DISEASES of the CHEST

VOLUME XXVI  OCTOBER 1954  NUMBER 4

Delirium Cordis*

A heart-to-heart talk on certain problems in present day cardiology in the light of ancient and recent history.

WILLIAM B. BEAN, M.D., F.C.C.P.
Iowa City, Iowa

Anyone with a reasonable mixture of pride and vanity in his makeup naturally takes it as a high honor to be asked to give the after-dinner sermon before such an illustrious company. But the honor carries the less happy implication that the speaker should combine wisdom and wit. Following in the wake of wise men and entertainers I have some qualms. The whole business assumes an aura of unreality. At this stage perhaps we can all get some consolation in blaming your speakers committee. At least it is too late to do anything about it now. One of the firmest planks in my platform of conviction and behavior is that physicians as members of an ancient profession owe society, or as I prefer to say, our fellow man, a debt of thoughtful criticism. If criticism is to have value it demands the use of the intellect. This enterprise few indulge in because it is such a wearisome and hard thing; and society has never had the full attention of the rational mind to help solve its problems. But in spite of their difficulty intellectual exercises may have a slight side all can enjoy.

From time to time the artist backs away from his canvas, changes the light and looks at his creation from a different and more distant place. He stops the act of embodying his percepts and concepts in the process of painting in order to get a general view of his progress. So as craftsmen in many fields of endeavor whose interesting collaborative venture is being recognized in this act of feast and assembly, let us stand back from our several parts of the scientific, social, and humanitarian mosaic to see whole the object of our joint work. Let us remove our thoughts from myopic concern with details, look up and regain in simplicity the sense of rejoining the world at large.

In giving my scattered remarks the formidable title of Delirium Cordis my purpose was to pose a question as well as to puzzle the thoughtful. You may note a recurrent theme of the dim view. I have prepared some

From the Department of Medicine of the College of Medicine of the State University of Iowa.

*This paper is derived from remarks made at the Annual Dinner of the Los Angeles County Heart Association, 20 October 1953 on the occasion of the 23rd Annual Symposium on Heart Disease, and at the Annual Banquet of the Iowa Heart Association and the Iowa Tuberculosis and Health Association in Des Moines, 14 April 1954.

Copyright, 1954, by the American College of Chest Physicians

381
verse around a few borrowed lines to start us along in a mellow mood of perplexity. The whole talk, as you will see, is a series of non sequiturs presented in perfectly logical sequence.

Psychiatrists have made it plain
We have a fore and after brain
Which struggle for the upper hand
Reason or lust may take command
The dinosaur is now extinct
Because his two brains were distinct.

"You will observe by these remains (Figure 1)
The creature had two sets of brains
One in the head, the usual place
The other at his spinal base
Thus he could reason a priori
As well as a posteriori;
No problem bothered him a bit
He made both head and tail of it
If something slipped his forward mind
'Twas rescued by the one behind
And if in error he was caught
He had a saving afterthought."
But sometimes two brains disagreed
The one said—loaf, the other—feed.
While forward brain would make him smile
His rear brain told him he felt vile—
Hind brain intent on procreation
His front brain favored sublimation.
At length the dinosaur decayed
Because the eggs were never layed.
Some bones remain, a dismal track—
Footprints in nature's cul-de-sac.

But now of creatures who survive (Figure 2)
In spite of troubles, still alive
The dachshunds clearly illustrate
How poorly nerves may integrate.
This tearful face displays no notion
Of happy wagging tail's emotion
And when dismay demotes his tail
His barking front gives happy hail.
So, tail twixt legs, with facial glee
The fore and aft do not agree.

The centipede has numerous feet (Figure 3)
The nerve supply of each so neat
That she can well perambulate
Both fast and slow, both curved and straight.
The centipede was very gay
Until a frog in fun did say
Which leg comes first, which next, which last?
What makes them slow, what makes them fast?
This raised her mind to such a pitch
She lay distracted in a ditch
Her quivering efforts came to naught
She could not walk by taking thought.
But when she gave up introspections
Her walk was brisk in all directions.
A moral is not hard to find.
Employ but do not fret your mind.

Such introductory masterpieces
Are only smoke screens for my thesis
Which is that we must all be led
By heart as well as brilliant head.

