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THE BROADENING HORIZONS OF MEDICINE[1]

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WE meet this morning in the midst of a troubled world, a world troubled perhaps more than it has ever been in the history of mankind. For ten years this country, along with the rest of the world, has been going through the throes of an economic depression of greater intensity and greater duration than any previously recorded, a depression which has disorganized commerce among nations and which has affected profoundly the lives of almost every one. During this same period of time we have seen many of the fruits of man's struggle for liberty sacrificed in the rise of political authoritarianism. The freedom of speech, the freedom of thought, the freedom even of physical movement, have been completely abolished in several portions of the globe. Fortunately this tide of authoritarianism has not yet engulfed this country; although it behooves every one to be on the alert, we need not fear that the ideals for which so many of our forefathers struggled will be easily given up. And now added to the depression and the rise of authoritarianism, we have before us the spectacle of war, a war which threatens the very foundations of civilization, and which is unleashing truly awful forces of aggression and hatred throughout the world. The troubled state of mankind and the inexpressible folly of war have seldom been summed up more pungently than in the words of Professor Albert Einstein in a letter addressed to posterity which was deposited a year ago in the five thousand year capsule at the New York World's Fair. The letter reads:

[1] Address presented at the opening session of George Washington University School of Medicine, September 25, 1939.

Our time is rich in inventive minds, the inventions of which could facilitate our lives considerably. We are crossing the seas by power, and utilize power also in order to relieve humanity from all tiring muscular work. We have learned to fly and we are able to send messages and news without any difficulty over the entire world through electric waves. However, the production and distribution of commodities is entirely unorganized so that everybody must live in fear of being eliminated from the economic cycle, in this way suffering from the want of everything. Furthermore, people living in different countries kill each other at irregular time intervals so that also for this reason anyone who thinks about the future must live in fear and terror. This is due to the fact that the intelligence and character of the masses are incomparably lower than the intelligence and character of the few who produce something valuable for the community. I trust that posterity will read these statements with a feeling of proud and justified superiority.

I hope that I may be pardoned for starting these few remarks with what may appear to be a pessimistic note. I have, however, stated the facts and hope further to use them perhaps as a backdrop against which the prospects of medicine may stand out a little more clearly and brightly in relief. To a psychiatrist the present troubled state of the world emphasizes more than ever before the need of a balanced mind in an unbalanced world; the need for confidence, for the use of intelligence, for the restraint of emotion. The need for sanity and for its application to the affairs of life has never been greater.

Many of those present here to-day are taking their first step or steps along the road which leads to the practice of medicine. The road is a difficult one. Even those who are present here to-day for the first time have already spent two years or more in college studying pre-medical subjects. They must spend four years of study, and not particularly easy study either, in the medical school, after which there will come a period of interneship before actual practice is essayed. I am one of those bold enough to question the wisdom of some of the required pre-medical work. There is a tendency to-day, I believe, to require specialism altogether too early and to leave out of the equipment of the medical man what were known in the old days as the humanities. Although the field of medicine has developed almost unbelievably, there are still, however, other things in life which make life worth living and to which the medical man should not be inattentive. Let us hope that the day is not gone forever when the field of medicine can produce such litterateurs as Oliver Wendell Holmes, S. Weir Mitchell, Sir William Osler and Harvey Cushing. I recommend as a decided contribution to that balanced mind of which I have spoken earlier the development of hobbies, of other interests to which one can occasionally flee from the practice of medicine. This is not to say that medicine itself has not many facets and many satisfactions. If those of us here did not believe that, we should not be practicing or study medicine to-day.

In the midst of a cynical world it is well occasionally to reaffirm one's faith in the existence of such a thing as altruism, the desire to serve one's fellow men. I may perhaps be pardoned another quotation by referring to the tribute paid to the physician by that brave spirit, Robert Louis Stevenson. The physician, as a rule, he comments, stands above the common herd, shares as little as any in the defects of a period and most notably exhibits the virtues of the race; he then goes on to say:

> Generosity he has such as is possible to those who practice an art, never to those who drive a trade; discretion tested by a hundred secrets; tact tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick-room, and often enough, though not as often as he wishes, brings healing.

