with the emotions, the new one with intelligence. Fear and rage he shares with all, judgment and foresight are almost uniquely his. It would probably be impossible, surely unwise, to eliminate the selfish elements of self-preservation from man's make-up; but it may be possible and is surely desirable to control and guide them. Knowledge is cumulative in time, generation building on generation, while emotion is not. Perhaps cerebral control is increasing. Modern psychiatry is finding the hidden springs of behavior and modifying their flow. Men will probably always want more than their share, but perhaps it will not always be of the same things. The mass desideratum now is money, yet large groups of men have completely renounced this end for another; for example, fame. As man learns more of himself, his neural mechanisms, the hormones that modify them, the drives they generate, and the personal and social consequences of his acts, much control will undoubtedly be possible. And this knowledge will be deposited only by the stream of science. I am perhaps not overly guileless in believing that reason will sufficiently dominate emotion to keep a functioning civilization from perishing. Some emotion is needed, but the future of society is a direct challenge to the cerebrum of man and to its tool for rational advance—pure science.

OBITUARY

ALBERT SHERMAN

DR. ALBERT SHERMAN, research associate and Stephen S. Wilder fellow of the Basic Science Research Laboratory at the University of Cincinnati, died suddenly on July 1, following a period of illness. He was a brilliant theoretical chemist and probably the leading authority on the practical application of activation energy calculations to chemical reaction rates. His death at the age of 31 is a handicap to the development of this new and important branch of chemical kinetics. He has written twenty articles in the field of mathematical chemistry published in several journals, but chiefly in the *Journal of Chemical Physics*.

Born and raised in San Francisco, Dr. Sherman was graduated from the chemistry department of the University of California and went to Princeton University, where he received the Ph.D. degree in 1933. Here he came under the stimulating influence of Professor Eyring and Professor Taylor, and in this period published several articles in the rapidly developing application of quantum mechanical calculations to chemical problems such as adsorption, and deuterium reactions. He received a National Research Council fellowship and went to the University of Wisconsin, where he remained as fellow and research associate with Professor Daniels until 1937, except for a second appointment to a National Research Council fellowship to study in England with Professor Lennard-Jones.

Of this period of his scientific work, three outstanding papers are typical—a long review article with Professor J. H. Van Vleck on the "Quantum Theory of Valence," an article on the "Addition of Halogens to the Double Bond" and an article with Moelwynn-Hughes on the various types of interaction between solvent and solute and their influence on reaction rates.

A year ago Dr. Sherman was appointed to an interesting position on the staff of the Basic Science Research Laboratory at the University of Cincinnati. He had the opportunity of giving advanced courses in quantum mechanics, valence and thermodynamics, directing research and cooperating with the industries around Cincinnati. At the Symposium on Recent Advances in Chemical Physics of the American Association for the Advancement of Science, Dr. Sherman gave a paper on the "Calculation of Activation Energies," and in a forthcoming book he has contributed a chapter on the "Theoretical Basis of Halogenation Reactions."

Not only in his publications has Dr. Sherman helped to advance chemistry but also in the help which he was constantly giving to other investigators. He was liked and respected by all the graduate students with whom he came in contact at Cincinnati, at Wisconsin and at Princeton. His advice was eagerly sought by many in getting the most possible out of a series of experimental measurements, and both in formal lectures and informal conferences he stimulated others to more mathematical and more valuable treatment of chemical problems.

Dr. Sherman is survived by his parents and a sister in San Francisco. He is survived by Dr. Jack Sherman, an identical twin brother, who is also a prominent mathematical chemist, located at the laboratory of the Universal Oil Products Company.

FARRINGTON DANIELS

ELLIS STANLEY JOSEPH

THE death of Ellis S. Joseph from a heart attack on September 16 ended the career of one of the world's foremost animal collectors. Mr. Joseph was 66 years old, and had been in virtual retirement for the past five years due to ill health.

Born in Bombay, India, of English parents, he was educated in an English school in Shanghai. His father, said to have been a wheat farmer and horse owner in India, wanted the son to become a doctor. But the lure of travel and adventure was too strong, and when only eighteen the young Joseph began making expeditions

into the wild country in India, bringing back rare birds and animals. As he grew older, his horizons widened, and he was soon traveling into the most remote parts of Asia, Africa and Australia, selling his finds to zoos all over the world. Before the world war he established an animal farm near Sydney, Australia, which he used as his headquarters and clearing house. In 1923 he moved his headquarters to New York.

