

THE DEPARTMENT OF THE AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

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DEPARTMENT.

THE PRESENT-DAY CHALLENGE TO GRADUATES IN PHARMACY.*

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Pharmacy is an old and honorable profession. This is a "trite" saying and some may be inclined to pass it with the common slang expression, "bunk." As we pass the modern drug store and see piled high in the windows everything from Ford tires to mouse-traps, we may feel justified in using some such expression in describing a profession thus advertised. However, if we will investigate beyond the windows, we will find that every store, even the ultra modern ones, have, in charge at all times, a competent college-trained pharmacist. This may cause us to withhold judgment and to investigate further.

If we question this pharmacist, especially on subjects that involve a knowledge of medical science, we will find that he has a storehouse of practical accurate information on public health, sanitation and disease prevention. This may arouse our curiosity and we may wish to investigate further. If so, we will find a thoroughly equipped prescription room and dispensing laboratory and that the pharmacist is an expert professional individual, thoroughly trained to execute the service that he performs for the public and the physicians. We may wonder why a *profession* uses its choicest space to advertise merchandise, some of which is very non-professional. There is but one answer to this and that is, the present-day economic conditions make it necessary for the pharmacist to merchandise. It is true that some of our calling become so enthused with merchandising that they seem to forget that the most important part of their labor should be strictly professional. However, 99 per cent of the pharmacists of the country are true to the ideals inculcated during their apprenticeship and college training and are rendering to the public a service that is purely professional.

HISTORY OF PHARMACY INSPIRING.

Pharmacy *is* an old and honorable profession. It had its beginnings in the days when man first attempted to cure human ills and it has continued to serve humanity ever since. It has a history well worthy of our study.

For those of you who have lived in the midst of the historic places of New England, I suppose they lose some of their significance and glory, but in one who visits them for the first time they inspire reverence, enthusiasm and patriotism. When I had the pleasure of my first visit to Lexington, Concord and Bunker Hill, I am frank to say that I was deeply moved as I thought of the glorious sacrifices made on these spots and of the immeasurable benefits that have come down to us because of these sacrifices.

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We will have similar thoughts when we read the records of those who have preceded us in Pharmacy, those who helped to lead men out of the bondage of ignorance and superstition into the light of a sane and rational treatment of disease. They were human beings such as you and I, but they were filled with a desire to serve and with a love for their profession that caused them to willingly make sacrifices so that this profession could advance and become more useful to humanity.

When you feel a bit discouraged and need inspiration, read the lives of Glauber, Geoffroy, Baumé, Trommsdorf, Maquer, Scheele, Bechamp, or a host of others who have contributed to the development of our profession. I wish time permitted me to speak to you of all of these. I feel compelled to speak of one whose life is very worthy of emulating.

Carl Wilhelm Scheele, the great Swedish apothecary, was born in 1742 and died in his apothecary shop in Köping in 1786. He lived only a little more than two-score years, but in that brief time he made discoveries that vitally affected the sciences of Pharmacy and Chemistry and that serve as a monument to his memory. It has been said that genius consists of 99% perspiration and 1% inspiration. This was exemplified in Scheele. He was not considered a particularly brilliant youth, but love of research and labor found their fruition in him. At the early age of 14, he was apprenticed to an apothecary and spent eight long years in that capacity. He labored night and morning to learn something of the secrets of the drugs he handled. He had but little time, a meagre equipment and only the small back room of the apothecary shop as a laboratory. There, before the opening time for business and after the closing of the same, he spent his time in study and experimentation.

It is difficult to conceive a situation that offered greater obstacles to pure research, yet Scheele was able to isolate tartaric, phosphoric and hydrofluoric acids before his experiments attracted the attention of the trained chemist who later became his teacher. It has been said that this teacher's greatest discovery was Scheele and we can well believe it.

We hear most of his discovery of oxygen which he did independently of Priestley and Lavoisier, but in addition he discovered and isolated about 25 elements and compounds including the arsenical pigment known as Scheele's green. I wonder how many of us, if not instructed, would be observant enough in making lead plaster to note that glycerin is a by-product. This discovery illustrates the careful painstaking attitude of the man.

We are prone to console ourselves with the thought that the man who succeeds had greater advantages than we, or that luck played a great part in his success. This is a foolish thought that will be quickly refuted if we read carefully the story of the lives of our successful scientists. This success has depended upon the good old-fashioned principle of "hard work," which is as true to-day as it was in their time.

We must admit that Scheele had one great advantage over the modern youth. He was not distracted by the complications of the twentieth-century civilization. When he had time to spare, there was no cheap movie to allure him. If he had a short distance to go he walked and thought while he did it, while we jump into an automobile if we wish to go a few blocks, and risk our lives dodging traffic. Our modern civilization detracts from constructive thought unless we isolate ourselves

from some of its complications. Scheele's wants were few and easily supplied, while ours are countless and, useless though they be, we feel badly treated unless they are fulfilled. The boy of a few years ago who was pleased with a fountain pen for a graduation present, now wants a Rolls-Royce and the rest of our wants have increased in proportion. The present generation will produce but few great men unless they adopt a philosophy of life that eliminates much of the useless trappings of modern society. Without doubt there are within the hearing of my voice embryonic Scheeles if such a philosophy of life were accepted as a guide. We must get back to the simpler things that will give time for constructive thought and labor, if we wish to develop the best that is in us.

