EDITORIAL

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WILL PHARMACY FIND HERSELF?

IN one of Kipling's tales, "The Ship that Found Herself," the story of a newly launched ship, severely storm-tried on her first voyage, is narrated in an instructive way. Under the stress of headwinds and heavy seas, the various parts of the ship's structure—the beams, the plates, the shafting, and so on—feel the strain and pull, and voice their separate grievances, blaming everyone but themselves for the excessive burdens put upon them. The steam alone, having been through similar trials before, counsels patience and coöperation. At last the discordant elements are harmonized and integrated and the voice of the good ship "Dimbula" is heard for the first time.

This allegory holds a lesson for our profession, at this critical period in our history. Will pharmacists rise above petty and personal considerations and weld themselves firmly together into a harmonious whole? How else shall the good ship be saved? It is an old axiom that the whole is *equal* to the sum of its parts: it is the newer experience that these parts coördinated and combined are far *greater* than their sum. President Wulling's address presented a powerful plea for the union of all pharmaceutical forces and organizations. How shall the beginning be made? Does not the National Drug Trade Conference offer a nucleus? Here are represented the national associations which can speak with authority for all the branches of pharmacy. Already the Conference has made itself felt in pharmaceutical affairs. It has exercised no small influence in shaping legislation which concerns all pharmacists. The American Pharmaceutical Association has formally expressed its willingness to give the Conference added powers. Why not begin the integration here and now? W. B. D.

MEDICINE, PHARMACY AND CHEMISTRY.

IT has been my good fortune to be unexpectedly called to fill the high office of President of the American Pharmaceutical Association as the result of the sudden and sad death of its duly elected president, my highly esteemed and respected friend, Charles Holzhauer, of Newark, N. J. Whatever plans or appointments he had made shall be my plans and appointments as well.

As his death came so early in his term of office he scarcely had time to formulate, much less carry out, any plan of action. According to my point of view it is unfortunate that the president of this association as a rule only makes his recommendations and suggestions at the meeting at which he presides and which is at the close of his term of office, thus depriving him of the opportunity of putting such suggestions into practice. For this reason I have concluded to lay before the pharmacists of this country in general and of this association in particular some ideas and suggestions which appear to me pertinent and advisable to-day. I will refrain from making any criticisms of pharmacy and of our association, but confine my remarks to constructive suggestions which I trust may induce pharmacy and all

other pharmaceutical associations as well as this association, to seriously consider the *status quo* of their profession and its associations with an end in view of meeting the needs thereof by such action as they may deem wise. I am presenting my subject in the form of a triple parallel between Medicine, Pharmacy and Chemistry, all of which are cognate sciences and closely identified and connected with one another from their inception. My presentation is to be a historical one and its survey shall cover briefly the period from Galen, who was born in 132 A. D., to to-day. This brief outline of history will point our clearer and more effectively than can words of mine why pharmacy has not kept pace with her sister sciences and why this association has not developed and grown like the great national associations of medicine and chemistry. There is a reason, and as in case of this cataclysm of war now devastating the civilized world, history reveals that reason.

Pharmacy and pharmacies originated amongst the Arab tribes at the dawn of the Christian Era. The name to be sure is of Greek origin and is derived from the Greek word *Pharmakon*, meaning a drug. The word Chemistry is, on the other hand, derived from the Arabic words *"al"* meaning "the" and *"kheme,"* meaning "black earth," together, alchemy, or the black art; and later developed into "Chemistry" by omitting the particle *al* and lengthening the word. Another derivation is claimed, however, from the Greek words *chymeia*, meaning alchemy, and *iatreia*, meaning medical treatment. This derivation is based upon the fact that out of a combination of the alchemists and their study of medicines given in medical treatment, resulted the science of chemistry. Medicine is derived from the Latin word, *medicina*, the art of healing, again derived from the word *mederi*, to heal. Thus the oldest of the three sciences, medicine, has a name dating from a later period in history than either of its derived sciences. Medicine dates back to Hippocrates who lived in Athens at the time of Pericles, about 450 B. C., and was supposed to be eighteenth in direct descent from Aesculapius.