His quest for the rare and the difficult took him to almost every country in the world. He was one of the few collectors who obtained and cared for his specimens with his own hands. He consequently had remarkable success in securing the most unusual specimens and in delivering them to buyers in excellent condition. A complete enumeration of his almost superhuman achievements is impossible. Once, in Sierra Leone, an infant chimpanzee, about to die, was saved by persuading a native mother to nurse it for several weeks. On his first visit to New York in 1920, he brought a record-breaking shipment of camels and other animals, and in that same year delivered to the New York Zoological Park the first blue-birds of Paradise ever seen here. He also brought over the lungfish and the first Australian koala to be seen in this country.

On July 13, 1922, he delivered to the New York Zoo the first and only duckbill platypus ever held in captivity. The platypus lived only 49 days in New York, but the method used to transport the animal to this country still provides anecdotal material among animal collectors. For half a century the platypus, which thrived in a certain kind of watery habitat, had resisted all attempts to transplant it from Australia. After working five years on a scheme to duplicate the conditions under which the animal lives, Mr. Joseph devised the "platypusary"—a cage containing a system of water tanks through which the animal swam to a dry burrow. As the platypus ascended from the water into the sand it passed through a series of rubber gaskets which squeezed the surplus water off its body.

Mr. Joseph was so reticent and shy of publicity that much of the story of his life was never told. On several occasions, when besieged by newspaper men or by publishers desiring him to recount his adventures in book form, he refused; and it was to only a few intimate friends that he would occasionally describe his experiences in the bush.

His physical appearance was arresting. A huge figure of a man, more than six feet tall and weighing nearly 300 pounds in his prime, he was noted for his fearlessness, and his arms and hands were covered with scars where carnivores, parrots and big birds had ripped into his flesh. One arm was marked by a long scar where a black panther had slashed him. On five different occasions he had been forced to sew himself up when wounded by animals far from civilization. His face bore scars as the result of the "affectionate" reactions of a large male chimpanzee which he had not seen for several years.

Ellis Joseph was a true zoologist, ecologist and comparative psychologist. His knowledge concerning the morphology and behavior of various birds and mammals was unexcelled. He was particularly eager to cooperate with scientists throughout the country, and would often go out of his way to supply a laboratory with desired research animals. Once, rather than sell the body of a young gorilla for less than it was worth, he donated the animal for study to a well-known comparative anatomist. He was an honorary life member of the American Museum of Natural History and of the Philadelphia Zoological Society.

Mr. Joseph had the universal respect of all those who knew him. His reputation was impeccable; his word was his bond. He was exceedingly generous and a most gracious host. He sought perfection, and had a singular love for the unusual and the esoteric; these were reflected in everything that he had and did.

Ellis Stanley Joseph is dead. He has joined Carl Akeley and Martin Johnson, and has completed the triumvirate. But his spirit lives on in the African bush, Australian plain, Tibetan highland and Malayan jungle, as well as in the memories of those who knew and loved him.

JOHN P. FOLEY, JR.

DEPARTMENT OF PSYCHOLOGY,
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RECENT DEATHS

DR. E. W. RETTGER, professor of applied mechanics at Cornell University, died on October 9 at the age of sixty-seven years.

DR. RAEMER REX RENSHAW, professor of organic chemistry at New York University, was killed on September 23 by a fall from the window of his apartment. His wife was killed at the same time in the same manner. Dr. Renshaw had been on leave, but was expected to resume his work at the university on September 28. He was fifty-eight years old.

THE death is reported in *Nature* of Sir Philip Dawson, a distinguished electrical engineer, who received the George Stephenson Gold Medal of the Institution of Civil Engineers and also the Albert Medal of the Royal Society of Arts, on September 24 at the age of seventy-one years.

DR. F. J. KARL SUDHOFF, professor of the history of medicine at the University of Leipzig and founder of the German Society for the History of Medicine, died on October 14. He was eighty-four years old.

THE death on June 30 at the age of seventy-five years is reported of Dr. Waichiro Okada, honorary professor of otorhinolaryngology at the Tokyo Imperial University and president of the Showa Medical College, which he founded.