one uses the smaller or the larger estimates for the contribution of nongovernment sources, federal influence on the life sciences in academic institutions through grant and contract policies may be expected to be relatively significant compared with the effect of policies of the other off-campus groups.

Total Federal Support to Science

Although the grant and contract funds reported in this paper constitute a major segment of the total funds for grant and contract research in the life sciences, they represent but a very small part of the over-all federal expenditure for research and development. For fiscal year 1954, the total federal obligations in the physical, life, and social sciences amounted to $1762 million (*6*). Of this, 87 percent was for the physical sciences, 2 percent for the social sciences, and the remaining 11 percent, or $195 million, for the life sciences. Thus, the sum of approximately $64.5 million expended for unclassified grants and contracts in fiscal year 1954 amounted to about one-third of the total federal obligation for the life sciences and about 3.7 percent of the over-all federal financial commitment for all research and development.

References and Notes

1. *Federal Grants and Contracts for Unclassified Research in the Life Sciences, Fiscal Year 1954* (National Science Foundation, Washington, D.C., 1955).
2. The data presented in this article are from official findings of the National Science Foundation. However, the conclusions whether stated or implied are those of the authors and do not necessarily reflect the views of the National Science Foundation.
3. *Federal Grants and Contracts for Unclassified Research in the Life Sciences, Fiscal Year 1952* (National Science Foundation, Washington, D.C., 1954).
4. S. L. Deignan and E. Miller, *Science* 115, 321 (1952); 119, 661 (1954).
5. A. T. Waterman, *Public Health Repts.* 69, 378 (1954).
6. *Federal Funds for Science IV. The Federal Research and Development Budget.* Fiscal years 1954, 1955, and 1956. (National Science Foundation, Washington, D.C., 1955.)

C. M. Louttit, Psychologist

The death of Chauncey McKinley Louttit on 24 May 1956 was a great loss to psychology and to the behavioral sciences. Louttit will be missed as one of psychology's more versatile and productive contributors and as the very able editor of *Psychological Abstracts*. After a brief, known illness, Louttit succumbed to leukemia. He is survived by his wife, Laura, née Talcott, two sons, Robert I. and Richard T., and a brother, Henry I. Louttit.

Louttit was born 9 October 1901 in Buffalo, New York. Following a battle in his teens with tuberculosis and subsequent work as a miner in the Southwest and as an assistant in a color physics laboratory, he spent a year in the College of Forestry at Syracuse University and then transferred to Hobart College, where he received the A.B. degree in 1925. He became a research assistant at the Training School, Vineland, New Jersey, and a graduate student at Yale University, which awarded him a Ph.D. degree in 1928. In the same year, his *Bibliography of Bibliographies on Psychology, 1900–1927* was published by the National Research Council.

Following completion of his studies at Yale, his first appointment was as research psychologist in the psychological clinic of the University of Hawaii, where for 2 years he was associated with Stanley D. Porteus in studying culture-free behavior. After a year at Ohio University as assistant professor of psychology, he went to Indiana University in 1931 as director of the psychological clinics and assistant professor of psychology, where he developed one of the earlier and better-known programs of graduate training in clinical psychology. In 1933, his *Handbook of Psychological Literature* appeared, and, in 1936, his *Clinical Psychology; A Handbook of Children's Behavior Problems*. Both of these handbooks were "firsts" in psychology. The latter was especially influential in developing the field of clinical psychology and was a significant stimulus in the field of child development.

Despite a heavy schedule of teaching, writing, and research at Indiana University, he concerned himself with psychological problems in various institutional and community settings throughout Indiana and was a very active participant in the American Association for Applied Psychology, in which he served as executive secretary (1940–42) and as president (1943). Yet, with these and many other professional and scientific concerns, he was always available to his students, who found in him an unfailing source of stimulation and encouragement.

His services during World War II were substantial and extended to many important activities. Commissioned a lieutenant commander in 1940, he was assigned to duty with the U.S. Naval Medical School, in which he served as a consultant in the development of the initial plans for the psychological aspects of psychiatric screening of recruits at naval training stations. He then became chief of the clinical psychology section, and subsequently assistant chief of the psychological division, research and analysis branch, of the Office of Coordinator of Information. He next served as coordinator and executive officer in charge of quality control for naval training schools, which led to subsequent assignments as commanding officer of the Naval Training School at Plattsburg, New York, and the Naval Training Center at Bainbridge, Maryland. He retired from active duty in the navy with the rank of captain in the latter part of 1945.

Following the war Louttit became professor of psychology and director of the psychological clinic at Ohio State University, where a community-oriented behavior clinic was established and a graduate training program in clinical psychology was developed in cooperation with the Veterans Administration. Then, beginning in the latter part of 1946, Louttit yielded to a growing interest in the field of college administration and accepted several appointments in this field during the next several years. He was, in turn, dean of the faculty at Samson College, executive dean of the Galesburg Division of the University of Illinois and assistant to the provost at the University of Illinois before he accepted his last position as professor of psychology and chairman of the department of psychology at Wayne University in 1954.

