SOUTHERN MEDICAL JOURNAL

JOURNAL OF THE SOUTHERN MEDICAL ASSOCIATION

PUBLISHED MONTHLY AT BIRMINGHAM, ALABAMA

Volume XIV

JANUARY 1921

Number 1

RELATIVITIES IN MEDICINE*

BY EDWARD H. CARY, M.D.,
Dallas, Tex.

Newton, in his great generalization known as the law of gravity, established basic principles from which scientific men gained fixed standards. By these they interpreted the interesting phenomena of the world, relating physical laws to what were then accepted as facts. This procedure obtained until Einstein formulated a new theory, essentially an outcome of the electrical theory of matter. On this theory, mass instead of being constant as it is in ordinary Newtonian dynamics, is only approximately constant and increases slightly when a body moves very rapidly through the ether. It also is an outgrowth of the electrical theory of matter, which holds that the shape of bodies is dependent on their motion, too, and that a measuring-rod is quite imperceptibly different in length, according to the way in which it is held. This new theory known as the law of relativities is, in a measure, out of harmony with the accepted principles of Newton, but has been apparently substantiated by observers who, in an effort to disprove Einstein's theories, were, by the results of their observations, forced to accept the correctness of what they had disputed. Thus it is made plain that even what, after the most mature reflection, we consider fixed principles, are only relative in our understanding of the laws governing the world. For as we progress we find that things really relate themselves to dissimilar things and even a fixed, accepted, fundamental truth is subject to a new interpretation with corresponding variation.

So, in our particular sphere of activities,

we find it possible to approach many of the accepted principles with new theories, and frequently find right values resulting in new interpretations. We often hear medicine spoken of as a progressivescience. We hear that text-books a few years old are of no service; that the most valuable medical library is the one which has the largest number of good, current journals. Without reflection, we would be prone to think a profession which so quickly discarded present text-books for new was really on an unstable foundation. Inasmuch as this progressive tendency still exists, has for years, and no doubt will for years to come, we might be charged with having few positive convictions. With us the law of relativities is exemplified in its essence, for is it not true that our literature is largely a new interpretation of much that is old? They are based upon the complexities of life, which are as varied as human individuality. Each individual differs in form and detail, responding to the physical conditions which surround it. Hence it can not be stable.

We humans are climatic slaves and our resistance is a complexity of rare interest. These influences constitute the ground work of our medical problems. As conditions vary and subtle influences tilt the scales, the law of relativities is established and ceaseless interpretations are made necessary. The medical profession in its hurried absorption in its own problems sometimes fails to take into account the point of view of the people who do not understand the philosophy of the changes I have indicated.

In ancient times the men who practiced medicine were philosophers first and incidentally physicians. And even within our own memories the family practitioner, when a fairly educated and philosophic man, was the community oracle. In medicine, he may have fallen short of the latest

*President's Address, Southern Medical Association, Fourteenth Annual Meeting, Louisville, Ky., Nov. 15-18, 1920.

ideas, but he was beloved and revered by all. We are becoming more highly scientific, devoting but little time to philosophic pursuits; and I fear we sometimes lose the human in following the scientific and the sympathetic relation of old is gradually wearing out. To combine the two capacities would strengthen the hold of any man.

Addresses delivered in public places have a beneficent influence, and if we continue them (utilizing only men most gifted and most prepared) the public mind may be molded to accept the most advanced thought which is utilized in the interest of society. The greatest danger lies in the use of ill-prepared men or men wholly scientific.

It has been said by those who know the needs of the masses that a desire is manifested by all to know more of the simple health rules which could be employed by families to better their physical condition. There is at all times an active wish on the part of the majority to remain well rather than to profit by some promised legislation which will care for them when they are sick. In my Presidential Address to the Texas Medical Association in 1918, I expressed the following view:

"Socialism is likely to become a paramount issue throughout the world unless the radicalism of Russia (as proven by its utter failure and the treachery of its followers) shall discourage for many years paternalism by the unenlightened. We must, however, recognize the possibility of so-called paternalism as a menace likely to overtake the physician. With insurance and compensation laws a medical profession would be under state control, as more or less exemplified in England, and would finally lose its independence if the issues are not met and solved both for the people and the profession. The world will never be made so rich in accomplishment if individual incentive is checked, or if individual responsibility or individual accomplishment is curbed."

