

stock," although the authors point out that a number of child-bearing years remain. Of particular interest is the finding that the mean intelligence level as measured by the Concept Mastery Test significantly increased between the ages of 30 and 40.

For the reader who wishes to obtain a brief review of Terman's 35 years of research on gifted subjects, this will be a useful book. Readers of earlier volumes will find that it covers familiar ground. It provides a concise summary of an investigation which sought to tell us (i) what intellectually superior children are like as children; (ii) how well they turn out; and (iii) what some of the factors are that influence their later achievement. The last aim was only partially realized. The authors themselves conclude that the research has not yielded much information on methods and techniques for the education of the gifted. However, by showing the records of accomplishment of gifted children who go through our schools without any special educational opportunities, the authors have provided a valuable base line against which the effects of future innovations may be assessed.

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Mass Leisure. Eric Larrabee and Rolf Meyersohn, Eds. Free Press, Glencoe, Ill., 1958. x + 429 pp. \$6.

This collection of readings roams widely over a rather loosely defined subject, but the serious reader should, in general, find it an informative and provocative set of skilled attempts to dissect and explain "the leisure that has become available, on an increasing scale, to the populations of the industrial West."

In confining their attention to the industrial Western nations, the authors point out a rather basic distinction between "class leisure" and "mass leisure," the former involving the use of free time which was secured as a right or prerogative of classes whose orientation was towards leisure, the latter involving the use of free time earned and paid for by people whose orientation is towards work. It is "the working class" that is now joining the ranks of the "leisure class" as a result of greatly reduced hours of work and a considerably increased span of life. But this new-found leisure has

come faster than have the changes in our attitudes towards work and in our philosophies of life; thus, it has brought anxieties and "problems" along with the potential advantages of a freer and better life. The book is, in general, an explication of these social trends.

The volume begins rather pedantically by quoting the two pages on "leisure" found in the *Oxford-English Dictionary*, followed by the five pages on the same subject contained in the *Encyclopedia of the Social Sciences*. This may, unfortunately, prove too much for the general reader—a pity, because the readings become more interesting, meaty, and thought-provoking as the distance from this logical but unimaginative beginning increases. The succeeding sections, for example, contain a number of theoretical discussions of a philosophic, psychological, and sociological nature, such as Bertrand Russell's "In praise of idleness," Jean Piaget's "The explanation of play," Robert MacIver's "The great loneliness," and Margaret Mead's "The pattern of leisure in America." There is not much connection between these sections, but the reader will come away with a sense of expanded horizon and a greater depth of perception regarding the subject.

The third section of the book is devoted to empirical studies—statistics on the amounts and uses of leisure and field studies on leisure behavior. Lundberg's classic study of Westchester County, N.Y., is included, along with the *Fortune* report on "30 Billion for fun," and Cleveland Amory's description of American upper-class white society at Tuxedo Park appears alongside Franklin Frazier's account of the "black bourgeoisie."

Finally, in section four, the authors include a series of articles on specific forms of mass leisure, under the subheadings "Sports," "Hobbies," "Holiday travel," and "Fads and habits." Here will be found studies on "camping in the wilderness," the "do-it-yourself market," the "motivational pattern of drinking," and "sex as play."

The volume ends with some words about the future of leisure in our society and with a bibliography which "attempts to include all works on leisure written in the English language since 1900." The list is arranged by decade and includes only 22 items from the period 1900 to 1909 but over 400 items for the 8 years from 1950 to 1958—an indication of the growing importance of the subject to us today.

Although this is a professional rather

than a popular book—in the sense, at least, that it is confined for the most part to serious items from the research and the theoretical literature—it is also a book about each of us who is struggling to adjust his way of life to make more profitable use of his leisure time, or at least to understand why he can't do so. Thus, I believe that any serious reader will come away from reading this volume with greater perspective on himself and on the people around him.

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Excavations at La Venta Tabasco, 1955.

Philip Drucker, Robert F. Heizer, and Robert J. Squier. Smithsonian Institution, Washington, D.C., 1959 (order from Superintendent of Documents, GPO, Washington 25). viii + 312 pp. Illus. + plates. \$4.