Now, let us leave the dry land of preparation, the shifting tides and currents of introduction, and come at length to the high seas of my sub-
ject. We may suppose that the voyage of man and his heart which we are taking had its beginning in the dim wastes of prehistory. It has continued during historic times with the records of our predecessors increasingly clear and more detailed into the present with the accumulations of research now piling up so rapidly that our understanding and thoughtful use of them still are largely matters for the future. Some few landfalls in this voyage I shall indicate.

Probably the cardiovascular system of man and its relation to his central nervous system, brain or mind, as we choose to say, has undergone no radical change during the most recent developmental phases in the span measured by late prehistoric and historic times. Paleopathology or study of the diseases in ancient times is well established. It indicates no basic changes in types of heart disease. It reaches back a mere instant in the long series of changes which have culminated in man as he is today. Unfortunately we have no paleophysiology. Perhaps the nearest we can come to it is to trace back in the archeology of language some concepts which are so firmly embedded in the matrix of man’s linguistic heritage that we have reason to look upon them as natural objects of great significance.

To get further information concerning the attitude of man to his heart during ages for which we have no precise historic record, we approach it by speculation and imagination. It is reasonable to assume that the intimate connection between the activity of the heart and mental activity was perceived, perhaps dimly, by prehistoric man in remotest antiquity. This became of significance only when abstract thought advanced to the point where it permitted man to conceive of a separation between soul and body. Man placed the seat of the soul in the heart. This is reflected in concepts which we can trace most clearly in what we know and can infer about language. Even with the advance of scientific research which has demonstrated that the heart is really a muscular pump and insofar as we can get evidence, not the seat of the soul, the linguistic habits of our ancient forefathers prevail in their designation of the intimate relationship between heart and soul. I need not detain you with a great number. We know that Mrs. Smith has a heart of gold or a kind heart; Mrs. Jones has a heavy heart; that Mr. Thompson has a heart of steel or a heart of stone; that Tom is light-hearted; that Elizabeth is not a bad person at heart. When someone comes to me in a mood of confidence he opens his heart to me and I take his problem to heart. As I mentioned in the subtitle, we are now having a heart-to-heart talk. There are countless other expressions and only a few need be listed—soft-hearted, hard-hearted, heartless, broken-hearted, half-hearted, I win somebody’s heart, I lose my heart to someone, I gain my heart’s desire, something is heart-warming, heart-breaking. Hearts ache. Hearts are lonely. Folk speech invents a cardiac anatomy with heart cockles and heart strings. In the title of my comments the delirium or mania of the heart, though it is commonly used to designate a particular kind of irregularity or lack of rhythmic beat of the heart, illustrates as did the verse the fact that hearts may be mixed up and troubled. This symbolization of the heart remains as a pleasant
Delirium Cordis

March 1885

DEdRIVE to the persistence of folk speechways at a time when our understanding of its intricate functions has advanced in ways which are as remarkable as they were unexpected even the relatively few short years ago. Nonetheless, the heart stands squarely before us as the organ whose diseases and disordered workings are most likely to bring our career to an end.

Instead of taking you all on a detailed historic pilgrimage of heart disease I have chosen to spend a few moments in recalling to some, and introducing to most, one of cardiology's forgotten knights, Peter Mere Latham, whose career was at its peak in England about a hundred years ago. He was a man of charm and wisdom and simple piety whose example should be more widely known and valued today. His life I shall not detail. For several years I have been collecting some of the gems of his writings. A few I will pass along, realizing that such a concentration may lead to a surfeit and is better sampled one at a time. Most of these come from his text of cardiology. As he said of someone else "he could wrap up wisdom in a witticism."

Heart

There is no organ of the body which during life submits its structural condition so freely to our knowledge as the Heart.

The Heart using its proper language of sounds and impulses, how clearly and emphatically does it speak of its own diseases to the ear and touch of experience.

Observation has traced back, with fearful fidelity, a long line of formidable and fatal diseases to their pathological parentage in the heart.

In speculating upon diseases and disorganizations of other parts as the causes conductive to disease and disorganizations of the heart, we must be cautious that we do not invert the real order of things. For the order of causation will be found to run as often from the heart to other organs as from other organs to the heart.

In every organ of the body, and pre-eminently in the heart, the living actions and sufferings of disease have a compass and a reach far beyond its material framework.