Hence it is necessary for our profession to be understood as willing in every way to co-operate to bring about health standards which would go to the root of the trouble. The proponents of health insurance legislation have advanced many plausible arguments which would naturally appeal to those who would find themselves beneficiaries. Unless we intend to further such legislation, it is necessary to have the attention of the members of the medical

profession specifically directed toward it. A new statutory enactment likely to jeopardize their own independence is certainly worth their interest. Let us profit by the case in England. There the men whose time and training were bartered in Parliament never realized the seriousness of such legislation until its passage was imminent. They had allowed themselves to be jockeyed into the position of objectors, without a plan of their own to offer. I do not believe the American physician will be found in this helpless state. We must by now have crystallized opinions. Personally, I do not feel that the proponents of this legislation have made a convincing case. But our views in opposition must be expressed in places and at times wisely selected. Mere negation is not convincing. Arguments based upon many reasonable objections must be supplemented with a profound study of the problems which do exist and which seem to disturb sincere welfare workers.

We in the South are very fortunate, for we will have an opportunity to observe advanced legislation (if it ever reaches that stage) in states above the Mason and Dixon line. And as our section of the country is less thickly populated, similar legislation with us would be unwise. However, I have noticed that enactments, like an epidemic of influenza, are likely to travel from one state to another, and whether good or bad, once upon the statute books, they are very difficult to remove.

I shall not burden you with the pros and cons of the wisdom of health insurance laws. There is a bibliography on this subject, given in an article by Frederick R. Greene, who is connected with the American Medical Association. You all know him, and I refer you to his paper.

We have in many sections of the South a very serious shortage of doctors, and this factor alone is likely to lead to legislation of some kind, possibly a form of subsidized practice. It seems to me that we should be thinking of a plan whereby this deficiency may be met if we are to preserve the friendship of a large constituency represented by men in the legislatures who are not at the present time interested in factory problems. In Texas,

and probably in other states, there is a law permitting the county and city to join hands in building hospitals, so that it is possible to supply communities with the proper facilities. The thing most needed is for the profession in various localities to realize its obligation to society and to organize efficient hospitals, located at convenient places, which will make easy the transportation of the sick. If the people were educated as they should be regarding the sound necessity for these hospitals, they would be organized. If the hospital is scientifically managed and the element of personal aggrandizement eliminated and genuine service substituted, there will be an ever-increasing demand for beds. Fees that are equitable, consistent with the situation and the ability of the patient to meet his obligation, should prevail. Such well-regulated places could easily cheapen service to the people without economic loss to the physician and bring about a professional interest in scientific study which would be consistent with the present type of medical man. All of us realize that the graduates of medical schools, as soon as they have had their additional hospital training, are crowding the cities. This is due to the fact that they want the larger facilities the city offers and dread the rural districts where they would be thrown upon their own resources, with unscientific surroundings.

Adverting to the greater hospitalization of a community as a plan which would care for those who need medical attention and in a modest way, are able to pay for it, a zoning of districts according to the population, with hospitals built to fit the needs of the community, would be a step in the right direction. These institutions could be built either by the county or the city, or both; or by various organizations interested in the establishment of hospitals. The trustees of such hospitals could organize, each for themselves, a staff quite capable of meeting the needs of the people. Everything should be planned to care for the economic situation, for the doctor and the different classes of patients. It is conceivable that the financial phase of the problem on the medical man's side might, in many places, be solved by estab-

lished salaries, but the danger in this lies in the fact that through this system a physician's individuality might be submerged and he would probably lose interest. On the other hand, one of the by-products of this system would be time for scientific research, justifying the hope that the science of medicine would be advanced in every locality and the people would benefit thereby.

Speaking broadly and in the vernacular of the street, medical men are now judged somewhat by the cleverness they possess in selling their skill. A scientific man, capable of rendering the highest service, frequently feels that his confreres judge him not so much by his ability to interpret his cases and treat them as by the measure of his annual income. This places the whole question on a sordid basis.

To carry this thought a little further, a hospital in any community, solvent and well supplied with sufficient means for scientific work, should have a scientific library. For the lack of this we constantly have the brightest intellects depressed. Where men have hoped to pursue to a logical end some great theme, it comes to naught for the lack of proper research facilities. They have brains enough to want the record of other men's achievement and to wish to save themselves the pain of discovering finally that in years of work they have only duplicated previous discoveries. Research workers want the basis of past experience; then they can strike out for themselves. If such opportunities are not at hand, men drift and become mentally lethargic.

In addition to having a library, a hospital should be the home of the county and district medical society. From using this as a meeting place, the smaller medical societies might cease to hold solely to the accepted and traditional manner of conducting meetings. I recall an address made by one of my distinguished predecessors, Dr. Stuart McGuire, in which he spoke of the fact that four medical societies should be enough: the Americal Medical Association, the regional society, the state and the county society, not, of course, excluding the societies on special branches. I think we all agree with him. The point I

wish to make is that the hospital should become the home of a scientific group whose study of cases would become largely clinical with all the aid which could be rendered by a pathologist, a biochemist, a roentgenologist and specialists in all lines.

