Study Suggests New Brain Structures in Man Give Unique Reasoning Abilities

By Karen Levin

New evidence of the versatility of the human brain was reported recently by Dr. Morton E. Bitterman, Chairman of the Department of Psychology, Bryn Mawr College and a National Institute of Mental Health grantee.

He discussed his provocative findings at a Laboratory of Psychology seminar held at the Clinical Center.

From his studies, Dr. Bitterman concluded that "man is not just more efficient than lower animals, but possesses new brain structures which give him unique reasoning abilities."

He work, conducted for the past several years in the laboratories at Bryn Mawr, challenges some theories of modern psychology which hold that man's intelligence is not unique and differs from that of the lower animal only in degree.

Theory Tested

One theory holds that, although man can make more neural connections faster than lower animals, he has no exclusively human mental mechanisms.

Dr. Bitterman decided to test these ideas with the fish, turtle, pigeon, rat, and monkey, and apply the findings to humans by extrapolation.

By putting the animals in test containers and rewarding them with their favorite food, he was able to train all of them to choose correctly one of two Plexiglas panels.

However, when he reversed the rewarding panel to see if the animals could adjust, all succeeded but the fish. No matter how he altered the findings to humans by extrapolation.

Blood Bank to Seek Donors At Westwood January 29

NIH Blood Bank staff will visit the Westwood Building's Employee Health Unit, Rm. 30, on Friday, January 29, 10 a.m. to 2 p.m., to receive donations. Employees are requested to call Ext. 6400 for appointments.

The Blood Bank also reported that 183 pints of blood were received from NIH donors during December.

AHA Honors Dr. Shock

Dr. Nathan W. Shock, Chief of the Gerontology Branch, National Heart Institute, was the recipient of a Special Citation for Distinguished Service to Research at a luncheon of the Board of Directors of the American Heart Association last Saturday at the Hotel Summit in New York City.
NEWS from PERSONNEL

INAUGURATION DAY

Inauguration Day, January 20, will be a holiday. Provisions of the Leave Act for time off and holiday pay will be observed.

HEALTH BENEFITS PROGRAM

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Detailed information will be published in this column in the next issue of the Record.

VISITING PROGRAM REVIEWED

A look back over fourteen years reveals that, to date, 814 promising and distinguished scientists have worked at the NIH in the Visiting Program. Its international flavor is pointed out by the fact that these scientists have come from 48 different countries.

Since 1960 the ten countries most often represented in the program were Japan, England, India, Italy, Germany, Israel, Canada, Sweden, Australia, and France.

The length of the visits has ranged from a few months to three years. Although the initial appointment is made for one year, it may be renewed if work is incomplete and the visitor’s visa permits.

The majority of the visitors return to their homelands, but in a few cases they become United States citizens and join the NIH staff.

Through the Visiting Program the NIH is able to strengthen scientific relationships between itself and other similar centers throughout the world.

Some of the visiting scientists are here essentially for training purposes. Others bring skills, techniques, and judgment values to the NIH and thereby contribute to the intellectual environment of the NIH as a national research resource.

GUARDS & FIREFIGHTERS

In a letter this week to James Gribble, President of the American Federation of Government Employees, AFL-CIO, Lodge 2419, Dr. James A. Shannon, Director of NIH, expressed his pleasure in granting exclusive recognition to the employee organization for a unit comprised of non-supervisory guards and firefighters at NIH.

The action was taken as a result of an election conducted on December 15 to determine majority status as provided for in Executive Order 10988, Employee-Management Cooperation in the Federal Service.

This recognition gives to the organization the right to represent all employees of the unit in discussions on the formulation and implementation of personnel policies and practices, working conditions, and grievances. Any agreements reached through such discussions must, of course, be in conformance with appropriate rules, regulations, and merit system principles.

PSB Issues Procedures for Removal of Parking Decals

Employees separating from NIH are requested to have parking permit decals removed from their automobile bumpers on or before their final separation date. This includes decals provided for additional cars.

Revised parking permit procedures issued by George P. Morse, Chief of the Plant Safety Branch, OD, also request employees to remove NIH parking decals when they sell, trade, or otherwise dispose of their motor vehicles.

As a service to employees, the NIH Fire Department will remove these decals using an approved chemical process. This service is available at the Fire Station, Building 12, between 7 a.m. and 7 p.m., Monday through Friday.

The Fire Department will furnish separating employees temporary parking permits to use until date of termination. Additional information may be obtained from the Plant Safety Branch, Ext. 66858.

NII 'Old Timers' Relive Hygienic Lab Days at Club's Annual Banquet

Memories of the “good old days” at the Hygienic Laboratory at 25th and E Sts., N.W., were shared by 72 members of the NIH Old Timers Club who recently attended the club’s annual banquet.

