PHARMACEUTICAL EDUCATION IN NEW JERSEY.*

BY ROBERT P. FISCHELIS.[1]

Training men and women for the practice of pharmacy in New Jersey presents, broadly speaking, the same problems which are confronted in pharmaceutical education throughout the United States. Nor can one separate pharmaceutical educational problems from those of education in general. This is true for all kinds of professional education. The fundamental principles are the same. It has taken time for professional men to realize that a mere vocational training is not sufficient to supply the professions with workers who will build up these professions while at the same time rendering adequate service to the public. Medicine, dentistry, law and other professions have adapted themselves more rapidly to this changing view than pharmacy but we are traveling in the right direction now, and with sufficient speed, to do for pharmacy what the educational advances in medical, dental, legal and other types of professional education have accomplished for their respective callings.

One need not go back very far in the pharmaceutical history of New Jersey to recall the time when four years of experience in a drug store, presumably under a well-qualified pharmacist, was the only educational requirement exacted of a registered pharmacist. Many exceeded that requirement and were equipped with high school and college training but the doors of the profession were open alike to those without school or college training and those who possessed such training in the highest degree. Both types of applicants had to have four years of drug store experience and both had to pass an examination to become registered.

Theoretically, there is probably no better way of learning an art or a science than to sit at the feet of a master and imbibe what he, out of the richness of his years of experience and patient study, is able to impart. This carries us back to the days when men "read" medicine or law under experts and became prominent in the practice of their professions; when future chemists worked as laboratory boys under the able tutelage of famous experimenters, and when the apothecary of old took in an apprentice and taught the young man pharmacy in all its details from the ground up. But it has been many years since men "read" medicine under preceptors. Law schools are rapidly replacing the law office as a classroom. Chemists no longer sprout from apparatus washers and drug-store experience, as an exclusive means of educating pharmacists in the fundamental sciences underlying their profession, or even in the strictly pharmaceutical work of the drug store, is a thing of the past.

Pharmacists like men in other professions are too busy to train apprentices nowadays and very few modern drug stores would make adequate training schools for the all-around experience needed. Furthermore the day has passed when any single individual can be at once an expert in pharmacy, chemistry and materia medica and other subjects. So rapid has been the progress of science that those who call themselves scientists, while being generally informed in their science, profess to be specialists in only a small part of it.

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More than a hundred years ago pharmacists in the City of Philadelphia began to realize that it would be advantageous if those desiring to enter the profession could receive instruction in chemistry, pharmacy and materia medica from acknowledged masters in these subjects rather than from a variety of preceptors possessing varying degrees of knowledge, and they organized the first college of pharmacy in America. New York and other cities soon followed. More and more the duty of training pharmacists has been shifted to the colleges and less and less "experience," in the original interpretation of that word, is supplied in the drug store. First-class colleges now give all the training necessary for the equipment of a pharmacist excepting that of contact with customers and meeting the many and varied situations which arise in the daily work of the drug store. Some are attempting to supply that also. This latter training is of the greatest importance and it is really what our Boards of Pharmacy to-day have in mind when they require drug-store experience as a qualification for registration. There was a time when "experience" meant chiefly prescription experience. To-day it means all-around experience. I hope the store-experience requirement will never be abolished entirely. It is as essential to pharmacy as the interneship requirement is to medicine and the law office-experience requirement is to law.

Conditions in the drug business being such that the training of pharmacists has been shifted definitely to the colleges, it is but natural that college education in pharmacy has been made a legal requirement for registration in many States and is on the way to becoming a legal requirement in all States.

New York was the first state to require a college education in pharmacy of its registrants. The Empire State has been a leader in much of the progress that has been made in professional education of all kinds. It has a wonderful school system and is particularly fortunate in the possession of good administrators. Its influence on the standards of professional education in other states has been most profound. The requirements for recognized colleges of pharmacy as laid down in rules of the Regents of the state of New York have been models for other states.

Pennsylvania followed New York in requiring college graduation of applicants for registration and now more than half of the states in the Union are on a college prerequisite basis. New Jersey did not join the procession until 1920, but since then it has made up for lost time.

With college training in pharmacy legally required in so many states, it becomes somebody's business to see to it that it is provided in proper measure and of proper quality. The duty of providing pharmaceutical education lies partly with the public, which, through legislation, has demanded it and partly with pharmacists as a group, whose pride of craft should awaken sufficient interest to see that its future members are properly trained. The duty of supervising the quality of the training provided comes properly within the jurisdiction of the Boards of Pharmacy.

