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THE ART OF MEDICINE[1]

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IF I indulge to-day in a panegyric of the art of medicine, it is not with any intention to disparage the science of medicine. Far be it from me to do so. I was trained in pathology and taught that fundamental branch for eight years before engaging exclusively in the teaching and practise of internal medicine. I may therefore lay some claim to an interest in the sciences. But I am here to-day through the courteous invitation of Dr. Locke to speak of medicine as an art by which is meant medicine as it applies to the care of the patient in contrast with medicine as a branch of the science of biology of which we proudly claim it to be a part. When I contrast the two branches of medicine—the art and the science—it must not be inferred that they are separable in the doctor's daily work. Dr. John Brown, the gentle author of "Rab and His Friends," long ago said that art uses one eye and science the other but wisdom uses both. It is for this wisdom arising through a union of science and art for which we must strive as students and as practitioners of medicine.

The art and the science of medicine are like the two sides of a shield; neither can exist alone; neither by itself can achieve the grand goal for which medicine has been striving through the ages—to relieve suffering and to prevent disease.

In its composite character of art and science medicine does not differ from some other occupations, from that of the blacksmith or that of the mason. I can illustrate what I mean by a story. I once wanted a stone wall built from my house to the garage—a simple wall slightly curved. Any mason knowing the science of putting one stone upon another, of dropping a perpendicular, should have been able to do it. But upon inquiry I was advised to get an Italian mason because the Italians, so I was told, had a natural feeling for stone and would give me a more beautiful wall. And that is what happened—the wall is a work of art. It has something that the mason who only knows how to cut stone and mix mortar and pile one block upon another by the plumb

[1] Address delivered by invitation to the students of the Harvard Medical School, November 19, 1930.

line could not have achieved. And is not the same thing true, *mutatis mutandis,* of the doctor and of the blacksmith? There is science in everything and there is art in everything. When the wool workers of Florence wanted to provide the baptistry with bronze doors, they established a competition. The competitors were to make a panel depicting the sacrifice of Isaac by Abraham. Brunelleschi and Ghiberti were the chief contenders and both fulfilled the requirements as to subject and size of panel. It needs, however, only a glance at the two designs to reach an immediate decision in Ghiberti's favor. His was the greater art. Hence those wondrous gates that Michelangelo said were fit to be the gates of Paradise.

It is possible to fix an approximate date in history for the beginning of the science of medicine. Some think it began in a feeble way with Herophilus of Alexandria. Galen, the 2000th anniversary of whose birth has recently been celebrated in Philadelphia, made a better beginning but after him the scientific or as we might also call it the experimental side of medicine slumbered for nearly fifteen hundred years; virtually until Harvey's discovery of the circulation of the blood in 1615.

The art of medicine, the care of the patient on the other hand, goes back in an unbroken tradition to the very beginnings of the healing art. It must have begun in what Dolley calls the dusk of prehistoric time. Astronomy is the only branch of human knowledge that might vie with medicine in length of lineage. The spirit that has animated the art of medicine in these long ages is beautifully expressed in the name of the first physician recorded in history—the great Egyptian Imhotep, whose name means "He who cometh in peace."

What do we understand by the art of medicine? The phrase, as I have said, is largely though not wholly synonymous with that of the care of the patient. In actuality, however, it has a much wider connotation for it concerns itself not only with the sick individual but with the totality of his environment—his family, his friends, his occupation, his social and pecuniary status; indeed with everything that can favor or retard his recovery from illness. In the past we have taken a too narrow view of our task in caring for the sick human being for we have been interested only in the patient or in his disease. Largely through the work of Dr. Richard Cabot and his school a wider horizon has been opened to us with incalculable benefit to the sick and with a nobler position of the art of medicine. We have come to realize that it is not sufficient to prescribe for the patient and to lay down rules for his diet, for his time of rest and of work. We must go beyond these undoubtedly necessary matters and learn the conditions at home, whether the diabetic patient is getting the right diet, whether the child is getting the needed food and sunshine, whether the conditions of living are made suitable for the nervous and maladjusted patient. We must remember the influence of sickness upon dependency and delinquency; the demonstrated relation between these is an added spur for giving to the patient's relation to the outside world every possible thought and effort.

I can not leave this phase of my theme without paying a tribute to the social workers whose cooperation has so greatly facilitated in our day the care of the patient.