The banquet marked the 10th anniversary of the club whose 101 members each have at least 20 years experience with NIH to their credit. Fourteen members are retired, the others are still on the job at NIH.

Mr. R. "Shorty" Reed, who has been with NIH for 42 years, was master of honor at the banquet. He is a pathologist with the Laboratory of Experimental Pathology of the National Institute of Arthritis and Metabolic Diseases.

One speaker, Louis "Dusty" Bender Sr., a retired veteran of 40 years of service with the Division of Biologics Control (now the Division of Biologics Standards), discussed highlights of Mr. Reed’s career.

Sportsmanship Cited

He also spoke of Mr. Reed’s expertness at softball during lunch hours at 25th and E. “Shorty,” he recalled, “exhibited sportsmanlike conduct at all times, which is particularly noteworthy since he was a pitcher.”

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Newly elected officers are James B. Davis, Chief, Supply Management Branch, OD, president; Frederick, Environmental Services Branch, DRG, 1st vice president; Maurice Haugh, Laboratory of Experimental Pathology, NIAMD, 2nd vice president; Charles Williams, Laboratory of Chemistry, NIAMD, secretary; and LeRoy Smelbaker, Laboratory of Biology of Viruses, NIAID, treasurer.

Mr. Davis expressed the hope that the Old Timers Club might expand its activities and invited all NIH employees with 20 or more years of service to join. Additional information may be obtained from Mr. Davis, Ext. 62315.

Dr. Udenfriend Delivers Harvey Society Lecture

Dr. Sidney Udenfriend, Chief of the National Heart Institute’s Laboratory of Clinical Biochemistry, recently delivered a Harvey Society Lecture in New York City. His subject was “Biosynthesis of the Sympathetic Neurotransmitter, Norepinephrine.” The Harvey Society is affiliated with the New York Academy of Medicine.

Published bi-weekly at Bethesda, Md., by the Public Information Section, Office of Research Information, for the information of employees of the National Institutes of Health, principal research center of the Public Health Service, U. S. Department of Health, Education, and Welfare.

NIH Record Office
Bldg. 31, Rm. 4B13. Phone: 49-62125

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The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policy of the paper and the Department of Health, Education, and Welfare.

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Margaret Powers, Senior Assistant Dietitian in the Clinical Center Nutrition Department, recently helped orient Peace Corps volunteers for Kenya, East Africa.

"It was a matter of interpreting basic nutrition principles in terms of the foods available in Kenya—making things like carbohydrates and vitamins comprehensible in a language and culture different from ours," Mrs. Powers said.

BRAIN STRUCTURES
(Continued from Page 1)

tered the test or increased the reward, the fish could not exhibit what psychologists call "habit reversal."

This trait, Dr. Bitterman feels, "represents a flexibility that cannot help but be of value in an animal's adjustment to changing life circumstances."

Next, the researcher tested the animals' "probability learning," the developing of strategy when the rewards are split between two choices on a set ratio. In spatial problems, all animals but the fish were able to figure out a certain probability and do better than sheer guessing in deciding between two panels.

On visual problems (where the correct panel was marked by stripes) the pigeon and the turtle were unable, along with the fish, consistently to pick the right panel. In the evolutionary scale, animals were able to solve spatial problems earlier than visual ones.

Removes Part of Cortex

Finally, Dr. Bitterman removed a large part of the cortex—the seat of reasoning—of the rats, and restested them. Their performances slipped to the level of the turtle, a reptile with almost no cortex. He thinks that, with deeper denervation, the rat probably would sink to the level of the fish.

Dr. Bitterman noted that the first primitive forerunner of the cortex appeared in the amphibian, probably by genetic accident. The first true cortex was developed in the reptile, and has reached its present development for the Air Ministry. During World War II he worked as a government scientist on radar development for the Air Ministry.

Vaccination of a village child near Matlab Bazar is observed by (left to right): Drs. A. K. M. Abdul Wahed, Pakistan; Colin M. MacLeod, Office of Science and Technology; Clifford A. Pease, Chairman, NIH Cholera Advisory Committee; Alexander D. Langmuir, Communicable Disease Center, Atlanta, Ga.; Capt. Robert A. Phillips, Commanding Officer, U.S. Naval Medical Research Unit No. 2, Taipei, Taiwan; and Abram S. Benenson, Director, Pakistan-SEATO Cholera Research Lab.—Photos by USIS.

The Cholera Research Laboratory which the late Dr. Joseph E. Smadel of NIH helped establish at Dacca in East Pakistan, as part of the SEATO Cholera Research Program, recently named a new health service launch in his honor.

