

THE PLACE OF SCIENCE IN MINISTERIAL EDUCATION.

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We are assured almost daily by the public press and by popular consent that the present is not only an age of scientific progress, but that it is pre-eminently THE age of scientific progress. Has the idea been ingrained into our lives to such an extent that we have forgotten the reason for our existence? Have the mighty achievements of science intoxicated us? Have we so closely watched the investigator of whom Chaucer wrote?

“Fortune him hath enhaunced so in pride,
That veraily he wend he might atteygne
Unto the sterris upon every side;
And in a balance weyen each mounteyne,”

have we watched him laying his hand upon the swiftly moving sunbeam and forcing it to give up its secret, turning the lightnings from their course of destruction into channels of peace and usefulness, gathering materials from every part of the earth, from the mountain top to the lowest levels of the mine, from the ocean depth and the depths of space and patiently, thoughtfully sifting out from them the gems of truth; and then turning them all to practical account to ease the burdens of tired humanity; seeking out the wondrous and mysterious forces and compelling them to run as the swift messengers and patient servants of mankind. Have we watched these things so closely that we have permitted the college, so dear to our hearts, to forget that it was founded to provide for the education of a Christian ministry? Or is it true that these things, modern as they may be, have an important part to play in the education of a young man preparing himself for the Gospel ministry?

I do not propose to make a plea for scientific education. That course of training which is best, which is necessary

for the education of a young man preparing himself for a technical profession, is not the course to be pursued by a young man preparing to enter the ministry. I do not propose to enter upon a discussion of the comparative educational merits of the Classical and Scientific courses, as offered in our college. Had I believed, as many men do, that our college curricula are still in the hands of the medieval church, which demands the study of words instead of things, and that these curricula have become heavy with age, I would not have done as I did—take a classical course in college when it was my intention to spend my life in scientific pursuits. Had I believed that a college course might be likened to emery used in polishing a piece of metal, and that we are not concerned for the emery after that metal has been polished, I should hardly have consented to the lengthening of my course made necessary by my desire to put myself in thorough sympathy with both phases of modern educational methods.

I do not propose to resurrect the ghost of Conflict between Science and Religion. Dramatic events have been involved in the rise of science from the Alexandrian epoch to the present day. We all recognize the existence of a family skeleton. A few men still love to speak of the "warfare of science," and the "martyrdoms of science," and recall to memory the cruelties of the dungeon and rack, suffered by truth seekers at the hands of ecclesiastical intolerance. The scientific man who loves to call to mind these early mistakes too often preserves the spirit of the persecutor rather than that of the martyr, the spirit of intolerance creeping in with the consciousness of power. Mistakes have been made on both sides. He who claims to be the "Successor of Peter," conscious that men believed he possessed power to open Heaven to them or shut them out, found it easy to assume dominion over the earth. On the other hand, unsupported guesses at the unknown are often uttered with an assumption of authority, beside of which the

pretensions of the Pope and Council seem slight and shadowy.

A young man preparing himself for the ministry ought to take enough scientific work in his college course to obtain a fair view of the place such courses should occupy in the college curriculum. He is about to enter a profession from which college presidents, trustees, and administrators are largely drawn. May the time never come when the connection between the college and the interest of the church shall be less marked than now. Schools and colleges, wherever they exist, almost without exception owe their origin to the church. Christianity has always been friendly to learning. Its ministry is a teaching and preaching ministry. Christianity produces an inquiring, observing, thinking people. Occasionally infidelity or irreligion have founded colleges, but as such, they have not prospered, and it has been found necessary to transfer them to the hands of religious teachers and guardians to save them. We have in the United States at least one great university founded by atheists, who became convinced that Christians were gaining an undue advantage through their Christian schools. Should you visit that institution to-day, probably the first structure you would enter would be the Christian Association Building. A college president of our own denomination has made the statement publicly that one of the most important cares of his administration, the laboratories, while not outside his interest, were quite beyond his comprehension because his own education had given him no insight into their proper functions.

Why should not he who is making an effort to read God's thoughts as he left them, written in these wonderful things about us, be a Christian man? For my part, I do not see how it is possible for a man observing the wonderful things revealed to his senses in the laboratory to fail to see God's hand in it all. And yet it sometimes occurs that a man is looked upon with suspicion because he happens to be a scientist.