The principles of the healing art have not greatly changed since the beginning although the advance of civilization has brought about certain modifications in practise, for example, in the care of the insane and in the control of epidemics. The irrational attitude of the public and even of the profession which until recent times expressed itself, *e.g.,* in shot-gun quarantine against yellow fever, was due to ignorance and has been abandoned. Perhaps our present methods of quarantine against some of the contagious diseases are also based on false premises and will eventually disappear.

There are other noteworthy advances in the care of the sick that deserve a moment's notice. The fever patient is no longer smothered with blankets and suffocated in an hermetically sealed room. We have insulin, liver and arsphenamine for the treatment of three important diseases. But lest we become too vain, let me remind you of quinine for malaria, introduced into Europe just three hundred years ago, of vaccination against smallpox, 134 years old, of lime juice against scurvy (1770), of ether for anesthesia (1846) and of antisepsis against wound infection (1847), all of them initiated or developed before any one here was born.

I do not think I shall be challenged if I say that in his medical course as at present constituted the young student learns too little about the care of the patient. In certain places there is indeed a definite tendency to minimize the importance of the art of medicine and to imbue the student with profound faith in the laboratory as the Alpha and Omega of medicine. I doubt whether Hippocrates, incomparable observer that he was and wise above other men, could get a chair to-day in some of these superscientific medical schools. The first question that would be asked of him would be—"How long have you worked in a laboratory?" And I can see a fine tolerant smile playing about his sensitive lips as he replies, "I have done no laboratory work but I have studied disease diligently at the bedside. I know its constants and its vagaries. I know how to treat it."

Speaking of Hippocrates I am reminded that our medical schools not only neglect to some extent the practical aspects of the treatment of the sick but they also fail to touch that phase of the care of the patient upon which the Hippocratic school laid such stress, namely, prognosis. And yet the reputation of a physician often stands or falls more by his prediction than by his treatment.

Perhaps the care of the patient receives more consideration here at Harvard than elsewhere, because it is in this school that the traditions of Francis Peabody are felt and honored. In his beautiful swan song, "The Soul of the Clinic," Peabody has expressed in admirable language the true ideals of the teacher of the art of medicine.

The care of the sick can not be learned from books. It must be learned at the bedside, in the hospital or in the home. Harvey Cushing tells of a young physician who counted as the most valuable experience of his ten years of medical study a summer's substitution for a local doctor among an island colony. Never before had his powers of observation and his common sense been so thoroughly exercised. Although some hold differently, I believe that no one can become a great specialist who has not had some kind of practical bedside experience. There was much good in the old preceptorial system under which the young doctor accompanied the old doctor on his daily rounds and learned the art of medicine under a teacher who knew it. I am naturally much interested in the Wisconsin experiment of reviving this old custom.

As the result of the unilateral teaching of which I have just spoken, the student goes out into practise with the conviction that the laboratory is of supreme importance and that observation and study at the bedside are of secondary rank. Such blind dependence upon laboratory methods makes many otherwise excellent men of little use in the treatment of the sick. This fact was brought home to me and many others during the war. Men thoroughly familiar with laboratory technique but lacking the clinical spirit were, in the beginning at least, of little help in the wards during the influenza epidemic.

I recently asked a renowned artisan in wrought iron why the world was no longer able to build great Gothic cathedrals like that of Chartres. "To-day," he replied, "men are draftsmen, in those days they were craftsmen." This subtle distinction is applicable to the two types of medical men—the theoretically trained draftsman and the all-around doctor craftsman.

The tendency to ignore the human side of medicine in the patient through a predominating interest in his disease and in the laboratory reached its height in Germany, but lately the pendulum has begun to swing in the opposite direction and now one hears everywhere the slogan, "Back to Hippocrates." What is meant by this cry, back to a man who was born 460 B. C.? It means that medical men are coming to realize that in their otherwise laudable zeal for scientific methods, they have forgotten the true essence of their calling—the healing of the sick. Heilwissenschaft had displaced Heilkunst.

After these not wholly unnecessary digressions, I shall take up in detail the mixture of elements that constitutes the art of medicine. I shall first consider the subjective side of the art, that which deals with the personality of the doctor, and then the objective, which deals more directly with the care of the patient .

All writers of romance have put in the foreground of the ideal doctor's qualities sympathy. I am not altogether in agreement with these well-wishers or critics of our calling, for to me the most important quality in a doctor is understanding—the ability to fathom the psychology of the patient. Much of the good occasionally accomplished by the misguided followers of Mary Baker Eddy can be ascribed to an understanding of the human mind and of its influence upon the body.

