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THE SPIRIT AND SERVICE OF SCIENCE¹

By Professor DAYTON C. MILLER

THE CASE SCHOOL OF APPLIED SCIENCE

THE occasion of this convocation is the fifty-second commencement of the Case School of Applied Science, bringing to a close the fifty-fifth year of the activities of the school. Since my early school days I have been absorbed in the study of the philosophy of science; for forty-six years I have been a member of the faculty of Case School of Applied Science and have endeavored to promote the usefulness of science, with ever-increasing enthusiasm. I am convinced that science, in the broad sense, has arrived at the beginning of a new era in its history; this is "Commencement Time" for science, when it must assume new duties and obligations. My friend, Sir Richard Gregory, editor of the English scientific journal, *Nature*, has used a phrase so concise and explicit that I wish to adopt it as the title of this address, "The Spirit and Service of Science."

¹ The commencement address, June 1, 1936.

THE SPIRIT OF SCIENCE

The greatest effort of thinking man, since the beginning of civilization, has been to find a reasonable set of answers to his own questions concerning reality, origin, destiny, duty and hope. This organized body of highest truth constitutes philosophy; it is an inquiry into the first principles of things, as distinguished from science, which generalizes the scattered operations of nature into laws. The Greeks laid the foundation for our system of philosophy. The Eleatics before Socrates anticipated many modern theories, but rather by guessing than by research; a mythological explanation was assigned to a phenomenon of nature. Socrates was the first real philosopher; he introduced the method of hypothesis. Plato, the disciple of Socrates, concluded that the objects of real knowledge are not the ever-changing things of the sensible world, but are immutable, eternal objects which he called

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