sidered to have been originally the environmental inclusion of a droplet of sea-water, which subsequently became the circulating medium for the transportation of various substances from one part of the body to another.

If such an hypothesis, or perhaps it might better be called a speculation, should ultimately prove out, it would then mean what again we already have definite hints of: that the laws which govern in the physical world and with which we are to a certain extent familiar would be determined to govern in this apparently more tenuous and immaterial world, the world within. We would find that the relation between stimuli and mental states, as already indicated, was a quantitative one; for example, the relation between a frustration and a compensation. We would see analogies with scientific laws with which we are already familiar, and to which we would become progressively less able to remain blind.

If all the above things represent a fair statement of how we may consider mental events in their relation to other events in the cosmos, then it can be further understood how significant this particular class of events has become for an adequate understanding of the most important aspects in which we relate ourselves to our environment, namely, those inter-personal relations which have to do with our contacts with other human beings and upon the nature of which it may easily be said depends the whole future course of civilization. Civilization is a matter of the psychology of the peoples functioning at a social level of integration, and no adequate understanding of the forces that are involved can be had unless this fact is appreciated, and we can not expect to guide these forces into constructive channels unless we have this information.

While it is true that this program contemplates a procedure which looks a little as if man had the problem on his hands of raising himself by his own boot-straps, nevertheless, as I have said, this impossible performance is just precisely what he has proved himself in the past capable of doing. And so it would seem that the reception of psychology into the realm of the biological sciences, the appreciation of man from this point of view functioning as a social unit, and the attempt to fathom the intricacies of the human psyche by the development of methods of research in this field, are worthy, significant and important developments in the world of science which need to be aided, abetted and encouraged by all those who in their own particular fields may have reached a higher degree of perfection both in the observation, description and interpretation of their facts, and in the development of ways and means for their uncovering.

In any case, however, we will continue our search in the regions of the unknown and our efforts to find explanations where at present none exist; and we hope that if from time to time we make mistakes and come to conclusions that are unwarranted by the facts, that we are sufficiently loyal to the tenets of scientific methodology to be the first to welcome the criticism that will disclose our shortcomings, while in the meantime we shall, on the other hand, be able to receive contributions from other sources without exhibiting those prejudices that unfortunately too frequently mar the course of scientific progress. In this respect we trust that we may profit by our own disclosures, although we feel the burden of those human weaknesses that are common to us all; and so in attaining to recognition in the general body of the sciences we make our entrance in the hope that we may be received as one of you, earnestly working to throw light where there is now darkness.

OBITUARY

HERMAN CARL RAMSPERGER

THROUGH the death of Dr. Ramsperger on July 13 we have lost an outstanding American contributor to chemistry.

He was born in Salt Lake City, July 19, 1896, and obtained his education at the Utah Agricultural College and at the University of California, where he received the degree of doctor of philosophy in 1925. Since that time he has held positions as instructor at California, National Research Fellow at Stanford and at the California Institute of Technology, and as assistant professor of organic chemistry at the California Institute.

His main work was in the field of chemical kinetics where he made contributions of permanent importance to science. Through his work on the rate of decomposition of azomethane, we were provided for the first time with a satisfactory study of homogeneous unimolecular gas reaction whose specific rate falls off with decreasing pressure. This result was crucial in showing the effect of molecular collisions in leading to the chemical activation of molecules, and provided the experimental basis for the theoretical developments of Rice and Ramsperger, of Kassel and others which give a quantitative account of the dependence of reaction rate on pressure. The work on azomethane was followed by the determination of other unimolecular rates so that the whole field has been left in a satisfactory state.

In addition to his work in chemical kinetics, Dr.

Ramsperger had a wide acquaintance with a number of fields of physical and organic chemistry to which he made contributions. He was an investigator of great vigor, sense and insight, with interests in psychology and other sciences, and his loss is a deep personal one to many friends and colleagues.