The fact can not be disputed that the newer psychology especially psychoanalysis has sharpened our powers of understanding the subconscious mind and has given us a valuable means of treating certain types of nervous and mental diseases. I believe our medical schools are delinquent if they do not teach at least the elements of analytic psychology as it applies to the neuroses, to the psychoses, and to the problem child.

The quality of human understanding comprises the quality of sympathy. Sympathy, at least the active kind, is not always in place, for certain patients, the utterly selfish ones, frequently are best treated somewhat roughly. But under all circumstances the doctor must have pity, "I can not live without pity if I am to become a doctor."

Two other closely related qualities help to give the doctor personality—ambition and enthusiasm. They are prerequisite to self-improvement. The doctor who has them will be what every doctor should be—a student all his life. I like it when the doctors talk shop. My lawyer friends, I find, rarely talk law nor do they seem to read as many journals and magazines as the medical men. A physician who reads knows what is being done in Boston, Berlin, Brussels, Helsingfors, Frankfurt, Rochester and Vienna. The lawyer's intellectual contacts seem to be more limited; that is why I think medicine is a much better field than the law. While I proclaim this self-evident truth I nevertheless have a very high respect for the

lawyer who with equal conviction holds the direct opposite. The doctor's attitude as well as the lawyer's toward his calling must be like that of the blacksmith in "Daniel Deronda" who said, "For the life of me I can not see why anybody wants to be anything else but a blacksmith."

Next to understanding in importance comes confidence—confidence primarily in one's self for only he who possesses it can inspire confidence in others, and in the relation of doctor and patient confidence is everything. The author of San Michele asks, "What is the secret of success?" and answers, "To inspire confidence." Confidence is a magic gift granted by birthright to one man and denied another. The doctor who possesses this gift, says Axel Munthe, can almost raise the dead. The doctor who does not possess it will have to submit to the calling in of a colleague in consultation in a case of measles.

Experience and knowledge are the foundations of self-confidence. In their absence conceit may perhaps create self-confidence but it is then like an inflated bubble easily pricked.

Confidence in one's salf begets imperturbability—a magnificent asset in the crises of the sickroom. When the patient is in agony and the friends in despair the calm, well-poised, confident doctor is like a tranquil haven to a storm-tossed ship.

The doctor needs to be honest—I do not mean the vulgar honesty that the Philadelphia Quaker had in mind when he said to his son, "Be thee honest, James, but if thee can't be honest, be thee as honest as thee can." I mean intellectual honesty, the kind that scorns deceit and bluff.

The thought of intellectual honesty suggests another thought and that is the danger, the unwisdom, of becoming a fashionable doctor. A few years ago I called on a very distinguished physician in Harley Street in London. During the course of conversation I asked him about another man on Harley Street who is widely known as a clinician. "Oh," he said, "he is just a fashionable doctor." His tone spoke volumes. What he meant I am sure you can all imagine.

There are other elements that can not be left out of the category of qualities a doctor needs if he wants to exercise the art of medicine with success. Dignity is one of these. The dignity I have in mind does not depend on what is facetiously called the bedside manner, nor upon the cut of the clothes, nor upon the appointments of the office. I can best define it by saying what is absent from it—familiarity, gossipiness, pomposity and haste.

When I began the practise of medicine a young man had a hard time to succeed. My contemporaries and I were sure that the Vandyke beard, the frock coat and a few gray hairs were the *sine qua non* of success. As a concession to this sentiment, I grew a beard but as it was red and my hair was brown, the combination was by no means comely and I soon took the advice of well-meaning friends and of the looking glass and did away forever with the beard.

Punctuality, the politeness of kings, is a quality of much value in the doctor's relation to his patients and his colleagues. The patient has little patience. The late Dr. William Pepper, one of the busiest men of his generation, was remarkably prompt. Not only must a doctor be punctual but he must never appear to be in haste. It was one of Sir James Mackenzie's striking characteristics that no matter how pressed he was for time he never seemed hurried.

The doctor must have courage—a courage greater than that of the soldier who is sustained by the thrill of battle and the inspiring support of his fellows. The courage of doctors in all ages has never been surpassed. There are, of course, instances of lack of courage but they are few. You may remember that the great Thomas Sydenham was accused of deserting his practise when the plague broke out in London. It is told of Galen that he was once asked by Marcus Aurelius to accompany him on his campaign in Germany. Galen immediately had a very convenient dream in which Aesculapius forbade him to leave Rome, a divine command Marcus Aurelius did not dare to disobey.

