was held in equally high esteem by practical engineers and by academic scientists.

Perhaps the most eloquent testimony to his scientific contributions may be found in the wide-spread appreciation to-day of the value of research in industry. Professor Thomson was one of the first in America to recognize the importance of research, both fundamental and practical, to our industrial progress. This was a contribution that transcended any of his scientific discoveries.

His sense of public responsibility is illustrated by his long reluctance to patent his system, developed in 1878, of distributing alternating current by transformers, because of the possible danger to the public. It was not until he discovered a way to avoid the danger, chiefly by grounding the secondary in the transformer, that he filed his patent in 1885. The patent on this safety device was dedicated to the public from a feeling that no patent or invention which has to do with public safety should in any way be restricted or made unavailable to the people.

That he cherished the title "Professor" was indication of his unabated interest in education. He never ceased to teach. "Throughout his life," wrote my predecessor and his friend, Dr. Richard C. Maclaurin, president of M.I.T. from 1909 to 1920, "he has not only done great things himself, but shown an intense desire to help all who are struggling earnestly with scientific problems. He has proved an inspiration to an ever-widening circle of engineers and others who have intrusted him with their secrets and sought his help in overcoming their difficulties. They have done this, knowing that they had only to ask in order to get the full benefit of his imagination and his power, and that they need have no misgivings that he would take any advantage of their confidence or any credit for their work, for he has no touch of selfishness."

From my own knowledge of Professor Thomson I can validate Dr. Maclaurin's tribute.

His long association with M. I. T. affords a specific example of his devotion to education. He became a lecturer in electrical engineering at this institution in 1894, and from then until his death he maintained with it the closest sort of relationship. He was elected a life member of the corporation in 1898, was acting president in 1920 to 1923, and for many years was a member of the executive committee of the corporation. His services to the institute alone place him among those who have contributed greatly to American science.

If we add to this his services to the Franklin Institute, to the American Philosophical Society, to the American Academy of Arts and Sciences, to the National Academy of Sciences and to a host of other institutions, we get some measure of his influence and constructive contributions to the scientific profession.

For these and many other reasons it is meet to pay tribute to Professor Thomson as a distinguished scientist, and I do so with affection and enthusiasm. Not only were his scientific contributions numerous and important, but he consistently served science by being an ideal connecting link between the practical and the theoretical, the industrial and the academic. By his vigor, perseverance and versatility he contributed one of the most brilliant chapters yet written in the book of American science.

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OBITUARY

WILLIAM McDOUGALL

WITH the death of William McDougall on November 28, 1938, the science of psychology lost one of its foremost creators. The range of his contributions prohibits detailed review here. Fortunately he himself has given an unusually penetrating interpretation of his life and work.[1]

The prolonged preparatory studies of McDougall foreshadow the wide scope of his later work. He was born in Lancashire on June 22, 1871. After a year at Weimar, he entered Manchester University (1886). Feeling forcibly the impact of the controversy over evolution, he read widely in biology and worked also in geology and paleontology. He won a scholarship at Cambridge and took the premedical course there, specializing in physiology, anatomy, anthropology (1890–94). Drawn toward problems of the nervous system, he completed the medical course at St. Thomas Hospital, London, ending as house physician (1894–98).

In reading William James he had become increasingly aware of the possibilities of the psychological approach to the problems of human nature. During the next two years he came into first-hand contact with primitive cultures (participation in the Cambridge Anthropological Expedition to the Torres Straits; collaboration in Borneo with C. Hose); and studied the newer laboratory methods of German experimental psychology (with G. E. Müller at Göttingen). To this extensive background was later added four years of study and treatment of "shell-shocked" soldiers.

The external features of McDougall's professional career did not bear a very intimate relation to his creative work, and may be stated briefly: At first,

[1] "A History of Psychology in Autobiography," I. Edited by C. Murchison. Worcester: Clark University Press, 1930, pp. 191–223.

reader in experimental psychology at University College, London (1900–04); later Wilde reader in mental philosophy at Oxford (1904–20); during the war, major in the Royal Army Medical Corps; then professor of psychology at Harvard (1920–27); finally professor and head of the department of psychology at Duke University (1927–38). His academic degrees and honors include the following: Cambridge University, M.B., and Fellow, St. John's College (1898); Oxford University, A.M. (1908), and Fellow, Corpus Christi College (1912); University of Manchester, Honorary Sc.D. (1919); Fellow, Royal Society of London (1912); Honorary Fellow, St. John's College, Cambridge (1938).

