planned with extreme care; such planning will depend heavily—for the immediate future—on ground-based observations. The publication of this book at this time is therefore especially timely.

Planets and Satellites is the third in a series of five volumes on the solar system. It has been 7 years since the publication of volume 2, *The Earth as a Planet*, and it is to be hoped that publication of volumes 4 and 5, which will deal with the Moon, meteorites, comets, and the interplanetary medium, as well as with additional material on planets, will not be so long delayed in publication.

The 18 chapters were written by 19 active specialists who had access to important unpublished literature and who were in a position to evaluate the widely scattered literature in critical fashion. Chapter 1 deals with the Earth as seen from space by TIROS. Chapter 2 gives a very readable account of the Lowell Observatory's transneptunian planet search. The next three chapters discuss orbits and masses, the stability of the solar system, and planetary interiors; this last subject should soon receive a real boost, as standard geophysical techniques are applied on the surface of the Moon and the nearby planets. Chapters 6 through 9 are concerned with the photometry and polarimetry of the Moon, planets, and satellites, while the next two chapters are devoted to planetary temperatures and recent radiometric studies. The surprising new radio observations of the Moon and planets are treated in chapters 12 through 14, while chapter 15 is an excellent account of the Pic du Midi planetary studies. This is followed by photographs of the planets taken with the 200-inch telescope and Finsen's color photographs of Mars. The last chapter is by Kuiper, who discusses limits of completeness of searches for intramercurial planets and for new satellites.

So much important previously unpublished material is in this book that the subject matter bears but slight resemblance to any other textbook or monograph. I can heartily recommend this volume both as a reference book for the specialist and as a source of information for scientists working in allied fields of study.

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Research Leads

Values and Ideals of American Youth. Eli Ginzberg, Ed. Columbia University Press, New York, 1961. xii + 338 pp. $6.

This volume preserves 22 selected papers of the 1961 Golden Anniversary White House Conference on Children and Youth. The contributors represent 18 professional specialties. Examples include pediatrics, child psychology, university administration, and theology. The contributions are conformably diverse. They are not, in most instances, expressly about the values and ideals of American youth. Indeed, they are about so many things of severally unique import that a topical breakdown seems obligatory here.

Eight essays are captioned *Development and Adaptability*. René J. Dubos and Charles A. Janeway take turns in widely ranging pursuit of biologic factors in adaptation to technological change. Irene M. Josselyn and Margaret Mead view older youth in the toils of social change, from vantage points respectively of psychoanalysis and cultural anthropology. Winston Ehrmann interprets data on sexual practices and codes of adolescents. Urie Bronfenbrenner reviews evidence that the American child has changed in response to change over recent decades in patterns of child rearing. Richard G. Axt analyzes the hard task of adapting higher education to its rising student tide. Earl A. Loomis considers the newer place of religion in the life of the child.

Six papers are headed *Problem Areas*. Lester B. Granger probes into ways to effect "community organization for social change." Norman V. Lourie surveys theory of and practice to prevent juvenile delinquency. Ross A. McFarland and Roland C. Moore track the automobile as one vexing root of trouble for youth, and Herbert B. Warburton scrutinizes pornographic literature as another. Hilda Taba and Frederick D. Patterson separately attack recent issues of intergroup relations as these involve young people.

Concluding addresses are headed *Values in Transition*. Liston Pope assesses signs of a revisionary outlook by youth upon traditional American values. Kenneth B. Clark evaluates conceptions and methods of discipline in child rearing, with interest first in creative outcomes. Henry Enoch Kagan assays institutional obligations and opportunities in the teaching of values. Talcott Parsons applies to diagnosis of morality in the young his instrumentalistic version of the American value system. Joseph Sittler inquires into the "interior dynamics" of maturing ideals and values. T. V. Smith appeals on behalf of youth for an imaginatively pluralistic morality. Lawrence J. McGinley argues for "transcendent values" to insure individual fulfillment against organizational complexity. Abram L. Sacher details a need to create a "climate of commitment" for "our cool and uncommitted young."