I am not fond of the praise of those who sympathize with the physician because he has to make many sacrifices of those joys and activities of life upon which the average mortal sets so high a store. "Doctor, it must be hard for you to miss that opera, this play or that party." No, it is not at all hard except perhaps through the uxorial reflex, for the thing we do instead brings so much more durable satisfaction. Some wives may perchance express regret, but the ideal wife which nearly every doctor has shares her husband's feelings.

And now I come to the objective aspect of the care of the patient—the practical application of the art of medicine.

The visit of the patient to his doctor is an event of transcendent importance upon which the patient focuses all his thoughts, his hopes and fears. He is full of his story and wants to pour it out to a receptive listener. The doctor, therefore, must listen with patience and interest, he must avoid interruptions and when interruptions come, he must from a cultivated habit be able to bring back his mind at once to the patient's case.

The doctor must be a detective, a Sherlock Holmes, a Zadik, so as to elicit data intentionally or unintentionally concealed by the patient.

He must understand something of the laws of heredity which play a more important rôle in the majority of diseases than is dreamt of in our everyday philosophy. Furthermore, he must have some acquaintance with the newer concepts regarding the constitutional factors in disease, factors that are closely allied to heredity.

Study of the recent literature and bedside experience are the chief teachers in these newer but worthwhile fields.

After obtaining, often with infinite pains and self-control, the history, the doctor proceeds to make the physical examination. It is at this point that art and science meet. The doctor must know his tools, whether they be his hands, his eyes, the test-tube or the microscope. He must know how to make a physical examination. He must know the physiognomy of disease so as to recognize it when it is present.

After a thorough examination and a painstaking history, he should be able to arrive at a diagnosis and to apply treatment rationally.

Let your work be so thorough that when the patient leaves your office he will be able to say, "Such an examination I have never had before."

The subject of physical examinations reminds me to say a word about the cost of medical care, especially about the cost of laboratory examinations. Is it not the duty of every physician to minimize the expense to which the patient might be subjected by avoiding useless and uncalled for examinations? Expensive wholesale examinations not based on a thorough preliminary study are economically wasteful and reflect grievously on the good sense of the medical profession. Much of the criticism of the cost of medical care arises from this wide-spread practise of ordering indiscriminately all manner of examinations in every patient.

Medicine after all is not a matter of trial and error nor is the doctor's examination a *ballon d'emblée* but it is a purposive rational procedure based on a careful history and on an appreciation of the needs of a given case. There are occasions when difficulties of diagnosis may warrant the making of every possible test but they are rare.

What should the doctor tell the patient about his disease? There are some distinguished men who urge that the doctor tell the truth, the whole truth and nothing but the truth. I am inclined to think that those who give this advice have never had any desperate illness in their own families or at least have seen but little suffering among the people. When Dante inscribed above the doors of his "Inferno," *Lasciate ogni speranza voi ch'entrate*—all hope abandon ye who enter here—he showed his profound understanding of the human soul. He knew that the greatest thing men live by is hope.

The doctor must ever be careful not to banish hope even at times when there seems no hope. Does that mean to be false to truth? No, it only means that the doctor should temper his statements so as not to crush the spirits of the patient or his dear ones. There are cases that by every criterion are doomed, in which nevertheless a sudden turn may occur and recovery result. One not rarely hears the statement—the doctors had given him up but he got well.

I have seen recovery in cases of insanity that seemed utterly hopeless. A woman comes to my mind at this moment who had a profound melancholia. She tore out her hair, had to be fed forcibly and took on the appearance of an old hag. After about three years of abject and repulsive negativity, she began to improve and finally got entirely well, so well that she has been able to make several trips to Europe and one around the world.

But even in cases that experience tells us can not possibly recover, the humane doctor will so couch his statements that the family will be sustained during the last days or weeks of the patient's life.

A patient of mine had a serious coronary attack and seven years later had a second one while in Paris. The physician in attendance called a consultant who as soon as he had seen the patient said to the wife, "Madame, your husband is going to die." Put in that bald brutal way the dictum crushed her. She implored the attending physician to remain with her husband and to spare no efforts to save him. To every one's astonishment the man improved, so that the consultant on his next visit declared that he had been in error and that the patient would now recover. The wife was overjoyed. That night the man had another seizure and died.