There are throughout the country four general types of institutions teaching pharmacy.

The earliest type of pharmacy school was the so-called independent school organized by pharmacists and conducted by them. About one-third of the seventy-five or eighty pharmacy colleges in the United States still belong to that type or a modification of it. The general scheme of organization of these schools is that

followed by the first college in Philadelphia. An association of pharmacists interested in educating their apprentices was formed. This organization procured a charter, selected a governing body or Board of Trustees and the Trustees engaged a faculty, provided suitable quarters for lectures and laboratory work and upon recommendation of the faculty awarded diplomas to those who passed the required examinations. Originally these schools existed on the fees of students exclusively and, where classes have been consistently large, they have been able to provide a good faculty, proper equipment and accumulate a surplus to provide for future expansion. Educators in other fields might marvel at the spectacle of an institution of collegiate grade paying its own way without endowment, gifts or State support, but when it is explained that these colleges have been working on a three-day-a-week basis—that is having one class at the institution on Mondays, Wednesdays and Fridays, and the other class on Tuesdays, Thursdays and Saturdays—the feat does not appear so impossible. A building adequate for only three hundred students thus at once becomes adequate for six hundred. Overhead is reduced, fewer teachers or part time teachers are employed and instead of the customary deficits we may have surplusses. But we have reached the point where the pharmacy course is being lengthened in hours, days and years. This leads to the need of more space, more equipment, more teachers, full-time teachers, and more comforts for students. And all this costs money. So-called independent schools which have had to meet these new conditions find that whereas they formerly needed no outside aid, they must now appeal for endowment funds, building funds, or State support. In other words when pharmaceutical education reaches the level of other types of education its expense increases commensurately and colleges must either look somewhere for support beyond the fees of students or raise the fees beyond the capacity of the average student to pay. As a result we now have two types of independent schools. The independent endowed schools of which the Massachusetts College of Pharmacy is an example and the independent schools without endowment which endeavor to exist on fees of students. The Philadelphia and New York Colleges were examples of this type until recently but they have secured considerable aid from their alumni and manufacturers interested in pharmacy. It is the accumulated property owned by these institutions with its enhanced value that makes it possible for them to meet any development in pharmaceutical education with little difficulty. Were they to start out to-day without their property and donated funds on an independent basis to give the kind of a course they now give, the tuition fees would pay only a fraction of their expense. It is, therefore, futile for an independent school of pharmacy in this day and generation to expect to finance itself without a source of income beyond that of tuition fees. The independent, unendowed, unsupported colleges now extant will either become endowed or supported from the outside, or close their doors. The third type is the group of University and State supported colleges. They make up two-thirds or more of the total number of colleges of pharmacy in the United States. Ever since the University of Michigan began instruction in pharmacy in 1868 there has been a continuous growth of departments, schools and colleges of pharmacy in Universities all over the land and many independent schools have sought and obtained University affiliation.

University schools of pharmacy naturally enjoy the advantage of drawing

on the various departments of the University for instruction in chemistry, biology, economics and other subjects thus giving their students that broad cultural contact which is so desirable in all educational work. Likewise the department of pharmacy supplies a contact to the other divisions of the University which is helpful in gaining a better viewpoint for pharmacy among the non-pharmaceutical students who later spread that viewpoint in their respective walks of life. It is the ideal type of pharmacy school of the future.

The fourth type of pharmacy school is hardly worth mentioning. It is the type which is organized as a stock company or private venture on a purely money-making basis. With few exceptions it is limited to the "cram schools" which prepare applicants for board examinations. Schools of this character which actually attempt to give a course leading to a degree are taboo wherever there is strict legal supervision over pharmaceutical education. They could not exist in New Jersey to train pharmacists for this state.

It now becomes of interest to inquire into the regulations governing pharmaceutical education in New Jersey and the sources from whence the New Jersey pharmacists of the future are springing. Since 1920, the pharmacy law of this state demands that applicants for registration as pharmacists shall be graduates of colleges recognized by the Board of Pharmacy. In 1920 one year of high-school training was required by the Board prior to entrance upon a course in pharmacy at a recognized college. In 1921 this was raised to two years and in 1923 to four years, or high-school graduation. Next September the minimum course given by a college of pharmacy recognized by the New Jersey Board must be one of three years totalling 2250 hours of instruction.