Not long ago a young man received the hand of fellowship in a New England Baptist church, and the pastor, good man that he was, took occasion to remark upon the strange circumstances, "A man of science knocking at the doors of the church." Had he known a little more of the facts of the case the scene would not have appeared so strange to him. Had he seen that same candidate enter his laboratory and with bowed head ask God's guidance in the research of the day he would not have been suspicious of the young man's profession.

No system of education is a good one in which the student gets out of touch with the great body of men. This is beyond doubt a scientific age. The young minister to whom nature is a sealed book will be greatly handicapped. Modern science has so lessened and narrowed hardship and suffering, so widely diffused ease and comfort, covered with a soft cushion the rough places in life, not only for the rich but also for the poor, that a great majority of our young men, consciously or unconsciously are following its leading. The terminology, the figures of speech, the points of view of science are quite common in the realms of thought. The minister who possesses a sympathetic understanding of these things has at his command a wealth of illustration and influence over those he is seeking to direct. He can hardly afford to be out of intellectual touch with his hearers, for the pews contain many men "gifted with the sad endowment of a contemplative mind."

It is an interesting thing to observe the student as he discovers for the first time that he cannot trust his unaided senses in the investigation of the simplest and most obvious phenomena. He must make correction for his personal equation. Watch the expression on his face as he measures for the first time the amount by which another man sees a thing too late, and he in the excitement of anticipation sees it, or thinks he sees it, before it really happens. He realizes as he never did before that his own judgment may be no better than that of the other

fellow. From that time on he is never quite so cock-sure of a thing, and, believe me, he is a good deal more agreeable to live with.

How unfortunate it is that in this day and age there should be abroad in the land so much false—philosophy, I almost called it, but it is hardly proper to dignify it by that term. And how much of it is foisted on the public in the name of religion? Did the Baptist denomination ever lose a minister to one of these many isms? While they were with us we believed them to be good devout men. And they were. What they lacked was balance. Education in the traditional humanities alone does not seem to be sufficient protection to those who fall easy victims to the vagaries of quacks. There is no better antidote for unworthy credulity than a consistent course in some good laboratory.

The spirit of the laboratory is not dogmatic, as some would make us believe. Intolerance has no place in it. Mistakes have been made and the truth is being sifted from error. The ghosts of phlogiston, caloric, and luminiferous ether, and a crowd of other phantoms haunt the investigator. Science, like Bunyan's hero, has sometimes had to pass through the "Valley of Humiliation." Theories have been propounded and for a time accepted, which later investigation has disproved. This does not necessarily discredit the method. Faith in the fundamental principles persist notwithstanding the difficulties encountered. The student cannot help seeing that however much science may analyze and explain, back of it all is God. A student of elementary chemistry, profoundly impressed with the ability of the teacher to explain natural phenomena, asked him: "Professor, why is gold yellow?" Whereupon the wise man answered: "Because God made it so."

The good college teaches science to the ministerial students in a reasonable way. He is not allowed to fritter away his time in acquiring a little knowledge of this thing and, a dangerous omitting of that. He is allowed

to choose from a wide range of scientific studies, one suited to his ability and taste. His time would be well spent if the only thing acquired were the knowledge of how little he knew about it after all. Who can tell how many mistakes he may thus avoid and the chagrin he may be saved. There is a wide-spread taste for sensationalism which gains with the efforts made to satisfy it, which offers a premium upon anything startling or revolutionary. If a fraction of the wonderful scientific discoveries which have been announced in the public press and too often referred to or made the basis of an illustration in the pulpit, had actually been made, this would indeed be a sign of scientific progress. The daily newspapers and popular magazines sometimes make as sorry a mess of their attempt to describe a scientific discovery as they do to report the doings of a religious convention.