Medicine developed very gradually until the time of Galen, who developed the use of vegetable drugs and herbs in pharmacies where at that time medicine was practiced with the administration of such vegetable potions and herbs as were then used. Those physician pharmacists were also alchemists and practiced during the dark ages and middle ages the so-called dark or occult arts, including necromancy, magic and much quackery and deception. From the time of Junius Firmicius about 300 A. D. we first meet the term Chemistry, from the Greek *chemen* and *chemeia*, meaning the book and the art of ennobling metals, so that chemistry really means originally the art of ennobling metals, and from this time on through the centuries, even up to the nineteenth, kings and princes were induced to employ and subsidize these alchemists to try to convert copper and lead or tin into silver and gold. Prominent among these were Geber the Arabian, Albertus Magnus, Roger Bacon, Raymond Lullus, all of whom believed that there existed somewhere the philosopher's stone, the touch of which would commute base metals into gold. Medicine employed only vegetable and herb remedies during this period, and hence the name galenicals for this class of preparations. One of these, Zorimos of Panoplis in the 4th century, describes a "water of the gods" as *Panacee* (from *Pan* and *aqua*) as a cure-all and from this is derived our word Panacea.

In the latter part of the 15th century the alchemist Basilius Valentinus developed many inorganic preparations of mercury, antimony and arsenic, and used them as medicines besides the herbs of the Galenites. Then in the 16th century we pass to the school of medical alchemists, the most famous of whom was Paracelsus. This school was called the Iatro-chemical school and its theory announced by Paracelsus was that the healthy body, being made up of certain chemical substances in solution, could when diseased be cured only by the same chemical substances. Hence he preached that Galen's theory of herbs and vegetable drugs curing the diseased body was erroneous. He hence dosed heavily with mercury salts, blue vitriol, sugar of lead, antimony salts, sulphuric acid, iron salts. While he and especially many of his pupils killed many people and were driven out of town after town, his theory gave the next great impetus to pharmacy and incidentally as well founded chemistry, for the great problem now became to invent and discover new chemical compounds for the relief of disease and this was done in the shops of the alchemist pharmacist. His successors, Sylvius, Tachenius, Van Helmont, Agricola, Glauber, Libavius and Pallissy, in consequence developed a great number of such metallic compounds as well as

some organic compounds. Here we hence see that in the early history of all three sciences, medicine, pharmacy and chemistry, all three were practically united in one and frequently practiced by one person, who however almost invariably received his training in a medical school and bore the title "Doctor." The alchemists's shop became the pharmacy and the owner of it practiced the healing art as well as the preparation and compounding of his medicines. From these shops developed through the zest for discovering new medicines, the chemist and the science of chemistry.

Later came the separation of all three during the eighteenth and nineteenth centuries and gradually the chemist became the scientific student looking for scientific laws governing the composition of matter and the changes it undergoes; the medical man became the curer of disease and the student of the human body in health and in disease, while the pharmacist became the student of the plants of the field and forest, the chemicals of the chemist and their proper preparation in forms suitable for administration as medicines. Each had his field and each field was important and required great patience, ingenuity and careful study and observation. Each science developed gradually and steadily along different lines, medicine and pharmacy confining their activities to curing disease, while chemistry not only did its share to produce new medical substances but spread out gradually over all the other branches of industry that have to do with matter of any and every kind, until to-day any industry that does not employ the latest discoveries and methods of chemistry in its processes, from the laundry up to the steel plant, can not successfully compete with its competitor that does. The chemists have for a century flocked to the universities all over the world to complete their needed knowledge and practice culminating in the securing of the degrees of "doctor of science" or "doctor of philosophy," which stamp them as broadly educated men with well-trained minds. The medical men and the pharmacists during the eighteenth and especially the nineteenth centuries sought their education in so-called colleges of medicine and pharmacy in this country. These colleges were at first most crude and were practically workshops for training the hand as well as the head in a practical knowledge of their professions. They were very much mixed in quality and in the products they turned out; some were fairly good, some were indifferently good, many were markedly inferior, and but few were high class. Many were run for the financial returns they gave to those who founded them, owned them and taught in them. The doors were wide open and anyone could make a try at learning medicine or pharmacy if he paid the fees and passed the examinations, even if he did not, as frequently occurred, attend all or even most of the lectures.

