BOOK REVIEWS


Physicians and cardiologists, whether within or without an educational citadel, should have gained better insight into the problems of a university following the reading of Jacques Barzun’s book, as well as enjoying it as a literary creation. There are eight chapters, each with an arresting title, and each chapter has numerous subtitles. I counted eighty of the latter and practically all were “catchy” phrases, to pique the reader’s interest. Many of these sections could exist independent of the total discourse, as short critiques, or editorials, on particular facets of the university. The total listing of the subtitles would be a fair abstract of the book. The reader using his imagination and own experiences, to add the meat and the feathers to such a skeleton, could come up with a parallel story to Barzun’s, though likely failing to match it in style or number of facts. Would a listing of 80 section headings violate copyright?

There is little mention of the medical school within the university mammoth, but one can savor a foretaste of how revolutionary movements within the university at large may grow within the specialty schools—medicine in particular. With the enlightened insight and outlook at Columbia University outlined by Professor Barzun, it is even more difficult than before to understand the magnitude of the violence on that campus, and the role of some of the junior faculty, only a few weeks after the book had been completed. With the ever-engulfing problems of funds and budgets, so artifically described, one can better understand, but not necessarily be more forgiving, for that university’s quasi-ethical grasp at expedient financial help from a patent on a cigarette filter. In a distillation of the book, the author seems to ask whether society in general, and students in particular, demand too much, and expect too much, of the present huge university, and why our culture looks askance at an objective of learning for learning’s sake, and pinches pennies in its support.

H.B.B.


This volume contains essentially the material presented at the Thirteenth Annual Meeting of the Ballistocardiograph Research Society. Its 19 papers cover a variety of subjects ranging from considerations of purely theoretical nature to evaluation of the effect of clinical treatment.

Over a period of several years a clear consensus has developed about the most suitable type of instrument to be used. As a result, those papers that deal with instrumentation are directed at more refined studies regarding the transmission of forces from the cardiovascular system to the transducer.

A newly emerging trend is the investigation of the ballistocardiogram in relation to other manifestations of fluid dynamical or aerodynamical nature such as systemic arterial pressure, aortic flow, radio density of the chest, diaphragm motion, and the thoracic air plethysmogram. These analyses have pointed up similarities and differences not noted before. Additional theoretical studies confirm the sensitivity of the ballistocardiogram to the quantity of blood ejected per beat and particularly to the time course of ejection during early systole.

About one third of the studies is devoted to the extraction of information that is of diagnostic interest and to the evaluation of therapeutic measures. The latter group includes dialysis and the Vineberg operation performed on patients with severe angina pectoris.

The book is recommended to researchers and clinicians who are interested in the quantitative aspects of the heart as a fluid pump.

ABRAHAM NOORDERGRAAF, PH.D.


This a well-done résumé of the current status of operable diseases of the heart. It has many
One might question the advisability of a discussion of electrocardiography in a text of this type, but in a few pages the basic elements of electrocardiography are well presented. Technical errors are present, but they are few in relation to the size of the book.

There are only a few places in the text which are open to differences of opinion. For one thing, it is said (p. 83) that ruptured chordae tendineae are "usually caused by subacute bacterial endocarditis or myocardial infarction." Actually, surgical experience indicates that only a minority of ruptured chordae tendineae is on this basis. In most instances the condition is idiopathic but often associated with left heart disease of various types. For another thing, on the subject of the Starr-Edwards aortic valve prosthesis it is stated (p. 101) that "The incidence of 'ball variance' is much higher than originally thought and is presently occurring in 10 to 15 percent of the patients." This percentage seems to vary markedly from one center to another, and is much less than 10 to 15 in some centers.

New books on subjects in rapidly advancing fields tend to become outdated quickly. In the volume at hand, however, only the newer operation for truncus arteriosus and some of the newer developments in transplantation of the heart have not been included.

In this book, consequently, the authors succeed well in their efforts to summarize the salient data about diseases of the heart amenable to modern surgical treatment. It can be recommended to all physicians interested in this area of medicine and surgery.

Robert O. Brandenburg, M.D.


The author, a pioneer investigator of the role of lymphatics in disease, has brought together in an orderly fashion what is now known or can be deduced from the international literature and what we yet need to know. Starting with a brief discussion of the normal function of the lymphatic system, the author proceeds to discuss disease states primarily involving the lymphatic system. This is followed by detailed and suggestive chapters describing the role of the lymphatic system in the production of signs and symptoms of diseases of the heart, liver, and pancreas.

