee. The citation described as of "exceptional merit" papers read by Professor Johnstone on heat transfer and distillation before recent meetings of the institute.

DR. CHARLES F. WILINSKY, executive director and superintendent of the Beth Israel Hospital, Boston, chief medical officer of the Boston Public Safety Committee, was presented on April 12 with the annual medal of the Boston City Club for distinguished civic service, in recognition of "the outcome of his work in organizing the medical section of the city's civilian defense effort, and for his work during the Cocoanut Grove disaster." This gold medal is presented each year to the citizen adjudged by the club to have "rendered the most outstanding civic service to greater Boston."

THE Clarke Memorial Medal for 1942 has been awarded by the council of the Royal Society of New South Wales to Dr. W. L. Waterhouse, of the University of Sydney, for "outstanding contributions in the sphere of natural science, particularly in plant pathology."

THE fellowship award of $1,000 of Sigma Delta Epsilon has been made to Dorothy Marie Ziegler to further her work at the Barnard Free Skin and Cancer Hospital, St. Louis, on changes in epidermal cells, comparing harmless and malignant cells through the application of improved new techniques. The work is being carried on under the direction of Dr. Edmund V. Cowdry, of Washington University.

THE American Association of University Women has made twelve grants to conduct research projects under $1,500 fellowship awards for 1943–44. Among those receiving awards in the sciences are Harriett F. Mylander, of Baltimore and Cambridge, to complete a scientific study of central inhibition; Elly M. Jacobsen, of the University of California at Los Angeles, research in the physiology of reproduction; Dr. Elizabeth Z. Burkhart, of Clarksville, Ark., experiments in endocrinology, and Dr. Dorothy I. Parker, botanist of Bargersville, Ind., to write the second volume of a botanical encyclopedia of the United States.

IT is reported in *Nature* that at the annual meeting of the British Institution of Chemical Engineers, on April 2, the following medals for 1942 were presented: *Osborne Reynolds Medal,* L. O. Newton; *Moulton Medal,* W. K. Hutchison and Dr. E. Spivey, for their paper on "Design and Performance of Cooling Towers"; *Junior Moulton Medal and Award,* Dr. S. H. Wade, for his paper on "Evaporation of Liquids in Currents of Air"; *William Macnab Medals,* J. H. Sharp and F. J. Wilkins.

DR. E. W. SMITH has been elected president of the British Institute of Fuel for the session 1943–44. He will take office in October.

PRESTON S. MILLAR, president of the Electrical Testing Laboratories, has been elected president of the New York Electrical Society. Dr. Colin G. Fink, professor of electrochemistry at Columbia University, has been elected first vice-president.

H. E. ROBINSON, assistant chief chemist of Swift and Company, Chicago, has been made president of the Chicago Chemists Club.

PROFESSOR H. H. KNIGHT, of the department of zoology of the Iowa State College, was elected on May 6 president of the college chapter of Sigma Xi.

DR. DAVID W. E. BAIRD, JR., acting dean, has been appointed dean of the Medical School at Portland of the University of Oregon. He succeeds Dr. Richard B. Dillehunt, who has resigned.

DR. GEORGE D. SCARSETH, who has been serving as professor of soils and as soil chemist at the Experiment Station of Purdue University, has been appointed head of the department of agronomy, effective on July 1. He has been a member of the department since 1937 and succeeds Professor A. T. Wiancko, who is retiring on June 30 after serving for forty years. Eric W. Stark, of the Texas State Forest Service, has been appointed associate professor of forestry in the School of Agriculture and associate in forestry and conservation in the Experiment Station. For the past three years, he has served as chief of the Division of Forest Products Research. He will carry on research and teaching in wood properties and wood utilization.

P. I. DEE has been appointed professor of natural philosophy at the University of Glasgow.

DR. MAURICE L. TAINTER, professor of pharmacology at Stanford University and at the College of Physicians and Surgeons, San Francisco, has been named research director of the Winthrop Chemical Company. His headquarters will be at Rensselaer, N. Y.

DR. T. SMITH TAYLOR, formerly professor of physics, in charge of the Graduate School of the Newark College of Engineering, has become chief of selenium rectifier development with the Federal Telephone and Radio Corporation at East Newark.

