

**DOCTOR JESSE M. SHAVER,
AN EDITOR WITH A VISION**^{1, 2}

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It is indeed a privilege for me to bring to the Tennessee Academy of Science and to Dr. Shaver the greetings of the officers, Board of Directors, and administrative staff of the American Association for the Advancement of Science. We are all keenly interested in your program and progress and are anxious to assist you in any way we can.

The purposes of the AAAS include the implementation of cooperation among the sciences, the promotion of human welfare, and the dissemination of scientific information, attitudes, and methods to the public. The academies are in an ideal position to further these objectives on the "grass-roots" level. It is the hope of many of us in the Association that we may find more and more ways of assisting you directly and through the Academy Conference in furthering these aims.

Two trends highlight these roles of the academies and the AAAS. The rapid expansion of the sciences has led to more and more fragmentation through specialization. Between us we are charged with the responsibility of maintaining lines of communication and integration among the various expanding galaxies of science.

The second of our dual roles arises from the increasing importance of public attitudes toward science and scientists. Science is becoming more and more dependent on tax support, and this support is dependent upon a favorable opinion of our work on the part of people in all walks of life. You, even more than the Association, are in a position to reach the public and develop an understanding not only of the facts of scientific progress, but also the attitudes and objectives that motivate this program.

To help you in these efforts we are studying the possibility of furnishing outstanding scientists as speakers for your annual meetings. They would deliver semi-technical or popular lectures to sessions open to the public. Since academy meetings tend to circulate around the states, over a period of years we would hope to reach a fair segment of educated people.

In preparation for my trip here, I reviewed the back numbers of the "Journal of the Tennessee Academy of Science." Unfortunately, the Library of Congress had the volumes through

¹One of a series of talks given in Dr. Shaver's honor at the dinner meeting of the Tennessee Academy of Science in Oak Ridge, November 27, 1953.
²Dr. Shaver's biography was published in the October, 1943, and the July, 1954, issues of the Journal of the Tennessee Academy of Science.

1943 only, but these gave me a span of fifteen years of Dr. Shaver's editorship. Since the earlier volumes reflected a constant alertness on the part of the Editor to new ideas and changing emphases in science, I feel sure that I missed some interesting highlights in the later numbers. However, I did get a good kaleidoscopic view of Dr. Shaver as editor, scientist, and teacher.

Even a most cursory study of the results of Dr. Shaver's career as an editor reveals three striking characteristics: breadth of interest, an uncanny sense for scientific and educational trends, and a determination to improve the Journal no matter what the obstacles. A few examples will illustrate these qualities.

His cosmopolitan interests are first of all apparent in the wide range of technical papers in all of the major scientific disciplines. But his interests did not stop there. We find excellent articles in the history and philosophy of science, in the cultural contributions of the sciences, and particularly in science education. To take two notable examples, I would like to call to your attention a paper in the January, 1929, issue by Louis J. Bircher entitled "The Relations of Philosophy to Modern Science," and one in the January, 1936, number by George M. Hall on "The Economic and Cultural Value of Geology."

The most striking example of Dr. Shaver's sensitivity to new developments is the article by C. R. Fountain on "Principles of Physics and Chemistry Presented by Moving Pictures." In April, 1931, when this appeared, the use of such visual aids in teaching was a long way from universal acceptance and actually was looked upon with varying degrees of skepticism often verging on scorn.

The other example in this second category probably reflects a continuation or recurrence of certain educational problems more than foresight into the future. There is a remarkable satirical editorial in the January, 1933, issue called "Our Children and the Schools." The Editor deplores the low regard in which we hold our teachers and their economic plight. It is so well done and so timely today that it would certainly bear reprinting or least re-reading.

As an editor myself, I could appreciate Dr. Shaver's struggle to reach his editorial ideals within his limited budget, and I was envious of his success. In the January, 1930, journal he bemoaned the fact that he had an article by L. R. Hesler on "Some Mushrooms of Eastern Tennessee" which, to be effective, must include a large number of expensive halftone illustrations. How could he find the means to finance it? I don't know how it was done, but in the April, 1930, issue the article appeared resplendent with pictures. Furthermore, in the years that followed, he obtained advertising to help balance the budget and was able to increase the number of pages devoted to scientific material.

So, in the twenty-fifth year of Dr. Jesse M. Shaver's editorship of the "Journal of the Tennessee Academy of Science," The American Association for the Advancement of Science joins the Tennessee Academy in doing him honor, not only for his contribution to the Academy but to the advancement of science in America as well.

THE OBLIGATIONS AND RESPONSIBILITIES OF A SCIENTIST: A TRIBUTE TO DR. JESSE M. SHAVER¹

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In this time when it is the custom to say: "What is there in it for me?", it is wise to stop and ask ourselves: "What are our responsibilities as scientists?" It seems that as a minimum there are five obligations which we must meet.

Firstly, we must be objective and open-minded, not only when there is little controversy but also in times like these when the pressure for conformity is great. This is perhaps the most trying responsibility of the true scientist.

Secondly, we must be tolerant. Resisting encroachment on our own intellectual freedom, we must permit others to disagree with us, and encourage even our own adversaries to reach their own independent conclusions.

Thirdly, we must have a broad point of view and admit that there is only one universe. We must with humility integrate our specialty into the knowledge of the whole and realize that relationships exist between all disciplines.

Fourthly, we must be very demanding of ourselves, and must encourage others to be self-critical.

Fifthly, the scientist is obligated not only to search and find, but also to instruct the public concerning his results, particularly the impact which his findings may have on society.

Successful performance in these matters may well insure the recruitment of sufficient new personnel in the science field, and the public understanding and support of science so badly needed today.

It is clear from the statements here presented from his colleagues and friends that Dr. Jesse M. Shaver has fully satisfied all the criteria mentioned above, and it is not only fitting and proper but also a pleasure to hail him as well worthy of everything inherent in the title: **scientist!**

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