What should the doctor have said? As I see the situation he should have said something like this: "Madame, your husband is very ill; his chances of recovery are not good. However, we shall not give up and shall do everything in our power to save him."

The question is often asked, "Doctor, shall I send for the children?" I usually reply, "It might be wise; if they find their father improved, they will be only too happy and if not, they will be grateful for letting them know the truth."

Keep the patient's confidence. If you get to be known as one who babbles, patients will keep from you important details of their lives that you need to know if you want to be successful in your treatment.

Coming now to specific advice on the question as to what to tell the patient, my counsel has been somewhat as follows:

If the patient has a serious disease, the knowledge of which might frighten or crush him, tell him the whole truth only if it is otherwise impossible to get his full cooperation. If he carries out the instructions

faithfully, it is unnecessary, it is cruel to tell him the worst.

In the case of tuberculosis conditions are somewhat different. A patient who does not know his disease may become a menace to others. Moreover, in the absence of an understanding of his malady he will rarely give that full cooperation which is vital for success in conquering the disease. Therefore, I always tell the patient the truth if he has tuberculosis. One need not be brutal about it—one can sugar-coat the pill but the pill must be administered.

Many patients have cancerophobia, that is they are convinced that somewhere in the body there is a cancer. If after a thorough examination I have come to the conclusion that there is no cancer, that the fear is groundless, I have sometimes found the following procedure very successful. If after the examination the patient asks me, "Doctor, do I have a cancer?" I say, "Yes, you have two or three." That generally causes him or her to smile and the fear vanishes.

If for legitimate reasons one conceals the true nature of a grave disease from the patient himself, one must as soon as possible apprize a member of the family. Not only is this a duty one owes to the family but it is also a matter of self-protection; otherwise the doctor may be accused of not having known the true nature of the patient's illness.

It is the doctor's duty if the patient has an illness that might suddenly terminate his life, such as angina pectoris, aneurysm, or excessively high blood pressure, to induce him in a tactful way to make his will.

In a doubtful case the doctor must always err on the side of hope but he must be honest not to rouse vain expectations when he is fairly convinced that the patient can not recover.

In connection with this general subject there is a kindred matter of which I want to speak. There are situations in which from the nature of things treatment is useless. If the case is one of long-standing suffering, such as cancer, the family nearly always prefer that the doctor do nothing to prolong the agonal period. They may, in fact, resent the torturing with injections of an already overtortured patient. There are cases, however, in which the family insist that the doctor spare no efforts, that he fight with death to the last moment. They resent it if he sits idly by with folded hands while the patient's life is ebbing away. What is his duty in such circumstances? If the family is an intelligent one, he can explain the futility of all further efforts, but where intelligence is conspicuous by its absence, it is good psychology to keep on. Only he who in the lonely hours of the night has fought with death over a dying child and has seen the gratitude in the eyes of the parents, knows the profound difference between theory and practice.

It is the doctor's duty to pay attention to the creature comforts of the patient. The poorer the patient, the more important it is for the doctor to give that phase of the medical art his attention.

Among the comforts of the patient the first place is occupied by a good nurse whether hired or "owned." A good nurse will see to it that the bed is clean and smooth, that the pillows are properly arranged—the arranging of the pillows is an art—that the light is satisfactory and the hangings not too garish. The importance of the hangings was brought home to me many years ago in connection with a typhoid fever patient whom I had seen in consultation. The young woman was convalescing from her fever but had become wildly delirious, crying out that she was being burned alive. The family and the doctor were greatly worried that her mental aberration might be permanent. However, I gave a good prognosis and outlined appropriate treatment. I did not see the patient again, but perhaps six months later a young woman walked into my office and said, "Doctor, I want to pay my bill." I did not recognize her. She said, "I am Miss Nichols. Perhaps you would like to know something about my delusions." "Surely," I said, "I remember the details very well." Then she told me that she attributed her delusions of fire and burning to the fact that the wall paper was red, red flowers were being sent to her, the screen around the bed was red and the nurse was fanning her with a red fan.

It goes without saying that proper food properly prepared and properly served is vitally important. Unfortunately even in the best hospitals one or more of these factors may fail.

A point of importance often neglected is the giving of specific directions. Early in my life I found it a good practise to write out for the caretaker, whether it was a member of the family or a nurse, the directions as to food, medicines, etc.