Only consider for a moment the proper office of the valves. They are meant (as it were) to keep guard at the orifices of the heart, and throw them wide open to the onward course of the blood, and hold them close-barred against its refulent current. But disease spoils their fitness sometimes for this office, and sometimes for that.

Valvular disease on the right side of the heart alone is a most rare occurrence; and, when it is found on both sides together, the disease on the left generally so far outruns that on the right, as to have reached its acme before the other has hardly begun.

Strange things happen to the heart when the chest is deformed.

Deformity of the chest, resulting from curvature of the spine is justly reckoned among the causes capable of producing disorganization of the heart, especially active or passive dilatation; or, it may be, dilatation both of one kind and the other coexisting in the several cavities of the same heart. The whole chest being distorted and narrowed, and the lungs straitened and imprisoned, and the heart itself displaced and the aorta tortuous, and the liver bearing hard with its external pressure, lead upon the whole to as large an amount of hurtful encroachment of organ upon organ as can possibly be conceived. And this encroachment cannot be without mechanical impediment; and this impediment cannot be without hurt and hindrance, first, to the functions, and then to the structure of such organs as the heart and lungs.

Because inflammation of the heart tends to a destructive disorganization, every day that it is allowed to abide and continue its progress, the heart sustains more and more injury from morbid matter deposited upon it or within it, and its functions are hindered and baffled, and at last abolished; and these functions are vital.
... One principal object I have in view is to bring diseases of the heart to a living test; to stand by the bedside, and there see how much we know of them, and how much we conjecture, and how, according to degrees of probability, our conjecture is made, sometimes little less than knowledge, and sometimes little more than a guess. Now we are able during life to conjecture a fat heart with such strength of probability that we almost know it.

By what agency does the heart become disorganized in consequence of a dilated aorta? It is, probably, by its own extraordinary efforts to overcome a virtual impediment to the circulation. Blood being immediately poured from it into a larger space than natural, requires from the heart an augmentation of its motive impulse.

Subjects of asthmatic diseases furnish the most frequent instances of dilatation of the heart from causes seated in the lungs.

What exact relation such disease of the kidneys bears to hypertrophy of the heart, we do not know even yet. But the two are too often coincident in the same subjects for them not to bear some, and that a very important, relation to each other.

The plainest and most palpable effects of an unsound heart upon the circulation in the veins are denoted by their distended and overloaded state...

Nature does, as it were, make use of the lungs as the readiest and the nearest channel through which to relieve the oppression of the heart.

It would be difficult to overrate the value, as guides to practice, of the signs which declare themselves through the medium of the lungs in every case of unsound heart.

What can be said of palpitations of the heart, and intermissions, and irregularities of its beats, which come and go during a man's whole existence, neither originating in any known disease, nor terminating in any, nor abridging in any measure the duration of life.

A little edema of the ankles... is the earliest beginning of serous effusion, which may go on increasing until it has pervaded the entire cellular structure and filled every serous cavity of the body.

There are no certain measures of pain, of palpitation, and irregular action, annexed to a given amount of unsoundness in the heart.

The heart that has a valve thickened and an orifice contracted, or its pericardium adherent, is apt to suffer pain, and to palpitate and beat out of time.

Learn, then, to read aright the meaning of these two orders of symptoms referable to the heart,—the vital and the mechanical.

I would state then summarily, that it belongs to the heart, in its different states of permanent unsoundness, sometimes to affect the brain perilously or fatally, the brain itself being altogether free from disease; and sometimes only to bring disease, which already exists within the brain, sooner, and more inevitably, to a perilous and fatal event. The work may be entirely of the heart, or it may be shared between the heart and the brain.

The man, who, having an unsound heart, must traffic with his sinews, for his daily bread, has a poor chance of benefit from medicine.

What a gain will it be to mankind, should observation hereafter discover that the conversion of the valves of the heart, and the lining of arteries, into earthy matter or cartilage, has its sure pathological origin in certain forms of disease in other parts, or in the constitution at large, which are both obvious and curable, or in certain habits and modes of living which can be rectified or avoided!

Heart Sounds and Murmurs

The sounds which naturally accompany the movements of the healthy heart, can only be learnt by the practice of listening to them. It is useless to describe them.

Murmurs are to be caught quickly, and distinguished surely, and turned to a ready use, only by practice.

The ear must be a well-educated and well-practised ear, or it is not a trustworthy witness.
In proportion as the sounds of the healthy heart are more highly intonated, they acquire a greater audible extent. The louder they are, the further you hear them.

