Book Reviews

Advances in Medicine and Surgery from The Graduate School of Medicine of the University of Pennsylvania. Philadelphia–London: Saunders, 1952. 441 pp. Illus. $8.00.

This is a well-bound volume well printed on excellent paper. Illustrations, where utilized, are good. The subject matter consists of 52 separate papers designed to cover 10 general subjects. The authorship is multiple and comprises 55 contributors, most of whom are connected with the University of Pennsylvania; a few are guest lecturers.

The purpose of the compilation is to fulfill one of the objectives of the faculty of the University of Pennsylvania Graduate School of Medicine; namely, to publish in book form the symposia given in a postgraduate course for practicing physicians. The subject matter covered is wide and ranges from a consideration of adrenal cortical hormones on through potassium metabolism, thrombo-embolism, cancer, and functional disorders, to mention a few. There is no direct relationship, other than an occasional coincidental one, between the various general subjects.

It goes without saying that no single person is competent to review adequately such a diverse compilation, even if space restrictions did not automatically preclude such an effort. Least of all should a surgeon take on such an assignment if he has any regard for the customary scientific amenities and enough brains to keep out of trouble. Obviously, the reviewer possesses neither.

It is our impression that the editors and authors have done a difficult task well. As is to be expected in any such assembling of material by so many authors, there is considerable variation in the amount of effort expended and in the method and type of subject management. This concerns the length of discussion and clarity of presentation, as well as fidelity, authenticity, and style of narration. Probably the most serious and most inexcusable breach of fidelity was encountered in Henle's article on mumps, wherein he fails completely to mention the obvious pertinence and priority of Goodpasture's outstanding, classical work. This is the bedrock on which Henle's article rests but, oddly, he inferentially (p. 384, line 3) ascribes it to others.

The reviewer has been interested for years in the efforts of some members of the preclinical medical faculties to stray over into the clinical aspects of medicine. By and large, it is our impression that they do it less gracefully, perhaps with less deftness, than the clinicians, who in turn are poaching along the fringes of pure science.

This volume interestingly illustrates the foregoing without detracting from its charm or real intrinsic value. Each general section is well and interestingly done. To do justice to each of the numerous contributors would require individual mention of each. Limitation of space makes this impractical, although the volume warrants such treatment. In our estimation, this compilation may be read with interest and profit by any physician, irrespective of his field of special interest. Therefore, it is sincerely recommended.

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Biochemistry and Human Metabolism. Burnham S. Walker, William C. Boyd, and Isaac Asimov. Baltimore: Williams & Wilkins, 1952. 812 pp. Illus. $9.00.

Some of the textbooks in biochemistry published during the past 15 years have, by the introduction of a few clinical applications, emphasized the interests of medical students. Others, written expressly for medical students, have not adequately combined the fundamentals of the subject with the medical viewpoint. As in other sciences, the authors of textbooks in biochemistry are faced with two difficult problems. The first is that of inclusion or exclusion of material. The border lines between biochemistry, physiology, pharmacology, and microbiology have never been very clear and are becoming less so as these fields develop. The second is that of arrangement of the material for maximum teaching effectiveness. Although the answer to this problem may lie in part in pedagogical theory, the solution usually grows out of the personal ideas and experience of the authors.

Biochemistry and Human Metabolism is intended primarily for medical students. The classical order of topics has been altered extensively. Part I, comprising four chapters, is entitled "Structure." "The Chemistry of Proteins" (Chaps. 1 and 2) is taken up first because of the authors' opinion that these substances are of prime importance to medical biochemistry. "The Chemistry of Carbohydrates and Lipids" is presented as an introduction to tissue chemistry (Chap. 3 of Part I). The fourth chapter deals with blood and the anemias. Part II, designated "Control," contains the usual material on enzymes and hormones. In Part III, "Growth," there are chapters on nucleoproteins, cancer, and reproduction and heredity. Part IV, "Metabolism," takes up food and diet, digestion, intermediary metabolism, electrolytes and water, respiration, heat and work, and excretion. "Vitamins and Vitamin Deficiency Diseases," and "Infection" make up Part V, "Pathology." Colloids, isotopes, thermodynamics, and acids and bases are covered in the appendix.

The success of a textbook as a tool in the teaching process is difficult to forecast. It seems evident, however, that a mere reshuffling of topics does not in itself constitute a real improvement. Moreover, it leads to certain teaching difficulties, such as the postponing of basic definitions and concepts until after their application and significance have been discussed. There is

still much to be said for the classical arrangement of proceeding from the simple to the complex; from the known to the unknown. Many instructors in medical biochemistry cover the material included in the appendix of the present volume in the early part of their courses.

