

## UNIFICATION OF PHARMACEUTICAL EDUCATION.\*

BY C. B. JORDAN.

Professional education in the United States is still so young that we can trace the effects of our beginnings upon the present-day systems. Much of our pharmaceutical education, as was the case of other professional education, has been a "miss and hit" sort of a thing. It has not been developed according to any well-conceived and well-thought-out plan, but rather according to the ideas and whims of the individual or individuals in control of the several schools and colleges. As a result we have many schools with many different aims and purposes, each trying to best fill the need of its particular clientele.

The other professions, especially our sister profession of medicine, have outgrown these early attempts and have placed their educational endeavors upon a good foundation of secondary school and college training and now have well-rounded courses of study. There still remains in pharmaceutical training much of the individualistic tendency and we yet have schools of all grades from the "cram" school to the thoroughly organized and well-equipped Pharmacy College. How to unify and bring this varied educational endeavor up to a standard that will provide us with thoroughly trained practitioners is, I believe, a task for all pharmaceutical organizations to engage in. It is particularly a task for the American Pharmaceutical Association, and a brief consideration of past and present conditions will help us to more thoroughly grasp the bigness of the problem.

The early school of pharmacy was organized and often owned by a man, or by men, who loved their profession and who delighted in teaching its mysteries. Their desire to perpetuate and to increase pharmaceutical knowledge was a very laudable one, and great credit should be given them for their efforts in behalf of our profession. However, the teaching was often a "side line" to business and the methods used as varied as the minds of those who used them. Each state had its own pharmacy laws and these differed greatly. The schools organized in the different states reflected this difference because one of the objects to be kept always in mind by these teachers was the giving of a training that would fit their students to successfully secure licenses to practice pharmacy. The results of such haphazard methods were frequently bad, but were lost sight of in the very bigness of our country. Distance has been so remarkably annihilated by modern means of travel that any part of our great country is easily accessible and there is to-day no legitimate reason why each city, or county, should maintain a school of pharmacy to supply it with licentiates. So, as I see it, we have come to that point in our educational development when serious consideration should be given to the best methods to be used in unifying and perfecting our professional training.

Many of our schools make no attempt to give their students any training other than that required for their professional and commercial work. In our Two Year Course, which is the standard course in practically all schools, it is impossible to give the students any of the broadening courses, so-called cultural or humanity courses, because the time is so limited that only strictly professional work can be

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given. This means that nearly all of the young men and women coming into our profession are trained only in professional studies. If we give thought to this for a few minutes, we can readily understand why the doctor, the chemist, the engineer, the lawyer and the agriculturist, all graduates of at least a baccalaureate course, are better equipped to meet the demands laid upon an intelligent citizenship. Since we are compelled to meet and compete with men who have had a better foundational training than we are requiring in our profession, is it not time that we began to take steps to remedy this defect in our educational system?

The American Conference of Pharmaceutical Faculties and the National Association of Boards of Pharmacy have been working upon the problem of entrance requirements and have at least partially solved it by pledging themselves to go to the high school requirement in 1923. There still remains the problem of how our schools and colleges are going to meet this demand and measure up to the responsibilities that it will place upon them. This is indeed a serious problem for many of our schools. Manifestly a college that has heretofore based its teaching upon little or no preliminary training must make decided changes in methods, equipment, teaching staff, etc., before it can successfully handle the product that will come to it. Will it be possible for our smaller colleges, especially those that depend upon student fees for financial support, to make the necessary changes? Many of these smaller colleges are now experiencing financial difficulties and are unable to bear any added burden. Some solution must be provided to enable them to successfully continue their work. I believe that the logical solution is the consolidation of two or more of these schools into a larger, better-equipped, and better-financed college.

Consolidation of schools and colleges is not a new idea. It was long ago recognized that one well-equipped and well-supported school provided better facilities for imparting knowledge and did more efficient work than many small and poorly supported ones. The Township Unit Systems, prevalent in many states, are the direct outgrowth of this idea. These Township Unit schools have given a very practical demonstration of the advantages to be gained by consolidation.

During the past fifteen years we have witnessed the consolidation of many medical schools and colleges. The Indiana Medical College is a product of such consolidation. In 1878, the College of Physicians and Surgeons combined with the Indiana Medical College and they were known as the Medical College of Indiana. In 1905, the Medical College of Indiana, the Central College of Physicians and Surgeons, and the Ft. Wayne College of Medicine merged under the name of the Indiana Medical College, the School of Medicine of Purdue University. In 1907, the Indiana University School of Medicine and the State College of Physicians united, and, finally, in 1908 the two remaining colleges united as the Indiana University School of Medicine. Thus we see that the present institution is made up of six smaller ones. No one doubts the wisdom of this combination. A similar movement took place in Cleveland, Ohio, when the five medical colleges consolidated into the present School of Medicine of Western Reserve University. In both of these cases the consolidated college ranks higher and gives better instruction than could possibly be given by the separate colleges. This is true because the consolidated college is better supported and hence can provide the neces-

sary laboratory facilities and teaching staff to give efficient instruction. Examples of such consolidation in medical education could be multiplied, but sufficient has been given to show the value of consolidation.