At Wayne University, Louttit, with typical enthusiasm, initiative, and a prophetic sense of values, was working toward a broadly conceived graduate training program in psychology which his friends feel will be a significant advance in graduate education.

Throughout his career, Louttit showed a keen sense of responsibility to his profession and to science in general. It was typical of him that he accepted so willingly the unsalaried editorship of *Psychological Abstracts* and spent his energies so freely in further expanding and developing this important resource in the behavioral sciences. He was never so occupied that he neglected his editorial and other such duties; his responsibilities as a consultant in psychology to the National Institute of Mental Health, the Library of Congress, and other such organizations; or colleagues and students who requested counsel and advice on scientific, professional, or personal problems.

He was curious about many things. He had the energy and the courage to pursue wherever his curiosity led and also the ability and creativeness to be productive in whatever situation he found himself. Above all, he had a capacity for enjoying his work which was the envy of those who knew him.

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H. B. Williams, Physician and Physiologist

Horatio Burt Williams, emeritus professor of physiology, College of Physicians and Surgeons, Columbia University, died at Harkness Pavilion on 1 November 1955 at the age of 78 years.

Born in Utica, New York, 17 September 1877, the son of Horatio Olin and Julia Pierce Williams, he spent his early life in northern New York State where he attended Syracuse University, receiving an A.B. degree in 1900 and the M.D. degree 5 years later.

In 1905 Dr. Williams moved to New York City and in that year married Abbie Prentiss Schermerhorn. The Schermerhorn name is prominent in both the early history of New York and of Columbia University. Mrs. Williams died in 1944.

Dr. Williams interned at New York Hospital in 1905–06, after which he practiced medicine and acted as assistant in physiology at Cornell University Medical School (1907–11). He was called to Columbia University in the spring of 1911 as associate professor of physiology and, with the exception of his Army service in World War I, served continuously in that department until he retired as Dalton professor of physiology in 1942.

Dr. William's name is associated with the early history and development of electrocardiography in the United States. His paper, written with Walter B. James, "The electrocardiogram in clinical medicine," which appeared in 1910 in the *American Journal of Medical Sciences*, is, we believe, the first publication on electrocardiography in this country.

Williams spent most of the summer of 1911 in the laboratory of William Einthoven in Leyden. On his return he duplicated the Einthoven string galvanometer. This apparatus was costly, complicated to operate, and completely filled a moderate-sized room. In 1914, Williams designed and supervised the construction of the first American Einthoven string galvanometer for the use of Alfred Cohn at the Rockefeller Institute for Medical Research. This instrument is now on permanent exhibition in the Smithsonian Institution in Washington, D.C. Williams' intensive theoretical and experimental study of the Einthoven string galvanometer resulted in successive reductions in size and weight of the electrocardiograph. He was one of the founders of, and a director and technical adviser to, the Cambridge Instrument Company, Inc., from 1922 until the time of his death.

Perhaps the most interesting investigation carried out by Dr. Williams and his associates was on the effect of electric shock on the heart. This showed that fibrillation produced in the hearts of experimental animals by the passage of an electric current could be abolished in most instances by an electric countershock of high intensity and short duration. Williams' interest in this field led to his appointment as chairman of the Resuscitation Review Board of the Edison Electric Institute. He served also as a member of the Committee on Safety of the American Institute of Electrical Engineers (1943–44 and 1945–51).

Although a doctor of medicine, Dr. Williams held a captain's commission in the U.S. Army Corps of Engineers. During World War I, he was an instructor in the Army Engineers School at Fort Belvoir. Many of the graduates of this school later attained positions of high rank. Professor Williams was concerned also with the development and construction of sound-ranging instruments used for locating enemy guns.

Dr. Williams was an outdoor sportsman. For several years he was camp director of a boy's camp in the Adirondack Mountains. He was an expert rifle and pistol marksman and held many cups for marksmanship. This interest led him to acquire an extensive collection of early American firearms. Early in life Williams became an enthusiastic yachtsman; later he became a skilled horseman and took great pride in his thoroughbred Thunderclap, a former race horse. Professor Williams spent most of his summers at his home Whispering Woods in Woodstock, N.Y., where he enjoyed his association with the art colony.

Williams' wide range of interests is shown by the many organizations and societies of which he was a member and by the titles of the volumes in his extensive library. In this, classical volumes mingled with scientific monographs. Although he read most of the modern foreign languages as well as Greek and Latin, he perhaps took greater pride in his ability to speak the dialects of several northern New York Indian tribes.

Williams received a number of honors. He was awarded an Sc.D. degree by Syracuse University in 1925 and delivered the fourth Josiah Willard Gibbs lecture before a joint session of the American Mathematical Society and the American Association for the Advancement of Science in 1926. He was made an honorary member of the American Society of Anesthetists. In October 1953, he received a gold medal for distinguished service at the celebration commemorating the 25th anniversary of the opening of the Columbia Presbyterian Medical Center.

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