PROFESSOR HARVEY BRACE LEMON is on leave of absence from the University of Chicago. He has become chief physicist at the Ballistics Research Laboratory, Aberdeen Proving Grounds, for the duration of the war.

DR. MARGARET D. CRAIGHILL, dean of the Woman's Medical College of Pennsylvania, has leave of absence to enable her to accept a commission of major in the division of preventive medicine in the Surgeon General's Office. She will specialize in preventive medicine in the Women's Army Auxiliary Corps.

DR. E. RAYMOND HALL, Guggenheim fellow, University of California at Berkeley, returned on May 2 after two and a half months spent in Mexico, where he made ethno-zoological studies in the field. While in Mexico he gave illustrated lectures at the Instituto de Salubridad y Enfermedades Tropicales and at the Benjamin Franklin Library on the results of his biological studies in Michoacan and on the Latin American fellowships offered by the University of California.

SIR HAROLD HARTLEY has been appointed general treasurer of the British Association as from April 1, the beginning of a new financial year. He succeeds Professor P. G. H. Boswell, who has resigned after twelve years' service in office, first as a general secretary (1931–35), and then as general treasurer (1935–43).

IT is reported in the *Times*, London, that the British Ministry of Agriculture, the Department of Agriculture for Scotland and the British Ministry of Information have asked a party of four agriculturists with practical experience of the food production campaign to visit the United States and Canada in the near future. The party will consist of T. R. Ferris, executive officer of the Dorset War Agricultural Executive Committee; Watson Jones, vice-chairman of the Shropshire War Agricultural Executive Committee; T. B. Manson, Divisional Land Officer of the Department of Agriculture for Scotland; and A. G. Street, farmer and author. They will tour the United States and Canada, giving lectures on the British farmers' war effort. The visit is expected to last for two to three months.

RICHARD P. STRONG, Colonel, M.C., A.U.S., director of tropical medicine at the Army Medical School, Washington, D. C., delivered the Leo Loeb Lecture at Washington University Medical School, St. Louis, on April 29. The problems of the war regarding malaria, bacillary dysentery, filariasis and typhus fever were especially discussed. On April 30 at the School of Medicine of St. Louis University he delivered an address upon plague.

DR. ERNEST CARROLL FAUST, professor of parasitology and head of the department of tropical medicine of the School of Medicine of Tulane University, delivered the third series of Ernest A. Sommer Memorial Lectures at the Medical School of the University of Oregon, Portland, from May 17 to 22. The first lecture was entitled "Horizons of American Tropical Medicine"; other lectures were on "Insects as Agents and Transmitters of Disease," "Malaria," "Yellow Fever and Dengue," "Amebiasis" and "Filariasis."

DR. CARL J. WIGGERS, professor and director of physiology at the Western Reserve University Medical School, has recently given the following lectures: "The Irreversibility Characteristic of Shock," before the Detroit Physiological Society on March 18; "The Value of Adrenal Cortex Preparations in Hemorrhagic Shock," Michigan Academy of Science Shock Symposium on March 26, and "Experimental Approaches to the Shock Problem," Adam Miller Lecture at the Long Island Medical College, Brooklyn, N. Y., on April 13.

PROFESSOR J. EDWARD HOFFMEISTER, of the department of geology of the University of Rochester, gave a public lecture on April 22 on "The Importance of Geology in Military Strategy in the Pacific Campaign." This was the second in a series of popular scientific lectures sponsored by the university chapter of the Society of the Sigma Xi. These lectures were initiated to acquaint the public with modern scientific facts of present-day importance. The first lecture of this series was given by Professor J. R. Murlin, of the university, on January 22. He spoke on "Food Rationing and the Nutritional Welfare of Our People."

PROFESSOR CARL O. DUNBAR, director of the Peabody Museum, Yale University, gave the address following the annual dinner of the Sigma Xi Club of the University of Connecticut on April 22.

A SERIES of six lectures is being given under the auspices of the New York Institute of Finance on Mondays, at 3:45 o'clock, in the Governors' Room of the New York Stock Exchange. The lecturers include John Mills and Dr. K. K. Darrow, of the Bell Telephone Laboratories, and Dr. Willard F. Libby, of the University of California.