Perhaps at this time when much is being said as to the nature of medical practice, it is well to give some heed to what we mean by a learned profession as distinguished from a trade or business. The professional man is, or should be, something of an idealist. He is guided by the ideals of his profession, rules of conduct which have been handed down and which for instance are embodied for the medical man in the Hippocratic oath. The professional man is primarily a learned man, a man who depends upon his knowledge as his stock in trade. He has specialized knowledge over and above that of the common man in relation to some particular topic, be that law, theology, accountancy, teaching or medicine. Perhaps the thing that distinguishes him more than anything else is the peculiarly personal relation to the client or patient which he enjoys, a confidential relationship, a situation in which he is adviser, guide and friend, a situation in which his interest does not cease when the particular transaction is concluded. It follows as a corollary that he is an individualist, one who functions far more efficiently without regimentation or coercion, but rather requires the opportunity to utilize freely his own initiative and judgment within the limits of his professional code of ethics.

He has, too, an interest in the results of this relationship in which he is called to advise, which is over and above the cash recompense which he receives; in fact, in the practice of medicine it is all too often the case that no monetary recompense is received at all, and more frequently the recompense is wholly inadequate to the value of the services rendered. The physician does not consider that he is receiving a *quid pro quo* when he is paid by his patient. It is not that he sells his opinion at so much a yard. He is entitled to

a living, yes, but more than that he takes a satisfaction in seeing that the results of his advice have brought aid and comfort to the person who sought it.

Another feature is, or should be, the disregard of fixed hours, the readiness to be of service whenever called upon. It is a matter of regret to some of us in the medical profession to see certain other professional aides at times somewhat disinclined to regard this fundamental principle of the profession. The professional man is not a "clock-watcher." He does not count on regular hours. He realizes when he takes up the study of medicine that his sleep will often be interrupted, that his time will not really be his own, and he rejoices to feel that he may be called upon when others are in need regardless of his own comfort. One other point of distinction may be mentioned, and that is the principle as laid down in the Hippocratic oath that he will teach this art to others if they wish to learn it "without fee or stipulation." The physician, and indeed any professional man, should emulate the Clerk in the Canterbury Tales of whom Chaucer said: "And gladly would he learn and gladly teach."

Such are a few of the distinctions which set off the learned professions, and particularly the profession of medicine, from business. Our earliest prototype, the priest in primitive society, was the guide, counsel and friend, the original professional man. We belong to one of the oldest professions, and we may feel confident that when in years to come we prepare to retire from active practice we may still be looked upon as the members of a profession.

We have all been greatly pleased and deeply touched by the presentation this morning of the oil portrait of Dr. William Alanson White, the gift of the faculty to the school, and the few but eloquent words of Dr. Mallory which have accompanied this presentation. The faculty knew Dr. White well and some few of the student body probably came under his direct influence, though it is now two and a half years since he ceased to be among us. I like to look upon Dr. White as the ideal medical man. He embodied, certainly better and more fully than almost any one I have ever known, what we may look upon as the ideals of the physician. He was a student; he always wished to learn. He was a teacher, always happy in imparting his knowledge to others, a gift which he had in rare measure. He was deeply interested in the patient and desired first to understand the nature of the disorder. Whether or not he brought healing (and he often did bring about restoration to health), he always brought comfort. At the same time he remained a human being, a man in close touch with his fellow men, a man of wide and scholarly interests. To have known him is a benediction.

I shall speak later concerning Dr. White's influence on the development of psychiatry. For the present I should like to add a few words about the sphere of his personal influence and the devotion which he inspired in those who came into contact with him. It was a source of great personal satisfaction to Dr. White that the students of George Washington University School of Medicine, a school in which he had had a very close and vitalizing influence during his entire stay in Washington, a period of thirty-four years, showed not only a sufficient interest in psychiatry and its problems, but had sufficient personal respect and admiration for him to organize in this school the William Alanson White Society. This society was founded for the purpose partly of recognizing those students who had special interest and proficiency in psychiatry, and also for the consideration of what might be termed extra-curricular problems in psychiatry; that is, the broader applications of psychiatry to social problems. It is my earnest hope that this society will be long continued by the students as a tribute to the memory of this great man whom we are honoring to-day. Likewise, during Dr. White's life there was established in Washington the William Alanson White Psychiatric Foundation, which not only publishes a quarterly magazine entitled *Psychiatry,* but which is sponsoring this year for the first time a series of William Alanson White Memorial Lectures, to be given by an admirer of Dr. White and an outstanding psychiatrist, Dr. Harry Stack Sullivan, of New York. Such memorials to Dr. White are perhaps even more effective and closer to us than portraits such as this and such as the one which hangs at Saint Elizabeths Hospital. These portraits, however, are tangible reminders of the appreciation and affection which was felt for this fine physician, teacher and friend.