The abnormal murmurs, as well as the natural sounds, of the heart, are heard to a greater distance in proportion to their mere loudness, and that not only in the direction to which the current of the blood conducts them, but in all directions.

Thus the disease and the impediment still increasing may, and sometimes do, reach a point at which the endocardial murmur ceases thenceforth, and altogether, as long as life remains.

As to the sounds themselves, since the ear can only become familiar with them by practice, I leave you to be your own instructors. As to their theory, taking the matters of fact and matters of speculation which have been brought to bear upon it, I consider that it is in part satisfactorily made out, and in part only plausibly surmised.

If in a healthy man we carry bleeding far enough to blanch the surface of the body, we create an audible systolic murmur in the precordial region, and diffuse it through the arteries.

Place the instrument upon the neck by the side of the trachea, and pretty close to it, and at the same time rest your finger upon the space between the angle of the jaw and the mastoid process; and when your ear has caught a continuous humming sound, and listened for a while and made sure of it, then press your finger firmly down upon the vein, and the sound, if it be the true venous murmur, will immediately cease; then raise your finger, and if it be the true venous murmur, it will immediately return.

The truth is, a very free current of blood is essential to the production of the venous murmur.

Never omit to listen to the praecordial region whenever you visit a case of acute rheumatism, and visit a case of acute rheumatism oftener perhaps than you otherwise would do merely for the sake of so listening.

The short physiological account of auscultation, which has just been given, will probably be found useful to us as we proceed. At all events we may make a platform of it, where we think it will bear us, and tread more cautiously upon it, where we think it will not.

Pulse

Surely the number of the pulse ought to have a vast deal to teach us, seeing what a point we make of ascertaining it in every instance. The pulling out of the watch, and the deliberation which follows, must appear to the patient at least the most solemn part of the interview with his physician.

The oracle of old made it the top of wisdom to know oneself, but did not fix the credit due to that fragment of self-knowledge which enables a man to keep count of his own pulse.

Now let us come face to face with the present. We are living in a time of crisis rarely equalled in human history. Behind the ironical fantasy of the so-called "peace" we have the stern reality of iron curtain and cold war. Against the theme of the insistent roar of jet engines we witness vast world-wide disorder. The removal of the veneer of inhibitions of civilization reveals surprisingly near the surface the savage in man. Scratch the man of mid-century and find the Neanderthal. Intellect has not superseded instinct. It has only made the chances of response infinitely various. The absolutes which have governed professional standards of physicians and men of good will on their long pilgrimage have been eroded and sometimes ruined. The old certitudes, and sanctity of the individual, the authority of reason and knowledge, have been thrown out contemptuously to reveal the naked manifestations of power and evil. The cynic, protected by office, can apply the lynch law to character with
conviction automatic after mere accusation; and smoking out the rats burns down the house.

The all-enveloping mood of fear with its irrational tensions underscores man’s frightening and tragic predicament. How can he get along with his fellow man—individually, nationally and internationally? To some extent a group like this exemplifies one of the healthy counter-currents which justifies our putting aside the bleak pessimism which dominates so much of our thought and action today. Medicine has been through other major ordeals when a general disintegration of the conserving and cohesive forces of the body politic loosened the ties of family and state. The connective tissue of society tends to dissolve. It sags, relapsing into barbarism, for the society and civilization we know are possible only through the active collaboration of the people and their willingness to subordinate private interest to common weal.

Although the ideals of medicine and its code of ethics have been high, its present esteem and public confidence is not a century old, and could easily be destroyed. We must prevent its succumbing to the disorder of our age, intellectual and spiritual paralysis with decay of moral standards, loss of professional cohesion and the narrow ultraspecialization and self-interest with the trade union spirit predominating. It is as true today as ever that the medical profession can exist and survive only as it is permitted to sustain its rights, privileges and prerogatives by popular confidence in integrity which must be self-monitored; and by public belief in its capacity for good. Medicine today suffers from a curious dichotomy which has vexed man in his dealings with the world from time immemorial. Some who profess themselves to be ultra scientific, search only for objective data in nature and make no effort to corral the meaning. On the other hand some philosophers and thinkers looking for ultimate meanings fail to get them into any coherent relationship to the objective data of science. Both have the illusion that they seek to find the truth but only with thoughtful combination of the two approaches is it possible to satisfy the intelligent layman’s firm sense of reality and sense of the truth.