To some this may seem like a rapid rise in requirements but we must remember that this rise was necessary to bring us up with the head of the procession which had started marching in other states years ago. New Jersey, lying between two progressive states, as far as education is concerned, was in danger of becoming the dumping ground for those who were unfit to practice pharmacy in New York and Pennsylvania. Our Board of Pharmacy deserves great credit for its courage in taking a firm stand for better training for pharmacists in spite of some ill-advised opposition.

It is plain to anyone who looks into the matter that the gateway to pharmacy in New Jersey under our present regulations is the College of Pharmacy. One must be a graduate to qualify for the examination for registration and one must have completed at least one year of college work successfully to qualify for the assistant examination. Without particularly seeking the responsibility of selecting our future pharmacists, the colleges have suddenly had that responsibility thrust upon them. Now the members of the New Jersey Pharmaceutical Association should be interested in how the colleges are meeting that responsibility. If they are admitting any applicant who has a high school diploma and the price of tuition, until their class rooms and laboratories are filled, then they are not meeting the responsibility at all. If they are requiring character endorsements and are shutting their doors to undesirables, regardless of the effect on the treasury, they *are* meeting that responsibility. The members of a profession who have its interests at heart ought to know what is being done to keep out undesirables and they ought to coöperate with those charged with that duty. To my knowledge this Association

has never made it its business to find out what is being done or to coöperate along this line.

The largest number of prospective New Jersey pharmacists receive their training in three colleges. Those from the southern part of the state find it most convenient to attend the Philadelphia College of Pharmacy and Science. Many in northern New Jersey and other easy commuting points attend the New York College of Pharmacy. The majority since 1920 are attending the New Jersey College of Pharmacy in Newark. Available records for the past year show a registration of about fifty-five New Jersey students in all courses at the New York College, 65 from New Jersey at the Philadelphia College; about two hundred Jerseymen out of the total enrollment of two hundred and fifty at the New Jersey College.

So many of the older members of the New Jersey Association are alumni of the New York or Philadelphia Schools, that I dare say they are better acquainted with those institutions than with the College in their own state. I believe that a New Jersey pharmacist, no matter what his *Alma Mater* may be, owes some allegiance to the College in his own state. At least he should be sufficiently interested in it to want it to be successful.

It is well known that the Philadelphia College has expanded in recent years and is giving science courses as well as courses in pharmacy; that it has campaigned successfully for building and endowment funds and that it has adopted a careful system of selecting students.

It is also well known that the New York College is affiliated with Columbia University; that it has recently enlarged its facilities and has added to its equipment with the aid of funds collected from alumni and other sources. This college is, as far as I know, the only one of the New York Schools which has arranged a three-year course that meets the requirements for New Jersey students even though its regular minimum course for the coming year (and perhaps for several more) is only a two-year course as required in New York State. Anyone familiar with college administration knows that it is not a simple matter to make arrangements of this sort and the New York College deserves credit for its spirit of service.

It is further well known that the New Jersey College of Pharmacy is engaged in building and financing a new structure to house its increasing number of students and prepare for the adequate administration of the three-year course. I am sure you will pardon me if I spend a few moments in acquainting you with some things I think you ought to know about the only school of pharmacy in your own state and perhaps endeavor to arouse your interest in its welfare.

When the New York and Philadelphia schools had already reached or neared the proverbial three-score and ten, the New Jersey College was a babe in arms. It was organized in 1892 on a basis very similar to the Philadelphia and New York Schools. The college membership has never grown like that of the other institutions mentioned but this was perhaps due rather to a lack of applicants for membership than to a desire to restrict it. In the past year a number of new members have been added making the total about twenty-six.

One often hears misinformed individuals referring to the New Jersey College as the property of a wholesale drug house, as a stock company, or belonging to the State of New Jersey or to the druggists of New Jersey. None of these statements

are true. The College was organized under an act of the legislature which empowered its Board of Trustees to give courses in pharmacy, award the Ph.G. degree and work for the improvement of knowledge in pharmacy and allied sciences. It is an independent school of the non-profit making type. Salaries are paid to faculty and certain officers and small honoraria are given for the performance of certain duties but no one receives any dividends from the institution nor does any individual own its property. Its property like that of many other universities and colleges is held for educational purposes under the administration of the Trustees. This statement is based on public records open to any one who may take the trouble to look them up.