The monograph is well printed and well illustrated. Particularly interesting are the tables in which the author outlines his concepts of the development of abnormal patterns, for example, lymphogogenous enteropathy in congestive heart failure, "vicious circles" in rheumatic carditis and mitral stenosis, insufficient lymph circulation in the pathogenesis of crural ulcer. Dr. Foldi presents in considerable detail his most recent work on lymphogenous encephalography which he defines as a "disease of the central nervous system brought about by insufficient cerebral lymph drainage." The reader will be stimulated and provoked by the concept even though he may feel disinclined to accept the complete thesis as having conclusively been proved by the evidence presented.

An extensive and valuable list of references follows each of the 23 chapters. The author concludes with the suggestion that among numerous problems awaiting solution, perhaps the most important one is the role of lymph circulation insufficiency in the development of atherosclerosis. "The arteries are well known to possess lymphatics among their vasa vasorum; and the question is, Why are the arteries unable to rid themselves of lipids via these channels? The solution of this question might have therapeutic implications."

H. S. Mayerson, Ph.D.


This is the publication of a symposium on ergometry in cardiology organized by the European Society of Cardiology which took place in Freiburg, West Germany. A wide experience is reported of exercise testing in diagnosis and function evaluation. Most of this experience is unknown to American physicians and is of considerable interest to them.

The introduction by Professor Denolin of Brussels emphasizes that the cardiac patient can and should work—proportionately to his adaptive capacity, and that this capacity is best defined by ergometry. Wide differences in the concepts and procedures of exercise testing and interpretation of results led to this conference which was organized in the hope of facilitating common international language and approach.
Reports of procedure and results of ergometric testing are detailed from several countries in various types of cardiac patients and in general populations. These reports substantiate the recent experience in this country that progressive work tests result in advantages over the commonly employed, single-stage, two-step procedure of Master: (1) a considerably increased yield of ischemic-type ECG responses, (2) a closer definition of capacity for work, and (3) an improved standardization of the cardiovascular stress.

Numerous graphs present the relationship between external work and measures of cardiovascular work, including heart rate, aortic and pulmonary artery pressures, and stroke volume. Information is provided on the repeat variability of responses to exercise tests, on the effects of posture, on the comparative findings of discontinuous versus continuous work tests having the same external work loads, and on short tests with large load increments versus longer, more gradual test procedures.

Special problems considered are those of (1) testing patients limited by valvular disease and by atrial fibrillation, (2) measurement of heart volume and of cardiac output in relation to work load, and (3) measurement and interpretation of catheter data during work tests.

The discussion consists of committee reports and covers a wide range of problems in ergometry. It gives useful definitions of measurements and exercise states, conditions for testing, recommendations for submaximal target pulse rates, ECG leads, criteria for stopping the test, and recommended researches.

Most of the presentations and the entire discussion are in English.

This short volume would be useful to the practitioner and clinical investigator as an introduction to problems and procedure in exercise testing. It is of particular interest to U. S. workers who actively use exercise testing and would like to know the details and excellent quality of the work in progress on the Continent.

HENRY BLACKBURN, M.D.


This German synopsis discusses in systematic tabular form the normal and abnormal configuration of electrocardiographic curves, some rhythm disturbances, and the electrocardiographic configurations in myocardial infarction, electrolyte changes, and ventricular hypertrophy.

The description is essentially a collection of empirical data—probably the ultimate in mnemonotechnical recognition of electrocardiographic pattern reading. Some rules and counter rules are given with frequent reference to carefully recorded electrocardiograms of the atlas. These were obtained by multichannel instruments using a speed of 50 mm/sec as the standard reference and testify once more to the superior quality of European instruments or of overseas technicians. On the other hand, the time lines correspond to those commonly recorded for 25 mm/sec or are, in other words, directly printed on the paper. This leads to easy confusion for the beginner. A statement as to the time division should be included in the technical data.

A beginning ECG reader needs to start some place, and the approach, as given in this text, has in the past been serviceable up to certain limits. How far empirical pattern learning can go is debatable. The rules and statements made by the authors are frequently so oversimplified as to require modifying sentences which almost nullify what has been said before, so that what has been laboriously memorized is promptly wiped out.

In the entire text no mention is made of leads, lead systems, orthogonality, vectorial representation, ventricular gradients, or other fundamental electrophysiologic principles underlying the interpretation of an electrocardiographic curve. While one appreciates the authors' desire to avoid anything but the most immediate practical steps, it is undoubtedly a dangerous practice to build a teaching atlas entirely on a mnemo-technical basis. The elaborate discussion of electrocardiographic positions which begins the text is probably one of the weakest contributions of the Wilson school and could easily be omitted. The reference to lead reversals is fairly meaningless, since leads and lead connections have not been discussed. Some interpretations of the cardiac irregularities presented in the atlas are debatable by modern standards, and in this instance, the frequent reduction of the long tracings to one third of the original size is unfortunate, because in these tracings one would like to have as little reduction as possible.