The medical college granted the degree of doctor of medicine, not so much because the course of mental training justified that exalted title, but because those practicing the science of medicine were known to the laity as doctors. The pharmaceutical college never essayed at that time the degree of doctor of pharmacy, and to its credit be this said, because the course of training and study certainly did not merit the title. Its degree was and to a large extent still is Ph.G., or graduate in pharmacy, indicating that the holder of the degree has studied, practiced and graduated in pharmacy. In those days medicine and pharmacy ran along together in standing and quality of men turned out. A change came over the scene, however, during the last decade of the nineteenth century, for then medicine became organized. All its manifold branches, instead of getting further and further apart and developing a school for surgeons, one for ophthalmologists, one for obstetricians, and gynecologists, one for dermatologists, pathologists, etc., etc., as seemed to threaten, due to the ever-increasing specialization needed to really properly become a successful medical man that could demand confidence and meet with success, came together under the aegis of the American Medical Association and formed so as to speak a medical combination or trust. To medicine's lasting credit and benefit be it said that this was a wise and far-seeing move and inured immensely to the benefit of the profession of medicine and of the general public who are their patients. Pharmacy, however, did not organize by gathering together the several branches of its profession under one roof and management, but, instead, her disintegration into more and more branches and associations continued and

even increased. There are in fact to-day no less than ten pharmaceutical associations of a national character, to wit: the American Pharmaceutical Association, the National Association of Retail Druggists, the National Wholesale Druggists' Association, the Proprietary Association of America, the American Drug Manufacturers, Association, the Association of Pharmaceutical Chemists, the National Association of Boards of Pharmacy, the National Drug Trade Conference, the National Pharmaceutical Service Association, the National Retail Drug Clerks' Association. Each of these has to do with pharmacy in some shape or another, but each is as independent of the other in policy, management, membership and location as if they belonged to different professions or industries. Medicine developed a master organizing mind, George H. Simmons, while pharmacy developed no such master mind for organization. The organization took place first and practically all allopathic medicine has rested and to-day rests in the American Medical Association. One of the first results and the wisest move made by medicine was to gradually but steadily raise the educational requirement for admission to medical colleges, and then to lengthen and strengthen the medical courses. This began in the last decade of the nineteenth century. It has reached such a stage now that three results are plainly apparent:—first, the reduction in the number of medical colleges and their gradual absorption by universities; second, the requirement of the degree of A.B. or an approximate equivalent for admission to the medical courses, resulting in the degree of doctor of medicine approximating in quality that of the doctorates of philosophy, law, science and theology; and, third, the vastly increased influence of medicine and medical men in the councils of state and nation as well as in the service of the Government. Without the thorough organization and centralization of all branches of medicine and medical associations little if any of this wonderfully powerful American Medical Association could ever have developed. It almost succeeded in creating a separate Department of Health as one of the departments of our Government, and it may yet succeed in accomplishing this result. There is danger, of course, of this American Medical Association with its 65,000 members out of 150,000 physicians in this country overreaching itself and exceeding its legitimate sphere because of its wonderfully successful growth and development of strength and power. Many signs point to this possibility but it is to be hoped for the best interests of medicine, of the public, and of pharmacy that right reason and sound judgment will prevail and prevent the present great and useful organization riding for a fall.

Chemistry, too, has been effectively and successfully organized and consolidated in the great American Chemical Society, which to-day has far more members than any chemical society here or abroad, in fact, has more than all of them together in England, France and Germany. It at first was threatened with disintegration and separation into several independent units, as is pharmacy to-day; but thanks to the liberal education and consequent broad view of its members and to the presence thereamong of wise counsellors and able organizers, it weathered the storm and is to-day a power and citadel of strength that is supplying the needs of our country, cut off as it has been from so many of its needed essential chemicals and medicines. In the crucible of this great war, chemistry has been weighed in the balance and not found wanting. This means much, much more in future growth, progress and industrial independence than most people realize or than pen can portray or financier estimate in dollars and cents. Beginning in 1895 with 950 members, it gradually

attained in 1900, 1200 members; in 1910, 4500 members, and in 1917, 10,135 members. Chemistry has been the great energizing agent of our industries. When we say only the "squeak" is lost we pay a tribute to chemistry, and every year more and more industries "lose only the squeak" thanks to their appreciating that scientifically worked out processes and utilization of waste make world competition and unexcelled products possible. This is due in large measure to the organization of the chemical forces in the coöperating and coördinating American Chemical Society, which by its two great Journals, the *Journal of the American Chemical Society* and the *Journal of Industrial & Engineering Chemistry* is offering to its members the very best there is in chemical science to-day, without which they could not well keep abreast of the times. Just so is the *Journal of the American Medical Association* offering the medical men of this country a full and more than a full equivalent for their membership fee without consideration of the great benefits its organized strength offers them in protective legislation.