How you have spent your time in college is of great importance to your future welfare, but how you will spend your spare time out of college will be of far greater importance to it. Will you be one of whom it may later be said, "O yes! He graduated from the Rhode Island College of Pharmacy in 1927, but has never studied since the day he graduated, and, therefore, belongs to the historic educational past?" Or, will you be one of whom it may be said, "His education did not end with graduation? It was the beginning or continuation of an earnest effort to improve himself intellectually." If the first remark applies to you, we can readily predict where you will be 20, 30 or 40 years hence, a cog in the wheel without the power of leadership; dead timber that gave great promise in the budding season, but failed to secure the necessary life-giving substance to continue growth, hence stunted, sapless and ready for the harvest.

On the other hand, if the second remark applies to you, there are no limits to which you may not climb. If you are willing to forego the "sham" amusements of the world and earnestly strive for the better things of life, the joys of accomplishment will far outweigh any false pleasures you may have missed. Pampering the mind and body seems to be our greatest national fault. How refreshing it is to meet those who practice the good old-fashioned virtues of self-denial for the uplift of the spirit and the subjection of mind and body to the training necessary for mental and physical growth.

Our further education need not necessarily take advantage of the organized adult educational courses that I have mentioned. The reading of good literature, interest in the social, economic and political affairs of your community, State and Nation, the serious study of your profession and activity in its uplift and advancement or all of these may well indicate that you are alive and growing and contributing to the welfare of your day and age.

In closing this theme, let me leave with you this challenge! "My education has just begun, and I will put forth my best endeavor to continue it throughout my life."

PROFESSIONAL ETHICS.

No calling is a profession unless its practitioners are guided and inspired by the ethics that govern it. We are all aware of the beneficial effects that the "Oath of Hippocrates," the first code of ethics, has had upon all medical men who have been inspired by it. Pharmacy is not without its own code of ethics. The great AMERICAN PHARMACEUTICAL ASSOCIATION has adopted a code of ethics that we should accept as our guide in all our dealings with the public, the physicians and

our fellow-pharmacists. If this code is followed in spirit by all pharmacists, we benefit ourselves, our profession and our fellow-man. Permit me to urge upon you young men the duty of familiarizing yourselves with those principles and the duty of abiding by them.

Often we do not realize that we and our profession are judged by our actions rather than by our words. If these principles are to benefit us, we must practice them rather than lip them. Lip prayers never opened the Gates of Heaven to any sinner. Our hearts must be in our efforts to live up to a high ethical standard or we will fail to do so. Human nature is weak, and we are often tempted to do the "shady" thing for the financial or other gain it will bring to us. It requires an honesty of purpose that is unshakable to withstand these temptations. Professional dishonesty is, to my mind, particularly reprehensible. The pharmacist who will substitute or sell sub-standard drugs or in other ways cheat the patient, who, because of lack of knowledge of medicines, is compelled to depend upon his honesty is more contemptible than the man who cheats in ordinary business transactions.

The principle of *Caveat emptor*, "Let the Purchaser Beware," does not apply to our hidden and occult science, because it is hidden and unknown to the laity. They must trust to our honesty and, therefore, our obligations are greater. No great or lasting professional reputation was ever established except upon honesty of methods and purposes. The retail, wholesale or manufacturing company that enjoys the confidence of its customers is operated in accordance with the most acceptable principles of honesty. The quack and charlatan may prosper for a short time, but their business is built upon quicksand and the day of disaster is sure to come.

But over and above any financial gain that comes from honesty is the deep satisfaction of having discharged your duty and trust faithfully. The public confidence that the profession of pharmacy enjoys speaks volumes for the integrity of its practitioners. You young men and women will now have the opportunity of continuing and increasing this confidence.

OUR DUTY TO PHARMACY.

The young man who enters a profession has, as I see it, a three-fold duty to perform. First and foremost of these is the duty he owes to the public which he serves. The second is the duty he owes to himself and his family. The third is the duty he owes to the profession which he serves. Much has been written and spoken about the first two of these duties, therefore, I will pass them with the comment that they are important and must never be lost sight of. We hear but little of this third obligation, and hence I wish to dwell upon it for a few moments.

The men who have gone before have left to us a rich heritage. They blazed the trail and did the pioneer work, and we can now enjoy the fruits of their labor. We no longer have to go into the highways and byways and select our crude drugs and comminute them in hugh iron motors with heavy iron pestles. We no longer have to make our inorganic and organic salts—no, not even our fluidextracts. We no longer have to spend unreasonably long hours in the practice of our profession. The conditions that you will find in your places of employment will be much better than the conditions the older generation had to contend with. You are fortunate to be entering pharmacy in 1927. How do you propose to leave the profession for

those who will enter it in 1957, '67 or '77? This is an important question. How you shall answer it will determine the position the profession will hold in the future. It is not enough that you hermit yourselves in your places of business and be contented to do your duty to the public and yourselves. I believe I am right in saying that pharmacy, more than any other profession, has suffered from a failure of its devotees to realize that they owed a duty to it as a profession.