Let us now look at complexity from the point of view of the developments in cardiology which have flourished so furiously within the last few years that such a man as Latham might be completely at a loss to understand what the scientific jargon really meant. In spite of the fact that we do not have a completely filled-in story of the natural history of many diseases for example, high blood pressure or arteriosclerosis, the hard discipline of clinical observation is yielding results which are in a continuum of diminishing returns. It is unlikely that even very valuable information will revolutionize our outlook and attitudes.

The great gifts of science have pushed aside the ravages and indeed the risk of infection so that more and more people are now permitted to die without the help of germs. In spite of what I observe here to be a strong effort on the part of automobile drivers to eliminate each other and pedestrians in a perpetual open season, from a statistical point of view this destructive force has not yet wiped out the gain from control of
infections. The pattern of heart diseases—the large increase in incidence of hardening of the arteries with its several potentially ruinous effects, and the prevalence of high blood pressure—shifted the focus of attention to those disorders which become commoner and more frequently disastrous in older people. There is even the danger that concentration on the ills and ails of the aged will bud off a new and independent specialty which will suffer by being cut off from the central core of medicine. The risk is especially bad if it follows the assumption that the elderly are not people at all, just as the false assumption that children were not people has been such a stumbling block to certain specialists in the field of pediatrics.

The radical and revolutionary new developments of cardiac surgery in a decade or slightly more have allowed the surgeon to invade that once inviolate sanctuary of the body, namely the heart, without pain, with surprisingly little danger and sometimes with results so magnificent that they fall almost in the class of fable. These gains are all based on a clearer understanding of function of the heart, circulation and breathing. They have been possible only because of a number of simultaneous but tangential developments in the fields of anesthesia, of nutrition, a knowledge of fluid and electrolytes, in the control of infections by antibiotics, and in the clearer diagnostic methods which were possible only with such newer techniques as cardiac catheterization, gas analysis and evaluations of cardiac function. To those working on the local scene, your contributions have been an inspiration and a means to achievement. As I see it, however, there are two hazards which are not negligible. The first is that cardiology becomes an independent specialty in its own right separated again from the main central current of the broad stream of general medicine. This hazard exists partly because research and specialization in our present scientific and medical structure are apt to come before the physician is tested in the crucible of learning the clinical arts. The eternal danger is that he becomes a superspecialist before he becomes a good doctor. This is a hazard of all specialization. It is a risk to be taken because of the enormously fruitful results which scientific specialization has made possible in numerous fields. Even to one who had his undergraduate training in medicine in the not too remote past, the complexity of recent developments is an increasingly difficult burden and I need only mention some that come to mind. The field of electrocardiography with its multiplication of leads has required a complete reorientation in the dynamic significance of what the electrocardiogram is able to tell us. Ballistocardiography is a totally new and perhaps important field. The recent exploitation of vectorcardiology presents another facet of interest. The complex findings of the cardiodynamic investigation with the intracardiac catheter has added to the complexity. All these and many others are being unrolled in splendid panorama by the participants in this symposium. It is a display of stunning virtuosity which leaves us recourse only to the virtue of humility. Now each of these functions has something to add to our understanding of the state of health or disease which is the lot of a particular individual. It needs to be added to a thorough and
firm grounding in clinical medicine with its knowledge, physical signs, interpretation of symptoms, or fluid and electrolyte physiology, of cardiodynamics, the field of therapeutics and the use of the x-ray film and the fluoroscope for extension of the physical examination. Good research technics bring useful additions to our information about basic mechanisms of circulation. In recent times we have seen coming into flower a relatively new investigator whose interest is mainly in the exploitation of a method or a gadget or a machine. His knowledge of the problems of health and disease is not wide. He has no compelling interest in finding the solution for a particular problem. He approaches investigation by playing the field. He hopes that by trying a test under many circumstances and working with innumerable people he will get some useful results. This is a baneful result of overspecialization not only in medicine but in scientific research generally.

When I am teaching undergraduate medical students or trying to evaluate the skill and capacity of an intern and resident I sometimes try to find how far he could go in solving a patient's problems if, for a time, the electric current were shut off. It is dispiriting to see the helplessness with which many confront very simple problems in medicine when they are suddenly told to walk without crutches. I do not imply that it is always possible to find out exactly what is wrong without sometimes many and often very elaborate tests. But where a diagnosis can be made by a simple history and physical examination it is a great pity that the patient spends several hundred dollars in useless laboratory studies which are not simply aimed to confirm or quantitate what is already available from the careful consideration of the patient.

