based on the nature of the installations (whether restoration, fabrication, recreation, or reconstruction), and on their purpose and usefulness to the public.

There are occasional omissions, as one might anticipate in such a far-reaching work, and some of these are important. Clark's Indian Museum in St. Louis, which existed from 1818 to 1838, is not mentioned; nor is Robert Leslie's Museum of Technology in Philadelphia, which pioneered in its field in the late 18th century. The Armed Forces Institute of Pathology's Medical Museum is described, but no mention is made of its historical collection of more than 500 microscopes, which is believed to be the largest and most significant in the world.

An extensive appendix provides an alphabetical list of museums (by state and city), giving their address, type of collections, and visiting hours. There are 40 illustrations of the wide range of installations, buildings, and exhibits described in the text. The bibliography is comprehensive, and the index is thorough and well organized.

This book is not the most comprehensive reference work on the subject, but it serves as a useful supplement to Coleman's *The Museum in America*, in that it covers the period since 1939. *Museums, U. S. A.* does not pretend to be a scholarly work, but it achieves its objective as a handy volume of reference that will be useful to the general museum visitor and of interest to the scholar.

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Today's Youth in Tomorrow's Society

The Next Generation: The Prospects Ahead for the Youth of Today. Donald N. Michael. Random House, New York, 1965. xxvi + 218 pp. $4.95.

Donald Michael has set himself the task of making reasonable predictions about the immediate future and of persuading selected portions of the responsible public to face the problems these forecasts bring into view. *The Next Generation* is the third such endeavor he has made. The first had to do with the implications of space activities and the second with cybernetics. This book, based on a report prepared in 1963 for the Office of the Special Assistant on Juvenile Delinquency of the Department of Health, Education, and Welfare, is directed to those who are involved with youth planning. Its focus is on foreseeable changes in our society, such as the growth of megalopolis, the ever-widening separation in our society of the professionally trained, the technically trained, and the unskilled, and the increasing rationalization of life, that will bear on the chances of youth in the next 20 years.

It is striking that the audience to whom the book is addressed and the group whose problems are central to it appear only in a series of questions the author raises in the appendix. He treats "youth" as if young people comprised a bounded segment that is the concern of another bounded segment made up of those who "plan and implement youth development programs." Writing in a relentlessly flat style modeled on objective reports to interested top management, he lays out what will probably happen if—and this is left open—other things do not happen. The implications are bedded down in understatement and irony.

This style of presentation undoubtedly is effective, as the reader begins to pick up the clues and argues that, after all, something can be done. It is not necessary to continue on this or that devastating road. We do not need to wait so long before taking action. The author makes grim statements, carefully supported by highly selected summary studies on different aspects of American society. The reader responds with an ethical recalcitrance and an optimism that, because they are his creation, may well be effective. Michael draws a picture of a repulsive world (in which, he admits, a few people may have a very good time). His own repulsion is conveyed to the reader not by preaching or exhortation but by the carefully calculated movement of the spotlight he turns on a future that can be changed only by decisive, responsible action now.

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Perspectives in Physiology

Homeostasis and Feedback Mechanisms. A symposium of the Society for Experimental Biology (Cambridge University, England), September 1963. G. M. Hughes, Ed. Published for the Company of Biologists on behalf of the Society for Experimental Biology by Academic Press, New York, 1964. viii + 460 pp. Illus. $15.50.

This book is an example of the symposium volume at its best. All contributions are germane to the central theme, aptly described by the title. Homeostasis, of course, provides an approach rather than a specific field of inquiry and, since Bernard, has been one of the most powerful principles available to guide the physiologist. Consequently this symposium is of uncommonly general interest and deserves a wide readership. The volume proceeds from the more concrete and conventional papers to somewhat abstract contributions; this arrangement, together with the background material provided in many of the papers, enables the book to be profitably and enjoyably read in its entirety.

The contributions represent a diverse assemblage of problems, united by their common point of view—that the integration of the organism as a whole is as significant as the nature of its components. The papers of Pantin, Bartholomew, Hart, and Benzinger may be described as physiological ecology. Weis-Fogh, Mittelstaedt, Merton, and Fender consider neuromuscular systems, while Cross, and Jones and Bellamy discuss neuroendocrine mechanisms. Several facets of respiratory physiology are described by Hughes, Andersen, and Randle. Robertson, Wigglesworth, and Harker treat the special problems posed by the application of the concept of homeostasis to genetics, development, and diurnal rhythms, respectively. Detailed analysis of an osmoregulatory system is described by Shaw. In more theoretical discussions, Goodwin, Frank, and Machin attempt to apply statistical mechanics, information theory, and feedback theory to biological systems. Since many readers will be ignorant of the terminology and applications of systems analysis, Machin's paper might be read as an introduction to the chapters by Mittelstaedt, Merton, and Fender.

Despite the broad scope of the book, this is by no means a comprehensive account or an exhaustive review of recent work. The papers look forward rather than at the past; they are thought-provoking, speculative, and often controversial. Although this makes the book a poor reference, it certainly extends its useful life-span as an intellectual stimulant. Indexes are provided both by subject and author; but, since the symposium does not focus on a specific area of research in the usual sense, these will not be particularly useful to most readers. The symposium was held nearly two years ago, but the papers appear to have been brought up to date before publication.

A better starting point for an advanced course or seminar in animal physiology would be hard to find. I have seen no finer introduction to the hardships and rewards encountered in studying function in macroscopic systems.

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Summary and Guide

Elementary Coordination Chemistry. Mark M. Jones. Prentice-Hall, Englewood Cliffs, N.J., 1965. xvi + 473 pp. Illus. $18.60.