In any county with sufficient inhabitants to justify building a hospital, this would be practical. And such an institution would give a foundation for the work of the smaller medical society. The usual plan for meetings (wherein a local celebrity reads a paper) might be changed. It would be of far more value to all medical men attracted to such an occasion if there were adopted in part the plan of the great clinical congresses, where one or more distinguished visitors contribute papers of merit. The rest of the time is devoted to a series of cases, well worked up as we now understand the term, which are discussed fully after presentation. Until an attempt was made to standardize the hospitals and to require better records, there were practically no worthwhile histories of the sick. This is not intended as a reflection upon those great societies such as the state or regional where a program of papers is expected. If medical men consulted their reason instead of their memory, as Voltaire advised historians, and examined rather than transcribed, we should not see books and errors multiplied without end.

Now we turn to the largest social problem which confronts mankind: the prevention and control of disease. If this is to be accomplished, it can be done only through the state. All the wisdom extant is not sufficient to prevent disease without the power to enforce health regulations. Since this can only come from the state, it is unfair for the people to place upon the profession the responsibility of controlling disease. We who live in the South and cherish the traditions of state rights, would likely be the last to yield to a law delegating too much authority to the Federal Government. But we have had one experience after another in which capable medical officers' plans have been thwarted by local sentiment, and usually the aid of the National Government has been necessary to stem the tide of epidemics. It is

not lack of knowledge, but lack of power to act which makes the work of the state health officer ineffectual.

I am sure there is an unanimity of opinion among the profession that the big problems affecting public health can not be accomplished by the state, therefore Federal interest in the health and welfare of the people are things much to be desired. It is an old story, the creation of a National Department of Health, the head of it naturally a cabinet officer. This subject was recently revived in the House of Delegates at the New Orleans meeting of the American Medical Association. When our people reach a point where they will demand a National Department of Health they will get it, but the masses must be further educated. When this is done, we shall become a more efficient people. Some one has said, "Every case of sickness is a social symptom and means there is something wrong in the community." If this is so, and the community will not correct the causes, and the state can not act, it becomes a National problem. Centralization of authority is essential for the accomplishment of a great work.

In Texas some years ago, following the installation of the present Federal Reserve banking system, I suggested in an address, that there was no reason why this great country could not be divided into health zones, to be controlled by a secretary of health, in which case definite research work could be made upon diseases peculiar to each particular zone. Accurate data could be accumulated and correlated, and the people made to take an interest in things which affect them. A solution of the problems of the prevention and cure of many diseases now understood, could more quickly be made. The nucleus for all of this could be the United States Public Health Service.

Hippocrates, when asked, "Who is the physician that is an honor to his profession?" answered,

"He who has merited the esteem and confidence of the public by profound knowledge, long experience and consummate integrity; who has been led through the whole circle of the sciences; who has a due regard to the seasons of the year, and the diseases they are observed to produce; to

the states of wind peculiar to each country, and the qualities of its waters; who marks carefully the localities of towns and of the surrounding country, whether they are high or low, hot or cold, wet or dry; who moreover neglects not to mark the diet and regimen of the inhabitants, and in a word all the causes that may produce disorder in the animal economy."

Digressing for the moment, and without doing violence to the proprieties of the occasion, are we not by these words reminded of one of our honored dead whose memory I pause to recall? His accomplishments were such that

"the breath of censure has not dared to impeach the purity of his conduct, nor the eye of envy raise its malignant glance to the elevation of his virtues; such has been the transcendent merit and the unparalleled fate of this illustrious man."

He now rests serene in the hearts of his countrymen, and his memory will forever be enshrined among the immortals in the Hall of Fame. General Gorgas was one of our very own.

It was easier in the days of Hippocrates for a man to encompass the sciences. In this era, an educated and useful doctor is forced to circumscribe his efforts to a study of a part of a science. Today in this broad country of varied physical equations, it is also true that the subdivision of labor in understanding the problems of each section, is a task for single groups of men, which in every way justifies the suggested zoning system. An active application of the principles of Hippocrates would be met; proper laboratories could be built, equipped with men and materials, and based upon demonstrations near at home; well directed health campaigns could be carried on. All of these forces would look to the secretary of health as a cabinet officer, who would represent the various medical phases of the Government. He could bring to bear all of the educational and other forces necessary to meet the issues arising in our vast country. Quarantine measures and all similar activities would be correlated and an efficiency would be created in the enforcement of health laws impossible to contemplate with our present methods. The supervision of the foods produced and purveyed to the people, the healthfulness of trades and occupations, the cleanliness of the great water-

ways, the control of interstate shipping, the safeguarding of the young, the physical fitness of immigrants, the instruction of the people in the care of health, and the keeping of vital statistics are but a few of the governmental duties which are now handled inefficiently for want of a national department of health. The people of this country are going to have one. It may be deferred, but it is inevitable.