The risks of overspecialization were satirized by Herodotus, Plutarch, Cato and Voltaire to mention a few. This quotation from Voltaire's Zadig is not without its lesson. Zadig, a prince of Babylon, had been wounded in defending the honor of the princess he was to marry. "Her wounds were slight, and she was soon well again. Zadig's hurt was more dangerous. A spear had hit him near the eye and made a deep wound. Semire asked nothing of the gods save that her lover should get well. Night and day her eyes were bathed in tears. She lived for the moment when Zadig should be able to delight in her tender looks once more. But an abscess formed on the wounded eye, and made the worst to be feared. The great doctor Hermes was sent for from Memphis, and he came to Babylon with a numerous retinue. He visited the sick man and said he would lose his eye. He even predicted the day and hour when this disastrous accident would happen. 'If it had been the right eye,' he said, 'I should have cured it, but wounds in the left eye are incurable.'

"All Babylon while bemoaning Zadig's fate, marvelled at Hermes' profound knowledge. Two days later the abscess burst of its own accord, and Zadig was completely cured. Hermes wrote a book in which he proved that Zadig should not have been cured. Zadig did not read the book. As soon as he could go out, he prepared to visit her who was the hope of his happiness in life."

The nonmedical part of this audience must not get the notion that these
generalizations are pure irony and iconoclasm. It seems to me that this collaboration illustrates one of the unique methods by which some of the difficulties can be avoided. I shall mention several and elaborate briefly on a few. In the first place, such a group as this, working as a regional voluntary health organization, can make money available for problems which can be approached suitably by the group at hand. Research can be directed either towards a peculiar or unusually prevalent form of heart disease, or because people on the local scene have the necessary skill to attack specific problems. It is much easier to determine this for Los Angeles in Los Angeles or Iowa in Iowa than it is in New York or Chicago. (2) The local voluntary health organizations by constructive contributions to public and individual welfare, especially such decentralized and regional groups as this, are a healthy, trend away from the concentration of power, money and decision in Federal government. (3) Your Heart Association is a fine example of the kind of contribution public spirited and idealistic citizens can make. It counteracts some of the evil effects of enthusiastic lay support of fads and such inadvertently disastrous preoccupations as antivivisection. Progress in research in medicine in England has been to some extent hampered by the difficulty of having experimental animals readily available for humane endeavors. Thus it comes as a shock to us in this country that a surgeon in England may operate on patients before he has operated on animals. (4) The intelligent support of research, even if it is clearly defined and narrowly aimed, may yield rich by-products of unexpected discovery. So often discoveries are made completely without blue print. The well-trained and perceptive investigator very rarely makes a discovery which he has predicted and reached along strictly logical lines. In other words, the happy and observed accident is likely to be the revolutionary turning point in our ideas.

But there are certain negative or bad features in the program. (1) the single disease approach to research. Those of us who are teaching medicine are frequently disturbed by the fact that more generally applicable grants are not given to support a man whose ideas might lead him first to work in the field of dermatology and then cardiology and then endocrinology and perhaps then in some specific organ system like the liver or central nervous system. It is true that this suggests a good deal of vacillation in our independent investigator but there is more concern about the fragmentation of interest into so many separate organizations which stress say tuberculosis, cancer, heart disease, diabetes and the like. For the present this is a sound approach. I hope the day comes when society will enlarge in wisdom and gain the sensible and mature view that investigation, broad in outline, careful in organization and independently run frequently will produce better results than that for which the aim and object are too narrowly specified. (2) Research supported by a well organized popularity contest and by Gallup polls of current interest, with false promise of quick answers, is evil and dishonest. It should be emphasized again and again that money cannot guarantee results. In the light of all the exciting discoveries of the past the average layman looks upon a scientist as some superior being who, given the opportunity, is
able to make long strides stepping from miracle to miracle in scientific seven league boots. Nothing could be further from the truth. Scientists, though some do not like to admit it, are people. They make mistakes. Their judgments are fallible. There is a very considerable and I think inevitable emotional connection of a scientist with his work. Much of our modest capital of basic research has been used up. It needs restoring. The best that we can hope is that those who distribute grants for research will assign them more wisely than we have any right to think they should. At this point I introduce another verse before I come to the conclusion. It simply exemplifies some of the Babel of tongues which vexes the student’s memory without increasing his grasp of history, and follows my planned sequence of non sequiturs.

