

Let stand over night, filter, then add:

Quinine Alkaloid .....	1.100 gms.
Strychnine Alkaloid .....	0.115 gms.

When dissolved, add:

Sugar .....	715.00 gms.
Distilled Water, q. s. to.....	1000.00 cc.

Dissolve sugar in cold water, strain through cotton and add water q. s. Keep in amber bottles.

A sample of the first batch of the syrup made from this formula, dated January 9, 1913, is here for your inspection, in the original bottle in which it was placed. You will notice that it is perfectly bright and clear, with an attractive yellow color. (Sample was exhibited by author at meeting.)

A few weeks ago I constructed a formula for making *Syrupus Hypophosphitum*, U. S. P., along similar lines, and am using the formula in my store:

Calcium Hypophosphite .....	70. gms.
Hot Distilled Water.....	450. cc.

Dissolve and add:

Diluted Sulphuric Acid, U. S. P.....	1.50 cc.
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When mixed, rub in a mortar with

Potassium Sulphate .....	12.50 gms.
Sodium Sulphate, dried.....	10.00 gms.

Let stand over night, filter, and in the filtrate dissolve, in the cold:

Sugar .....	650.00 gms.
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Previously mixed with:

Tincture of fresh Lemon Peel.....	5.00 cc.
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Finally strain through cotton and add:

Distilled Water, q. s. to.....	1000.00 cc.
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Keep in amber bottles.

Although at first glance these formulas may appear to be more complex than those of the U. S. P., yet in practice they are easily worked, and they present the great advantage that the pharmacist needs to carry in stock for making these syrups only one hypophosphite, viz., calcium hypophosphite, which is the most stable, the most reliable and by far the cheapest of the hypophosphites. Without any preliminary practice, I am confident that you will be able to make your stocks of these two syrups by the litre or by the barrel, with satisfaction to yourselves, the physician and the patient.

### IDEALS IN PHARMACY.\*

THEODORE J. BRADLEY, DEAN OF THE MASSACHUSETTS COLLEGE OF PHARMACY.

As this is the day on which you receive your degrees and commence to be graduates in pharmacy it is an appropriate time for you to consider your future course, and I wish to call your attention to some of the conditions that confront the pharmacist today, and have you consider with me certain of the principles that should be adopted and followed by every pharmacist who is to achieve a success that shall be permanently satisfactory to himself.

\* An address given at the 1915 Commencement Exercises of the Albany College of Pharmacy.

You have chosen one of the oldest of the professions and one that has undergone many changes. In ancient times and during the dark ages medicine and pharmacy were practiced as one profession and such crude surgical work as was attempted was done largely by barbers. The successive periods in the development of mankind from utter savagery are generally designated by the materials from which our utensils and weapons have been made, as the stone age, the bronze age and the iron age, in the last of which the people that we say are civilized are now living. This present period could very well be sub-divided according to the sources of our medicines. In olden times parts of animals were used, empirically and often superstitiously, then herbs or simples and teas, then various mineral substances, followed by the tinctures and extracts of the early nineteenth century, these in turn largely displaced by the alkaloids and other active principles of plants and by various mineral drugs. Very recently we have made large use of synthetic compounds from coal-tar and similar sources, and, finally, we are entering a period characterized by the use of serums, antitoxins, animal extracts and similar products. Of course these periods are of varying length and overlap each other, and the most valuable drugs of former periods have been retained and probably will be for an indefinite time.

Each of the periods mentioned has been marked by an advance in medical knowledge and this has frequently made it necessary for the pharmacist to adapt himself to changing conditions governing the practice of his profession. At no time in the past have conditions changed more rapidly than they are changing now, and, when I hear a pharmacist complain of his profession, I wonder if the profession is to blame or his own lack of the adaptability necessary to adjust himself to changing conditions. Such complaints are frequently heard and many men oppose the changes, often to their own undoing.

The pharmacist is both a business man and a professional one, in about equal measure, and the general public's recognition that our calling has a professional aspect is one of our most precious possessions and we should do all we can to increase our standing as professional men. In continental Europe the practice of pharmacy is so restricted that there is no likelihood that the pharmacist will lose his professional standing, but in America and Great Britain there has been, recently, a large development of the commercial side of pharmacy, and we are in great danger of becoming mere buyers and sellers of goods. In fact many pharmacists seem anxious to exchange their birthright of recognition as professional men for a mess of pottage in the form of what is termed commercialism. The ideal pharmacist is the one who has retained his professional standing and used it to aid him in achieving commercial success. If we are to continue to be more than merely tradesmen it is necessary for pharmacists to realize this present danger and to overcome it by living up to the ideals of their profession. There is no incompatibility between professionalism and commercialism in pharmacy if they are developed side by side, each in its proper proportion and not at the expense of the other. It is difficult to control this matter by law in this country because of the great American principle of the liberty of the individual, but various attempts are being made to formulate laws to this end and we watch their progress with interest. It is obvious that a man cannot become a successful pharmacist unless he is a good business man, but neither can he become a success-

ful pharmacist unless he is a pharmacist. It may be that reasonable and equitable laws can be secured that will recognize that the practice of pharmacy is as personal as the practice of medicine, or law, or any other profession, and that such practice and the proprietorship of drug stores should be restricted to registered pharmacists. But pharmacists cannot expect the benefits of such laws unless they continue to show that they are professional men with professional ideals.