This applies also to prescriptions. It is unwise to say "take medicine as directed." The instructions should be specific and if the medicine is to be used externally, be sure to say "for local or external use."

Whatever treatment is instituted must be made to fit the patient's circumstances. It shows the doctor's lack of understanding and judgment if he suggests methods of treatment that the patient's station in life makes impossible of application. If the doctor in this year of grace should suggest to a broken-down broker that he go to the French Riviera for his bodily health, it might lay him open to a great deal of ridicule.

Visits of friends. Job's comforters are so ubiquitous that the majority of patients are better off without visitors although one must use judgment. Recently one of my patients, a man 69 years old, had

his tonsils removed. It was quite a shock to him. As he was convalescing and about ready to go home Bildad the Shuhite came to see him in the person of a business friend and told him this—"Don't go home too soon; a man I know went home the other day and had a terrible hemorrhage and nearly died."

Attendance at operations. Many a patient who is about to undergo an operation scarcely knows the surgeon when the latter is in his civics and not at all when he is garbed like a member of the Ku Klux Klan. What a comfort it is to have the family doctor standing by his side when the anesthesia is about to begin.

There is also a personal advantage to the doctor in being present at operations and that is he can learn a great deal more from the *autopsia in vivo* than from books.

Be present at death, it is a great comfort to the family who may need the staying influence of a sympathetic friend, one whose countenance like that of Conan Doyle's Dr. Seldon is in itself a consolation.

In discussing treatment of any given disease textbooks and teachers of medicine usually dwell upon the treatment of the disease during its course. Little attention is given to the treatment during the period of convalescence and yet that is a very important part of therapeutics. If the patient is recovering from some acute infectious disease like influenza, pneumonia, or typhoid fever, he can not return to work immediately; he has first to get back his strength, both mental and physical. He must receive instruction as to how much to sleep, how much to exercise, what to eat; in fact, how to live until he is himself again.

I have found that many surgeons entirely neglect the after-treatment of their cases. That neglect accounts for a certain proportion of recurrences or post-operative failures. If the surgeon will not take the trouble to instruct the patient how to live after a capital operation, then the medical man must be prepared to give the necessary advice. He must prescribe the patient's diet and his general course of life. I want to pay tribute to one of your fellow citizens who has done a great deal to focus the attention of the profession on the after-care of patients—Dr. John Bryant.

I often advise women patients who are convalescing to get up, put on corsets, stockings and the best dressing gown they possess. It will give them a sense of well-being. As Emerson understandingly expressed it, "The consciousness of being well-dressed is capable of yielding satisfaction that religion is powerless to bestow."

An essay on the care of the patient might properly include a section on that ticklish subject called medical ethics.

Among the lay public ethics commands about as much respect as the Volstead act in Chicago. They look upon our code as a sort of conspiracy for their undoing. That is because they do not understand it and also because sickness creates selfishness. Our ancient code is nothing more or less than a system of honorable dealing and in the last analysis is advantageous to the patient.

Much criticism is heard about consultations. Some of it is justified, although the strictures of Molière and the caricatures of Cruikshank hardly apply today. I believe in open consultations openly arrived at and whenever possible try to persuade the attending physician to have the family present.

I have known the doctor in attendance in cases in which there was a radical difference of opinion to ask the consultant to tell an untruth. That is unfair both to the patient and to the consultant. If the consultant is tactful, he can express his opinion without belittling or embarrassing the family physician.

And now, in concluding, I want once more to make it plain that indispensable as bedside experience is, it alone does not make a good doctor and if the Hippocratic ideal implied only bedside study, only the art of medicine, it would be an inadequate ideal. Believing this I have not been able to follow the late Sir James Mackenzie, for whom I had the highest personal regard as doctor, scientist and pioneer cardiologist, in his vehement attack on laboratory methods—an attack difficult to understand in one who in his early years made use of precision instruments with the greatest advantage to medicine. I can explain it only on the ground that many a great man when he grows old becomes a *laudator temporis acti.*

There is no conflict between the bedside and the laboratory. Indeed the bedside may also be considered a laboratory. The problems of clinical medicine, of bedside research, are as unlimited as are the problems of laboratory research and to my mind a good conscientious clinical essay is as valuable a contribution as a laboratory essay, even if that is filled with quadratic equations and estimations of the pH to the tenth decimal.