The modern diesel-powered laboratory was unveiled at a dedication ceremony at Matlab Bazar, river site of the floating field hospital of the Cholera Research Laboratory.

Loaned by the Government of Pakistan, the launch will be used for transportation from the laboratory at Dacca to the hospital barge 40 miles southeast at the village of Matlab Bazar.

The field hospital, formerly used as a police barge by the Government of East Pakistan, is four hours from Dacca by launch. The lower deck was converted into a hospital ward and doctor's office and the top deck into living quarters for medical personnel.

Plaque Dedicated in 1963

Earlier, in October 1963, a plaque was dedicated at the laboratory to Dr. Smadel who served as first Chairman of the Cholera Research Laboratory's Technical Committee. The plaque is inscribed with his words:

"We hope to find better ways of modifying the appearance, function, and psychology of people affected with clefts," Dr. Harris said.

The major emphasis in the proposed research is on establishing the normal range of function in cleft palate patients.

"Deterioration of the timing, symmetry, and constancy of electromyograms would indicate an unfavorable response," Dr. Harris explained, whereas a regular and symmetrical pattern would indicate competence without moving normal oral structures."

Associates Named

Associated with the project will be Dr. Orion H. Stuteville, Professor of Maxillofacial Surgery and Chairman of the Executive Committee of the Cleft Lip and Palate Institute; Dr. Morton S. Rosen, Assistant Professor of Prosthetics and Director of Cleft Lip and Palate Institute; Dr. John R. Thompson, Professor of Orthodontics; and Dr. Harold B. Westlake, Professor of Speech Correction and Speech Pathologist.
Scientist-Administrators Play Vital Role In Conduct of the Extramural Program

By Gary Goldsmith
NIH Information Trainee

Editor's Note: One aspect of the extramural granting procedure at NIH was discussed in the Nov. 18 issue of the Record. This article presents another facet of the process.

At the same time that a grant application is assigned to a DRG study section for consideration on its scientific merits, it is also referred for review to the appropriate Institute and associated advisory council.

Each Institute has a staff of scientists-administrators, especially knowledgeable in a particular field of research, whose function it is to consider the application not only from the scientific aspect but from the point of view of Institute program relevancy and interests.

The staff must ask:
How does this project fit into the mission of the Institute and into the aims and stature of present research programs?
Will it be a good project with which to start exploration into a new area?

Applications Prepared for Councils

Members of the extramural program staff are responsible for the preparation of materials for review by the National Advisory Council of the Institute and presentation to the council, if necessary, of supporting materials.

Where the study section is concerned chiefly with the scientific value of the proposed research, the staff must consider how these projects fit into a broad, coherent program and the Institute's larger mission.

The application is often forwarded to the council with additional information in order to highlight certain aspects and provide a clearer picture of the scientist, his work, and the potential of both.

The extramural staff's responsibility is not limited to the processing of applications for council's review, however. They are also concerned with the implementation of council's recommendations and for the final negotiation of grant budgets, administrative arrangements, and other factors involved in the initiation of support. They provide the direct link between NIH and the individual scientist and his institution.

Staff Provides Management

Once a grant has been awarded and goes into effect, the staff provides the day-to-day management and administration necessary to meet any problems that arise.

Since he must work so intimately with the programs under his jurisdiction, it is especially important that the extramural staff member be familiar with the scientists, their work, their facilities, and other important aspects of supported research.

He may undertake a site visit to the laboratory to study present and future needs. The site visits made by study section members clarify scientific competence and research requirements. The work of the Institute staff enable them to keep aware of and to evaluate research progress and therefore carry out their administration more effectively.

The Institute staff also acts as the liaison between the investigator and the Public Health Service, explaining its policies and regulations and interpreting adjustments in the grant administration, research, and goals.

A grant may be activated for up to seven years, but it must be reviewed annually to maintain an up-to-date knowledge of its progress and developing needs. Throughout the "life" of a grant, the extramural program staff watches it, attends to it, and tries to ensure its smooth continuation and well-being.

Research Progress Reported

The communication of important research developments and progress is an important part of the Institute staff's responsibility. They prepare reports for professional organizations and policy-making groups at NIH as well as congressional committees. They support and initiate periodic reviews of articles and surveys of the state of research in various fields.

They also bring to the attention of the Institute's information office significant scientific reports resulting from projects supported by the Institute. Accounts of these efforts are then prepared for presentation to the Surgeon General and other policy-making officials.

A third broad function of the Institute's scientific administrators involves programming of new areas of research. The staff draws upon its wide and extensive experience, along with the suggestions of advisory groups and consultants, in its efforts to search, analyze, and evaluate new avenues of research of potential interest for the Institute.

Must Ask Questions

In considering expansion of programs, the staff must ask: Why this research? How much support? How can this field of science be stimulated?