The papers together suggest (i) that children and youth now have and pose enormous problems, (ii) that knowledgeable and articulate persons of many callings are actively interested in these problems, (iii) that their wisdom in the matter stands to help, but (iv) that we now have to rely too much upon such wisdom, for lack of research to test, integrate, and extend it. Yet here are leads, some telling research, and some inspiration for research to the purpose.

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Writing and Decipherment

Voices in Stone. The decipherment of ancient scripts and writings. Ernst Doblhofer. Translated by Mervyn Savill. Viking, New York, 1961. xi + 327 pp. Illus. $6.

This book is definitely not for the readers of *Science*. To be sure, it does cover in a superficial sort of way the history of the decipherment of practically all the ancient scripts: Egyptian, Old Persian, Babylonian, Hittite, Ugaritic, Gublitic, Cypriote and Creto-Mycenean. But instead of presenting a straightforward account of the relevant methods and procedures and letting these speak for themselves, as it were, it interlards the more informative sections with inane, insipid, and adolescent observations on the character and endowments of the decipherers, and does so in exaggerated and "dramatic" phraseology which would bring a blush to the cheek of many of them. Add to this a translation which is often inexact, clumsy, and at times

even ludicrous, and you have an unsavory concoction hardly to be recommended.

This rather mannered tome is one of a rash of amateurish and adulatory "popular" books on archeology and related subjects, published since the Second World War, which tend to fill the specialist, whose handiwork they exploit, with chagrin and dismay. For these specious works are not designed to inform and enlighten but to edify, inspire, and enthrall. In the case of the ancient Near East, for example, the intent is often to "prove" the Bible, or to glamorize the ancients as knowers and purveyors of profound mysteries, or to take advantage in one way or another of the current yearning to "escape" to the past from a bitter present and an ominous future.

It needs no stressing that effective "vulgarization" of the findings and results of archeological research is highly desirable for its educational and humanistic value, and should be encouraged on every hand. Fortunately the specialists themselves are now devoting part of their time and energy to this end. Thus, to return to writing and decipherment, the themes of the book under review, the adult reader will find succinct, lucid, and informative accounts in the works of two distinguished scholars: I. J. Gelb's *A Study of Writing* (University of Chicago Press, Chicago, Ill., 1952) and Johannes Friedrich's *Extinct Languages* (Philosophical Library, New York, 1957).

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Russian Numerical Analysis

Approximate Methods of Higher Analysis. L. V. Kantorovich and V. I. Krylov. Translated from the third Russian edition by Curtis D. Benster. Interscience, New York, 1959. xv + 681. $17.

The recent advent of high-speed computers has brought about a tremendous increase of activity in the field of numerical analysis. Most of the work is centered around the search for new, computer-oriented numerical methods to replace the classical methods developed with the hand computer in mind. However there are many results in classical numerical analysis which were never popular among workers in the field because they were ill-suited for hand calculation but which are very suitable for use in a computer installation. It behooves the seeker of new methods to study the works of the old masters before embarking on any time-consuming research project.

One source for such classical results is this book by Kantorovich and Krylov, originally titled *Methods for the Approximate Solution of Partial Differential Equations*, which has been expanded to include material on integral equations and conformal mapping. The volume contains much material not available elsewhere, especially results of the Russian school of numerical analysis. It also contains many numerical examples, which unfortunately do not indicate the scope of the methods illustrated since they are intended to illustrate hand calculations. Of course, some of the text has been rendered obsolete by recent investigations. However, the richness of the book will provide many new ideas for the interested reader. The translator is to be congratulated for making this classic available to the English-speaking public.

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New Books

Biological and Medical Sciences

Advances in Agronomy. vol. 13. A. G. Norman, Ed. Academic Press, New York, 1961. 397 pp. Illus. $12.

The Biological Role of Ribonucleic Acids. Jean Brachet. Elsevier, Amsterdam, 1960 (order from Van Nostrand, Princeton, N.J.). 144 pp. Illus.

The Complete Book of Birth Control. Alan F. Guttmacher. Ballantine Books, New York, 1961. 157 pp. Illus. Paper, $0.50.