The physician who would be an artist in medicine must, like the artist mason of whom I have spoken, have the fundamental skill or science to build on. His foundations must be solid and he must understand the use of plumb and level. Bedside manner otherwise becomes a mere veneer.

A doctor must not only read medicine; if he has ambition and enthusiasm he will read much else besides. Everything that extends his antennae makes him a better physician. For that reason I am an ardent advocate of a hobby for every medical man. A hobby has a subjective value—it is a haven of rest for the tired mind, and it has an objective value

in that it gives additional points of contact with intelligent patients and may form the basis of brief conversation that adds to the pleasure of the doctor's visit. It may even lead to friendships that otherwise would not be formed.

The American is what Paul Leicester Ford calls Peter Sterling, a practical idealist. Better perhaps than any other national he can combine the ideals of the art of medicine with the ideals of the laboratory. Under that combined egis medicine will become a greater and a grander profession, more scientific in the sense of understanding better the physiologic basis of life and health and a nobler art in its profound insight into the human soul which can not be weighed in the balance or seen through the microscope.

OBITUARY

EDWARD SKINNER KING

ON September 10 Professor Edward Skinner King, astronomer for more than forty years at the Harvard College Observatory, died at his home in Cambridge, Massachusetts, after a short illness. He was born at Liverpool, New York, on May 31, 1861, and obtained his education in the schools of that state, receiving his degree from Hamilton College: an A.B. degree in 1887, an A.M. in 1890 and an honorary Sc.D. in 1927. While at Hamilton he specialized in mathematics and the classics, taking several of the coveted prizes in mathematics, and was elected a member of Phi Beta Kappa.

During his college days he came under the guidance of Professor C. F. W. Peters, upon whose suggestion he applied, immediately following his graduation, for a place on the staff of the Harvard College Observatory. Appointed an assistant in 1887, he was connected with the observatory thereafter almost continuously until his death. There was an interval of about three years in the early nineties when he was compelled to give up active duty because of ill health.

During all these years Professor King was in charge of astronomical photography at Cambridge, developing new methods of clock control, instrumental guiding and plate testing. He was a pioneer in the subject of photographic photometry, and made a special determination of color differences in stars, as observed photographically and visually. He was the first successfully to photograph the Aurora and the spectrum of lightning, and was likewise the first to observe star occultations by photographic means. The results of his scientific work are to be found in the various Harvard Observatory publications and include, among others, discussions on the absorption of photographic wedges, photographic photometry, lunar photometry, tests of photographic plates, transformation of prismatic to normal spectra, absorption medium in space, out of focus results on magnitudes of stars, eclipses of Jupiter's satellites, and photo-visual magnitudes of stars and planets.

For more than ten years Professor King contributed biweekly articles on astronomy to one of the prominent newspapers of the country, and in this connection devised and published his "Star Maps." He was coauthor of the "Harvard Radio Talks," better known as "The Universe of Stars." In 1930 he produced his "Manual of Celestial Photography," an authoritative and unique treatise on how to take celestial photographs.

Professor King became assistant professor of astronomy in 1913, and in 1926 was made Phillips professor, a chair which he held until September first of this year, when he became professor emeritus. He was a member of numerous scientific societies, among which were the American Academy of Arts and Sciences, the American Association for the Advancement of Science, the International Astronomical Union, the Société Astronomique de France, the Bond Astronomical Club, the Nantucket Maria Mitchell Association, and the American Astronomical Society, of which, at the time of his death, he was a member of the council.

He was married in 1890 to Miss Kate Irene Colson, of Batchellerville, New York, to whom three children were born: Dr. Harold Skinner King, now associate professor of chemistry at Dalhousie University, Halifax, N. S.; Margaret W., wife of Professor J. C. Manry, of the University of Iowa, and Everett T., who died in 1917.

LEON CAMPBELL

MEMORIALS

To celebrate the centenary of the British Medical Association the council has opened a fund for the purpose of establishing a permanent memorial to its founder, Sir Charles Hastings. The *British Medical Journal* reports that the memorial will take the form of a stained-glass window in the cathedral at Worcester, a city with which he was intimately associated all his life; the placing of a tablet on the house in Worcester in which he practised; and the restoration and permanent upkeep of his grave in the Astwood Cemetery, Worcester. Any balance left over after these objects have been fulfilled will be given to the Sir Charles Hastings Fund, which is controlled by a small body of trustees, who have power to distribute the income for the benefit of individual members of the profession or their dependents in any way that