The Institute and its staff then work together with the council to establish priorities, to determine if it is of interest, productive, and the best investment of public funds for health-related research.

In all of their many functions and responsibilities the extramural program staff regard themselves as "stewards of the public funds" in advancing the mission of the Public Health Service.

Environmental Causes of Cancer to Be Studied Under PHS Contract

Scientists at the Chicago Medical School will cooperate with expanded National Cancer Institute programs of research on environmental causes of cancer under a Public Health Service contract totaling $1,065,768.

The staff of the medical school's Division of Oncology, under the direction of Dr. Philippe Shubik, will conduct an integrated program of testing and research on environmental substances suspected of being carcinogenic (cancer-causing).

Drs. Shubik, Kotin Plan Work

The direction of the research will be planned jointly by Dr. Shubik and Dr. Paul Kotin, Associate Director for Field Studies, NCI.

The NCI-Chicago Medical School program will help meet the growing need for carcinogenesis research brought about by the increasing number and complexity of environmental contaminants. It will operate on a continuous, long-term basis with flexibility to solve problems as they may arise.

Chemicals to Be Tested

The carcinogenic effects of chemicals such as pharmacological agents, combustion products, food additives, and industrial materials will be tested by administering them in animals over prolonged periods.

At the same time, research will be conducted to determine the mechanisms of carcinogenesis—how the chemicals are metabolized, what products are formed, and how they interact with cells and tissues to produce a malignancy.

Judith Raisner, latest graduate of the NIH Information Training Program (center), receives her certificate from Clifford F. Johnson, Chief, Office of Research Information, and Laura Jackson, Information Officer of the National Institute of Mental Health, who acted as Miss Raisner's counselor during her one-year internship. Miss Raisner is now on the information staff of the National Cancer Institute.—Photo by Bob Pumphrey.
Dr. Osberg Is Appointed Chief of NIMH Branch; Dr. Hollister Retires

Appointment of Dr. James W. Osberg as Chief of the Community Research and Services Branch of the National Institute of Mental Health, has been announced by Dr. Stanley F. Yolles, NIMH Director. Dr. Osberg succeeds Dr. William G. Hollister, Branch Chief since 1962, who retired January 1 from the Commissioned Corps of the U.S. Public Health Service.

Major function of the Community Research and Services Branch is to make use of research findings in the development of the Nation's mental health services and to provide consultation in the development of State mental health programs.

Dr. Osberg will direct the branch in developing and disseminating scientific information and technical knowledge through which mental health practitioners can translate research findings into services.

Dr. James W. Osberg (left) discusses his new duties as Chief of the Community Research and Services Branch, NIMH, with Dr. William G. Hollister, who has held the post since 1962 and is retiring from the Public Health Service.

Directs Study Center

Since 1960, Dr. Osberg has been Director of the NIMH Mental Health Study Center in Adelphi, Md. He came to the Institute in 1966 as a Study Center staff psychiatrist, and later served as consultant in psychiatry at the DHEW Regional Office in Atlanta, Ga., from 1958 to 1960.

Dr. Osberg, a native of Stoneham, Mass., attended the University of Virginia, Harvard University, and the University of New Hampshire, and received his medical degree from the Tufts College Medical School in 1948. He spent his psychiatric residency in the Lexington, Ky., and Fort Worth, Tex., PHS hospitals. A Fellow of the American Psychiatric Association, Dr. Osberg is also a member of the American Medical Association and the American Public Health Association, and a Diplomate of the American Board of Medical Examiners.

Two NIH Scientists Win Swiss Foundation Award

Two NIH scientists have been awarded first prize in an international competition for their article “Sodium-Potassium Activated Adenosinetriphosphatase and Cation Transport in Normal and Leukemic Human Leukocytes.”

They are Dr. Jerome B. Block, Senior Investigator, Medicine Branch, NCI, and Dr. Sjoerd L. Bonting, Head, Section on Cell Biology, Ophthalmology Branch, NINDS.

The article, based on work completed at NCI over a year ago, was submitted by its authors for the first competition of the Dr. Heinz Karger Memorial Foundation of Basel, Switzerland. The award included a check for 3,000 Swiss francs (about $700), and publication of the paper in the November issue of Enzymologia Biologica et Clinica, Volume 4, No. 4.

Serves in Israel

Dr. Block, who has been with NCI since 1960, received his undergraduate training at Stanford University and his M.D. from New York University. He recently returned from a year’s research training assignment at the Weizmann Institute, Rehovoth, Israel.

Dr. Bonting, who also came to NIH in 1960, took his B.S., M.S., and Ph.D. degrees at the University of Amsterdam in The Netherlands. Last September he left on a one-year assignment to conduct a research program at the Institute of Animal Physiology in Cambridge, England.