Many prominent members of this Association have been affiliated with the college of pharmacy. The names of Kuebler, Hommell, Staehle, Wuensch, Wrensch Marquier and others are linked with the progress of both.

Just why the New Jersey Pharmaceutical Association has never had a committee on education and taken a greater interest in the New Jersey College of Pharmacy is not apparent to the author of this paper. Other State Associations take pride in the institutions of their state and lend moral and material support to their welfare. We have overlooked this duty and it seems timely to correct the oversight. The growth of the college in numbers of students since 1920 has been rapid. The total number of graduates from the institution in thirty-three years is 761. Of these, 279, or about 37%, have been graduated since 1921. Graduates of the college since 1923 are eligible to the New York, Pennsylvania and other State Board examinations. The College is certainly filling an educational need but in order to continue to do so in conformity with the higher requirements of the Pharmacy Boards in this and neighboring states, it must have more space, more equipment, more professors and full-time assistants.

Efforts to provide these necessities are under way but are handicapped by lack of funds. That is not an unusual situation with colleges but it is a serious one.

When a college is compelled to spend all the money it has and can borrow, for building purposes, its equipment and faculty must suffer. If all available funds are spent for faculty and equipment, the building must suffer. All three are of prime importance and none should suffer. The remedy lies in endowment, state support or contributions to meet particular needs.

If some philanthropist would endow the New Jersey College, as the Massachusetts College has been endowed, the problem of pharmaceutical education in New Jersey would be solved forever. If the legislature of the State of New Jersey, representing the people, were to make a lump sum contribution for the building and an annual contribution for maintenance of the College of Pharmacy, the problem would likewise be solved. There is plenty of precedent for such action. At its last session the legislature voted $200,000 for a physics building at Rutgers University. Annual contributions are made to the same institution. Unfortunately pharmacy is not taught at the University so pharmacists cannot benefit from these contributions. It is conceivable, however, that the College of Pharmacy might become a part of the State University System and benefit indirectly by these appropriations.

If the College had a large alumni body of wealthy men, it might be able to secure the necessary sums from them. The difficulty is that funds from all such

sources are not in sight and unless there is concerted effort on the part of all those interested in pharmaceutical education in this state to bring about endowment, state aid, or financial help of some kind, the College will for years to come stagger under the load of debt that must be incurred, curtail necessary improvements, take in all applicants for admission it can possibly accommodate, without regard to their fitness for pharmacy—all in the hope of coming out a little ahead financially each year, to pay off mortgages and other debts.

A business may thrive under such conditions but an educational institution will do so only at the expense of students and faculty. We must not compare the work of making dollars with the work of building men who are to determine the future character of our profession.

We have briefly traced the origin and need for college training in pharmacy. We have considered the types of colleges giving instruction in pharmacy. We have discussed the college requirements in this state and referred to the three colleges which now furnish over 90% of the future New Jersey pharmacists. It has been pointed out that the colleges are the gateway to pharmacy in this state and attention has been directed to the needs of the College of Pharmacy within your own borders.

All educational work which will benefit our calling is deserving of our support but that which lies nearest should have our first consideration. Can we afford to ignore it?

RHO CHI—HONORARY PHARMACEUTICAL SOCIETY.

BY ZADA M. COOPER.

It is, perhaps, worth while to think occasionally of the significance of honorary societies. To be specific, let us think of Rho Chi, honorary pharmaceutical society. There are at least four good reasons for its existence—it is a means of recognizing superior scholarship; it establishes fraternal relations among the scholarly members of all colleges represented; it is an incentive to excel for the sake of obtaining the honor; it will help to promote the science and the art of pharmacy. The custom of recognizing in some way the individual who outranks his fellows goes far back in history and has taken many forms. Honorary societies, as one only of these forms, have grown in numbers and in strength since Phi Beta Kappa was established until every calling is represented by such a society. Rho Chi is comparatively young but it is making a place for itself. Election to membership is in some ways the highest honor within the gift of college organizations. The young men and women who go to colleges of pharmacy *should* be doing so in order to fit themselves for life. I say *should* advisedly because some go only to pass a Board examination and "get registered" but they may be left out of the reckoning where honors are concerned. The work involves the study of some things for the training of minds and bodies and of others that constitute a specialized body of facts and theories. So when a student shows proficiency in scholarship it indicates, in general, that he has done well the thing that he came to college to do. Recognition of that scholarship is then a real honor. Membership in an honorary society brings a more intimate association with others who have won the same honor. The