As the title implies, this monograph reports on extensive excavations made at the Olmec site of La Venta, Mexico, during approximately three months of 1955 by a National Geographic Society-Smithsonian Institution-University of California archeological expedition.

The purpose of these excavations was to obtain definitive information on patterns of construction or architecture—a problem concerning which previous excavations of the site had produced only inconclusive results. Most of the work was concentrated in the Ceremonial Court area (complex A), which lies just north of the pyramid. Four construction phases were recognized: phase 1, the water-sorted floors period; phase 2, the white-floor period; phase 3, the rose-floor period; and phase 4, the red-clay-cap period.

The authors are of the opinion that "La Venta represents a culturally 'floating' manifestation of classic (or florescent) Olmec culture which at the present time is not firmly anchored to other sites or culture periods either at its beginning or end" (page 259). Radiocarbon dates are interpreted as indicating that complex A was constructed and used continuously during, approximately, the period 800 to 400 B.C.

Two points of wider significance are discussed under the heading "Possible sociopolitical situation at La Venta." La Venta may have been selected as the district ceremonial center because of its relative isolation. Whereas the religious

centers of Europe are associated with large population centers, in Mesoamerica in Preclassic times there may have been a less intimate connection between economic factors, population numbers, and religion. The authors' assignment of the site to the Formative or Preclassic period of Mesoamerica runs contrary to "the opinion of some earlier writers who believed that elaborate systems of sociopolitical or socioreligious controls, as manifested by major construction projects, did not come into being until the Classic period" (page 269).

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Evolution by Natural Selection. Charles Darwin and Alfred Russell Wallace. Cambridge University Press, New York, 1958. viii + 288 pp. \$4.75.

Among the spate of books published to celebrate the centenary of the publication of the *Origin of Species*, this volume occupies a special place. Over half of the book consists of an annotated and complete reprinting of Darwin's lengthy "Essay" of 1844, long virtually unavailable, in which he set forth his views about the causes and evidences of evolution with a comprehensiveness and a logical force that would have made writing of the *Origin* itself seem superfluous to a lesser man. This is the solid document Darwin entrusted to his wife with explicit written instructions for its publication in case he should die before completing the *Origin*.

Also included are Darwin's 47-page "Sketch" of 1842, an apparently unpublished but reasonably complete treatment of his theory; the famous Wallace-Darwin papers of 1858; a letter from Darwin to Asa Gray at Harvard; and, finally, an informative introduction to most of these documents, written in 1909 by Darwin's son Francis. Gavin de Beer has furnished an up-to-date and readable foreword.

For an American, special interest attaches to the Asa Gray letter, in which Darwin expounds and apologizes for his theory in, for him, an incredibly brief space. It is to be regretted that neither this book nor the recent *Darwin Reader* by M. Bates and P. S. Humphrey (Scribner, New York, 1956) includes the "P.S." at the end of this letter, for in it Darwin distinguishes between natural selection and the then unknown laws of

what we now call mutations, which Darwin terms "all important" in providing the "groundwork for selection to act on."

No one can read these "essays" without being struck by the great importance Darwin gave to the relationship between the production of new breeds of domestic plants and animals by selective breeding and the evolution of new species by natural selection. The material on the evolution of animal behavior and instincts makes good reading now that Tinbergen and his school have reconferred scientific respectability on this important field. Because these essays preceded the publication of the *Origin* by a decade and a half, they serve as links between Darwin and his predecessors. Of them de Beer well says, "none of these precursors was able to compel attention, let alone adherence, to these views; and it is because of the completeness of his demonstration of the fact of evolution, and of the method by which it has been brought about, that the world owes its debt to Darwin."

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New Books

Anatomy and Physiology. vol. 1. Cells, tissues, integument; skeletal, muscular, and digestive systems; blood, lymph, and circulatory system (College Outline Series). Edwin B. Steen and Ashley Montagu. Barnes & Noble, New York, 1959. 347 pp. Paper, \$2.50.

