ter have done an excellent job of reviewing the use of the various techniques available for making such determinations. In my opinion, this book is also one of the best compilations of methods for determining the structure of organic compounds in general that is presently available. Chapters 2 through 5 (on ultraviolet, infrared, nuclear magnetic resonance, and mass spectroscopy, respectively) form a compact introduction to the applications of these tools in organic chemistry, which could be read with profit by every student in this field. Another example of the general utility of this volume is the excellent treatment (in Chapter 6) of the interplay of inductive, resonance, and steric factors in determining the acidity and basicity of organic compounds.

The various topics treated in the chapters devoted to chemical methods will be of general usefulness to the organic chemists, even though the specific examples of their use are usually natural products. The chemical methods treated are detection and protection of simple functional groups, reduction and hydrogenation, dehydrogenation, zinc dust distillation, alkali fusion, carbon-oxygen and carbon-nitrogen bond fission, degradation of polypeptides and proteins, degradation of side chains, stereochemistry, and molecular rearrangements.

This volume certainly belongs in every scientific library, and many practicing chemists will want to own their own copy.

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Undergraduate Textbook

University Mathematics. Robert C. James. Wadsworth, Belmont, Calif., 1963. xiv + 924 pp. Illus.

Despite a reasonable first conjecture that the reader may form on viewing the title, type-size, and bulk of this book, the volume is designed as a textbook for use in the first 2 years of undergraduate instruction in mathematics. It opens with a substantial chapter that introduces the basic ideas and techniques of the calculus and serves as a preview of the course without bothering overmuch about finer points; many science departments request that their students have these tools early in their first term, a request that this chapter meets. Following this, we start from fundamentals: sets, relations, functions, logic, probability, the finite cardinals, an outline of the development of the number system, and a discussion of the real number system.

The least upper bound axiom leads naturally to limits and continuity (chapter 5), and from this point on the subject matter could be described, fairly and briefly, as an unusually careful, complete, and detailed "calculus and analytic geometry—with vectors," except for chapter 12, which is a substantial introduction to linear spaces, transformations, and their associated matrices.

It seems clear that the book was written with a rather above average student in mind, that an average student would find it a rather stiff dose (although his instructor might profitably consult it), but that it deserves consideration if your primary concern is with students of fairly high ability.

The only lapse noted in the author's general carefulness is in section 7-4 where, without comment, we find ourselves considering partitions of the interval $[a, b]$ with $a > b$.

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Malnutrition

Mild-Moderate Forms of Protein-Calorie Malnutrition. Symposia of the Swedish Nutrition Foundation held at Båstad in August 1962. Gunnar Blix, Ed. Almquist and Wiksell, Stockholm, 1963. 159 pp. Illus. Kr. 35.

The Swedish Nutrition Foundation was created in 1961 to bring together scientific, industrial, and government organizations interested in nutrition. Among its activities is the holding of an annual symposium on a topical subject. The first meeting was held in Båstad, 29 to 31 August 1962, and the proceedings of that symposium have been published under the title *Mild-Moderate Forms of Protein-Calorie Malnutrition.*

It was judged appropriate to initiate the series with a study of the most widespread nutritional syndrome in the world today. The organizers probably wished to also emphasize that, in addition to the full-blown kwashiorkor and marasmus, there are a number of mild and intermediary conditions which, like the submerged part of an iceberg, comprise the great mass of this important threat to the welfare of the children of the world.

This slim, attractive book, well edited by Gunnar Blix, contains the following chapters: "Nutrition research and food production," "Clinical signs of mild-moderate protein-calorie malnutrition of early childhood," "Biochemical signs of mild-moderate forms of protein-calorie malnutrition," "Metabolic disturbances in protein-calorie malnutrition," "Production and control of oedema," "The Swedish project concerning a children's nutrition unit in Ethiopia," "The evaluation of the nutritive value of proteins," "Minimum requirements of calories and protein in different age groups," "Adaptation to suboptimal nutrition with respect to protein and calories," "The vicious-circle mechanism in production of protein-calorie malnutrition," "The influence of protein-calorie malnutrition on psychological test behavior," "Methods for the determination of physical capability," "The assessment of protein-calorie malnutrition of early childhood as a community problem," "The utilization of protein-rich foods in the prevention of protein-calorie deficiency diseases."

Particularly outstanding are the chapters by Jelliffe and Welbourne, Waterlow, Dean, Bigwood, and Cravioto and Robles. Jellife greatly clarifies the marasmus-kwashiorkor relationship and gives a workable classification of signs and symptoms. Waterlow gives a neat summary of metabolic and, more specifically, body composition changes in protein-calorie malnutrition; Dean, one of the edema picture in this syndrome. Bigwood, one of the great scholars in the field of nutrition, whose scientific life-span has embraced almost the entire period during which the field of modern nutrition was developed, brings his long experience to bear on the evaluation of the nutritive value of protein, and he presents a clear and cogent criticism of some of the short cuts to the appraisal of diets, which have recently appeared in the literature. Cravioto and Robles provide an interesting discussion of aspects of the often neglected psychological consequences of protein-calorie malnutrition. The excellent chapter by the Jellifes, on practical tests to appraise malnutrition in young

children in poor villages, should become a classic in public health nutrition.