An eponymic lament in the form of a dirge.

Ewart, Corrigan, Roger
Live in eponyms today
Frantzel, Fisher, Grossmann, Hall
Marfan, Osler, one and all
Monkeberg, Valsalva, Quick
Libman, Sacks, van Gierke, Pick
Heberden, Ayerza, Fick
Tell us how our hearts are sick.
"Keith, Purkinje, His and Plack
Conduct our hearts impulsive track
Block aberrant beats which might
Apall Paul Wood or gall Paul White"
Quell arrhythmias which could
Forestall Paul White and mall Paul Wood.
When conduction acts in frenzy
We are guided by Mackenzie;
Asystolic fits and chokes
Immortalized by Adams—Stokes
To this eponymic jelly
Broadbent, Branham, Cardarelli
Traube, Hill, Durozies
Heartless heart men, let us pray.
Eisenmenger and Fallot
Rule the cyanotic flow
Traube, Rotch, de Musset, Hill
Known for murmur or for thrill.
Graves, Sontoni, Ebstein, Hope
Worked without a fluoroscope
Kartagener, Warthin, Pins
Save us from our heartfelt sins
Still today the names go on
January, Harrison
Dexter, Kempner, Culbertson
Mauer, Eliasch and Burch
Do not leave us in the lurch
Harken, Keefer, Katz and King
To the heart men let us sing!

Conclusion

The laymen in this audience little know their many helpful functions in supplementing the physician’s efforts. He is usually called too late and can bring too little to be of complete usefulness. His patient is scared, threatened with pain, with loss of income as well as the cost of illness. Fear of economic disturbances delays treatment and restricts its scope. Few physicians can confine their practice to diseases they can cure with
virtuosity and finality. As doctors we live lives of incessant compromise. The practice of medicine is a selection from a sad series of second best choices. In his studies, his plans and aspirations of what might be done, the good physician looks to the laymen for help, moral and fiscal. On behalf of all the physicians whom your earnest collaboration has inspired and whom your thoughtful contributions have aided directly, I wish to thank you as laymen with my warmest thanks for the stimulus of your benefactions.

You have, by your corporate efforts and instinctive sense demonstrated the capacity to foster the sturdy advance of knowledge and welfare. It is an endeavor which is humane and good. But these constructive acts only emphasize the further duty to understand all the wide ramifications, the subtle as well as the evident implications of what we are about. For a just and wise combination of heart and head is our only hope of fulfillment among the snares and pits which beset us on all sides. I cannot give you a map or guide book. But perhaps it is well for us all to recognize that man is at a nodal point in his long journey, and that nodal point happens to be a jungle.

Many of the animals which we know have existed on earth have disappeared, generally because their rigid overspecialization prevented them from adapting to some unexpected and radical change in environment. Man, as a social organism, has survived and flourished because, in his often clumsy way, he has been able to adapt. But nature makes no allowance for illusions. Man is the first and only creature whose survival on the globe is to some extent within the reach of his own thoughtful manipulations. But weakness or uncertainty or stupidity does not get a second try in nature. Even a cheerful and optimistic person should ponder the question of whether man can escape the responsibility for thinking or abuse the results of his thinking and the less objective but no less real aspirations and yearnings of his spirit. For in recorded evolution the price of failure is extinction. And busy nature will turn her hands to other tasks.

Acknowledgments

The theme and rhyme scheme of the verses are borrowed, mainly from the rich and fertile source of folk songs in the oral tradition. Some of the part about the dinosaur appeared in some Chicago newspaper in the 30's, or so I am told by Professor Robert L. Ebel who gave me the lines included in quotation marks. The dirge was formed around four lines taken from a verse published in that unassailably anonymous column of the Peripatetic Correspondents in the Lancet. The Latham excerpts are from a substantial collection I have gathered together and edited. I hope to publish them in the early future. Many of them are derived from his textbook on Diseases of the Heart, the American edition of which was published in 1847. I am indebted to Mrs. Naomi Schedl and Miss Mary Arp of the Department of Medical Art for the illustrations.