In the mean time, unaided by any national effort, the physician is working toward the betterment of these conditions. Throughout the history, the development of medicine has usually kept pace with the other arts and sciences. While there has occasionally been some confusion in the threshing out of ideas in the advance trenches, sometimes to the amusement of the populace, the medical army has always left a safety zone within which all, even the scoffers and the drugless healers, are protected, whether or not they appreciate the results gained by untold labor and conscientious endeavor on the part of men whose chief aim has been a better world and a happier human race.

Aid and co-operation from the Government would materially lessen disease among the poor and those who are made poor by disease. For the glaring necessity for relief is now illustrated by the poverty-stricken, whose misfortunes are most frequently traceable to disease. Fundamentally, the question of the cure and prevention of disease must be left to scientific men who must have power to act. The independence of the race can be far better preserved in keeping the people well and at work, yielding to certain restrictions in their interests—restrictions which may run the gamut of scientific propaganda, but eventually level themselves by their worth to the people.

In an attempt to curb the use of habit-forming drugs, Congress, through legislation followed by a constitutional amendment controlling the sale and manufacture of intoxicating beverages, has added materially to the burdens already carried by the profession. While trying to get information as to the number of medical men who had violated this obligation to so-

ciety, I have found that we could indeed be proud of the fact that they are few. The narcotic law could unquestionably be greatly strengthened if Congress would more directly deal with this evil and curtail the importation of the drugs. It is being dealt with from the standpoint of taxation. The importation of drugs into this country is ten times greater per capita than in France, twenty times greater than in Austria, and correspondingly as great in other countries. The illicit use of such drugs is evidently far wider than it ought to be. The traditions of our profession plus an enlightened public opinion have protected us so far from a violation of the trust imposed in the medical profession. It is the physician's duty to throw the weight of his opinion and advice towards a better day when man's appetite for stimulants of any kind will be curtailed. We can claim with one of Voltaire's heroes, for us "Honor has always done greater things than interest."

Another of the relativities of medicine lies in the question as to whether or not the medical man deserves the term "scientist." Who is the scientific man? I ask this, not as Pilate asked "What is truth?," but with a view of accentuating the relative importance of the clinician as a scientist.

Is there such a thing as a "pure scientist?"

In a definition, in part, given by Jevons, we find:

"A science teaches us to know, and an art to do; and all the more perfect sciences lead to the creation of corresponding useful arts."

Within our memory, medical education has gone through various phases: first, we had schools where splendid clinicians prevailed, where the laboratory side of medical education was of little consequence, where exact information such as is now taught in medical schools was unknown. Then came the age of the microscope and the work which followed Pasteur. This was so wonderful and information which

was gained seemed so far-reaching, that the people stood in wondering admiration of the new interpreters of disease. Medical schools commenced to readjust themselves as rapidly as possible and developed laboratories to care for the increasing knowledge from research, effort and study. The great clinicians were the first to reach out for this help, and as most medical schools in that day were privately owned institutions, it was through the personal encouragement of clinicians that laboratory workers found a field. Their advance for many years was solely due to the stimulation of the clinician who was urged on by his desire to know all. There was no large sum of money available from any public source to encourage laboratory growth; medical education was largely in the hands of clinicians, supplemented by whatever results could be gained in the laboratory. The relative importance of the clinician and the laboratory worker was not called into question by the public; there was no propaganda on the part of either. The estimation of what was found in laboratory research was as far as value to mankind was concerned somewhat speculative; but the prevailing thought which stimulated medical men was to prevent disease and they magnified in every way the importance of laboratory accomplishment and of the men doing such work. I fear the laboratory men themselves have sometimes been guilty of overstating their case in an effort to be of service to humanity, and the public has found disappointment when all the things so generously promised have not been accomplished.

The English idea of medical education distinguished from the German prevails in England, but the German plan has been more or less adopted in America, supplanting in large measure the old clinical or English method. So the laboratory side of medicine has become accentuated and the development of men who devote all of their time to laboratory instruction is the result of an effort to create acceptable University standards, and a medical edu-

cation has not been required of many laboratory teachers. In the last item of a report of the Council in Medical Education occurs the following paragraph:

"(T) There is a serious tendency in present-day medical education to drift into the ultra-scientific and to ignore or belittle the development of a closer relationship of the pre-clinical and clinical teachers. This tendency will be decreased if it is required that the teachers of the laboratory departments in medical schools shall have had a complete medical training, by which they will obtain the medical point of view."