The frequently enacted special laws regulating adulteration, the sale of alcoholic liquors, the sale of poisons, and similar matters, put on the well-meaning pharmacist a burden that he must bear because pharmacy has in its ranks some men who are a discredit to the profession. All physicians and all lawyers suffer in the same way from the misdeeds of a few quacks and shysters. Many of these laws are proposed by men who see a real or imaginary evil to be remedied, but who know little or nothing about pharmacy or medicine. In dealing with these proposed laws the pharmaceutical associations show their value. These organizations are generally able to prevent the enactment of foolish and harmful laws and to secure the modification of objectionable parts of necessary laws, so that they do not oppress the pharmacist who knows his work and is trying to do right. As an example of this value of the associations may be cited their work on the national anti-narcotic law which has recently become effective. All who had any knowledge of the growing use of habit-forming drugs realized that strict regulation and control of their sale were necessary, but the first bills brought before Congress included many regulations that were impossible of enforcement and which would have worked great hardships on pharmacists and physicians. The national pharmaceutical organizations, including those of the retailers, wholesalers and manufacturers, promptly formed a joint committee which met several times at Washington and was able to show the unreasonableness and impracticability of the objectionable sections so conclusively that the bills were amended and combined and finally passed in a workable form. This beneficial influence on legislation constitutes only one of the reasons why every pharmacist should be a member not only of his local and state associations, but of both national pharmaceutical associations as well. They deserve and need his support and he receives a great deal in return for the moderate yearly cost of membership. The resultant contact with the leaders in his profession, which is enjoyed in these organizations, helps to broaden and develop a man as nothing else can do.

Besides these questions and others of general interest to pharmacists, there are some of just as great importance, but which are of personal and individual application.

During the past two years you have rapidly developed, and largely increased your knowledge or you wouldn't be here today. It is now necessary for you to decide whether or not you are to continue this development, and progress, or stop it, and retrogress. The New York State pharmacy law requires that a pharmacist shall have a minimum education of a general and a special nature. Education informs and develops the mind and the studies pursued in a pharmacy course do these things in about equal measure. What they lack is the cultural value possessed by the languages and history, which is of great benefit in the polish it gives to great minds, but is likely to lead to intellectual snobbery in little minds. Appreciate your education and build upon it, but do not misap-

prehend its value. After we have acquired the most elementary subjects, the value of our education is shown by what we can understand and do, rather than what we remember. You have learned much of the theory and practice that are essential to the trained pharmacist, but this knowledge forms no more than a set of tools with which you are to fashion your careers. If you have studied with no worthier motive than merely to pass your examinations and graduate, and with no real interest in the subjects themselves, and if the faculty has done no more than to teach you a mass of facts, more or less scientifically classified, you and they have failed in your work together. Your course has been successful, only if they have helped you to develop your powers so that you can understand and interpret facts and theories, think for yourselves and work independently. This day is only one of the prominent milestones in your journey through life. You must pass others, but you will not travel far if you know only what has been learned from teachers and can work only under supervision. Each of us has two kinds of education, one that is received from teachers and one that we give ourselves. We receive no diplomas from the courses we give ourselves, but they count heavily in the casting up of our lives' achievements.

A tendency that every one should guard against is the narrowness that is likely to follow close application to one kind of work. One of the chief features of our modern industrial organizations is specialization in work. If such specialization leads to thoroughness it is fine, but if it leads to narrowness also, it is vile. We no longer commission a shoemaker to shape a pair of shoes to our individual measure and expect that he is to do all of the work on them himself, but we buy a ready-made pair that is exactly like many others that have been turned out in a factory where dozens, perhaps hundreds, of men and women have each contributed a small bit of work to them. This modern method leads to economy and uniformity and style, but not always to quality, and never to versatility in the workmen. We are becoming so dependent upon each other that there may be a seriously bad effect upon the race after a few more generations. Perhaps this danger from specialization in work is not near to pharmacists, but, nevertheless the tendency to specialize is here. In the larger stores we now hire prescriptionists, store clerks, soda clerks, porters and others for special lines of work, so that the drug store boy, who did all of these things in turn and as a part of his apprenticeship, is fast disappearing. The clerks have an easier time now and are undoubtedly more comfortable in their work, and probably this is a real improvement in conditions, but we should not allow this tendency to specialize to dominate our own work unless we have already mastered all of the tasks of the modern drug store.