Medical and Health Studies Account for Seven Cents of Federal Research Dollar

Medical and health-related research will account for seven cents from each dollar the Federal Government will provide for research and development in Fiscal Year 1965, according to a recent Public Health Service publication.

The publication analyzes the $1.3 billion currently being provided by 12 Federal agencies for performance of such research and for investment in research facilities.

Based upon data provided by Federal agencies to the National Institutes of Health, the publication—“Federal Support for Medical and Health-Related Research, 1962-65”—continues to document developments in the growth of Federal medical and health-related research presented for the 1947-61 period in the preceding issue of the Resources for Medical Research series of publications.

Highlights of the report show that:

- The Nation’s medical research effort will require $1.7 billion in 1964 for the conduct of medical and health-related research. All sources of support—Government, industry, foundations, voluntary health agencies—continue to provide increased funds with Federal sources accounting for 65 percent of total support.
- Federal support for medical research has increased about 23 percent per year, on the average, since 1957; but for the 1962-64 period, the annual rate of change has been slower, about 19 percent; for 1965 an increase of about 10 percent over 1964 is scheduled.
- While nearly all major Federal research and development programs contain components contributing to the conquest of disease, the 12 Federal agencies whose research and development programs are reviewed in this publication all make specific provision for medical research.
- About four-fifths of the total spent by Federal agencies for the conduct of medical and health-related research is budgeted and justified as such; about 20 percent represents outlays for research directly related to health but supported as germane to agency missions other than health.
- Since 1960, Federal agencies with general health as their primary objectives have provided almost three-fourths of all Federal funds for the conduct of health research; agencies with defense and space objectives, about one-fifth; and agencies with civilian objectives, the remaining one-twentieth.

Postwar Pattern Continues

- Following the pattern of the postwar period, nearly three-fourths of total Federal funds support the investigations of scientists in non-Federal laboratories—one-fourth finances the research at Federal installations. Investigators at educational institutions and other non-profit organizations will receive more than four-fifths of Federal funds spent outside Federal facilities.
- Of the 12 Federal agencies supporting medical research, only two, PHS and the Veterans Administration, devote their entire research programs to health problems. Other major research agencies such as the Atomic Energy Commission, the Department of Defense, the National Aeronautics and Space Administration, and the Department of Agriculture provide support for medical research essential to their missions.

This report is the fifth in a series of publications designed to present timely information on significant measures of the Nation’s resources devoted to medical and health-related research.


CU Election January 19

New members of the Board of Directors and the Credit Committee will be elected at the 25th Annual Meeting of the NIH Federal Credit Union, Tuesday, January 19th, at 12 Noon in the Clinical Center auditorium.
Soviet claims of isolating a virus that causes ALS. “We attempted to evaluate these claims, discuss methods, review protocols, and, if possible, to arrange for the exchange of materials,” reported Dr. Leonard T. Kurland, Director of Biometry and Medical Statistics, Mayo Clinic, Rochester, Minn., and formerly head of NINDB’s Epidemiology Branch.

Although the members of the mission were not convinced of the presence of a transmissible viral agent in the material submitted to them and other U.S. scientists for examination, they were impressed by the vigorous efforts of Soviet scientists to isolate viruses that may be related to chronic degenerative diseases of the nervous system.

Other Soviet discoveries of microscopic changes in the nerve cells of ALS patients, also observed in persons in the U.S. and Guam, were confirmed in the mission’s report.

23 Centers Visited

During their 3-week visit, the delegation traveled 12,000 miles within the Soviet Union, visiting 23 clinical and laboratory research centers. Members of the delegation praised the warmth of their reception.

Most impressive of these centers was the new “science city” of Akademgorodok (meaning academy’s little city), located 2,000 miles east of Moscow and 12 miles south of the Siberian capital of Novosibirsk.

Built seven years ago, this city is situated near a 125-mile artificial lake, and has a population of 1.3 million. Fifty thousand of the inhabitants are employed at the university or one of its 15 institutes of research and teaching.

This academic complex emphasizes the physical sciences, but also offers training in genetics, experimental biology, and medicine. The U.S. mission was the first such American biological delegation to visit Akademgorodok.

Scientists in Siberia Younger

“In Siberia we found much higher standards of living, spacious, than in Moscow,” said Dr. Richard T. Johnson, Division of Neurology, Metropolitan General Hospital and Western Reserve University School of Medicine, Cleveland, Ohio.

“The scientists working there are younger than in other areas—perhaps 50 to 40 years of age. There are also many students. The top 300 or more children in the area who show outstanding ability in science and mathematics are brought to the center at the age of 14 or 15, and are taught by men of professorial rank.”