Certainly while we are paying tribute to the memory of Dr. White we should be remiss if we failed to remind ourselves likewise of another significant physician, a close personal friend and admirer of Dr. White who did much for this school. I refer, of course, to our late dean, Dr. Earl B. McKinley, an outstanding scientist, a man of high ideals, of great imagination and tremendous energy, who performed valuable services in developing this school to its present high plane of efficiency and reputation. His untimely death was a great loss to the cause of bacteriology, of medical education and this school. We all wish for our new dean, Dr. Bloedorn, the greatest of success in keeping George Washington University Medical School on the same high plane of standing. He may feel confident that the faculty shares his enthusiasm for the possibilities of the school and his desire to keep it a leader among the medical schools of North America.

If one were merely to enumerate the significant advances which have been made in medicine in the last century, he would have to be provided with a rather bulky book in which to record them. When

we consider that less than one hundred years ago the benefits of anesthesia, the germ theory of disease and consequently the possibilities of preventing infection were not known, you can realize that some of the very elementary items of modern-day practice are relatively new.

Consider the advances of bacteriology; the significant work not only of Morton, Lister and Pasteur, but more recently of Banting and his epoch-making development of insulin; the work of Theobald Smith and McKinley in bacteriology; the work of Folin in chemistry and of Cannon in physiology; the development of the knowledge of the vitamins and of the endocrine glands, and of surgery in all its aspects—and we have achievements worthy of record indeed. Perhaps even more important is the aspect of preventive medicine for which Walter Reed did so much. To-day diphtheria, typhoid and many other diseases are virtually unknown. New horizons are being discovered daily in the field of allergy, and indeed there is much reason to think that the work of medicine is just beginning. The pessimist may say that much has been discovered, that there is nothing more to discover. Such an attitude, of course, is far from the fact. Each discovery lays the groundwork of a group of further discoveries. How could we have all the wonders of radio and television to-day had it not been for the painstaking work of Marconi years ago?

There is a story going the rounds that a long time ago a Commissioner of Patents of the United States advised closing the Patent Office because everything worth-while had already been discovered. Being curious as to the basis of this story I appealed to my friend, Mr. E. W. Chapin, librarian of the Patent Office, and am indebted to him for giving me the actual facts upon which the story is based. As is so often the case, there was a little fire, although a great deal of smoke, and this story illustrates very well how stories grow. The study of gossip and its development, indeed, would make an interesting topic of discussion for psychiatrists. It appears that in the year 1843 the Commissioner of Patents said in his report: "The advancement of the arts from year to year taxes our credulity and seems to presage the arrival of that period when human improvement must end."

Let us not be deceived into thinking that human improvement is nearly ended. Heaven knows that there is ample room for much improvement in many fields, including that of the conduct of individuals and of groups. Much more is to be learned concerning the possibilities in the field of heredity and constitution. Much remains to be learned in the field of bacteriology with particular reference to the virus diseases and the development of biological tests. The field of chemotherapy is only beginning. The almost miraculous effects of sulfanilamide and sulfapyridine in the treatment of certain infections lead one to the belief that perhaps we may be on the path toward that dream of the old physicians, the *therapia magna sterilisans*. Surgery is on the threshold of new developments, and the development of the newer anesthetics in the field of obstetrics has really revolutionized the practice of that specialty within the past few years. There is one field, however, on which medicine has hardly yet begun—medicine is just discovering man! So much in the past has been devoted to the parts of man, to his various organ systems and to his specific functions, that altogether too little has been thought about man himself, the social animal whose principal significance is his relations with other men. Dr. William A. White probably did more than any other medical man in this country to emphasize the importance of the individual, the "organism-as-a-whole," as he called it, a something which is greater and more important than the sum of all its parts, and indeed something different from the sum of its parts.

He emphasized the fact, now just beginning to be recognized in a general way, that the influences which impinge upon one from the outside, as well as the conflicts which arise from one's unconscious, have much to do with the physical functioning of the organism. To use Dr. White's own words, "The concept that considers the organism as a whole, and the necessary correlate thereto, that there is a psychological factor in every illness, bids fair to cause a revolution in medical thinking that will be of as great significance and as radical in its results as the revolution that has recently come about in the thinking of the physicists and the astronomers."