Every pharmacist should cultivate the habit of reading several of the drug journals and occasionally he should buy a new book on pharmacy or one of the related subjects and read that also. This will keep alive his interest in these subjects and inform him on new developments. Antitoxins and biological products do not yet receive much attention in the pharmacy curriculum, but pharmacists should be informed on them and I commend to you, for immediate post-graduate study, a course of reading on these new products.

One of the most satisfactory and profitable assets a pharmacist can have is a reputation as a scientific worker. I have in mind one man who has a drug store

in a city with fifteen thousand inhabitants. Some years ago, after graduating in pharmacy, he did some advanced work in bacteriology and used that and his knowledge of chemistry in working up a practice in clinical testing for the physicians of his city. He was soon appointed city chemist and bacteriologist, at a moderate salary for a small amount of work, but the prestige derived from this position has secured the best trade of the city for his store and his customers are willing to pay advanced prices because of the confidence they have in his products. All of us cannot do just as this man has done, but we can find similar opportunities if we look for them.

After securing the proper training it is necessary that we believe in ourselves. Opportunities constantly present themselves to us. We may have the training which prepares us to profit by them but we need also backbone enough to embrace them. Not long ago the college with which I am now connected was asked to recommend a man to take charge of the pharmacy department in a state university, a position that is attractive in all ways. The university is located in a beautiful town, the salary to start with was \$1500 for nine months' work, and there was a great opportunity for the right man to build up a strong department. After considering the matter we suggested two men, both of whom appeared to fill the requirements. The first was selected because he was among the honor men in his class, and the other because of his manliness and ability to make friends. The latter was a good student, though not a distinguished one. What happened? The university wrote to both men and the first one refused to consider the position because, as I understand it, he lacked confidence in his ability to fill it. Of course his reason appeared good to him, but I would much rather have had him undertake the work, as I feel sure that he could have done well in it. The other man secured the position and has been markedly successful in the work. He may not be as distinguished a scholar as the first man, but he makes up for this by a good measure of that quality we call gumption.

It is probable that every one who makes his own way in the world wonders, at one time or another, if he would have been more successful in some other calling than the one he chose to follow. Such thoughts are fruitless and unprofitable after we are established in a definite line of work. If we have the essentials for success in our make-up we shall have some measure of success in the work we are doing; lacking these essentials we should not be successful in any other work. This is true of all callings, except those which require natural artistic gifts. We should not allow ourselves to be influenced by some who can see no good in pharmacy as a profession. Every kind of work has its difficulties and we are likely to magnify those in our own path because we are so near them. We should choose to be with those who square their shoulders and overcome their difficulties rather than with those who are themselves overcome.

With all the changes that have affected pharmacy, conditions are better now, both for proprietors and for clerks, than ever before. A boy without any capital may decide to study pharmacy and it is entirely possible for him to earn his living while obtaining the store experience which is an essential part of his preparation. As his experience grows his compensation is increased and he can work for a part of his time while attending a college of pharmacy, earning enough to pay his expenses. When he completes his training and becomes a registered

pharmacist he has his choice of several good-paying positions, and it is not at all difficult for a dependable man to secure a store on a small first payment and then make the store earn the amount necessary to finish paying for itself. How different these conditions are from those governing other professions, like medicine or law. A man who chooses either of those professions must complete a college course and spend some time in hospital or law-office with little or no compensation, and then wait for an indefinite period before he can secure a practice sufficient to support him.

But the man who is to succeed must have certain qualities that are only indirectly connected with his education. The faculty has talked to you so much in college courses about the necessity and value of study that I feel that I should now caution you not to over-estimate the importance of knowledge. You have acquired much more than the average amount of education or you wouldn't be here today, but do not for a moment deceive yourselves into believing that a complete man is made by any amount of knowledge. Your happiness and success will come, mainly, from your character and health and common sense and industry. Many great opportunities come to all men who possess a good measure of these qualities in this country of ours. Your superior education only prepares you to profit by these opportunities to an extent far greater than can the poorly-educated man.

You should appreciate the importance of striving to do right at all times. The man who is trying to do right has a weapon that makes him invincible if he but use it. Remember that your acts and achievements are thrown back on the college which trained you. Your credit will be its credit and your shame would be its shame.

This room is filled with your friends; mothers, fathers, sisters, brothers, and, I trust, sweethearts. Each of you is now, or soon will be, able to support a wife, in comfort if not in luxury. I advise you each to find one by all means. If you get the right one you have a help, not a hindrance, and you become immediately a more dependable man. The world will respect you accordingly and the happiest men are those who are well married. A word to the wise is sufficient, so I shall not pursue this topic further.

In this talk I have asked you to keep alive the professional ideals of pharmacy, to support the pharmaceutical organizations, which will return to you much more than you give to them, to continue your personal development and to adopt high standards of conduct for yourselves. In conclusion, I want to add that the best policy that a man can have is to strive to do right because it is right. Be sure that the things you work for are real. Remember that money-making is not the only possible kind of success and don't mistake the glitter of ephemeral pleasures for the solid gold of abiding happiness.