

rather than the momentous consequences of changes in women's work," he offers no predictions except that the increasing employment of wives and mothers will "leave a deep imprint on every side of American life during the second half of the century."

The flaws in this interesting, documented, quotable book affect the research worker more than the casual reader. Among such flaws are Smuts' failure to mention inflation as a cause of employment of women, especially of older women and widows; his failure to cite such basic discussions of his subject as Hazel Kyrk's, in *The Family in the American Economy*; and a style of citing sources that is onerous to a reader interested in dates of publication.

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Celestial Mechanics. E. Finlay-Freundlich. Pergamon Press, New York, 1958. viii + 150 pp. \$7.50.

In a small volume on a subject as vast as celestial mechanics it is impossible to give more than a general introduction and an exposition of a few selected topics.

The introductory material consists of an elementary treatment of the two-body problem and a chapter on the *n*-body problem, with emphasis on Lagrange's stationary solutions. This chapter concludes with a discussion of Hill's curves of zero velocity in the restricted problem of three bodies and the periodic solutions in the vicinity of the stationary solutions.

One of the topics that the author selected for more detailed treatment is contained in the chapter entitled "Application of the theory of Hamilton-Jacobi to the three-body problem." The theory of canonical transformations is presented briefly but adequately. The integration of the two-body problem by Jacobi's method is then given as preparation for applications to perturbational problems, an outline of which is presented in the next chapter.

Two more topics are treated in considerable detail: "the two-body problem for extended deformable bodies" and "the motion of the apsidal line in relativistic mechanics."

The book will serve as a useful introduction to the subject for students with adequate mathematical preparation. The serious student will find his appetite whetted for more, especially for more

concerning applications of the Hamilton-Jacobi theory to the problem of perturbations. The bibliographies given in the various chapters will direct him to some of the standard works, but these are not detailed enough to offer specific help.

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Landscape from the Air. A physical geography in oblique air photographs. F. J. Monkhouse. Cambridge University Press, New York, 1959. ix + 53 pp. Illus. Paper, \$1.75.

Air photography has brought a new tool to the classroom. Geographers, geologists, foresters, pedologists, engineers, planners, military leaders, and others all make extensive use of air photographs—pictorial likenesses mechanically achieved. About 45 percent of the earth's land area has been photographed from the air; coverage of the United States is virtually complete.

Landscape from the Air was written primarily for geographers and geologists, for use in conjunction with topographic maps to envisage types of landscape that one might never be able to visit in person. Fifty-two oblique aerial photographs—most of them of Europe but some of North America, Africa, and Asia—are used to depict landscapes, under the following headings: "Rock types"; "Structure"; "Vulcanicity"; "Earth sculpture"; "Underground drainage"; "Rivers and river valleys"; "Glaciation"; "Desert lands"; "Coast lines"; and "Lakes and lake-basins." The photographs used were carefully and meticulously selected from among thousands.

Beneath each photograph are given the names of major features and the short numbers of the relevant topographic maps. Moreover, in the majority of instances the exact orientation of the photograph is given. Then follows a brief description of the main features to be seen in the photograph. Every effort has been made to make the text self-explanatory, but to get the most from a given illustration the "photo-interpreter" should have some background knowledge of geography and geology, for only then will he know what to look for. Proper interpretation of aerial photographs is positively dependent on professional competence.

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New Books

Analysis of Linear Systems. David K. Cheng. Addison-Wesley, Reading, Mass., 1959. 439 pp. \$8.50.

Astronomy. Theodore G. Mehlin. Wiley, New York; Chapman & Hall, London, 1959. 400 pp. \$7.95.

The Economics of Freedom. American capitalism today. Massimo Salvadori. Doubleday, Garden City, N.Y., 1959. 264 pp. \$4.50.

Free Radicals. An introduction. A. F. Trotman-Dickenson. Methuen, London, Wiley, New York, 1959. 148 pp. \$2.50.

Geochemical Methods of Prospecting and Exploration for Petroleum and Natural Gas. A. A. Kartsev, Z. A. Tabasarskii, M. I. Subbota, G. A. Mibilevskii. English translation edited by Paul A. Witherspoon and William D. Romey. Univ. of California Press, Berkeley, 1959. 372 pp. \$12.50.

Handbook of Diet Therapy. Dorothea Turner. Univ. of Chicago Press, Chicago, Ill., ed. 3, 1959. 237 pp. \$5.

The Harvey Lectures. Delivered under the auspices of the Harvey Society of New York, 1957–1958. Series 53. Academic Press, New York, 1959. 269 pp. \$7.50. Contents: "An epidemiological study of illness in families," J. H. Dingle; "Myxomatosis in Australian wild rabbits—evolutionary changes in an infectious disease," F. Fenner; "Structure and infectivity of tobacco mosaic virus," H. Fraenkel-Conrat; "Bacterial reproduction," J. Lederberg; "Enzymatic synthesis of deoxyribonucleic acid," A. Kornberg; "Some reactions of lymphoid tissues to stimulation by antigens," A. H. Coons; "Cell division," D. Mazia; "Correlation of roentgenological and pathological changes in some diseases of the lung," J. Gough; "Extracorporeal maintenance of cardiorespiratory functions," J. H. Gibbon, Jr.

The Invertebrates. Smaller coelomate groups: Chaetognatha, hemichordata, pogonophora, phoronida, ectoprocta, brachiopoda, sipunculida, the coelomate bilateria. vol. 5. Libbie Henrietta Human. McGraw-Hill, New York, 1959. 791 pp. \$13.50.

Linear Network Analysis. Sundaram Seshu and Norman Balabanian. Wiley, New York; Chapman & Hall, London, 1959. 585 pp. \$11.75.

The Many Body Problems. Summer school course in theoretical physics given at the University of Grenoble, 1958. Wiley, New York; Methuen, London; Dunod, Paris, 1959. 675 pp. \$15.

Medical Museum Technology. J. J. Edwards and M. J. Edwards. Oxford Univ. Press, New York, 1959. 182 pp. \$3.40.

Organic Chemistry. Melvin J. Astle school course in theoretical physics given 1959. 781 pp. \$7.50.

Package Design Engineering. Kenneth Brown. Wiley, New York; Chapman & Hall, London, 1959. 276 pp. \$8.50.

Physiology of Insect Development. Frank L. Campbell, Ed. Univ. of Chicago Press, Chicago, Ill., 1959. 181 pp. \$4.

Plane Trigonometry. A. W. Goodman. Wiley, New York; Chapman & Hall, London, 1959. 284 pp. \$4.50.