Although the physical manifestations of embarrassment such as blushing have long been recognized, the analogue of blushing which might be exhibited in palpitation or in spastic colitis as a result of emotional factors was overlooked. So much attention was focused upon the gastro-intestinal and circulatory tract that it was forgotten that they were parts of an individual who was perhaps expressing in this particular way and by these particular symptoms his emotional conflicts. The field of psycho-somatic medicine is in its infancy. It is encouraging to note recently in articles in the *Journal* of the American Medical Association moderately frequent references to the psychic factors in disease; during the coming year it is planned that considerable attention will be paid to these factors in the clinical instruction given in this school. Dr. White also emphasized what he called the language of the psychoses; namely, the fact that even the individual whose mental disorder is so marked as to require his commitment to a mental hospital is endeavoring in his way to meet a situation and is, perhaps in a highly symbolic manner, attempting by what we call his "jargon" to express what is going on in his mind;

after all, our language is but a symbol anyway, whether we be called psychotic or normal! Dr. White did much through his early espousal of the teachings of Freud to bring about an understanding of the unconscious mental mechanisms. The existence of these mechanisms is not denied to-day by many psychiatrists, and numerous happenings in everyday life emphasize the truth of the teachings of Freud. One of these truths, which may well be borne in mind in these parlous times of international name-calling, is that there is no such thing as pure reason, but that emotion colors every act and thought. A prominent English psychiatrist, Dr. Wilfred Trotter, has stated the case recently in a few telling words: "We can not separate off the reasoning process as such and set it to work in an emotional vacuum." He adds that if one says, "I am looking at it without prejudice," we may be sure that the statement is untrue—"We should do well on these occasions to inquire closely by what precise mechanism this supernatural purgation has been effected." A tremendous expansion in the psychiatric approach to medicine may confidently be looked for, and in this field we shall be constantly indebted to the contributions of Dr. White. Through his profound philosophical insight he adumbrated many things which have perhaps yet to be demonstrated, but as time goes on developments corroborate his keen intuition, aided by his scholarship and deep humanity.

We need have no fears that the development of medicine is at an end. Even though the world be troubled, we may confidently look for peace and satisfaction in the field of medicine, a field which is only at the beginning of possibilities of service and benefit to mankind. That medicine will continue as a profession in the hands of men possessed of individual initiative and of professional ideals, we likewise need have no doubt.

OBITUARY

HENRY CHANDLER COWLES

HENRY CHANDLER COWLES was born at Kensington, Conn., on February 27, 1869. He died at his home in Chicago, Ill., on September 12, 1939, after a prolonged illness. He received his early education in the public schools and in the New Britain High School. He entered Oberlin College and was graduated with the degree of A.B. in 1893. He taught natural science at Gates College during 1894–95, and held a fellowship at the University of Chicago during 1895–96. His graduate studies were begun there in geology, but upon the appointment of the late John M. Coulter as professor of botany, he became a member of the first group in that science at the University of Chicago. While Cowles was a graduate student, the appearance of Warming's celebrated text-book of plant ecology inspired and guided him in becoming a pioneer leader in ecology in America. He received the degree of doctor of philosophy in 1898, presenting as his thesis his classical paper on the vegetation of the sand dunes of Lake Michigan. He then attempted to apply the principles of dynamic vegetation, so evident in sand dunes, to vegetation in general. The resulting "Physiographic Ecology of Chicago and Vicinity" formulated a philosophy of vegetation in which the central principle was that classification to be valid must be genetic and dynamic. In this monograph the concepts of succession and climax were for the first time adequately expressed. The principles thus enunciated were so vital and so fundamentally important that scores of graduate students were later guided in their researches by these two early publications.

In 1897 he became an assistant in the newly organized department of botany in the University of Chicago. From that time onward he was advanced repeatedly in rank until in 1911 he became professor, and in 1925 chairman of the department, a position he held until his retirement in 1934. In 1926 he became editor of the *Botanical Gazette,* a task in which he had assisted for many previous years and relinquished only at his retirement. His alma mater, Oberlin College, gave him the honorary degree of Sc.D. in 1923.

As a leader in plant science, particularly in dynamic plant ecology, he was enthusiastic but never dogmatic. He formulated no rigid system with complex classification and formidable new terminology, preferring to use non-technical language except when new ideas demanded new terms. From the beginning of his university work he was inspiring with facts, processes and principles, the basis of his stimulating teaching. He soon gathered about him a group of men and women who effectively spread the knowledge of dynamic ecology throughout the land. In 1914 the Ecological Society of America was organized, largely through the efforts of Cowles and his former students. One of these students, V. E. Shelford, now a leader in the field of animal ecology, became the first president of the new society. Cowles was its first secretary-treasurer, its president in 1917 and always a wise counselor regarding its welfare.

His world-wide leadership in the field of plant ecology was recognized in 1930, when at the International Congress, meeting at Cambridge, England, he was made president of the section of phytogeography and ecology.

In 1911 appeared the "Chicago Text Book of