Pharmacy has, as we have seen, not profited by the experience of her former sister sciences. She has not seen the light and she has not developed the organizer and Moses who is to lead her out of the desert. Instead all her ten sub-divisions as separate national associations still each carry their own overhead charges and divide the influence and weight of pharmacy in national and state councils into ten parts. The inevitable result must follow, *viz.*, an unequal fight of organization against disorganization, and while chemistry and medicine will grow and prosper steadily, pharmacy will, unless she takes the lesson to heart, stand still, which means retrograde. The American Pharmaceutical Association has 2700 members out of 50,000 pharmacists in this country, or five percent against about fifty percent for both national associations of chemistry and medicine. If her ten associations were all consolidated into one association as has been ably pointed out by President Wulling at the Indianapolis meeting of the A. Ph. A. last summer, but with each retaining its own organization as a separate section of the same, the beginning of real advance would be made. Thus consolidated and if possible all meeting at one time and place, but in various rooms and with a permanent building as a home, a permanent management by a set of competent men, who would be well paid and on their job all the year, pharmacy would soon put out new shoots and rapidly become as beautiful a tree in the garden as are to-day those of medicine and chemistry. To be sure an effort in this direction was made when the National Drug Trade Conference was established in 1912, but unfortunately that Conference is without any power to do things and in consequence has not been able to accomplish much for pharmacy, although it did bring about the enactment of the Harrison Anti-Narcotic Law by the action of its constituent organizations—a truly great piece of constructive legislation. It is possible to effect the desired consolidation of pharmacy through the agency of the National Drug Trade Conference by getting that body to agree upon the general principle of such consolidation, and then through its delegates get the several national associations it includes to approve the movement and action. To do this the N. D. T. C. should appoint a special committee of six men to attend in a body each national association meeting, and, having announced its coming and plans beforehand, present same for adoption at the meetings. Should that not prove possible, then the simplest way would be to call a special meeting of the several national associations to be attended by those of the leading

members of each and at this meeting endeavor to bring about in 1918 what medicine and chemistry have done decades ago.

At this meeting the things to be accomplished and the ways and means of accomplishing them should be discussed at length and the work thus begun continue until pharmacy will be returned to a fitting place alongside her sister sciences and a place which she so richly deserves because of the important and necessary part she plays in the every-day life of this busy-day world. Among the topics to be discussed and included in the plan then to be proposed would be pharmaceutical education and preliminary requirements, united legislative work, central testing and standard laboratory, one strong, able and valued journal, drug clerk and employers' registration bureau, patent and trademark registration bureau, legal department, accounting, shipping, advertising and cost price bureau, exchange bureau for goods of retailer and jobber, pharmacopoeial and national formulary laboratory and bureau, establishment of local branches and consolidation of same and state associations with the national body.

If, during my incumbency of this high office of president of the oldest national and most representative pharmaceutical association, the cornerstone of a movement looking to the placing of pharmacy in her proper niche in the temple of sciences shall be firmly laid, I should feel proud indeed and I would be willing to devote my share of the time necessary to subsequently complete the structure.

My appeal hence to pharmacy and pharmacists and the entire drug industry is to consolidate their interests, not their business, and organize same in such a manner that the future of pharmacy in all its branches may become as representative and its degree as respected and high in grade as are to-day those of its sister branches of medicine and chemistry.

To this end I propose to try to present to each of these national associations and their members a plea for the consolidation of pharmaceutical interests into an organized and enlarged American Pharmaceutical Association together with a concrete plan for such consolidated or federated association, and to personally attend all their annual meetings and deliver my message, imbued and enthused with the hope that my efforts may result in some positive action being taken by each national association to coöperate in the movement and plan. No industry, institution or organization ever becomes great and influential among its own devotees or the public at large, that has no vision and realization of becoming something larger, stronger or better than it was or is. Self-complacency is synonymous with stagnation and retrogression. After the war the world's attitude to coöperation and consolidation will change; for these will be understood, in the light of our fight for democracy and greater freedom, to mean greater efficiency and greater possibilities. In all probability the Sherman Law will be materially modified or perhaps repealed. It is contrary to the spirit of to-day and to-morrow and in place of splitting the corporation into wee bits and preventing its working to its best advantage in the world contest for trade following this war, the Congress should and probably will permit and legalize consolidation and coöperation tempered, however, with regulation. This is hence the psychological moment for all drug associations to consolidate and coöperate. Will they see the necessity and catch the spirit of to-day?

A. R. L. DOHME.