However, members of the mission agreed that the best Soviet research was still coming from older research centers in Moscow and Leningrad.

Encouraged by the atmosphere of cooperation and free exchange of views, the American delegation arranged for future exchanges of scientific missions and pathologic material between the two countries. These exchanges will try to eliminate differences in diagnoses and terminology—differences which may be due simply to semantic confusion.

In addition to continuing collaboration with Soviet researchers on ALS and MS, the mission expressed interest in studying other suspected viral diseases appearing in areas of the Soviet Union, which may yield information on disease patterns in this country.

Masland Praises Mission

Dr. Masland praised the mission for establishing workable channels of communication with Soviet researchers in this field and said he welcomed the influence such exchanges may give to new directions in U.S. research programs.

Five of the six members of the U.S. mission to the Soviet Union, and Dr. Richard L. Masland, NINDB Director, brief representatives of the press on the purpose and accomplishments of the trip. From left: Dr. Masland, Dr. Jacob A. Brody, Dr. Leonard T. Kurland, Dr. John Hotchin, Dr. Richard T. Johnson, and Dr. William J. Hadlow, Dr. Hilary Koprowski, who headed the mission, was not available for the briefing.—Photo by Jerry Hecht.

Dr. Robert Gibbs Named To OD Grants Position

Dr. John F. Sherman, NIH Associate Director for Extramural Programs, has announced the appointment of Dr. Robert J. Gibbs as Assistant to Dr. Thomas G. Bowery, Extramural Operations and Procedures Officer, OD.

In this position Dr. Gibbs will assist Dr. Bowery, within the Office of the Director, on matters requiring OD leadership or participation in the area of grants administration.

He will be responsible for helping to insure consistent application of grant policies among NIH Institutes and Divisions. In addition, he will serve in a liaison capacity for Dr. Sherman and Dr. Bowery with the Division of Research Grants, the Office of the Surgeon General and other PHS Bureaus.

Dr. Gibbs joined PHS last January when he was appointed to the NIH Grants Associate Program for a year of diversified training in extramural grants administration. During this period he served on a rotating basis in various DRG branches, several NIH Institutes, the Bureau of State Services, and the National Science Foundation.

Prior to that, Dr. Gibbs had been a physical chemist with the U.S. Department of Agriculture since 1956, serving as the project leader of their program in muscle protein research. He is a former staff member of the Massachusetts Institute of Technology and was a research associate at the University of Virginia Medical School.

He received the B.S. degree from Fordham University in 1948, the M.S. degree in 1949, and his doctorate in 1953, also from Fordham. Dr. Gibbs was the recipient of several scholarships and was an AEC Predoctoral Fellow from 1950 to 1952.

Family Participation in Mental Care Studied In 27 Countries

A 5-month study of family participation in the hospital care and treatment of the mentally ill—covering 27 African, Middle Eastern, and Asian countries—was initiated by the National Institute of Mental Health last month.

Dr. John E. Bell, Program Director of Mental Health Services in the DHEW Regional Office in San Francisco, Calif., is conducting the study.

Ultimate aim of the study is to adapt to hospital treatment services in the United States beneficial customs of family participation in the mental care of patients hospitalized for mental disorders as well as for physical illnesses.

Dr. Bell will use hospitals in the countries he visits as sources of information on techniques of family involvement in treatment as they have developed within differing cultural patterns.

Dr. Bell, who has assembled data about mental hospital programs in these countries, hopes to supplement this information by field investigations into:

1. Methods by which patients’ families collaborate with hospital staffs to understand, diagnose, treat, support and rehabilitate patients.

2. Special provisions made by hospitals to facilitate family participation, including arrangements for family transportation, living quarters and organization of staff and patient activities.

Confers With Officials

Dr. Bell also will confer with representatives of the World Health Organization, overseas field stations of NIH, and Ministries of Health to learn how hospitals are organized, patient care programs planned, and staffing patterns developed to promote family involvement.

Dr. Bell, a Diplomate in Clinical Psychology with experience in teaching and research, is a pioneer in studies of family group treatment of the mentally ill.

Dr. Robert Gibbs, Director of the Wistar Institute of Anatomy and Biology, Philadelphia. Dr. Jacob A. Brody, Chief of the Epidemiological Section, Arctic Health Research Center, Anchorage, Alaska, served as Secretary.

Other members, in addition to Drs. Kurland and Johnson, were: Dr. William J. Hadlow, National Institute of Allergy and Infectious Diseases, Rocky Mountain Laboratory, Hamilton, Mont.; and Dr. John Hotchin, Assistant Director of the Department of Health, Division of Laboratories and Research, Albany, N. Y.