Certain merits of such a text cannot be disputed, but this one seems hopelessly outdated. It lacks a discussion of the recent developments in electrocardiographic diagnosis related to cardiothoracic surgery, pediatric cardiology, modern differentiation in disturbances of A-V conduction vs. His bundle blocks, or the analysis of external pacemaker-induced abnormalities. A "tertiary" pacemaker is mentioned which, confusingly however, applies only to simple ectopic foci.
The translation by Dr. Wehrmacher adheres closely, and at times a little too closely, to the German phraseology. However, Dr. Wehrmacher supplies frequent and very useful comments on differences in terminology and at times has replaced these with more common English usage. He has provided a bilingual index which gives the German as well as the English terms for various electrocardiographic impressions. This is exceedingly helpful, and in fact, it is one of the highlights of the volume.

The price is too high for what is essentially a seriously outdated attempt at empirical electrocardiography. With proper warning, it can be recommended however for the beginner, particularly if his training is supplemented by a modern electrophysiologic text or chapter.

HANS H. HECHT, M.D.

The Prevention of Coronary Heart Disease.

This small (66 page) volume published by the Irish Heart Foundation is intended for physicians and doctors of public health as well as for the lay public. Well printed, with a good type, clear headings, summaries at the end of each section, with a number of well designed tables and figures, and with a judiciously selected bibliography, it makes a very favorable impression. The largest portion of the text is devoted to a discussion of risk factors. One is pleased by the concise statements of the evidence and the moderation apparent in the conclusions. Doctors Mulcahy and Hickey have in general followed the prevailing views and do not exhibit any unusual aberrations of emphasis. They are vigorous and forthright in their discussions of the relations between elevations of serum cholesterol, hypertension, and the cigarette habit with coronary atherosclerosis. They are guarded and careful in their interpretations of the evidence associating genetic factors, physical activity, and overweight with coronary disease. They do not endorse the sucrone or stress theories. This, the major portion of the volume, is well done.

The final five and one half pages describe the practical approaches to prevention. Here, some of the general statements are confusing. For example, it was stated earlier that there was little evidence to suggest that gout or hyperuricemia were qualitatively important in coronary atherosclerosis; this section discloses that gout is "significantly" associated with coronary disease—as well as duodenal ulcer, bronchitis, and hernias—factors not previously mentioned. Psychologic stress had been virtually dismissed as a risk factor in an earlier section, yet this final chapter states that "the resolution of stress must form an important objective in the subject's management." Many physicians would not agree on any necessity for an exercise electrocardiogram in the patient with typical angina pectoris and would also question the statement that "a raised serum cholesterol can be effectively and easily lowered in most subjects by simple dietary means."

The first 57 pages are admirable and well done. The last 5 pages are distinctly uneven although containing mostly much good sense. With very minor modifications, this would be an excellent booklet for distribution by the American Heart Association to medical students, house staff, the allied health professions, and many patients. As it is, it is decidedly useful.

OGLESBY PAUL, M.D.


This book is a comprehensive review of pulmonary arteriovenous fistula and its close relationship to hereditary hemorrhagic telangiectasia.

The main part of the book, however, consists of a survey of an interesting family with hereditary telangiectasia in which a total of 18 members with pulmonary arteriovenous fistula was discovered.

Two hundred sixty-four members of this family attended mass chest roentgenographic surveys of whom eight (3%) were found to have pulmonary arteriovenous fistulas. Of the remaining 12,000 persons not of this family who were surveyed, none were found to have fistulas. The value of routinely taking chest roentgenograms and examining carefully all members of a family with hereditary telangiectasia was thereby demonstrated.

Having suspected or discovered an arteriovenous fistula, the authors review the special methods of investigation which may be indicated, including clinical, laboratory, physiologic, and roentgenographic investigation, and the relative contribution of each.

While recognizing the value of roentgen diagnostic procedures including posteroanterior and lateral roentgenograms, fluoroscopy, and tomography, the authors stress the importance of angiocardiology as the definitive diagnostic procedure. It not only affords proof of the diagnosis, but may also demonstrate fistulas previously unsuspected. Because of the risks

Circulation, Volume XL, December 1969
associated with angiocardiology, they claim the procedure should be reserved for those patients for whom therapeutic intervention is contemplated.

The authors recommend surgical removal of all fistulas unless contraindications exist and urge the preservation of as much lung tissue as possible.

