value of a conference can be given than is shown by these statistics.

Lest some one should misunderstand exactly what is meant by the term "conference" as here employed, it may be well to add a few words in explanation. The class of students and the professor met in a small lecture room, and all sat down. There is a certain pleasant informality about a seated professor that is wholesome on such occasions.

A leading question was asked a student whose name was chosen from the list of the class, and by auxiliary questions the thoroughness of his understanding of the subject was brought out. If it were shown by the answers that his knowledge was defective, another student was asked to point out the error. In this manner, by asking a few students many questions, and by permitting the students themselves to ask any number of questions, by immediately passing over matter that was understood and carefully explaining what was not understood, by endeavoring to determine why erroneous ideas were conceived, and by sound reasoning to bring the student's mind back to the correct channel of thought, the class progressed from day to day to a more and more thorough intelligence of the philosophy of the subject, so that they were easily able to cope with ordinary problems.

THE ELECTIVE SYSTEM IN MEDICAL SCHOOLS.

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With the growth of the curriculum in our medical schools, the urgent necessity has arisen of either lengthening the number of years of medical study from four to five, or of so adapting ourselves to the needs of the medical student that some way must be found out of the difficulty.

This increase in the number of subjects of study has arisen in two ways: 1. The development of the various laboratory subjects (and by this I include anatomy, physiology, histology, chemistry and pathology) has necessitated the devotion of practically the entire first two, to so-called theoretical branches, leaving the practical branch to the last two years. 2. The rapid development of the special branches of both medicine and surgery (gynecology is included in the latter), has taxed the number of hours in the school year to the utmost. An effort has been made in some schools to correct this latter growth, that is, practical branches, by dropping didactic lectures entirely and devoting the third and fourth years almost exclusively to demonstrations and clinical work at the bedside or in the dispensary, or hospital amphitheater. Even with the latter change, the medical schools in our larger cities have found it impossible to give every student the necessary personal contact with both teacher and patient, which is the prerequisite of thorough medical education. When we consider that the classes in our larger medical schools average from 150 to 200 in the junior and senior years, respectively, it will be readily seen that the old-fashioned amphitheater clinics can no longer be profitable to either teacher or student. I have stated above that we must find some way out of the difficulty, and I am firmly convinced that the proper application of the elective system of our medical curriculum will solve this problem better than any other method. In an article written by me two years ago I strongly advo-

cated this system from a merely theoretical standpoint. Since the publication of my article the elective system has been adopted by the college with which I am connected, and after one year's trial both faculty and students agree that it has been a great success. The reason for this success has been that we have not applied the elective system without restriction. It was thought by our faculty that the limited application of election on the part of the students would be of far greater value than if they were permitted to select both teachers and subjects without some guidance. In the first place, we have applied the elective system to the third and fourth years only. During the first and second years the student, as in other schools, takes up his anatomy, physiology, chemistry, materia medica, histology, biology, embryology, therapeutics, surgical pathology, hygiene and bacteriology, in a more or less routine manner, so as to get a thorough foundation for the more practical work of the following two years. In addition to these laboratory subjects, elementary clinics, as they were called, were held by the professors of the third and fourth years twice a week. When the students enter the third and fourth years they find the following schedule:

JUNIOR YEAR.

SPECIFIED REQUIRED SUBJECTS.

	Hours.
1. Neurology	72
2. Physical diagnosis	54
3. Dermatology	36
4. Principles and practice of surgery	144
5. Orthopedic surgery	36
6. Operative surgery	36
7. Laryngology, rhinology and otology	36
8. Genito-urinary diseases	36
9. Clinical Anatomy	36
10. Microscopic and chemical diagnosis	66
11. Medical jurisprudence	36
12. Autopsies	36
13. Dispensary clinics	54
	678

ELECTIVE SUBJECTS.

1. Medicine (didactic work), lectures and recitations in four courses of 54 hours each: Course A. Infectious diseases and intoxications. Course B. Constitutional diseases and diseases of the kidneys. Course C. Diseases of the digestive organs. Course D. Diseases of the heart and lungs. Total	216
2. Obstetrics	72
3. Gynecology	36
4. Medical amphitheater clinics	216
5. Neurologic amphitheater clinics	72
6. Surgical amphitheater clinics	180
7. Dermatologic amphitheater clinics	72
8. Laryngologic amphitheater clinics	72
9. Gynecologic amphitheater clinics	144
	1,080

Total number of hours.....1,758

SENIOR YEAR.

SPECIFIED REQUIRED SUBJECTS.

	Hours.
1. Medicine	216
2. Psychiatry	36
3. Chest diseases	36
4. Pediatrics	54
5. Ophthalmology	18
6. Obstetrics	72
7. Gynecology	36
8. Autopsies	36
9. Dispensary clinics	54
	558

ELECTIVE SUBJECTS.

