proach the problem from the standpoint of the more technical agricultural training.

WHAT A RESEARCH CAREER OFFERS

One of the first effects of the World War was to place the scientist and the teacher in an almost hopeless financial condition. One of the secondary effects has, however, been to bring to the attention of the people of all civilized countries the value of science and especially of organized research as an important factor in the preservation of their national unity. The final result promises to be an increased opportunity and recognition for the scientist in general and especially an appreciation of the increased necessity for continued research in the development of any industry.

For the man just out of college or having completed a single year of graduate work, the greatest opportunity will usually be in connection with the educational institution or government bureaus. A few years' experience with its accompanying accomplishment and broadening of vision, combined with educational training, will place the individual in line for further advancement in these organizations or for opportunity to enter the commercial field. With the present trend in salary standards, the research scientist in agricultural lines may look forward to a relatively early opportunity to enjoy a salary that will support his family in reasonable comfort and still allow a margin for accumulation. As he advances in his profession and gains a position of leadership the margin of possible accumulation will increase rapidly. By this time his position will give him social standing and opportunity that others can only purchase by the expenditure of much larger sums of money. In addition, with the growing recognition of the value of the work of scientific men, larger and larger financial rewards are being paid to the best men.

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THE ART OF MEDICINE

IN the dome of the magnificent structure of contemporary medical education, across the ceiling, are inscribed the words, "Mene, Mene, Tekel, Upharsin."[1] Below, in the alcoves of laboratory science, there may be made out, perhaps less distinctly, the words, which, traced by the Hand, foretold the fall of Babylon: "Thou art weighed in the balance, and art found wanting."

A writer on the medical art, rich in the modern spirit, but not contemporary with us, has said[2] "This is the great error of our day in the treatment of the human body, that physicians separate the soul from the body."

The idea that the patient is a person who is sick, and that the healing art is to make a sick person well, will dominate the medicine of tomorrow, whether the art is applied in time to prevent, or only so late that cure is not possible.

Just now the point of view of psychobiology is becoming recognized as the one from which the physician must regard his patient.[3] How can the student of medicine get this point of view? Best, by example, from his teachers who have it, who treat patients as persons in distress, with dis-ease, seeking the physician for relief. But also, more formally, by a study of the personality as Meyer has indicated.[4]

This point of view involves a reorganization of the medical curriculum. The logic of the present arrangement is clear. It is to study structure, then function, then defective or "diseased" structure and function; and finally, cases of disease, applying the already acquired knowledge of structure and function.

The reorganized curriculum will have a different logic. The patient, a sick person, will be studied first and chiefly. On the hypothesis that function and structure are inter-related, the student will use pre-laboratory methods, and then will go to the laboratory to get help in solving problems which the patient presents. The student will begin with the obvious, or more nearly obvious and go on to the less obvious, or the hidden. He will learn first to use his own senses, then try instruments of greater or less precision.

The course in clinical medicine will be the major course for the four years. It will be the only major course, comprehending surgical therapeutics as well as the other forms of

[1] Daniel, v. 25.

[2] Plato-Charmides, translated by Jowett.

[3] Yerkes, R., "Relation of psychology to medicine," SCIENCE, Vol. liii, No. 1362.

[4] Meyer, A. See Curriculum of School of Medicine, Johns Hopkins University.

FIG. 1. FIRST YEAR

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9	Lecture	Lecture	Lecture	Lecture	Lecture	Lecture
10	Clinic	Clinic	Clinic	Clinic	Clinic	Path. Lab.
11	Clinic	Clinic	Clinic	Clinic	Clinic	Path. Lab.
12	Clinical Lecture	Clinical Lecture	Clinical Lecture	Clinical Lecture	Clinical Lecture	
1						
2	Lecture	Lecture	Lecture	Lecture	Lecture	
3	Anat. Lab.	Anat. Lab.	Physiol. Lab.	Physiol. Lab.	Path. Lab.	
4	Anat. Lab.	Anat. Lab.	Physiol. Lab.	Physiol. Lab.	Path. Lab.	

therapy now taught as specialties. The laboratory branches will be supplementary, accessory, subsidiary.

This may be set forth in a skeleton schedule (Fig. 1). For convenience in schedule making the laboratory sciences may be put into three groups, the anatomy group, the physiology group and the pathology group. Devoting the morning of five days in the week to clinical exercises, and the afternoon and Saturday morning to laboratory studies, gives six laboratory periods in each week. These may be combined to form three units. The schedule for the first three years, with three groups of studies and three units of time, may be outlined easily.

Five days would be arranged as follows: The first hour (9-10) would be a didactic lecture; the hours from 10 to 12 would be devoted to the study of patients (bed patients, outpatients, patients in the districts); from 12 to 1 there would be a clinical lecture; intermission from 1 to 2; from 2 to 5, laboratory work preceded by as formal a talk as the instructor desired. This would reduce the didactic lectures to two a day at the most, from 9 to 10 and from 2 to 3.