The consolidation of the Medico Chirurgical College of Pharmacy with the Philadelphia College of Pharmacy, and the Northwestern University School of Pharmacy with the Illinois University School of Pharmacy is accepted by all pharmacists as a good move. I believe that in each case all or part of the instructional staff was taken over, together with the alumni, so no one was done any injustice by the consolidation.

Formerly the pharmacy school that fitted men to pass the State Board was considered by many as filling a legitimate place in pharmaceutical education. The rapid advance of prerequisite legislation has eliminated many of these. It is true that there are some still in existence, but with the new requirements they must eliminate themselves or prepare to give different instruction. With the passing of this class of colleges of pharmacy, passed also the need of different grades of colleges.

The requirements for the practice of pharmacy in some states are now so high that only first-class colleges can meet them. This means that a student graduating from any but a first-class college cannot secure registration in these states either by examination or by reciprocity. It is therefore up to the colleges to meet these requirements or they will handicap their graduates. Since only colleges of pharmacy of one rank, and this a high one, are demanded, there is every reason why colleges should consolidate into such a one.

The equipment and upkeep of good modern laboratories is very expensive. To realize on the investment, a good attendance is necessary. In many states there are not more than 70 or 80 students graduating in one year. One well-equipped college could easily handle all of these students. In fact, some of our eastern colleges are handling two or three times that number. What is true of laboratory equipment is also true of the teaching staff and there can be no doubt but that consolidation would provide better facilities and better instruction at a less rate per capita, therefore it would be more economical.

Some have felt that it was necessary to have several colleges located at convenient points. This used to be true, but with present-day rapid and various methods of travel, this need has been eliminated. Many states have but one medical college, but one agricultural college and but one engineering college, and no one complains that these colleges are not accessible. Several states have no colleges of pharmacy. Vermont, New Hampshire, and Connecticut have no colleges, and the Massachusetts College is located at one side of the state. The pharmaceutical students of these states all have to travel to Boston, except perhaps those adjoining New York State, yet there does not even seem to be a call for cram-colleges in this territory. From this it is clear that the old need of several colleges because of accessibility has been done away with, and one college located at a convenient center in the state would be accessible to all.

Thus far, I have viewed this question from the standpoint of the advantages to be gained by the pharmaceutical students, but how will consolidation affect the public and the retail pharmacists? The public demands competent pharmacists, and only by supplying competent dispensers will the public health be protected.

The retail pharmacists demand competent dispensers and wide-awake young men for the necessary commercial transactions of the modern drug stores. Will these needs be better supplied by consolidation? There is not one college of pharmacy that could not do more efficient work, if the financial support of the college were increased. With increased financial support, more and better equipment could be provided and more instructors, with corresponding division of work so that each one will impart instruction only in branches in which he is especially prepared. Consolidation will, as in the case of medical schools, make possible the increase in equipment and instruction and hence increase the efficiency of the teaching.

To summarize, the advantages to be gained by consolidation are: *First—Professional.* A large well-equipped, well-financed college can give better instruction. It can afford better equipment and better-trained teachers. The old days, when a college could consist of a meager equipment of mortars and pestles, retorts and a few crude drugs, housed in a vacant room above the drug store, *have passed.* Modern equipment is necessary for successful teaching. The burden of securing this modern equipment is indeed a heavy one for the small, poorly supported college.

*Second—Economic.* This needs no explanation to the pharmacist, since he is meeting similar economic problems every day. Suffice to say that needless duplication will be avoided by consolidation and the general overhead greatly reduced. The per capita cost of education will be much reduced.

*Third—Uniformity.* The standard of instruction would be more nearly uniform. With the great variety of good, bad, and indifferent colleges that we have today, unification is greatly needed.

*Fourth—State laws* are requiring our schools to meet certain definite standards. These cannot be met by the poorer schools, hence their fields of endeavor are necessarily limited. Consolidation will enable them to meet these standards.

*Fifth—The profession as a whole* would be benefited. The standard of our profession is reflected by our colleges. Good, efficient colleges indicate a profession of good standing, while second-rate "cram" schools indicate the opposite.

With all of these advantages to gain and practically nothing to lose, it seems to me that consolidation is the only logical course.

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#### STANDARDIZATION OF DISPENSING PHARMACIES.\*

BY L. E. SAYRE.

A few, rather trifling, incidents, have suggested the title to this paper. In a small city, something over 10,000 inhabitants, a surgeon wanted at once, for diagnostic purposes, in Roentgen ray work, some barium sulfate, specially prepared for the purpose. It is well known that this salt is now utilized in the process of "taking Roentgen ray pictures of the stomach and of the intestines," being prepared for that special purpose, free from soluble barium salts—a standard for it being described in New and Non-official Remedies.

Not one of the half dozen (or more) druggists knew of the salt. The physician was obliged to send away and wait several days for the article. Another physician

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