The National Board of Health was created by law March 3, 1879. It represented the first organized comprehensive, national medical research effort of the Federal Government.
Dr. Stuart M. Sessions, NIH Deputy Director, has announced the appointment of Dr. Karl R. Johansson, Chief of the Research Grants Branch, NINDB, and Dr. William M. Upholt, Chief of the Research Associate Grants Branch, Office of Resource Development, Bureau of State Services, as Chairman and Vice Chairman of the NIH Grants Associate Program for 1965.

Dr. Johansson succeeds Dr. James F. Haggerty, Chief of the Research Grants Review Branch, DRG. The office of the Vice Chairman is a newly created position. The assignments for Drs. Johansson and Upholt are in addition to their regular duties.

Dr. Johansson came to NIH in 1950 as Executive Secretary of the Virology and Rickettsiology Study Section. He left DRG in 1961 to accept an Associate Professorship of Environmental Health Engineering at California Institute of Technology where he taught microbiology and environmental biology for two years. In 1963 he returned to NIH and was appointed Chief of NINDB's Research Grants Branch.

Researcher in Microbiology

Born in Bay City, Mich., Dr. Johansson received the B.S., M.S., and Ph.D. (microbiology) degrees from the University of Wisconsin. His research interest has been in microbial physiology. He investigated the nutritional role of the intestinal microflora of animals and the mode of action of antibiotics.

After serving one year as instructor in dairy bacteriology at the University of California at Davis, Dr. Johansson spent 10 years as Assistant and Associate Professor of Bacteriology and Immunology at the University of Minnesota before his first appointment here in 1959.

Dr. Upholt entered the Commissioned Corps of the PHS in 1944 and was stationed at Savannah, Ga., where he conducted laboratory research on the use of DDT as a mosquito larvicide. In 1948 he became Assistant Chief of the Savannah Laboratory of the Communicable Disease Center. He was transferred to Atlanta in 1951 to serve as liaison between the Savannah laboratories and CDC.

Dr. Upholt received the B.S., M.S., and Ph.D. (insect toxicology) degrees from the University of California. He served an internship and residency at Bellevue Hospital, N.Y., and held a USPHS traineeship in human genetics for two years.

Dr. Upholt was assigned to field research in Wenatchee, Wash., and San Francisco, Calif., from 1953 until 1961 when he came to Washington, D.C., to help develop the research grant program in the Environmental Health Divisions, BSS. He became Chief of the Research and Training Grants Branch last year.

Dr. Upholt has been a member of the AAAS, Sigma Xi, and is a fellow of the American Academy of Microbiology. He is a past president of the American Society of Parasitology and of the Southern Society of Parasitologists. He has also been a member of the American Public Health Association, and is the American College of Dentists.

Dr. Upholt is a Fellow of the American Association for the Advancement of Science, the American Public Health Association, and the American College of Dentists.

Dr. Upholt has been Assistant Director of NIDR since August 1961 and was Chief of the Extramural Programs Branch from 1956 to that time.

The Institute's extramural programs, in which grants are awarded to institutions for research and training in oral diseases, have steadily increased in size and diversity.

**Witnesses Growth**

In his years at NIDR Dr. Lyman has witnessed increases in annual appropriations for research and training grants from $3.2 million in 1956 to over $15 million in 1964.

During the same period the scope of dental research has widened to include basic disciplines in biochemistry, microbiology, pathology, pharmacology, genetics, histology, crystallography, biomathematics, and epidemiology.

Commissioned in the Public Health Service in 1943, Dr. Lyman was assigned to the Entomology Branch, Communicable Disease Center, Atlanta, Ga., where he served as Assistant Chief for six years.

He joined NIH in 1955 as Executive Secretary to two study sections which reviewed research grant applications in morphology and genetics and in tropical medicine and parasitology.

**Memberships Listed**

A native of Saginaw, Mich., Dr. Lyman completed his undergraduate work at Alma College and received a Ph.D. in zoology from the University of Michigan in 1941.

Dr. Lyman is a Fellow of the American Association for the Advancement of Science, the American Public Health Association, and the American College of Dentists.

He is also an associate member of the American Dental Association, and a member of the International Association for Dental Research, Omicron Kappa Upsilon, and Sigma Xi. He has published over 35 articles in the scientific literature.

**Dr. Lyman Is Appointed NIDR Assoc. Dir. for Extramural Programs**

Dr. F. Earle Lyman has been appointed to the newly created position of Associate Director for Extramural Programs of the National Institute of Dental Research. He will direct the overall programs of the Institute's research grants, fellowships, training grants, and other extramural activities.

Dr. Lyman has been Assistant Director of NIDR since August 1961 and was Chief of the Extramural Programs Branch from 1956 to that time.