The chapter on "Reproduction and Heredity" contains a 30-page section on genetics and blood groups. The necessity of including this and a 23-page chapter on cancer in a textbook of medical biochemistry may be questioned, especially when "Lipid Metabolism and Ketosis" is covered in 12 pages, and "Proteins and Starvation" in 27.

In general, the authors have been successful in integrating the basic and clinical aspects of the subject. The clinical applications are well chosen and of current interest. The volume should be especially valuable to physicians and interns who wish to review recent advances on the subject. Assessment of its value as a text for students beginning the study of biochemistry must await the test of usage.

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Problems in Physical Chemistry. English ed. Lars Gunnar Sillén, Paul W. Lange, and Carl O. Gabrielson. New York: Prentice-Hall, 1952. 370 pp. $5.50.

For some time this reviewer has felt the need for a problem source book as an aid in teaching physical chemistry. To a very large extent this need is satisfied by the translation of Sillén, Lange, and Gabrielson's Swedish text, which contains more than 700 problems, with answers, covering "classical" physical chemistry—e.g., 100 problems relating to thermodynamics, 75 to electrochemistry, 75 to chemical kinetics. The problems in each set are graduated as to difficulty, and, in most cases, reference is given to the original literature.

It is unfortunate that contrary to American usage the work done by a thermodynamic system is defined to be negative and, thus, the first law is written $\Delta E = q + W$. However, since this convention, and all others, are very clearly stated in the text, this change in sign should cause only momentary confusion in the mind of the reader. It is felt that the inclusion of problem sets relating to nuclear chemistry, atomic and molecular structure, and the more elementary concepts of quantum mechanics would have greatly enhanced the usefulness of the book when used in conjunction with a modern textbook such as Moore's.

Although of minor importance, it is very pleasing to see the book begin on page 1 with the generalized mol concept and ignore completely the superfluous terms gram-atom, gram-ion, etc.

Sillén's manual clearly can be useful to the lecturer, but its adoption for student use may be problematical. The discussion accompanying each problem set is exceptionally lucid, but necessarily concise; therefore, it seems doubtful that the book could stand alone as a text. On the other hand, there may be a reluctance to ask students to purchase this problem book in addition to a conventional textbook. The usefulness of this manual to the student, however, may well outweigh the monetary consideration.

The authors begin the introduction with the statement: "The student who would learn to solve physicochemical problems with confidence must be prepared for a fair amount of mental effort." The reader who works his way through the book will also have used "a fair amount of mental effort" but will be more than amply repaid for his labor.

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The Stars: A New Way to See Them. H. A. Rey. Boston: Houghton Mifflin, 1952. 143 pp. Illus. $4.00.
Pictorial Astronomy. Dinsmore Alter and Clarence H. Cleminshaw. New York: Crowell, 1952. 296 pp. Illus. $4.50.

There are unfortunately many authors who must "talk down" to their readers because they have no confidence in the earnestness and intelligence of the ordinary fellow. These authors are usually amateurs in the fields in which they write. Others, who are professionals, have learned the knack of writing lucidly, yet informatively and authoritatively. In these books we have examples of these two contrasting types.

The jacket blurb for the book by Rey speaks of the author as having "swept out the meaningless and confusing geometrical shapes that have baffled the beginning star-gazer for centuries." To justify this statement, there are pages of contrasting "old" and "new" representations, but few will recognize the "old" ones as authentic. In many instances the author has drawn absurd "old" diagrams which he has then contrasted with "new" ones that many of us have been using right along. When he does do a really new one, such as for Ursa Major or for Pegasus, he often corrupts the traditional descriptions and reverses the figures, doing a far worse job than has been done in the past.

I know from my own experience that in several planetarium cities the "new" figures of Rey have been used for many years, and some others that are far superior to his. Not all the figures are bad; many of them are good "old" ones. The jacket itself, when unfolded, is a very useful map of the Northern sky. The text and illustrations in the second half of the book, devoted to general information in astronomy, are rather good. Certainly, some new stargazers will be attracted by this book—always a good thing.

The second book is written by two professionals who have devoted many years to extending public knowledge and appreciation of astronomy at the Griffith Planetarium in Los Angeles. There are 10 pages of star maps of various kinds, but most of the 56 chapters are devoted to very lucid discussions of specific topics in astronomy, intended for the average interested but uninformed person, even some rather young ones.

Alter and Cleminshaw have had millions of people