McDougall's psychological activity was of a varied character formally: he was systematist, acute empirical observer, clinician, experimentalist. In addition to his intensive early experiments in the psychophysiology of vision, he has published experimental work on auditory perception, memory, mental fatigue, drug effects, animal behavior, evolutionary theory. Unfortunately, most of the voluminous clinical notes made during the four years of war work with shell-shocked soldiers remain unpublished.

Although occupied at first more with their physiological correlations and later with their social aspects, McDougall attempted from the beginning to develop a system of concepts in terms of which the whole range of mental events might be interrelated. Accepting as fundamental the directed, purposive features of behavior and their evolutionary development, he developed a biological conception of fundamental urge systems. Behavior in all its complexities was interpreted as an expression of their action and conflict at different levels of organization. This conception was differentiated in its detailed application to problems in the fields of animal and human behavior, normal, abnormal, primitive, social.

McDougall was the most fundamentally biological of all psychologists, and his stress on heredity and eugenics bore major experimental fruit. Typical of his views as to the possible contributions of psychology to biology was his sustained experimental test, during the last seventeen years of his life, of the Lamarckian theory. For, if substantiated, it would provide an essentially psychological explanation of the dynamics of the evolutionary process itself. Significant also was his elaboration of the implications of psychology for the related social sciences and for philosophy.[2]

In this country McDougall, the man, was unfortunately known well by relatively few of his fellow psychologists. His deep family attachments are revealed in his own writings. To each of his departmental colleagues he was a personal friend, and his department was run intellectually and administratively in a spirit of absolute democracy. Characteristic to the end were his vigor, keenness, flexibility, open-mindedness. Always bold in his thinking and insatiably curious concerning every type of mental phenomenon, he believed that study at the fringes of psychology (as in psychic research) would yield valuable further insights into human nature. His great courage and strength of character were brought into relief during his last months. Very weak, and suffering from a painful cancer, he wrote the final chapter of his last book lying on his back, and, until physically unable, walked to the laboratory to run final control trials in his Lamarckian experiment.

An evaluation of McDougall's psychology in relation to current trends would be premature. Similar answers to many of the problems he discussed are being approximated by others, though often in other terms. His own terminology seems not to have readily suggested functional tests for its own further refinement. Any scientist must be viewed against the contemporary background of his own science. So considered, McDougall was unique in breadth of view and variety of contribution. During a period of psychology characterized by perhaps premature specialization and a tendency to turn toward the problems of other fields, McDougall performed the great service of facing steadily the vast range of phenomena which in the broadest sense are the concern of the *psychologist*, of pointing in masterful fashion to their essential features and of showing how in terms of his comprehensive set of concepts, their interrelationship might, to a first approximation, be understood. When highly satisfactory answers to all the problems with which he wrestled have been finally formulated psychology will have become a science indeed, and the goal of a great mind achieved.

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[2] A bibliography of McDougall's work, appearing in *Character and Personality*, March, 1939, lists 147 titles of articles and books.

RECENT DEATHS AND MEMORIALS

ADMIRAL RALPH EARLE, U.S.N., retired, president of Worcester Polytechnic Institute since 1925, died suddenly on February 13 at the age of sixty-five years.

FRANK DEAN TUBBS, who was professor of geology at Bates College, Lewiston, Me., from 1907 to 1929, died on February 23 at the age of seventy-four years.

A CABLE from Bermuda to *The New York Times* dated February 21 reports that on February 20 Dr. Alfred George Jacques, of the Rockefeller Institute for Medical Research, was drowned, and Dr. Marie Lebour, of the Marine Biological Laboratory at Plymouth, England, had a narrow escape when the dinghy in which they were dredging for specimens