In general, this is one of the best presentations of the *problems* of protein-calorie malnutrition. One can only regret that the problem of what to do about it on a significant scale is hardly touched upon. Perhaps the foundation will consider holding a meeting of nutritionists, agriculturalists, industrialists, and economic planners to consider ways and means of making a large-scale attack on the problem of providing millions of small children with cheap, first quality protein.

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Socialistic Social Science

Introduction to Econometrics. Oskar Lange. Pergamon, London; Macmillan, New York, ed. 2, 1963. 433 pp. Illus. $7.

This is the second edition of a book by the Polish (Marxian) economist, Oskar Lange; it was first published in 1957. According to the preface, the differences between the first and second editions are primarily editorial. Impetus for the second edition appears to have come from the growing acceptance of econometric methods by socialist planners during the past few years. Lange cites as evidence a large number of econometric studies currently in progress in the Soviet Union and the People's Democracies, Hungary in particular. This development is in contrast to the abandonment of econometric studies by the Soviet Union around 1930, following several years of preliminary exploration.

The book constitutes a short course in certain selected areas of econometrics, "the science which deals with the determination by statistical methods of concrete quantitative laws occurring in economic life." Three areas are covered: (i) business forecasting via time-series analysis; (ii) market research via supply and demand analysis; (iii) the theory of programming via Leontief input-output analysis.

The technical exposition is clear and concise, despite its being threaded throughout with earnest political commentary. Although the ideological interpretations detract somewhat from the organization and (in many cases) the accuracy of the presentation, they also provide a dimension of interest unfamiliar to readers of nonsocialistic texts. For example, 20 pages on Pareto's law are tucked incongruously at the end of the chapter on market analysis. The 20 pages read like a morality play, with Pareto's curve taking the role of the capitalistic villain and the lognormal curve taking the role of the socialistic hero. After a review of some comparative income statistics, the play concludes triumphantly with a proclamation that workers' incomes in Poland are "by no means distributed according to the Pareto formula."

This book provides some interesting glimpses into the thinking of a socialistic social scientist and some interesting commentary on the state of quantitative research in socialistic planning. The reader who wants a comprehensive text on econometrics, however, should look elsewhere: for example, Lawrence Klein's new elementary book, *An Introduction to Econometrics.*

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Inorganic Chemistry

Nonstoichiometric Compounds. A symposium sponsored by the Division of Inorganic Chemistry, 141st Meeting, American Chemical Society, March 1962. Roland Ward, Ed. American Chemical Society, Washington, D.C., 1963. viii + 253 pp. Illus. Paper, $7.

This collection of 23 papers consists of an introductory paper, five papers on oxides, six on hydrides, two on intermetallic compounds, five on chalcogenides, one on clathrate compounds, and three on tungsten and vanadium bronzes.

The organization of the symposium papers according to the chemical nature of the compounds is convenient from the point of view of one who wishes to find information concerning particular chemicals, but an index of the volume would have been more useful. From the point of view of one interested in the physicochemical basis for nonstoichiometry, the organization is unfortunate. It results in considerable repetition, particularly of elementary concepts, and forces one to glean similarities and differences between compounds by a careful reading of the whole volume. However, if one is willing to read the entire work, he will be rewarded by a wealth of interesting information and motivated to learn more about an important field that tends to be neglected in the training of the average scientist.

In short, this work is not a unified discussion of nonstoichiometry, but rather a collection of research papers pasted together with a few more general articles. A decade ago these papers would have appeared together in one of the journals published by the American Chemical Society, where they would have received wider circulation and would have been permanently bound at the end of the year. Now, they appear as volume 39 of a disparate series of paperback books along with volume 24, *Chemical Marketing in the Competitive Sixties.* After one reading, my copy shows signs of succumbing to wear before the end of 1963. One might expect a longer life for 253 pages that cost $7.

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Baird-Agassiz Letters

Correspondence Between Spencer Fullerton Baird and Louis Agassiz, Two Pioneer American Naturalists. Elmer Charles Herber, Ed. Smithsonian Institution, Washington, D.C., 1963. 237 pp. Illus. $5.

An Agassiz *coup de plume* reveals and fascinates; Baird's letters inform and conciliate. Now we have the two men before us, pens in hand, exchanging the latest news on Carisle and Cuttyhunk, chelonians, cyprinoids, and crinoids Cassin and Cope. This is a book for the "museum man" and, of course, the historian, who will welcome this intimate way of learning what transpired at the Museum of Comparative Zoology and the old brownstone castle, the Smithsonian Institution. Here we see two of the most influential figures in American science 100 years ago, at the time the two institutions were founded, planning, sharing, borrowing, financing, and, yes, contesting for the prize collections which were coming in from around the world and with which they hoped to enrich or decorate their respective museums.

The editor, Elmer Herber (Dickinson