Coordination chemistry has undergone a spectacular development in the past 25 years. Powerful new tools and methods of measurement, new preparative techniques, and ever more sophisticated theoretical treatments of chemical bonding have joined forces to provide a truly revolutionary increase in chemical understanding.

Inorganic chemists, chemical physicists, and biochemists have all contributed to this growth of knowledge and have, in turn, been enriched by the cross-fertilization of ideas. It is difficult to imagine a field of chemistry that has not been profoundly affected by the developments in what has come to be known as coordination chemistry.

In the preface of his book, Mark Jones begins by stating that his purpose is "to provide an elementary introduction to that vast and fascinating fund of information which is covered by the term 'coordination chemistry.'" In this goal, the author has succeeded admirably. The subjects covered in the book are best surveyed by listing the 12 chapter titles: "Introduction"; "Nomenclature and types of coordinating agents"; "Some aspects of descriptive coordination chemistry"; "Typical complexes of the various elements"; "The nature of bonding in coordination compounds"; "Some general aspects of the behavior of complexes"; "Determination of the structures of coordination compounds"; "The determination of stability constants"; "Some types of coordination compounds of special interest"; "Some applications of coordination compounds"; "Some metal complexes of biological significance"; and "Thermochemistry of coordination compounds."

As a teaching device for the relative newcomer, this book is to be highly recommended. Here he will find a wealth of well organized and documented information. His curiosity is bound to be aroused by the sustained enthusiasm for the subject which pervades this book. The numerous references provide an excellent guide to the literature, and the exercises given at the end of each chapter are calculated to stimulate thinking along experimental lines.

On the other hand, so vast a fare in the space of about 450 pages inevitably leads to a feeling of frustration on the part of anyone who seeks detailed information. Thus, the coordination chemistry of the actinide elements, for example, is treated in 1½ pages of text.

In summary, the book is a distinct asset to the literature in this field, and it should serve its intended purpose as a useful introductory guide very well.

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New Books

Mathematics, Physical Sciences, and Engineering

Advances in Petroleum Chemistry and Refining. vol. 10. John J. McKetta, Jr., Ed. Interscience (Wiley), New York, 1965. 587 pp. Illus. $27.50. Ten papers: "The composition of petroleum" by R. H. Hunt and M. J. O'Neal, Jr.; "Production and distribution of liquid hydrogen" by C. R. Baker and L. C. Matsch; "Hydrogen conservation in petroleum refining" by G. P. Hinds, Jr.; "Hydrocarbon gasification processes" by G. J. Van den Berg, W. R. Dammers, and L. W. ter Haar; "Modern dewaxing technology" by S. Marple, Jr., and L. J. Landry; "Naphthalene from petroleum" by H. D. Ballard, Jr.; "Nonconventional polymerization of vinyl monomers" by Norman G. Gaylord, David S. Hoffenberg, and Herman F. Mark; "Nitrogen fertilizers" by S. Strelzoff and L. H. Cook; "Nitroparaffin fuels" by R. S. Egly and E. S. Starkman; and "Engine fuel additives" by M. R. Barusch and J. H. Macpherson.

Analytic Functions of Several Complex Variables. Robert C. Gunning and Hugo Rossi. Prentice-Hall, Englewood Cliffs, N.J., 1965. 331 pp. Illus. $12.50. Prentice-Hall Series in Modern Analysis, edited by R. Creighton Buck.

Boundary Value Problems. A. G. Mackie. Hafner, New York, 1965. 266 pp. Illus. $5.50. University Mathematical Monographs, edited by D. E. Rutherford.

A Brief Trigonometry. Robert R. Christian. Blaisdell (Ginn), New York, ed. 2, 1965. 124 pp. Illus. Paper, $1.75. Pure and Applied Sciences Series, Robert E. K. Rourke and Seymour Schuster, Consulting Eds.

Calculus of Several Variables. Casper Goffman. Harper and Row, New York, 1965. 192 pp. Illus. $7. Harper's Series in Modern Mathematics, edited by I. N. Herstein and Gian-Carlo Rota.

Chemical Thermodynamics. A course of study. Frederick T. Wall. Freeman, San Francisco, ed. 2, 1965. 461 pp. Illus. $9.25.

A Collection of Problems on a Course of Mathematical Analysis. G. N. Berman. Translated from the first Russian edition (Moscow, 1947) by D. E. Brown. Ian N. Sneddon, Translation Ed. Pergamon, London; Macmillan, New York, 1965. 602 pp. Illus. $12.50.

Comparative Inorganic Chemistry. B. J. Moody. Elsevier, New York, 1965. 438 pp. Illus. $6.50.

Computer Methods in Solid Mechanics. Joseph J. Gennaro. Macmillan, New York, 1965. 304 pp. Illus. $10.95. Macmillan Series in Civil Engineering, edited by Gene M. Nordby.

Concepts in Physics. Reuben Benumof. Prentice-Hall, Englewood Cliffs, N.J., 1965. 576 pp. Illus. $13.

Design Theory and Data for Electrical Filters. J. K. Skwirzynski. Van Nostrand, Princeton, N.J., 1965. 729 pp. Illus. $29.50.

Descriptive Geometry. E. G. Pare, R. O. Loving, and I. L. Hill. Macmillan, New York, ed. 3, 1965. 393 pp. Illus. $6.50.

Diene Synthesis. A. S. Onishchenko. Translated from the Russian edition (Moscow, 1963) by L. Mandel. Israel Program for Scientific Translations, Jerusalem, 1964; Davey, New York, 1965. 701 pp. Illus. $22.75.

Difference Algebra. Richard M. Cohn. Interscience (Wiley), New York, 1965. 371 pp. $12.95. Interscience Tracts in Pure and Applied Mathematics Series, No. 17, edited by L. Bers, R. Courant, and J. J. Stoker.

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