In the second year and in the third year the student would have the same laboratory groups, with the shifting of period as shown in the diagram. (Fig. 2). The fourth year might well be left for electives.

This scheme might be utilized in a complete school of medicine. The course as outlined would be followed by all students for two years. At the beginning of the third year, specialization in dentistry, public health or industrial medicine could be undertaken, and two years, or the second half of the course, might be thus employed. The two years in the clinics with training in the general laboratory branches would be of great value to the dentist or doctor of public health. The "practitioner" would devote four years to clinical medicine.

What about research? There is some confusion of thought here. "Many are called but few are chosen." The capacity for adding to the sum of human knowledge is a rare gift. The capacity for adding to one's own knowledge is possessed by every medical student. So the

FIG. 2.

	First Year	Second Year	Third Year
Anatomy Group	Monday and Tuesday	Wednesday and Thursday	Friday and Saturday
Physiology Group	Wednesday and Thursday	Friday and Saturday	Monday and Tuesday
Pathology Group	Friday and Saturday	Monday and Tuesday	Wednesday and Thursday

spirit of research should be in every student. If he does not have this, medicine is not for him. But let us not think we yet know how to select from the thousands who wish to study medicine each year a few groups of fifty or sixty, for a few schools, so that in each group there shall be even five "righteous" persons, *i. e.*, capable of adding to the sum of human knowledge.[5]

There are many and serious practical objections to the scheme I have indicated in outline, which I shall not take the time to consider now. I have intentionally avoided details. At the risk of being misunderstood, and seeming dogmatic, I have sought brevity. But from many quarters arise suggestions that the student should come in contact with patients earlier than at present. Why not be "simple minded"[6] and begin at the beginning?

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PRESENTATION OF THE MARY CLARK THOMPSON MEDAL TO DR. EMMANUEL DE MARGERIE

AT the recent meeting of the National Academy of Sciences, the Mary Clark Thompson Medal was presented to Dr. Emmanuel de Margerie by Dr. Charles D. Walcott, president of the academy. In making the presentation Dr. John M. Clarke said:

It should be clearly understood that this award, based upon the foundation established by Mrs. Frederick F. Thompson, has for its purpose the recognition of full achievement in the sciences of geology and paleontology and while the award may encourage its recipient to further endeavor, this is not its first purpose. By the terms of the foundation, the Thompson Gold Medal shall go to him who has not failed in seed time nor in harvest and the fruits of whose labors are evident in the sheaves he has already reaped. This medal has been given but once before and then to Charles D. Walcott, the president of this academy.

Your committee has very cautiously filtered the world of geological achievement in its effort to fix upon the work and the author of the work most fitly to be crowned by this award. It has halted at no national boundaries and its decision has not been a hasty one nor arrived at by any devious crosscut. In consequence the committee has the pleasure of presenting to the academy for the award of this highest honor in these sciences in its gift Dr. Emmanuel de Margerie, former president of the Société Géologique de France, actual director of the geological service of Alsace-Lorraine, the bearer of many distinctions in geology and its allied sciences, laureate of the Académie des Sciences, member of l'Institut and Chevalier de la Legion d'Honneur.

Thirty-five years ago on his return from a visit to France, J. Peter Lesley, a member of this academy, wrote enthusiastically of meeting in Paris, along with Hébert and other men of distinction in science, a young man whom he characterized as "one of the best of the younger geologists—de Margerie." It is quite safe to say to-night that de Margerie still holds title to that characterization subject to some such modification as the best of the younger looking geologists. At all events the thirty-five years have yielded up their harvest and while we respect and honor him for his versatile accomplishments in many fields of investigation, his researches on the dislocations of the earth's crust, on the interpretations of terrestrial relief in terms of earth structure, his extensive and incessant labors on geological cartography, his bathymetric survey of the oceans, his contributions to the geological map of the world, his orogenic studies in the Pyrenees and the Corbières and the Jura—all these are his monuments—but no devotee of this science of geology can fail to recall without emotion de Margerie's most excellent service in translating from exceedingly difficult and intricate German into lucid French and in illuminating this translation with annotations as important as the original work, Suess's "Das Antlitz der Erde," de Margerie's "La Face de la Terre." To this monumental task de Margerie devoted the years from 1894 to 1917. Scrupulously exact in translation, vastly enriching the labors of that master of geological science, de Margerie has given an impulse to the work which

[5] Pritchett, H. S., Report of President of Carnegie Foundation, 1921.

[6] Pearl, Raymond, "Trends of modern biology," SCIENCE, Vol. LVI, No. 1456.