No one can correctly deny the great value to the world of laboratory men, and the very important place they occupy with the student of medicine, yet it is true that many of them have come to the point where they exaggerate their own importance. Though it is essential that a man should be a thoroughly capable pharmacologist, let us say, in order to teach pharmacology (and this is but an example of any branch in the primary work in the study of medicine) it is true that the sum total of his value, even though he is a useful man, does not place him on a pedestal above that occupied by a clever clinician who has general information consistent with the opportunities he had in getting his medical education plus that special training which made him what he is.

Medical education is drifting into the hands of these laboratory men who have more time to devote to the executive end. Although it was once in the hands of the medical men who encouraged the laboratory men and built up a propaganda to enlarge their usefulness, we find many laboratory men now who believe that medical education is wrapped up in themselves. The clinicians are being undermined. The idea is advanced that the scientific man is from the laboratory, and the public is left to speculate whether or not the clinician is scientific. But, to paraphrase another definition:

"The practice of medicine is called an art. Medicine is now undoubtedly a science. Science is systematized knowledge."

If, then, the laws and principles of medical study are exhibited in an ordered and

interrelated system, they appear in the character of science. The efficient clinician deals with medicine both as an art and a science and should thus be classified as a scientist.

History is replete with examples of the advance made in medicine by the great clinicians who used their executive abilities in growing situations and building great centers where scientific groups could work. A modern illustration is the Mayo Foundation. But we have yet to find a situation created by a (so-called) pure scientist, who has been able to create opportunities for others. The modern outcry in all medical schools is for research work and every laboratory is judged by the monographs published. While it would be foolhardy to decry entirely the forced effort on the part of laboratories everywhere to produce a bit of respectable work, it is a fact that the great mass of work and monographs written have little value. Much of it is only a re-presentation of the old and a straining after individual interpretation. Many teachers are called to high positions as the result of just such labor. This has brought into positions of trust impractical men who have failed to correlate their work and who add little to the teaching of medicine in this country. To illustrate: a man might publish a number of articles of more or less value on zoology, seeing to it that his publications are widespread. Finally he might be recommended very highly and called to a medical college as an anatomist and become professor of anatomy, when, so far as human beings are concerned, his anatomical knowledge is nil. The medical school finds this out only after a practical demonstration. He is a "pure scientist"—ranks high with those now responsible for teaching, and looks with disdain upon a mere useful clinician. As a result of the effort to marl medical schools with the devotees of science, students of medicine (who are to justify the expenditure of time and money) find this type of teacher useless.

Medicine, as it is taught today in its many branches, correlated as it must be to make it a useful procedure, offers many places of relative value; and whether a man teaches ninety hours in a school year in a laboratory or the same time in a hospital, if the work is well done by each man, the importance of the two teachers is more or less the same when the work is finally correlated for the benefit of the student. The men who devote their time to elucidating, clinically and didactically, the problems in medicine, surgery and the specialties, may find themselves leaders in the community not only in knowledge of their profession, but as welders of public opinion toward the acceptance of measures for the public good, and laws which tend to the prevention of disease.

I have no desire to minimize the importance of a faithful worker in whatever department. Many practitioners have fallen into the error of making diagnoses, not taking into consideration valuable clinical data, but accepting as gospel that which can only be an aid to diagnosis. It is time for the general practitioner, as well as the public, to reach a more just conclusion and classify the work of laboratory man and clinician as it should be. When this

comes about we shall hear less of the "pure scientist" in medicine and realize that men are of value as they are able to be of service to their fellow men.

We salute such men as Pasteur, whose most striking point was his imagination. I quote from a letter of his:

"I take the liberty of recalling to my confrere, M. Blanchard, that the illusions of an experimenter form a great part of his power. These are the preconceived ideas which serve to guide him; many of them vanish in the long path he must travel, but one fine day he discovers and proves that some of them are adequate to the truth; then he finds himself master of facts, and of new principles, the application of which sooner or later bestow their benefits."

There can be no difference of opinion as to whether or not this man is a scientist. If it were not that in this busy age of ours reverence is considered a weakness, I might pause and contemplate the personal achievements of our leaders of today and yesterday which would be an inspiration to those aspiring souls who worship success. However, let us not forget that this quality is but an expression of cultivated virtues. There is some of heaven on this earth for every sincere physician—there is a benediction beyond for all who live within the code.