A few years ago an attempt was made to fix the ratio of the circumference to the diameter of a circle by legislative enactment. That legislature was chosen by the people of one of the greater states of the Union, a state ranking high in the number of eminent men it has produced, and the excellence of its educational institutions. In the legislature of this great state, House Bill No. 246 was introduced. The bill has this title: "A Bill for an Act introducing a New Mathematical Truth," which truth in the second section of the bill turns out to be that the circumference of a circle is just 8 1-5 times its diameter. One of the great daily papers of the state capital, a paper famed for the excellence of its editorials, its clean management and complete lack of sensationalism, devoted several columns of its first page to an exploitation of this fake discovery which had been made by a doctor living in an obscure part of the state. Announcement was made that at last the circle had been squared, and the method, copyrighted, and the demonstration had been accepted by all great mathematicians; at Washington it had the support of the National Astronomical Observatory; the

mail of the discoverer was packed with letters from scientific men in Europe and America, and so on for several columns the unsuspecting editor continued to present the effusions of this lineal descendant of Ananias. The article furnished a wealth of illustrations for sermons on the following day. When the bill was introduced in the House, the Speaker, a graduate of a famous educational institution, happened to be a man with a sense of humor and ordered it referred to the Committee on Swamp Lands. Two days later the great discoverer had a hearing before the State Superintendent of the Public Schools and the Committee on Education, who immediately endorsed his views. The Committee on Canals and Swamp Lands reported the bill back, recommending that it be referred to the Committee on Education. This committee carefully considered the bill and reported, "the same back to the House with recommendation that the said bill do pass." The bill was called up by the committee and actually passed the House by a good, safe majority. Before it actually became a law its character began to be recognized and its progress was stopped. It will be a good many years before the participants in that comedy can contemplate their part in it without a blush of shame.

On the top shelf in an obscure corner of a department library of a great institution rests a book donated to the library by its author. It holds its position in the crowded shelves, not because of the author's reputation, the title, or the flaming Harvard crimson in which it is bound. The contents are most unique. The author of "My Sound Philosophy" is a demented man. The book is a strange combination of witticism, fact and insane fancy. Many a time have I seen my fellow-students, wearied by the labors of the day, gathered about the library table, while one of their number read extracts from "My Sound Philosophy." Whenever the red book was taken from the shelf, it was the signal for fun and recreation.

In the same city is a minister of the Gospel. He is

well known all over the United States as an earnest Christian man and an eloquent platform orator. His church was one of the largest in the great city and at the time of which I speak was attracting wide attention because of the old-fashioned revival which the good doctor was conducting. May I ask pardon for making a personal reference. It seems necessary to do so in relating an incident which affected me deeply at the time. My fellow-students were men of rare intellectual gifts, picked men training for special positions. They are all college professors now, leading the world of thought in their particular investigations. Not one of them is a Christian man. My own position and belief was thoroughly understood and respected. I was particularly anxious that these young men, richly endowed by nature for leadership, might be set to work in the Master's cause. As my old teacher, C. L. Herrick, used to say, "The influence of these men seemed destined to run wild like an uncontrolled prairie fire, but when once placed under subjection by the Master Hand, might be made to burn as a back-fire in the same Master's cause. One night I asked them to go with me to the particularly mentioned church. They readily consented. I hoped for much. I had heard this famous man lecture in my college town. He was a man with large gifts and spoke with conviction. He seemed to have the power to move men. Imagine my surprise when the speaker announced that the evening's discourse would be taken from a scientific lecture. Imagine my companions' amusement and my own shame when it appeared that the speaker's information had been gathered from "My Sound Philosophy" and similar sources. Should I quote from that lecture, you would be greatly amused. So were my companions part of the time; at other times they were angry. On our way home, one of them, a strong intellectual man, said, "Do you expect me to accept religious instruction on questions concerning which I have honest doubts, from a man of whose inability to distinguish truth from error I have no

doubt?" If the college can save its young ministers from mistakes like that it will mightily increase their usefulness.

A reasonable amount of scientific study will give the young ministerial student an educational balance, and broaden his view. Dealing directly with the concrete things which God has created he will obtain a wider grasp of what God's creation means.

“———— verily many thinkers of this age,
Aye many Christian teachers, half in Heaven,
Are wrong in just my sense, who understood
Our natural world too insularly, as if
No spiritual counterpart completed it,
Consumating its meaning, rounding all
To justice and perfection, line by line,
Form by form, nothing single nor alone,
The great below clenched by the great above.”