

mer schools and do post-graduate work in the hope thereby of increasing their knowledge and value as teachers and researchers, and of securing for themselves advancement with higher salaries, the Commissioner of Internal Revenue rules that the cost of such study is a personal expense and not deductible.

#### DEPRECIATION OF LIBRARY, APPARATUS AND OTHER PROFESSIONAL EQUIPMENT

While the situation on this point is not altogether clear, decisions in the main favor an allowance for depreciation, particularly where the taxpayer derives a material income from expert work.

From what has been said, it appears clear that in the administration of the income tax law, the scientist suffers in the matter of exemptions because of the absence of the idea of financial gain from his doings. He is regarded by the law as interpreted to be doing it all for his personal satisfaction, for which satisfaction he must pay. When his operations are dictated by a desire to make money, a taxpayer may claim and secure many exemptions denied to the scientist.

It is hoped that the further development of this subject, through decisions and otherwise, may be followed up and reported as matters of interest appears.

RODNEY H. TRUE,  
*Secretary, Committee of One Hundred*

#### EDWARD SYLVESTER MORSE

I WAS greatly pleased at the beautiful tribute paid to my dear friend, Edward Sylvester Morse. May I add a word of appreciation:

I first met Professor Morse at a meeting of the Association for the Advancement of Science, at Indianapolis, in 1871. Dr. P. H. Jameson, leading physician at Indianapolis at the time, gave a dinner to some of the visiting scientists and invited me to attend. It was at this dinner that I met Professor Morse. It was my good fortune to have his sincere friendship during all these remaining years. In 1923 my wife drove me and my boys to Cambridge to attend my fiftieth anniversary. On the day following the commencement, Professor Charles L. Jackson, emeritus professor of chemistry at Harvard, and one of my teachers when I was there, invited my family to dine with him at his summer home at Pride's Crossing. We went through Salem en route. I drove to the museum to see my old friend and learned that he was emeritus, but that he was in the museum nearly every day. The attendant said that if I would wait until he could be called up, he certainly would come down to see me. Over the telephone, he said, "I will be down in a few minutes." He was still just the same boy that he was when I first met him fifty-two

years before. He was particularly interested in my boys, who, at the time, were nine and eleven years of age. He showed them all his precious possessions from Japan. He illustrated, at my request, how he could draw on the blackboard with the right and left hand at the same time. He was just as much of a boy as my two boys were, and they have spoken of him continually since.

I am glad that, as this was the last time I saw him, it was under those circumstances which illustrated those very traits of character which Dr. Dall has so vividly described. The memory of this last meeting will, of course, always be as vivid to me as the first time I saw him. His life was typical of how a devotee of science may at the same time be warm-hearted, wideawake and an interesting human being.

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#### THE AMATEUR SCIENTIST IN THE ACADEMIC WORLD

At first glance, the things we do are divided into two classes: those we do from a desire within and those we do by virtue of some sort of compulsion from without.

Like most attempts at classification, however, this is incomplete. The two categories are not mutually exclusive, but the statement can nevertheless be taken as a useful first approximation.

The world's largest manufacturer of photographic goods has described himself as "an amateur photographer." Nor is this simply an exhibition of shrinking modesty; it is a statement of motive. It classifies his professional activity in the former of the two categories mentioned above. And he is fortunate, of course, who finds himself in such a position.

It is obvious, on a moment's reflection, that an "amateur" is not one who is any the less skilful or trained than a "professional," but is rather one whose motive for doing a thing is activated by the pure love of doing it.

Now a person's pursuit may be ever so laudable and still not be "amateurish" (being careful to divest that word of its inferiority complex). Even the teacher, the preacher or the missionary may be responding to the call of duty rather than to an inner urge.

Psychologically speaking, there are doubtless many "activators" or precursors of desire, but one of the most potent of these is curiosity. In and by itself it has led men to explore the world, delve into the earth, analyze, synthesize, create. It has been the silent watchword running through the whole history of science, and nothing will ever take its place in this field. Nothing but the irresistible urge to *know* could

have led Roger Bacon, Galileo and others to risk the ecclesiastical tortures of their times.

