are commended to all who, immersed in narrow routines or in specialized studies, wish to broaden their horizons and renew their appreciation of the history of our science. Old and young, venerable scholar and graduate student, will here find interest and inspiration for their further endeavor.

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Electronics. An electrical engineering approach. George F. Corcoran and Henry W. Price. Wiley, New York; Chapman & Hall, London, 1954. x + 459 pp. Illus. $7.

This is primarily an introductory textbook on active or electronic circuits. After a cursory treatment of such physical electronic topics as ballistics, space charge, and thermionic emission, the text proceeds through a discussion of vacuum diodes, multielement vacuum tubes, linear active circuits, nonlinear active circuits, feedback, principles and application of gas-filled tubes, germanium diodes, transistors, and transistor amplifiers.

The authors have made a laudable attempt to emphasize fundamental principles. This emphasis is particularly evident in the chapters on transistors and oscillators, and to a certain degree in the material on feedback. However, in the chapter on linear operation this point of view is not carried out to the same extent. For example, the nodal analysis method is introduced at the very end of the chapter when it could have been profitably used throughout the preceding material. In the chapter on vacuum diodes the authors fail to seize the opportunity to explicitly point out the piecewise linear method of analyzing a nonlinear problem. Aside from these lapses, I feel that this is a creditable piece of work with respect to the treatment of the active circuits.

In view of the good treatment of circuits, it is extremely unfortunate that the material in the first two chapters constitutes such a handicap to the remainder. I assume that the authors intended to treat certain electric and magnetic field quantities as vectors since they are printed in boldface type. These quantities are then treated with a complete disregard for their vector character. This can only serve to create confusion or false impressions regarding the fundamental quantities of electric and magnetic fields in the mind of the student. In addition, the relationships between electric and magnetic fluxes and their corresponding densities as given are valid only for uniform fields, but this is not pointed out.

I believe that this textbook suffers from a certain lack of consistency in approach and from some fundamental deficiencies which considerably reduce the effectiveness of presentation. Despite these shortcomings, however, it compares favorably with others in its field.

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The Permanent Revolution in Science. Richard L. Schanck. Philosophical Library, New York, 1954. xvi + 112 pp. $3.

I have read this book through slowly and carefully —it is a short book—yet I have no feeling of having understood what the the author was trying to say. There is a horrid suspicion in my mind that the trouble may be with me rather than with the book, which makes for difficulty in writing a review. The jacket "blurb" says that "it is the thesis of the author that a common method has been emerging in the different sciences which recaptures the dynamism of teleology without the fallacy of local cause and which preserves the field theory of mechanism without asserting invariance of behavior of the element." That sentence, I suspect, summarizes the book nicely; and anyone to whom this seems clear and cogent will probably enjoy the book itself.

Much of my trouble in reading can be traced to vocabulary allergies. The book is about "methodology," a word which, by itself, causes an almost immediate suspension of my thought processes. Philosophy, the author points out, will wither away as methodology develops, and somehow all sorts of things like ethics, aesthetics, progress, and "relative absolutes" will come into flower as this withering proceeds. The "revolution" in the method of science that the author is writing about finds its clearest expression in Marx and Freud—which may explain my confusion. Dialectic keeps bobbing up throughout the text, and there I have to struggle with another allergy. In my case, then, there was a complete failure in communication—but I neglected to take antihistamine before starting to read.

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Recent Progress in Hormone Research. vol. IX. Proceedings of the Laurentian Hormone Conference. Gregory Pincus, Ed. Academic Press, New York, 1954. 467 pp. Illus. $9.50.

This is a report of a special interim meeting of the Laurentian Hormone Conference held at Shrewsbury, Massachusetts. Its deliberations were strictly confined to techniques, and there was no discussion, except only incidentally and casually, of the broader concepts involving the function, origin, and control of the steroid hormones. This fact is clearly indicated in an obscure position in the preface to volume IX where the title of the conference is given as "Methods of steroid determination in blood and urine." The book, therefore, stands apart from companion members of the series, which, up until now, have been mostly concerned with physiological and clinical matters.

It is a highly valuable and useful volume, in fact a must for anyone who is interested in measuring or determining in a precise way the steroids found in blood and urine. It is not, however, recommended to the general reader unless he has a broad and intimate

knowledge of the basic analytical techniques of biochemistry. For those who need it, it will be invaluable. It is a highly practical book, and it will serve the endocrinologist well as a combined handbook, guidebook, and vade mecum in a difficult field. The knowing reader will find it extremely helpful in finding his way through a maze of methods for the separation of the steroid hormones from a multiplicity of other compounds.