Take an active interest in everything that pertains to it, and use every legitimate means to further its advancement. Our national, state and county associations are doing much to help you in your work, and it is expected that you will reciprocate by giving them your earnest support. This is one way in which you can serve your profession and assist in leaving it in better condition for those who will follow you.

FINANCIAL NEEDS OF PHARMACEUTICAL EDUCATION.

Pharmaceutical education is suffering and always has suffered from a lack of adequate financial support. Even our State-supported Colleges of Pharmacy do not receive the sums devoted to other educational endeavors of similar proportions. No college to-day can exist on student fees alone and render its best service to the students within its walls. It *must* receive help from the State or from an endowment.

When we contemplate the enormous sums of money given by the State or interested parties to medical, law and business education, we wonder that pharmacy makes as good a showing as it does. Why should not the State contribute to pharmaceutical education when the trained pharmacists are serving the public by assisting in preserving the health of its citizens? The State contributes to the support of education in agriculture, engineering, law, medicine, liberal arts, etc., and surely pharmacy serves the State in as great a capacity as any of these except, perhaps, medicine. I believe that pharmacy is justly entitled to State support and that the pharmacists should demand it. In our Midwestern and Western States, pharmacy receives support from public treasury, and I am sure it is not rendering a greater service to the public in these States than it does in the East.

Many educational endeavors receive great sums as endowments from interested parties. In my own State institution, agriculture and engineering receive considerable sums in this way every year. Medical, law and business colleges have in many cases been endowed, and with large sums. Why has not some of the money made in pharmaceutical endeavors been returned as endowments to colleges of pharmacy? For some unknown reason, it does not seem to be the fashionable thing to do. I know of only one college of pharmacy that has received a sum worthy of comment and, strangely enough, that did not come from a pharmacist.

We all know that large sums of money have been made in retail, wholesale and manufacturing pharmacy, and yet practically none of it has been devoted to pharmaceutical education where it is so much needed. I believe that if the possessors of this wealth fully realized the need and importance of adequate financial support to pharmaceutical education, some of it would be forthcoming.

If we are unable to locate some "Rockefeller" for pharmaceutical education, we may be able to secure a number of modest contributions, which, collectively, will accomplish the same purpose. However, it will not be done unless the pharma-

cists are sufficiently interested in the welfare of their profession and willing to assist in its consummation.

We are in dire need of great graduate schools of pharmacy, where young men and young women will be given more thorough training than that required of the every-day pharmacist. I can think of no college of pharmacy that has a graduate school at all comparable with those of medicine, law or even business. This is due primarily to lack of funds for the support of such an institution. It is also due in part to a lack of thoroughly trained teachers. We are a little like the blind trying to lead the blind in that we do not have an adequate force of pharmaceutical educators who have had a training sufficient to prepare them to be great leaders in graduate study. However, if we had funds to establish graduate schools such as I have mentioned, we could quickly fill this need, as we have a great many young instructors who would avail themselves of the opportunity if it were provided for them.

An enormous amount of beneficial research is being done in medicine and pure science in our great graduate schools, where plenty of money is at the disposal of the institution. On the other hand, pharmaceutical research is poorly supported, and it is only here and there that we find some great spirit filled with the desire to explore the unknown and willing to serve long hours in regular duties before giving time to research. We cannot expect much under these conditions.

Those of us who have served back of the prescription counter fully realize how limited our knowledge is and how necessary is research to extend our vision and usefulness. The decennial revisions of the U. S. Pharmacopœia presents an enormous number of research problems that should be solved before the work can be done efficiently. I am glad to say that the present Revision Committee is endeavoring to have some of these problems studied in our colleges during the interim between revisions, so that the next Committee will be better able to do efficient work. Every college of pharmacy should endeavor to assist in this great work. If we had some great graduate schools, adequately financed, we could find plenty of young workers willing to increase their usefulness and to add something to the sum total of pharmaceutical knowledge. I consider our failure to support graduate pharmaceutical education one of the greatest stumbling blocks to the advancement of our profession.

Wishing and sighing for the attainable has never accomplished *one step* in the progress of human civilization. If we desire our ideal to be consummated, we must be willing to work earnestly for it. I sincerely hope that I may enlist the assistance of you young men and women in this, what I consider, a great ideal.

Sir William Henry Perkin died twenty years ago. His fame is associated with the foundation of the coal-tar dye industry and because he made his discoveries useful to man. In 1826, amido-benzene was separated from indigo in dry distillation by an Erfurt pharmacist, named Unverdorben; in 1834, Runge obtained the same substance from coal tar; Hofmann continued these pioneer investigations, and Perkin was a pupil of the latter.

Joseph Bienaimé Caventou, pharmacist of Paris, who died 50 years ago, was associated with Joseph Pelletier, also a pharmacist and son of a pharmacist, in the discovery of quinine. The "Prix Monthyon," of 10,000 francs, was awarded to them for their discovery of quinine and this was their only financial reward for their cinchona researches, for they took out no patents.