Fearon's Introduction to Biochemistry. William John Edward Jessop. Academic Press, New York, ed. 4, 1961. 480 pp. Illus. $8.

Frontiers in General Hospital Psychiatry. Louis Linn, Ed. International Universities Press, New York, 1961. 509 pp. $10.

Functions of the Blood. R. G. MacFarlane and A. H. T. Robb-Smith, Eds. Academic Press, New York, 1961. 648 pp. Illus. $16.80.

Genetics on the Population Level. Marianne Rasmuson. Scandinavian Univ. Books; Heinemann, London, 1961. 191 pp. Illus.

Heredity. An introduction to genetics. A. M. Winchester. Barnes and Noble, New York, 1961. 282 pp. Illus. Paper, $1.75.

Hormones in Blood. C. H. Gray and A. L. Bacharach, Eds. Academic Press, New York, 1961. 573 pp. Illus. $20.

Mechanisms of Antibody Formation. Proceedings of a symposium held in Prague, 1959. M. Holub and L. Jaroskova, Eds. Academic Press, New York, 1960. 385 pp. Illus. $10.

Mechanisms in Radiobiology. vol. 1, *General Principles*. Maurice Errera and Arne Forssberg, Eds. Academic Press, New York, 1961. 549 pp. Illus. $16.

Modern Pharmacology and Therapeutics. Ruth D. Musser and Joseph G. Bird. Macmillan, New York, ed. 2, 1961. 903 pp. Illus. $7.

Parasitology of Fishes. V. A. Dogiel, G. K. Petrushevski, and Yu. I. Polyanski, Eds. Translated by Z. Kabata. Oliver and Boyd, Edinburgh, Scotland, 1961. 394 pp. Illus. 84s.

Primatologia. Handbook of primatology. vol. 2, pt. 2, chapter 8. H. Hofer, A. H. Schultz, and D. Starck, Eds. Karger, Basel, Switzerland, 1961. 87 pp. Paper, $7.50.

Mathematics, Physical Sciences, and Engineering

Basic Physics of the Solar System. V. M. Blanco and S. W. McCuskey. Addison-Wesley, Reading, Mass., 1961. 318 pp. Illus. $7.50.

Combustion and Propulsion. 4th Agard Colloquium. A. L. Jaumotte, A. H. Lefebvre, and A. M. Rothrock, Eds. Published for the North Atlantic Treaty Organization. Pergamon, New York, 1961. 415 pp. Illus. $15.

Computer Control Systems Technology. Cornelius T. Leondes, Ed. McGraw-Hill, New York, 1961. 659 pp. Illus. $16.

Dissertations in Physics. An indexed bibliography of all doctoral theses accepted by American universities, 1861–1959. Compiled by M. Lois Marckworth. Stanford Univ. Press, Stanford, Calif., 1961. 815 pp. $17.50; pt. 1, an alphabetical listing by author, which gives full bibliographical information; pt. 2, alphabetical by key title word; cross-referenced.

Elementary Differential Equations. William Ted Martin and Eric Reissner. Addison-Wesley, Reading, Mass., ed. 2, 1961. 344 pp. Illus. $6.75.

Filtration. George D. Dickey. Reinhold, New York; Chapman and Hall, London, 1961. 362 pp. Illus. $12.

Metallic Fatigue. W. J. Harris, Pergamon, New York, 1961. 342 pp. Illus. $12.50.

Miniaturization. Horace D. Gilbert, Ed. Reinhold, New York; Chapman and Hall, London, 1961. 315 pp. Illus. $10.

Photochemistry of Air Pollution. Philip A. Leighton. Academic Press, New York, 1961. 309 pp. Illus. $11.

Radical Polymerization. J. C. Bevington. Academic Press, London, 1961. 196 pp. Illus. $6.

Recent Advances in Heat and Mass Transfer. J. P. Hartnett, Ed. McGraw-Hill, New York, 1961. 412 pp. Illus.

The Teaching of Arithmetic. F. F. Potter. Philosophical Library, New York, 1961. 471 pp. Illus. $10.