is the age-long problem with which religion and ethics have struggled, namely, how can men be induced to live up to the best they know? How can they be brought to substitute the spirit of service for selfishness, love for hate, reason for unreason? The long efforts of past centuries show that there is no rapid solution of this great problem. But in the cooperation of science, education and religion there is hope for the future.

The American Association for the Advancement of Science is proud of its eighteen thousand members; the new edition of "American Men of Science" will contain nearly thirty thousand names. But the Christian churches of the United States number among their members about fifty-five millions. In so far as these churches represent the spirit of their founder they are concerned especially with the cultivation of ethics. That so little has been accomplished and so much remains to be done is due in part to refractory material, poor methods and the necessity of repeating this work in every generation. These religious bodies are enormous organizations with great potentialities for good. Why should not science and religion be allies rather than enemies in this process of domesticating and civilizing the wild beast in man?

The ethics of great scientists is essentially similar to that taught by great religious leaders. A scientist not friendly to organized religion has said that the Decalogue of Moses might be accepted as the Decalogue of Science if the word "Truth" were substituted for the word "God." Ivan Pavlov, the great Russian physiologist, left an ethical bequest to the scientific youth of his country, which reads like the warnings of the ancient prophets. Over the tomb of Pasteur in the Pasteur Institute in Paris are inscribed these words of his: "Happy is he who carries a God within him, an ideal of beauty to which he is obedient, an ideal of art, an ideal of science, an ideal of the fatherland, an ideal of the virtues of the Gospel." John Tyndall, no friend of the church, pronounced this eulogy of Michael Faraday, one of the greatest experimental scientists who ever lived; "The fairest traits of a character, sketched by Paul, found in him perfect illustration. For he was 'blameless, vigilant, sober, of good behavior, apt to teach, not given to filthy lucre.' I lay my poor garland on the grave of this Just and faithful Knight of God."

As scientists we are inheritors of a noble ethical tradition; we are the successors of men who loved truth and justice and their fellow-men more than fame or fortune or life itself. The profession of the scientist, like that of the educator or religious teacher, is essentially altruistic and should never be prostituted to unethical purposes. To us the inestimable privilege is given to add to the store of knowledge, to seek truth not only for truth's sake but also for humanity's sake, and to have a part in the greatest work of all time, namely, the further progress of the human race through the advancement of both science and ethics.

OBITUARY

THOMAS NELSON DALE

T. NELSON DALE, a retired member of the U. S. Geological Survey, died at his home in Pittsfield, Massachusetts, on November 16, nine days short of his ninety-second year.

Several years in Williston Seminary, courses in mathematics and mineralogy at Cambridge University, England, petrography under Professor J. Wolf at Harvard University, field trips under the leadership of Dr. Carl Zittel, of the University of Munich, to Norway, Sweden, France, Germany and Switzerland, and a stratigraphic and paleontological research problem in the Val de Ledro in the Tyrolese Alps, comprised the systematic part of Mr. Dale's early training. The accuracy of this first geological research, praised by Dr. Zittel, of the University of Munich, and Dr. A. Bittner, of the Austrian Geological Survey, characterized all his later structural and petrographic papers written while he was associated with the U. S. Geological Survey, which service started in 1880 and terminated in 1920. This work was mainly concerned with the Taconic and Green Mountain structural problems, which involved some twelve thousand miles of walking and as much of driving in the most rugged section of western New England. The areal mapping and the structural sections have been found to be, on the whole, extremely accurate and thorough within the area studied. The latter phase of his work with the U. S. Geological Survey was concerned with the investigation of the granite, marble and slate industries of New England and the United States, the results of which work, published in the Survey bulletins, have long been considered standard references among quarry people as well as colleges and universities.

Aside from teaching at Vassar and Williams for short periods, at the latter institution for nine years, he had interests of a religious and philosophical nature, which were manifested in several publications. He was a member of the Geological Society of America, a corresponding member of the Austrian Geological Society and a life member of the French Geological Society.

CORRESPONDENT