drawn from them were and still are the center of the picture. Every one who has given serious consideration to the problems involved is satisfied that the things which this building is to house can be made to convey the desired educational story and at the same time to convey it in a manner which will be strikingly interesting and widely informative.

Further than this, all are convinced that the major part of the exhibits which make up the great bulk of the exposition will in large measure be influenced by the underlying theme which typifies this building and its contents, will give point to that theme and will be enhanced in interest thereby. That much of what is presented for those of the visitors who crave only amusement or transient pleasure will have no substantial connection with the underlying theme, and that much else will have only a remote apparent connection is no derogation of the main purpose of the trustees. It is merely the result of those practical necessities which can not in the very nature of things be divorced from an undertaking of this kind.

Certainly, unless we are all completely in error as to what the Century of Progress can accomplish, every thoughtful and intelligent person who spends time within its gates will return home not only with a better understanding of the problems which confront the nation as a result of what science is bringing into the world, but likewise with a better understanding of how to go about the solution of these problems.

When a few years hence the Century of Progress is but a memory and these buildings have been razed and the grounds on which they stand have been restored to their permanent condition, I am confident that all who have had a part in the undertaking will be satisfied that they helped to provide Chicago with a dignified and fitting centennial celebration. I am confident also that they will feel it was done in a manner calculated constructively to advance the development of our national life and to evidence the keen appreciation which the citizens of this great city have of the problems which confront the country.

It is this deep-seated belief in the educational value of the Century of Progress and in the integrity of those who are its sponsors which gives me those feelings of pleasure, gratification and honor at being permitted to take part in this prenatal ceremony of dedication. In thus closing my part of the dedicatory exercises I would not wish to leave you with the thought that full understanding and appreciation of the problems which arise out of wide-spread utilization of the things of science constitute in my mind the sole or even the major problems with which society must struggle in its slow upward course. No amount of such understanding can even remotely touch the elements of human greed, avarice and misuse of public trust which frequently bulk so large in our community life. All that I do claim is that a real understanding of the underlying forces which have been released by science will very greatly simplify the solution of many problems. These solutions, reached as a result of real understanding, must likewise tend to limit the evil effects of the human factors just mentioned which might otherwise be augmented. To me the forthcoming Century of Progress offers a unique opportunity for service.

OBITUARY

LEONARD THOMPSON TROLAND

THE tragic death of Dr. Leonard Thompson Troland removes a man from the active scientific world who will be equally missed in several fields of human endeavor. He had scarcely passed his forty-second birthday when he fell to his death on May 27 down into a rocky canyon from the summit of Mount Wilson, California, just as he was about to be photographed by an associate.

Dr. Troland, who had been suffering from a nervous collapse as a result of overwork and mental strain, had climbed the mountain for recreation. For some time he had been staying in Hollywood, where he was directing the research of the Technicolor Motion Picture Corporation, of which he was the vice-president and inventive genius.

Although still only a young man, Troland had already established a reputation not only in psychology, which was his major field, but ranked high as a physicist through his book (with the collaboration of Dr. Daniel Comstock), "The Nature of Matter and Electricity"; was well grounded in chemistry and biology, in which branches he wrote scientific papers, receiving the Bowdoin prize for a dissertation in chemistry at Harvard; earned an enviable reputation for himself in the field of optics, and at the time of the world war was assigned to the task of developing acoustic devices for detecting approaching submarines, served as chief engineer for the Technicolor Motion Picture Corporation, in which capacity he elaborated not only the process of exhibiting colored moving pictures but developed methods to promote the manufacture of the film. In October, 1931, the U. S. Government issued to him a patent embracing 234 claims covering the production of pictures in color and acquiring rights claimed by many contestants since 1921. As if this were not a sufficient range for a single mind, he was also interested in metaphysics and ethical theory.

It is characteristic of the man that he has left provision in his will for a fund the purpose of which will be the advancement of knowledge with regard to the "relationship of consciousness and the physical world."

