

Reviews of Recent Books



Biochemical Individuality, by Roger J. Williams, John Wiley & Sons, Inc., New York, 1956, pp. 214, \$5.75.

No one denies that it is necessary to manufacture synthetic pictures of disease which we must compare with a synthetic picture of normality. But it takes much wisdom and much experience to realize that in the final analysis the notion of the *normal* as an entity and the concept of disease as a classic textbook entity are both figments. In times gone by, when physicians were not so bewildered by choosing what specific to use, since there were so few of them, it was possible for wise doctors to concentrate more on the individual. There was then much thought and action based on ideas of diathesis, disposition and temperament. Much more attention was devoted to the physiognomy of disease as it was modified in each sick person. To some extent these views of our medical forefathers were weakened by artificial systems of nosography in which single causes were emphasized to the exclusion of the tremendous importance of individual variations of response, resistance, susceptibility, and so on.

The notion of physical individuality has become widely accepted with studies of body type, with emphasis on such qualities as maleness and femaleness, and with reference to susceptibility to disease. In 1916, my father, R. B. Bean, published one of the first documented studies of the variations in frequency and severity of particular diseases among individuals of different anthropologic types. He found that there were some well-marked tendencies which might have some predictive value for the clinician. Thus Hippocratic intuition began to get objective verification. Only with the vast proliferation of information obtained by chemists have we faced the problem of conformity or individuality in the biologic, biochemical, and enzymatic constituents and characteristics of various people. Roger Williams, who has emphasized what he calls the genetotropic concept of disease, has amassed a great deal of evidence, much of which has been collected in his own laboratory, which suggests very strongly that just as no two fingerprints are alike, so we all seem to differ, one from another in our biochemical patterns. These arrangements seem to result from genetically determined biochemical processes.

As an example of an inevitable corollary on these facts, we may confront the problem of "vitamin requirements." For a point of argument, let us assume there are finite and specific vitamin requirements at a minimal level for safety and, higher, at an optimal level

for "ideal" health. Let us assume that all the environmental variables such as climate, activity, pregnancy, lactation, growth, are kept constant in a sizeable population. Still the requirements for any particular vitamin may vary many, many fold among different people, and in the same person perhaps from time to time. Likewise most persons might have some high, some middling, and some low requirements, though conceivably rare creatures might have low requirements all across the board, and others all high requirements. The impossibility of setting up an idealized list of requirements satisfactory for everyone is immediately apparent.

This thesis, which seems reasonable, but which requires much further verification, is enormously important in clinical medicine for it emphasizes again that each problem must be individualized, that standard doses of most medicines are wasteful for some patients, and unsafe for others, and that we cannot practice properly unless we know enough of the pharmacologic effects to adjust our treatment to the individual requirement for various patients under varying circumstances. The same is true for food and for vitamins. In a time of plenty we can be wasteful, and advise diets adequate for almost everyone. But in the present pressure for space and food as a global problem, ultimately we may need to study each person's individual requirements for many essential nutrients, and tailor his eating to suit his needs rather than his tastes. But probably such a custom-built approach can be afforded only by those who really don't need it. Roger Williams, in this searching book gives us much to think about, for we can never solve problems until we recognize them and face them.

WILLIAM B. BEAN

ABC für Zuckerkrankhe, by F. Bertram, Georg Thieme Verlag, Stuttgart, Germany, 1956, pp. 84, D. M. 4.20, \$1.

This little booklet by Professor Bertram, a well known clinical expert in diabetes in contemporary German medicine, is written for the diabetic patient. It contains three interesting features which are somewhat different from the recommendations given to the diabetic patient in this country.

(1) Dr. Bertram stresses a relatively rich carbohydrate, normal-protein and low-fat diet. Generally, he does not allow more than 70 to 80 g of fat per day. He also restricts cholesterol-rich foods, especially eggs. His emphasis on a low-fat diet seems very well justified

considering the interesting experience that diabetic patients did remarkably well in Europe during the war years when they depended to a large extent on carbohydrates in the food available as potatoes, rye bread and vegetables, since little fat and protein were available. Nowadays diabetes in Germany is rapidly increasing as it is in every country with high living standards—a fact for which the author blames mainly the high-fat content of the modern diet. Dr. Bertram's dietary regimen is in the tradition of the famous v. Noorden school.