1. Neurology	72
2. Surgery	72
3. Medical amphitheater clinics	252
4. Neurologic amphitheater clinics	72
5. Pediatric amphitheater clinics	72
6. Surgical amphitheater clinics	468
7. Ophthalmologic amphitheater clinics	108
8. Gynecologic amphitheater clinics	108
	1,224

Total number of hours.....1,782

In the junior year a total of 1,758 hours of instruction are offered, and in the senior year a total of 1,782

hours. Of this, 1,000 hours of instruction constitutes the year's work. Each student is required to take all of the specified subjects in his year; in the junior year these subjects amount to 678 hours; the remaining 328 hours he can make up from the elective subjects, exercising, to a large extent, his own choice in the selection of subjects which he will take. In the senior year the specified required subjects amount to about 558 hours; the remaining 442 hours may be selected from the elective subjects and clinics. Even in this selection the student receives some guidance, so that he must include among his elective subjects at least 120 hours of medical clinics and 120 hours of surgical clinics. Clinics in diseases of the chest, nervous system, pediatrics and dermatology are classified as medical. At the time of registration the student is required to designate subjects which he elects in order to complete his 1,000 hours; and will not be enrolled in the classes until his course has been approved by the secretary of the college. The secretary has authority to refuse to approve of the course elected by any student when for any reason it seems to him not well selected.

By a reference to the above table, it will be noted that surgery is compulsory in the junior year, but is elective in the senior year, and vice versa, medicine, gynecology and obstetrics are elective in the junior year, but are compulsory in the senior year.

What are the benefits of this privilege of election on the part of the student? He can so adapt his time in both years that he will not be obliged to sit on the benches in the lecture room or in the clinical amphitheater from morning till night. By a careful selection of clinical work he will have ample time to study, and yet be able to have a full curriculum and not slight any subject.

In addition to this, it gives the student more time to do special research work if he is prepared for this during his undergraduate period. This power of election on the part of the students, especially in the direction of clinical work, has had its reciprocal beneficial influence in all of the schools in which it has been applied on the faculty. The moment a clinician is aware of the fact that the size of his audience is more or less directly dependent on his ability as a teacher, he will make a greater effort to increase the same by a more careful study of his cases, so that he will not be accused of being careless in his work. He will acquire greater thoroughness in his surgical procedures. Nothing acts as a greater stimulus to teachers than this elective system, and, once introduced, I am certain it will continue to find favor in every large medical school.

In this manner a large number of students can find ample clinical and didactic work. The college can also utilize to the best advantage all of its clinical facilities within its own walls or in hospitals contiguous to it. At the same time, through this power of selecting where he wishes to take some of his clinical work, the abundant material which exists in hospitals and dispensaries at some distance from the main seat of learning, can be used to the mutual advantage of the student and of the attending staffs of these extramural institutions.

In my opinion, the elective system carefully applied is a stimulus to both teacher and student. It enables a college with large junior and senior classes to so distribute its students that no clinic is overcrowded, and there is a resultant individualization which is not possible in large classes.

THE TEACHING OF MATERIA MEDICA IN MEDICAL SCHOOLS.

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DESIRABILITY OF RESTRICTING THE COURSE OF MATERIA MEDICA.

"I must confess, if I had my way I should abolish materia medica altogether. . . . Not one trace of a knowledge of drugs has remained in my memory from that time to this; and really, as a matter of common sense, I can not understand the arguments for obliging a medical man to know all about drugs, and where they come from. Why not make him belong to the Iron and Steel Institute, and learn something about cutlery, because he uses knives?" . . .

"I entertain a very strong conviction that any one who adds to medical education one iota or tittle beyond what is absolutely necessary is guilty of a very grave offense."—Huxley, "On Medical Education," 1870.

Everyone will agree with this last sentence. In most medical schools the required class attendance exceeds thirty hours per week, leaving the student a very insufficient time for home study. This condition tends naturally to become worse, for the domain of medical knowledge is constantly extending, and the teaching must follow these extensions. It is, therefore, imperative to lighten the curriculum as much as possible by curtailing such studies as are no longer essential.

A case in point is presented by the relation of pharmacology, materia medica and therapeutics. The study of the action of drugs by laboratory methods is a new branch and one which requires considerable time, which must be taken from some other subjects. It is very true that a knowledge of pharmacology facilitates the study of therapeutics so greatly that a part of the time formerly devoted to therapeutics can be assigned to pharmacology without injury. The saving, thus effected, is not, however, sufficient. What further time is needed can be profitably drawn from materia medica (including pharmacy), if the course in these branches is wisely reorganized. This can be readily done, especially if they are taught in the same department as pharmacology, as they should be, in my opinion.

No one can doubt that the action of drugs is of vastly greater importance to the medical practitioner than their natural history. The latter can only be of essential importance when the physician is located remote from a pharmacist, a condition which is rather rare in this country. Nothing prevents those who expect to be so situated from taking a special, optional course, and such should be offered by the college, if it is needed. Were there no other demand on the students' time, an exhaustive course of materia medica might be profitable to all other students, but there can be no question that the other demands are more important. Indeed, I incline to the belief that the above advice of Huxley has not been sufficiently heeded by many schools, doubtless because it is somewhat too radical.

WHAT PARTS OF MATERIA MEDICA SHOULD BE RETAINED?

How far, then, may the study of materia medica be safely curtailed? What is essential? What may be made optional and what omitted entirely? There is surely room for much honest difference of opinion in

1. It will, I hope, be understood that I do not include therapeutics under this head.