It is repeatedly emphasized throughout the book that the choice of methods depends on what you want to find and where you intend to look for it. This and other equally pertinent advice will serve the neophyte well. It will also warn him of the pitfalls and hazards that beset this area.

The volume is divided into seven sections: "Introductory remarks," "Progesterone and metabolites," "Estrogens," "Neutral ketosteroids," "Non-ketonic neutral steroids," "Corticosteroids," and "Steroids as tracers." From this the reader should have no difficulty in comprehending the breadth and scope of the book. Each section contains from one to seven papers, all by distinguished investigators in their respective fields. A summarizing discussion of some 30 pages concludes the volume and adds to its usefulness. The problem of acid versus enzymatic hydrolysis of steroids is thoroughly discussed and explored as are other procedures for the fractionation and identification of these compounds. The techniques of measurements and the special advantages and disadvantages of the colorimetric, chromatographic, fluorometric, and spectrophotometric methods are all given adequate and thorough treatment. All in all it is about as comprehensive as anyone could wish.

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Chambers's Shorter Six-Figure Mathematical Tables. L. J. Comrie. Chemical Publ., New York, 1954. xxvi + 387 pp. $6.50.

For all workers acquainted with earlier versions of Chambers's mathematical tables it may be sufficient just to announce that these six-figure tables of logarithms and the trigonometric, exponential, and hyperbolic functions are now available. For others, whose use of tables has been limited to schoolbooks and various handbooks, this volume should show how much can be done to lighten the labor of hand computation. The typography is superb. The type face is old style in order to reduce reading errors.

The introduction gives explanations that will be most helpful to the nonprofessional computer, particularly the statements on accuracy and interpolation. For example, the tabulated difference between successive entries is printed in italic whenever linear interpolation is inadequate. In addition to tables of powers, roots, factorials, and prime numbers, there are tables for interpolation and numerical differentiation and integration. The volume includes brief but handy lists of integrals, series, and physical and mathematical constants. Both compiler and publisher deserve enthusiastic thanks for this splendid volume of general-purpose tables.

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Tables of Lagrangian Coefficients for Sexagesimal Interpolation. NBS Applied Mathematics Series, No. 35. National Bureau of Standards, Washington, D.C., 1954 (Order from Supt. of Documents, GPO, Washington 25, D.C.). ix + 157 pp. $2.

These tables contain 3-, 4-, 5-, and 6-point Lagrangian interpolation coefficients corresponding to interpolation by quadratic through quintic polynomials. Each coefficient is given to eight decimals. The coefficients are conveniently arranged and permit the direct calculation of functional values at integral multiples of 1/3600 of the basic interval of the argument. The introduction, which contains illustrations of various ways of using the coefficients, might be more helpful to some users if it were more self-contained by including definitions and a little of the theory of Lagrangian interpolation. The printing is excellent.

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Die Bedeutung des Blutchemismus. Besonders in Beziehung zu Tumorbildung und Tumorabbau. Ernst Leupold. Georg Thieme, Stuttgart, Germany; Intercontinental Medical Book, New York, 1954. 207 pp. Illus. $11.90.

This is a sequel to and represents the second part of *Cell and Tissue Metabolism as Internal Condition for Disease,* published in 1945, which contained results of experiments on mice. Substances found in the normal physiological metabolism, if injected in the blood system of mice in very small amounts and at low concentrations, had caused the development of tumors and of other diseases. These experiments were continued on rabbits. It is shown that parenteral resorption of metabolic products induces marked changes in blood reactions with respect to the lipid and sugar content. These changes are related to one another and can be expressed as ratios or "systems," such as sugar/lipid, cholesterol/lipid phosphorus, and cholesterol/sugar/lipid phosphorus; the last, which is written in the book as Ch/Zp, appears to be the most important index. If the system Ch/Zp falls strongly during the first few hours after the injected substances have been resorbed in the blood, then tumors are formed; if the numerical value of the system increases while the sugar content falls absolutely as well as relatively, then existing tumors are destroyed. The knowledge obtained from the experience with rabbits was clinically applied to nonoperable human tumors, mostly cases in which hope of