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**Dr. Yolles**

(Continued from Page 1)

for example,” Dr. Yolles said, “was achieved not alone on a treatment basis, but because it was possible to interrupt the life cycle of the malarial parasite and decide where and when to intervene.

“In such intervention,” he added, “the field presenting the greatest challenge in preventive medical activity is the specialty of psychiatry.”

As the new NIMH Director, Dr. Yolles said his primary activity will be to continue development of the Institute's NIMH mental health program “to relocate the responsibility for both treatment and preventive services in the mental health field back into the community.”

To achieve this, he said that the profession of psychiatry must continue to accelerate its leadership within the mainstream of American medicine. Psychiatry is not independent, he said, and psychiatrists must work with other physicians, as physicians, since “separation in medicine is an anachronism.”

George Abbott is Operator Of Stand in Wiscon Bldg.

The Maryland Workshop for the Blind, which sponsors and supervises the stands operated by the blind in Federal buildings in this State, recently announced the opening of a new stand in the NIH-occupied Wilson Building in Bethesda.

The new stand, which is the eighth to be established in NIH buildings on and off the reservation, is operated by George Abbott in Room B101.

Mr. Abbott, a native of the Cumberland, Md. area, is now living in Silver Spring.

Dr. Cooper Named Chief of New NIDR Section

Dr. Herbert L. Cooper has been named Chief of a new Section on Cellular Biology and Cyto genetics in the Human Genetics Branch of the National Institute of Dental Research.

The new section will conduct research in problems of chromosomal structure and duplication, immunogenetics, biochemical genetics, the mechanisms involved in the regulation of cell growth and structural and enzymatic protein synthesis by information coded in DNA.

Dr. Cooper, who joined NIDR in 1961, received his A.B. from Columbia University and his M.D. degree from New York University in 1957.

He served an internship and residency at Bellevue Hospital, N.Y., and held a USPHS traineeship in human genetics for two years.

**Dr. Charles D. Woody of NIMH demonstrates research conducted in the Laboratory of Neurophysiology to a group of Montgomery County Junior and Senior High School Guidance Counselors and Principals, and Sharon Varrill (center) of the Recruitment and Placement Section, PMB. A total of 86 counselors and 7 principals recently attended a one-day workshop at NIH to help counselors advise students of immediate occupational opportunities and long-range NIH requirements. The group was addressed by Edward Nicholas, PMB-OD: Dr. Robert M. Farrier, CC; Dr. Joseph M. Bobbitt, NICHID; Dr. Lois-Ellen G. Datto, NIMH; and Joseph S. Murtough, OPP-OD.—Photo by Bob Pumphrey.**
Limbic System

(Continued from Page 1)

guished investigations and theories on the functions of the limbic system in organizing drive states and behaviors concerned with self and species preservation.

Man essentially has three brains which function and communicate with one another. The oldest of these brains is basically reptilian. The second has been inherited from lower mammals, and the third is a later mammalian development which makes man uniquely man.

The lower mammalian brain consists of the old cortex within the limbic lobe, which surrounds the brainstem. This "old brain" is now referred to as the limbic system and is common in the brains of all mammals.

Functions Described

Dr. MacLean's investigations indicate that the limbic system is largely concerned with visceral and emotional functions, and is so strategically located as to be able to correlate every form of internal and external perception.

In other words the possibility exists in this region for bringing into association not only oral and visceral sensations, but also impressions from the sex organs, body wall, eye, and ear.

Unlike the newer brain, the limbic system contains the hypothalamus, which plays a major role in integrating the performance of brain mechanisms involved in self and species preservation.

These relationships and inferred functions of the limbic system have far-reaching implications for both neurology and psychiatry.

Conclusions Noted

They indicate that though intellectual functions are carried on in the newest and most highly developed part of the brain, affective behavior continues to be dominated by a relatively crude and primitive system.

This situation provides a clue to understanding the difference between what one "feels" and what one "knows."

Since his move to NIMH in 1957, Dr. MacLean has pursued a series of experiments to determine the precise location of areas in the limbic system and elsewhere concerned with sexual functions.

Offshoots of this work have opened up an important area of study pertaining to the selective affinity and vulnerability of the hippocampus to certain biochemical agents.

Dr. MacLean received his B.A. and M.D. degrees from Yale University in 1935 and 1940, respectively.

The medical launch named in honor of Dr. Smadel is dedicated by (first row, beginning fourth from left) Dra. Colin MacLeod, Theodore Woodward, and Abram Benenson of the United States. Above, left to right: Capt. Robert Phillips, USN; Dr. A. K. M. Abdul Wahed, Pakistan; and Dr. Robert Cruickshank, United Kingdom.