His was an extraordinary combination of the theoretical and the practical. The theoretical scientists respected him because of his technological achievements, while technologists admired him for his vast fund of theoretical knowledge. The only gap in his intellectual inventory was the humanistic sphere, including the esthetic and historical foundations. His practical sense reached out even into the business world, although his ambitions were never high in that direction.

Dr. Leonard Thompson Troland was born in Norwich, Connecticut, on April 26, 1889, the son of Edwin and Adelaide Elizabeth O'Brien Troland. After graduating from the Malden High School, he entered the Massachusetts Institute of Technology, receiving his degree in 1912. Continuing his studies in the Harvard Psychological Laboratory under Münsterberg, he obtained his A.M. degree in 1914 and the doctorate in 1915. He was awarded a Sheldon traveling fellowship from Harvard for 1915–16, engaging in optical research at the Nela Research Laboratory of the General Electric Company at Cleveland.

Returning to Harvard in 1916, he served for a year as fellow in psychical research, working on the problem of telepathy, the results of which turned out to be negative. From 1916 to 1922 he was instructor in psychology at Harvard University and then was promoted to assistant professor. Since 1929 he functioned as a lecturer at Harvard, directing research for the most part in vision, although he had been offered an associate professorship, provided he would devote all his time to his academic duties.

Besides numerous papers in technical periodicals, Dr. Troland was the author of "The Nature of Matter and Electricity" (in collaboration with Dr. Daniel F. Comstock), 1917; "The Present Status of Visual Science," 1922; "The Mystery of Mind," 1925; "The Fundamentals of Human Motivation," 1928; "The Principles of Psychophysiology" in four volumes, the fourth of which is now in the hands of the publishers. It is at least consoling to think that this last work, his *magnum opus,* was completed before the fatal accident. He also participated in the translation of Helmholtz's "Handbuch der physiologischen Optik" into English.

Troland was a member or fellow of about a dozen learned societies and president of the Optical Society of America in 1922–23. His marriage to Miss Florence Rogers Crockford, who survives him, took place in 1924. There was no issue.

Among the qualities which stand out in Troland's personality are his grim determination and industry, his unpretentiousness, even temper and friendship. He could work for 12 to 15 hours at a stretch and yet was never seen hurrying. His unassuming, although by no means submissive or meek, approach was noticeable in all his contacts. Without looking for causes or individuals upon whom to lavish kindness, he was always accommodating and obliging to students as well as to associates.

In spite of the well-known popular belief about the irascibility of reddish-haired people, I never saw him display the slightest distemper but once, and that was when some one was tampering with the tools in the mechanic's shop of the psychological laboratory. In discussion, he was delightful, because he never showed the least impatience if his views were criticized, and furthermore was the first to admit difficulties. Apparently he believed with Horace that "The wise man continues unmoved."

Beneath an unruffled and phlegmatic exterior there stirred a consuming ambition. Although his practical knowledge of German was limited, he once undertook to translate one of his articles for a German periodical in his youthful *naïveté* that submitting a manuscript in the foreign original was a handicap to its being published. His emotionality instead of being directed against man was spent on intractable matter. To turn shapeless material into an efficient device—that is what fascinated him. His native wit was peculiar to the stock from which he was descended, *viz.,* Scotch-Irish. He could see a humorous side in almost everything; and was amused by situations at which many others would chafe. This and the fact that he never took himself too seriously are proof that he possessed a genuine sense of humor.

As a psychologist, contrary to what might have been expected of a man who was so immersed in psychophysiological research, he belonged to the traditional school. On more than one occasion he exposed the one-sidedness of behavioristic contentions. His doctrine of motivation was based on the pleasure-pain principle, which according to him was further grounded in change of conductance in the synergic field. In ethics he was a hedonist of the utilitarian type. On the metaphysical issue, he sponsored the philosophy of psychical monism, or, as he sometimes called it, paraphysical monism. His idealism, however, did not carry with it any theistic implications.

A. A. ROBACK

CAMBRIDGE, MASS.

RECENT DEATHS

DR. GEORGE K. BURGESS, director of the Bureau of Standards, died on July 2 at the age of fifty-eight years.