The case presentations are good, and the accompanying reproductions of roentgenograms are superb. They form an excellent study of the variety of shadows that pulmonary arteriovenous fistulas may present, the obvious and obscure, the small and large, the single and multiple. The illustrations clearly show the value of the various roentgenographic technics and their value when indicated and utilized.

The thoroughness of the review, the reports of cases, and the excellent photographs make up for a minor lack of editorial proficiency.

C O R R I N  H. H O D G S O N ,  M.D.


For better or for worse, symposia, conferences, workshops, and congresses have become part of our scientific way of life. This book perhaps shows why frequent objections arise to publication of their proceedings. Of some 23 formal essays and four introductory papers, less than half contain any significant unpublished data. New investigations, of course, are what make a symposium effective as an instrument of communication, but the publication of unrefereed papers is dangerous, even more so in this book because the essays are not necessarily what the authors presented at the meeting. On the opposite tack, the preponderance of review material has little value; annotated bibliographies would have been preferable.

The literary merits of the contributions are as varied as their scientific contents. The preface states that the stenotypist accumulated 287 pages of “personal, lively, and occasionally heated” discussion. These attributes do not come through in the final edited text.

The papers are arranged into four groups. Part I, “The Pulmonary Alveolar-Capillary Interface and Interstitium,” is the least satisfactory. It is an important, difficult, and controversial field; yet there is little evidence of communication among the participants. Wiederhielm’s new investigation of interstitial space, and lymphatic pressures in the bat’s wing are outstanding. It is always a pleasure to read his work. Part 2, “Vasomotion and Electrophysiology of Smooth Muscle,” is interesting in that essentially no data exist for the pulmonary vasculature. The four review papers are especially interesting to pulmonary investigators because they bring us up to date on what is known about vascular muscle, in general. Part 3, “Regulation of Pulmonary Circulation,” contains the most notable essay. Torrance’s “The Idea of a Chemoreceptor” (pp. 223-234) is humane and generally literate but does include one amusing sentence which may epitomize the entire book. To quote from p. 230 . . . “It is, by its confusion almost, intended to show that, in my opinion at least, our views of the mechanism of the carotid body, after a long period of relative stability, are now up in the air . . .” Part 4, “Pulmonary Hemodynamics,” contains a higher proportion of new material than the other sections. Cumming and associates have begun a detailed dimensional analysis of the pulmonary vascular tree, and Permutt and co-workers have examined distensibility of the pulmonary vascular bed by elaborate indirect methods. Their efforts prove once again that one peek is worth two finesses.

What is the value of this book? It probably will serve as a source book for interested specialists, but it is not relevant to the casual reader. The results of the symposium would have been better as a special report published in Circulation Research giving abstracts of the invited papers, and, instead of discussions, a listing of agreed upon definitions and concepts, an annotated relevant bibliography, and descriptions of problem areas that might stimulate young investigators to new technical innovations and experimental studies.

N O R M A N  C. S T A U B ,  M.D.


This manual is designed to serve as a guide “to increase the capacity for physical exertion in cases of chronic obstructive lung disease.” In addition, the author believes that the “series of illustrations of the physical methods . . . with the attached legends, provides an adequate outline for patients . . . who suffer from this syndrome . . . to follow.” The topics covered include brief references to the use of bronchodilator aerosols, heated aerosols, steroids, tracheostomy, and positive pressure breathing in these patients. The primary focus of the manual, however, is on the use of physical exercise programs together with training in different patterns of breathing to rehabilitate the respiratory cripple. The different methods advocated are clearly presented; the sources of supply of some of the technical materials used are listed. With the guidance of the illustrations, it should
be possible for a knowledgeable physician to set up similar programs.

The book obviously reflects the author's opinion, based on long clinical experience, that a rehabilitation program using these technics will make the patient feel better, function better, and possibly live longer than the patient who does not participate in such a program. Unfortunately, in view of the magnitude of the problem and the uncertainties about what constitutes proper treatment, there are few reports designed to investigate adequately the effectiveness of the components of this type of rehabilitation program. In general, the reported studies are not adequately controlled, do not separate the effect of one rehabilitation technic from any other technic used, and do not differentiate the effect on the patient of the close supervision provided by the medical team from the effect of the actual physical procedures themselves. All studies report that the patients feel better. Some studies suggest that the patients may exercise more efficiently after such training, but no study, at this time, shows that survival is prolonged. It is hoped that the methods advocated in this manual would be applied in a statistically controlled program so that convincing data could be accumulated from which one may choose the components of a rehabilitation program for patients with chronic obstructive lung disease.

WARREN M. GOLD, M.D.