(2) The author's guide for the diabetic patient includes for the first time a discussion of the new orally active blood-sugar lowering sulfa-like drugs. His opinion on this subject is apparently an optimistic one which may be justified by his experience with these drugs. He stresses the fact, now completely accepted, that these drugs are most useful in the older obese patient, suggesting that some insulin must still be produced if the drug is to be effective. Nevertheless, in the opinion of the reviewer, one should not forget that one or two years is a relatively short period for a thorough evaluation of the possible therapeutic value and of the possible inherent toxicity of a new therapeutic principle.

(3) Another section deals with the benefit of muscular activity for the diabetic. That such activity is indeed an excellent therapeutic adjuvant in the treatment of diabetes is supported by recent experimental findings. The very personal point of view, expressed by Dr. Bertram in this little booklet, should stimulate the physician who has to deal with diabetic patients, to compare critically a regimen now widely followed in Germany with that which presently prevails in this country.

ERNST HELMREICH

The Biological Basis of Human Freedom, by T. Dobzhansky, Columbia University Press, New York, pp. 135, \$2.95.

The author of this significant book is an eminent biologist and geneticist. In 1954 he delivered the Page-Barbour lectures at the University of Virginia which comprise the basis for the essays in this short book. The style is forceful and lucid. The text is challenging and stimulating.

Early in the discussion Dobzhansky states that there is no such thing as a purely inherited or a purely environmental trait. This seems amply confirmed by a wide variety of data from numerous disciplines. Perhaps the section with the widest appeal to the general reader is the one entitled "Heredity as a Basis of Culture." Here the author shows that "human evolution is a singular product of interaction between biology and culture." In the chapter "Who Is the Fittest?" he indicates that natural selection does not necessarily favor what we may regard as desirable. Later in an important section dealing with ethics and biology he concludes that the ability of man to choose freely between ideas and acts is one of the fundamental characteristics of human evolution. Freedom may be the most

important of all the specifically human attributes. Furthermore, ethics emanate from freedom and are unthinkable without freedom.

Thus a thinker and scientist views the role of man partially bound by his genes and enclosed in his environment. It is a balanced logical appraisal and one badly needed in these days of scientific speed. S. O. W.

Experimental Methods for the Evaluation of Drugs in Various Disease States, edited by B. N. Craver, *Ann. N. Y. Acad. Sc.* 64: 463-732, (Nov.) 1956, \$3.50.

A conference on experimental methods in drug evaluation was held by the New York Academy of Sciences in March 1956. Twenty-one papers were presented which were divided into the following general headings: collagen diseases, angina pectoris, cardiac arrhythmias, atherosclerosis, and disorders of the central nervous system.

The contributors in general are highly experienced workers in their fields. Nevertheless, the quality of the presentations varies considerably. Most of the writers discuss the pros and cons of specific technics used in their work. These are important and necessary matters. But this reviewer would have preferred a more thoughtful analysis of the principles of drug evaluation. The book contains much valuable information which should be of special interest to investigators working directly in the fields discussed. They will find therein many valuable hints and suggestions. Although some of the authors seemed anxious to review their own work and re-emphasize their views, the objective reader will benefit by a critical reading of these important contributions. S. O. W.

Books received for review by THE AMERICAN JOURNAL OF CLINICAL NUTRITION are acknowledged in this column. As far as practicable those of special interest are selected, as space permits, for a more extensive review.

British Medical Bulletin, Physiology and Pathology of the Kidney, Vol. 1, January 1957, pp. 74, \$3.25.

Guide to Medical Writing by Henry A. Davidson, The Ronald Press, New York, 1957, pp. 338, \$5.00.

Liver, Biliary Tract and Pancreas, edited by Frank H. Netter, Part III of Volume 3, Digestive System, The Ciba Collection of Medical Illustrations, Ciba, Summit, N. J., 1957, pp. 165, \$10.50.

The Importance of Overweight by Hilde Bruch, W. W. Norton, New York, 1956, pp. 438, \$5.95.

Essentials of Nutrition, 4th edition, by Henry C. Sherman and Caroline S. Langford, MacMillan, New York, 1957, pp. 505, \$4.90.

Advances in Food Research, Vol. 7, by E. M. Mrak and G. F. Stewart, Academic Press, New York, 1957, pp. 404, \$9.50.