IN the issue of SCIENCE for April 23, Dr. Foster Kennedy was referred to as professor of neurology at the College of Physicians and Surgeons of Columbia

University. Dr. Kennedy is professor of neurology in the Cornell University Medical College.

A MEETING of the American Physical Society, including invited and contributed papers, will be held at Stanford University, Calif., on July 10.

DR. T. R. HOLLCROFT, associate secretary of the American Mathematical Society, reports that the three hundred ninety-fifth meeting of the society was held at Hunter College, New York City, on April 24. The attendance was about two hundred, including one hundred and forty-three members. The following addresses were given by invitation of the program committee—"Spectral Theory," by Professor Nelson Dunford, of Yale University, and "Absolutely Convergent Trigonometric Sums," by Professor R. H. Cameron, of the Massachusetts Institute of Technology. There were two sessions at which thirteen contributed papers were presented. Ten additional papers were read by title. The excellent arrangements made by the department of mathematics of Hunter College were very much appreciated by all attending the meeting.

PROFESSOR H. J. VAN CLEAVE writes: "The general seminar in the department of zoology and physiology of the University of Illinois has devoted two meetings per month through the current year to the history of zoology in some of the leading American universities. In most instances a full hour has been given to each of the more important institutions with a former student or staff member from that institution in charge of the program. In the aggregate these programs have given a fairly comprehensive sketch of biology in America."

A GIFT of $43,500 from the Rockefeller Foundation has been made to Columbia University in support of three years' research on problems of intermediate metabolism in the department of biochemistry.

THE Paleontological Research Institution of Ithaca, N. Y., has recently been presented by Mrs. C. S. Bentley, of Plattsburg, N. Y., with a collection of recent sea shells mainly obtained from the West Coast though with genotype representatives from other oceanic regions.

DR. C. C. LITTLE, director of the Roscoe B. Jackson Memorial Laboratory at Bar Harbor, Maine, has announced a grant of $35,000 to the laboratory from the trustees of the Rockefeller Foundation. This grant is for a five-year period beginning on July 1, and is a contribution toward the expenses of establishing and maintaining a mammalian stock center. According to Dr. Little the money will be used primarily in connection with the work at the Hamilton Station in Salsbury Cove. It is hoped that in the five-year period a good beginning may be made in the establishment and maintenance of stocks of rabbits, rats and guinea pigs for use in scientific experimentation. Work has already been under way for some time at the Hamilton Station. It is hoped that the scientific results obtained will be of value not only in cancer research but to experimental medicine as a whole.

DISCUSSION

"MOCK DOMINANCE"

IN a recent issue of SCIENCE,[1] Richey points out that a hybrid from two plants, one with twice as many internodes of half the length of the other, would have a greater height than either parent, providing the hybrid internode number and length were each the arithmetical mean of those of the parents. For such gene interaction resulting in heterosis in height he suggests the term "mock dominance" which he considers not to be dominance in its genetic sense. I believe further comment is necessary to clarify the issue.

(1) If height can be taken as a statistical creation compounded of two fundamental elements (internode length and number), then Richey's conclusions and terminology are justifiable. One might as logically, however, consider height and internode length as fundamental and their quotient, internode frequency, a compound. It should be noted in this connection that, in an actual cross, the factors would not necessarily interact in the manner postulated by Richey.

(2) If a particular gene substitution always makes the same contribution to the total effect, gene interaction is said to be absent. If the contribution is not always the same but depends merely on the total effect of the residual genes, the scale may be transformed into one on which each factor has the same effect throughout the range.[2] Interaction that can be thus eliminated by the use of a transformed scale may conveniently be termed "statistical interaction."

In other cases the effect of a gene substitution depends not merely on the total effect of the residual genes but also on the particular genes producing this total effect. That this is the case in the example proposed by Richey will be apparent from a consideration of the following list of genotypes and the relative

[1] F. D. Richey, SCIENCE, 96: 2490, 1942.

[2] See, for example, S. Wright, *Jour. Amer. Statist. Assoc.*, p. 163, 1926.