But times have changed, and it is now more respectable—nay, even laudable—to indulge one's curiosity. But with the increasing complexity of our modern conditions other motives become active, and even subtle compulsions invade the fields in which unfettered curiosity once foraged freely.

Not only have we seen a growing, and to a very large extent illogical, distinction between pure and applied science, but even so-called "pure" scientific research is becoming a recognized *business*. For a long time it has shown the competitive earmarks.

Well and good. All power to the world's progress! With all our wailing over "the good old days" we would not go back to the horse-car and the oil-lamp if we could. And suffice it to say, we can't, anyway. The world may move in cycles, as in Oriental cosmogony, but it certainly does not retrograde in straight lines.

But whatever embellishments may now adorn the armor of the scientific knight-errant in search of truth, let us not forget that his sword and primary resource is the keen desire to know—good old-fashioned curiosity.

Not for the first time have we heard complaint against the condition in our colleges and universities which makes it necessary for the young scientific aspirant to "grind the paper mill" in order to insure his continuance—to say nothing of advancement—in the academic-scientific field. This is certainly one of the reasons why young men yield to the persuasions of industry, where the desire to know is admittedly diluted to a high degree by the desire for pecuniary gain.

The publication of scientific papers is not only desirable but absolutely essential for the progress of science, and no one of us would wish to stem that stream of discovered knowledge which has in the past and is now helping to cultivate every field of the world's activity. "Keeping up with the literature," however, in the larger scientific fields is becoming a difficult problem, and the difficulty is increasing in geometrical progression. Nevertheless, the quantity is not a cause for concern; we will find some way of solving the difficulty when it becomes acute.

But many of us have had the experience of wading through tons of chaff in search of a few grains of wheat. One can not always avoid the suspicion that some—perhaps a goodly portion—of this material has been turned out for other reasons than those which have traditionally motivated true scientific inquiry.

And where, pray, should the bulwark of true scientific inquiry be found if not in our colleges and universities?

Nor is the fundamental scientific spirit of our many independent research institutions to be impeached. We may confidently assume that in these the business of scientific investigation will successfully be combined with the amateur motive. At any rate, we are not now concerned with them.

But the college and the university have a deeper responsibility. It is theirs—among other functions—not only to perpetuate science itself but the *spirit* of science as well. And that spirit is incompatible with anything but an absolute freedom of intellectual interest and curiosity. The moment compulsions enter that spirit begins to fade. No professor of science will do justice to himself who is being urged to think of what is incumbent upon him, *ex-officio*, by virtue of his position. Nor can a professor who is "grinding the paper mill" be expected to pass on successfully to the next generation the scientific spirit which is being stultified in himself.

In the course of my own graduate work I was given the advice which has doubtless been given to many another young man: "The thing for you to do now is to turn out as much research as you can in the next couple of years. A university in considering you for a position will not ask what you *can* do but what you *have* done."

We face a situation to-day in which many young men are admittedly "turning out all the research they can," with the frank purpose of getting themselves ahead, only secondarily—if at all—for the pure love of science. It is not a situation which can be easily remedied. Our universities are apparently "sold" on the idea of mass-production, at once the boon and the curse of our modern times. "Production" is the slogan of to-day, but we are beginning to question whether production, when bought at the expense of the bodies and souls of the producers, may not after all be a shortsighted policy. What is quite probable in the field of industry is a thousand times more than certain in our educational institutions. To be of most value to the world—yea, even to maintain its maximum *productivity*—the scientific mind in our universities must be "amateur."

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#### DEAN INGE ON THE RELATION BETWEEN SCIENCE AND RELIGION TO-DAY

AMERICAN biologists have been none too active in resisting the attacks of the so-called "fundamentalists." The most that is usually claimed by them in their own defense is that there is no necessary hostility between science and religion. It is then all the