RICHARD C. TOLMAN

PASADENA, CALIFORNIA

WILFRED WELDAY SCOTT

PROFESSOR WILFRED WELDAY SCOTT, who died on May 3 at the age of fifty-six years, received his college education at Ohio Wesleyan University, did his graduate work at that institution, at Cornell University, at Chicago University, and received his doctorate degree from the Colorado School of Mines.

After teaching for more than a decade in his chosen field in this country and abroad, he devoted the next decade of his life to practical research work in the chemical industries. With this rich background of contact with colleges, chemical laboratories and industrial plants, he returned to his major field of interest, college instruction and graduate research, as head of the department of chemistry at the University of Southern California. His was a most unusual experience—broad and varied, yet closely related. His preparation for his life work as a productive scholar and teacher of college students was both general and specialized. It involved both theory and practice; it included both philosophy and science.

College students are quick to discover evidences of productive scholarship in their teachers. They value highly instruction given by a recognized master of his field. In his laboratories, Professor Scott's students were conscious of the presence of a master mind. His understanding of the laws of chemistry and his command of the techniques of chemical analysis inspired his students to gain the knowledge and skills essential to the discovery of new processes that they too might push still farther out the frontiers of human knowledge in the field of applied chemistry.

Evidences of his mature scholarship, covering a period of more than two decades, are found on the shelves of all college libraries where are placed the products of his brain and pen;—each a comprehensive, scientific and scholarly treatment of an important field of human knowledge. The list includes:

Qualitative Chemical Analysis (1910)
Standard Methods of Chemical Analysis, 2 vols. (1917), 4th edition 1925
Technical Methods in Metallurgical Analysis (1923)
Inorganic Quantitative Chemical Analysis (1926)
Chemical Methods of Metallurgical Analysis (1927)
Elements of Qualitative Chemical Analysis (1930)
Essentials of Quantitative Chemical Analysis (1930)
A revision of one of his major works is now in the press (1932)

He was a member of the American Chemical Society, the American Association for the Advancement of Science, Phi Kappa Phi, Phi Beta Kappa, and several other scientific, scholarship, and professional organizations of national scope. Published reports of his scientific researches include the following: Fertilizers; Ferrous Sulphate Method for Determination of Nitrates; Volumetric Determination of Aluminum and Fluorine; Determination of Lead; Determination of Uranium in Carnotite; Catalyzers for Oxydation of Ammonia; Methods of Chemical and Metallurgical Analysis; Inorganic Quantitative Analysis; Qualitative Analysis.

Much as we value the memory of Professor Scott as an eminent scholar, as a nationally known scientific worker and as a master teacher, we who knew him well as a staff member and coworker on university committees value even more highly the fine human characteristics of the man. He was deeply and genuinely interested in the health and welfare of his fellow staff members. This interest was not affected, it was a natural and uncurbed expression of the great soul of the man who walked among us and worked with us. From the memories of many of his fellow workers will never be erased the recollections of his sincere expressions of deep interest in them. The society of scholars which is our university has a richer heritage because he lived, thought, wrought and taught among us.

FRANK C. TOUTON

UNIVERSITY OF SOUTHERN CALIFORNIA

RECENT DEATHS

DR. GRAHAM LUSK, who retired this year from the professorship of physiology in the Cornell University Medical College, New York City, died on July 18, at the age of sixty-six years.

DR. LOUIS WINSLOW AUSTIN, authority on physical measurements, radio transmission, and member of the staff of the Bureau of Standards, has died in Washington at the age of sixty-four years.

REGINALD AUBREY FESSENDEN, physicist and consulting engineer of the Submarine Signal Company, died in Bermuda on July 23. He was sixty-five years old.

DR. VAN HARTROG MANNING, consulting engineer, from 1915 to 1920 director of the U. S. Bureau of Mines, died on July 13, at the age of seventy years.

CHARLES WARREN HUNT, hydraulic engineer, secretary emeritus of the American Society of Civil Engineers, died on July 24 at the age of seventy-four years.