

WHAT SCIENCE MEANS TO ME¹

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The days when man could idly speculate on the natural phenomena that lie around him are gone. We live in an age of experimentation and advancement, an age which only the fool says what he can not prove, and in which the sage is one who appreciates science. In such times it becomes necessary for all men everywhere to not only acquaint themselves with scientific knowledge, but also to co-ordinate their work with the progress of science. Those of you here today are largely interested in science as I am—as a lifetime companion in work. We have been trained, you and I, to understand the elementary principles of botany, chemistry, biology, physics, atomics, and what have you. Later we will find our special scientific fields and conduct more extensive experiments. Yet, it is hardly that simple.

The mind of man is a nimble thing. It can contrive formulas and build bombs; it can find and create drugs; it can learn to treat illness. The heart of man unfortunately is less nimble. It is capable, as the head, of many things. Among these is hate—deep fiery hate that can overcome the sensibleness of the mind, hate that can rule the body and its members completely, hate that can move men to make atomic bombs.

I am no pacifist nor am I a justifier. What has been done, has been done, and will doubtless be repeated. But science and we who will in the future compose it have duties to ourselves. We have found atomic power. We have explored the unexplorable, and we have handed our information over to ruthless men. Now, to preserve the dignity that has always been science, is the time to show our true virtue. Now is the time to build from the wreckage of Hiroshima and Nagasaki a new weapon to help all men everywhere. Now while the fates and men look at us for strength. Now while there is yet time. The need cries out to us who will know, to us who **MUST** find, who must probe, **NOW**. Knowledge will come as always she has come to those who seek her most. Yet now we must turn our knowledge over to other men of science—doctors, teachers, engineers—men who are carefully trained to use knowledge.

We who are privileged with the opportunity to acquaint ourselves with science have a duty to understand through it the mysteries that lie around us. We have a duty to interpret them to the masses around us. Superstition is a damning vice which only science can conquer—it is a vice that can bring about a period in history like the Middle

¹Your editor is very happy to be able to bring to you this sample of the work of the high school students who make up the Tennessee Junior Academy of Science. Miss Alexander presented this paper at the Johnson City meeting, December 9, 1950. She is a senior and was sponsored by Mr. Crayton Jackson, one of the science teachers in this training school.

Ages. It is a vice that can twist and warp men's thoughts into dark and mystic distortions of terror. What superstition has once done it can do again. We, you and I and the young person next to you, have a duty to protect our people from atomic cure ills, or quick cure methods and even more from that breed of fear that breaks the human will and blinds the human understanding. An educated people is one of the greatest assets a nation can have. To fear what does not exist is to lay oneself open for slavery to fear. Fear is the harshest of all masters; it can sweep men and nations before it to their destruction. For centuries these two, knowledge and fear, have fought. Now, we who in the future will know, have a duty on the side of knowledge and therefore on the side of science. We must conquer fear in our people or be conquered by it.

There are thousands of young people in our land today who are taking a science course in their particular institutions of learning—thousands who will have only this smattering of understanding. It is our obligation to the future we hope to build to show them in the short time that they are in our classrooms that science teaches three things—the presence of a divine being and the greatness of his care, the understanding of things that are feared by many but which are unworthy of that fear, and that science exists only as a medium of lifting all men of all lands and times to a higher plain of living.

In short, science means to me—duty, obligation, challenge—duty to my God, my people, and my work.

THE HARTFORDFERN (CLIMBING FERN) IN TENNESSEE

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HARTFORDFERN

Lygodium palmatum (Bernh.) Sw.

The hartfordfern at first glance is very unfern-like. It appears to have a slender, climbing, and twining stem with short petioled, alternately arranged leaves, consisting of two palmately lobed leaflets. This appearance is deceiving for what seems to be a twining stem is in reality the twining petiole and rachis of a fern leaf, and what was taken for leaves are leaflets with two palmately lobed pinnules. The upper part of the leaf is fertile and has one to three times pinnately compound pinnules whose ultimate segments are almost linear. At first this portion of the leaf may not be noticed. However, the