Annual Review of Plant Physiology. vol. 10. Leonard Machlis, Ed. Annual Reviews, Palo Alto, Calif., 1959. 490 pp. \$7. Contents: "Prefatory chapter," W. J. Chandler; "Foliar absorption of mineral nutrients," S. H. Wittwer and F. G. Teubner; "Leaf proteins," N. W. Pirie; "Light-induced reactions of bacterial chromatophores and their relation to photosynthesis," A. W. Frenkel; "The structure of the chloroplast," J. J. Wolken; "Active transport of salt into plant tissue," G. G. Laties; "Respiratory mechanisms in higher plants," D. P. Hackett; "Photoperiodic control of floral induction," J. Doorenbos and S. J. Wellensiek; "The lignins," R. E. Kremers; "Fat metabolism in higher plants," P. K. Stumpf and C. Bradbeer; "The pine tree," N. T. Mirov and R. G. Stanley; "Physiology of virus diseases," F. C. Bawden; "Plant chemotherapy," A. E. Dimond and J. G. Horsfall; "The macronutrient elements," T. C. Broyer and P. R. Stout; "Nitrogen nutrition," R. H. Burris; "Metabolism of carbon compounds," M. Gibbs; "The chemical regulation of growth (some substances and extracts which induce growth and morphogenesis)," F. C. Steward and E. M.

Shantz; "Auxins and fungi," H. E. Gruen; "Phototropism and phototaxis," J. Reinert.

The Chemistry and Technology of Cereals as Food and Feed. Samuel A. Matz, Ed. Avi Publishing, Westport, Conn., 1959. 747 pp.

Circuit Theory of Linear Noisy Networks. Herman A. Haus and Richard B. Adler. Technology Press of Massachusetts Inst. of Technology and Wiley, New York; Chapman & Hall, London, 1959. 91 pp. \$4.50.

Elements of Materials Science. An introductory text for engineering students. Lawrence H. Van Vlack. Addison-Wesley, Reading, Mass., 1959. 544 pp. \$8.50.

The Emergence of the German Dye Industry. Studies in the Social Sciences, vol. 44. John Joseph Beer. Univ. of Illinois Press, Urbana, 1959. 175 pp. Paper, \$3.50; cloth, \$4.50.

Evolution of Nervous Control from Primitive Organisms to Man. A symposium. Publ. No. 52. Allan D. Bass, Ed. AAAS, Washington 5, 1959. 238 pp. Members (prepaid), \$5; nonmembers, \$5.75.

Experiment Perilous. Physicians and patients facing the unknown. Renee C. Fox. Free Press, Glencoe, Ill., 1959. 262 pp. \$5.

Families in Treatment. From the viewpoint of the patient, clinician, and the researcher. Erika Chance. Basic Books, New York, 1959. 252 pp. \$5.50.

Family Planning, Sterility, and Population Growth. Ronald Freedman, Pascal K. Whelpton, Arthur A. Campbell. McGraw-Hill, New York, 1959. 526 pp. \$9.50.

Optical Mineralogy. Paul F. Kerr. McGraw-Hill, New York, ed. 3, 1959. 456 pp. \$8.50.

Pigment Cell Biology. Proceedings of the fourth conference on the biology of normal and atypical pigment cell growth. Myron Gordon, Ed. Academic Press, New York, 1959. 661 pp. \$13.50.

A Primer of Programming for Digital Computers. Marshal H. Wrubel. McGraw-Hill, New York, 1959. 245 pp. \$7.50.

Principles of Direct-Current Machines. Alexander S. Langsdorf. McGraw-Hill, New York, ed. 6, 1959. 380 pp. \$8.50.

Proceedings of the First National Biophysics Conference. Henry Quastler and Harold J. Morowitz, Eds. Yale Univ. Press, New Haven, 1959. 784 pp.

Programming for Digital Computers. Joachim Jeanel. McGraw-Hill, New York, 1959. 525 pp. \$12.

Research Techniques in Human Engineering. Alphonse Chapanis. Johns Hopkins Press, Baltimore, 1959. 328 pp. \$6.

Russian for the Scientist. John Turkevich and Ludmilla B. Turkevich. Van Nostrand, Princeton, N.J., 1959. 265 pp. \$5.95.

A Short Course in Organic Chemistry. Harold Hart and Robert D. Schuetz. Houghton Mifflin, Boston, Mass., 1959. 346 pp. \$6.

A Symposium on Molecular Biology. Raymond E. Zirkle, Ed. Univ. of Chicago Press, Chicago, Ill., 1959. 356 pp. \$7.50.