

population problem" is as peripheral to some real, though unstated, problem as was the birds-and-bees literature to the earlier tabooed subject? Perhaps we should have a moratorium on books on "the population problem" until some rash iconoclast tells us what it is that really bothers us.

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Philosophy of Mathematics and Natural Science. Hermann Weyl. Revised and augmented English edition based on a translation by Olaf Helmer. Princeton University Press, 1949. 311 pp. \$1.95.

Now available in a paperback printing, the 1949 English edition is, in the main, a translation of an article first published in 1927 as *Philosophie der Mathematik und Naturwissenschaft*, Oldenbourg. It includes many minor changes in the text, additional references, and six essays on developments during the intervening years in mathematics, physics, and biology.

The Story of Albert Einstein. The scientist who searched out the secrets of the universe. Mae Blacker Freeman. Random House, New York, 1958. 178 pp. \$2.95.

It was announced some years ago, as the result of an investigation, that if one asked the average man on the street to name several distinguished scientists working in this country, the only name he could recall was that of Einstein. Quite recently typical groups of high-school students were directed, by means of a questionnaire, to give their impressions of the daily life and personal characteristics of the professional scientist.

The results are truly appalling. But to me, at least, it seems quite clear that the statistical average reply constituted a fairly true picture of the work and personal traits of Albert Einstein. Fortunately or unfortunately, Einstein was in no way a typical scientist. He may not have been even a typical genius. He has been called, with some justification, the greatest intellect of the 20th century. But it would be hard to match some of his personal peculiarities.

Where could one find another man of great professional distinction who habitually wore the most informal attire and "forgot" to change to formal clothes when delivering an important invited address at a foreign institution? Who rode by preference in a third-class railway

coach and *walked*, carrying his luggage, from the station to the castle of the Queen of Belgium, while the official welcoming committee searched vainly for him in the first-class coaches?

In the book under review, many other classic and apparently true stories concerning Einstein are set forth in simple and dramatic style, occasionally with an added embellishment that the author may have gleaned through her personal acquaintance with Einstein and his friends during several years of his sojourn at Princeton. Mae Blacker Freeman, wife of a well-known physicist, wisely makes no attempt to describe or discuss the scientific discoveries that brought such world fame to Einstein. Her book, which is designed for young readers, is confined almost solely to Einstein as an unusual human being. Relatively full treatment is given, appropriately, to his early life, prior to his first university position.

It has always seemed to me that the most significant part of the life history of any acknowledged genius is just this early period. What were the circumstances that encouraged, or at least allowed, the unfolding of great intrinsic talent? So often it seems as though only a fortuitous combination of circumstances has served to avert the suppression of such development. Einstein, quite possibly because he was a Jew, was unable to get a university position in Switzerland after his graduation from a Swiss institution. But he did finally obtain a routine position in the Swiss Patent Office, where the daily work assigned to him was dispatched in a comparatively short time, leaving the major part of the day free for him to "think." Here the theory of relativity was developed—a product of pure thought, although based of course on sound knowledge of experimental facts.

The latter portion of Einstein's life was occupied, in great part, with his endeavors to help those of his own race, all over the world, and to advance world peace. He was an admitted pacifist and conscientious objector, with a complete contempt for the military forces ("the vilest offspring of the herd mind"). Yet it was Einstein's personal appeal to President Roosevelt that set in motion the huge research project that led to the atomic bomb as well as to industrial uses of nuclear energy.

The hero worship that enveloped Einstein in his later years is almost unbelievable. He is, so far as I know, the only scientist who has ever rated a ticker-tape parade along Broadway or who has been greeted with a storm of applause when he appeared in a box at the Metropolitan Opera. These and many other details of such hero worship during his

tours all over the world are duly set forth, with a minimum of emphasis on the slanderous attacks also made upon him.

Presumably this little book is designed to inspire young students to choose a scientific career. But when the results of the questionnaire already mentioned are taken into consideration, the effect may well be just the opposite. The personal life of Einstein surely makes interesting reading, but it is far from the life of the typical scientist and far from one that even the typical scientist would care to emulate. Most scientists, so far as their personal lives are concerned, are quite normal human beings, a fact concerning which the average high-school student now seems completely uninformed.

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Biological Aspects of Cancer. Julian Huxley. Harcourt, Brace, New York, 1958. 156 pp. \$3.75.

The evolution of this book is as interesting as the subject matter. It began as a lecture, grew into two reviews, and emerged in its present form. The stimulus for this development was the discovery of "so many unfamiliar facts" which led to "so many ideas novel to . . . a biologist" that the author came to the realization that "cancer, far from being a field of purely medical concern, is a key subject for general biology in its present stage of development." While this conclusion is applicable to other problems of medical science, it is heartening to know that a biologist of Huxley's stature emerges from his "hard labour" with an opinion shared by oncologists interested in the biological aspects of cancer.

The volume should be read by biologists who are unfamiliar with the cancer process and, of more importance, by all who are engaged in cancer research, regardless of their previous training. The summary should be read first to acquaint the reader with the broad objectives and conclusions of the author. Huxley's interests include the fundamental factors involved in the origin and growth of cancer, the various agents responsible for the occurrence of the disease in experimental animals and man, present-day theories of the origin of the cancer process, and practical procedures for treatment and prevention. No book of this size could include all biological aspects of cancer, but this is a well-balanced discussion.

Oncologists will find statements in support of the opening sentence that the author "has never done original

work on the subject" and several misspelled names, but these are of little importance when the author's thesis is to bring about the "amalgamation of cancer research with biology."

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New Books

Can People Learn to Learn? How to know each other. Brock Chisholm. Harper, New York, 1958. 157 pp. \$3.

Rehabilitation: A Community Challenge. W. Scott Allan. Wiley, New York; Chapman & Hall, London, 1958. 263 pp. \$5.75.

The Principles of Semantics. Stephen Ullmann. Philosophical Library, New York, ed. 2, 1957. 346 pp. \$10.

Atomic Physics and Human Knowledge. Niels Bohr. Wiley, New York; Chapman & Hall, London, 1958. 109 pp. \$3.95.

The Industrial Challenge of Nuclear Energy, Research Uses, Social Problems. Papers given during the second information conference on nuclear energy for management, Amsterdam, 24-28 June 1957. Organisation for European Economic Co-operation, Paris, 1958. 301 pp. \$3.50.

Atoms for Power: United States Policy in Atomic Energy Development. Final edition, background papers prepared for the use of participants and the final report of the twelfth American Assembly, Arden House, Harriman Campus of Columbia University, Harriman, New York, 17-20 Oct. 1957. American Assembly, Columbia Univ., New York, 1958. 165 pp.

Neomycin. Its nature and practical application. Selman A. Waksman, Ed., Williams & Wilkins (for the Inst. of Microbiology, Rutgers Univ.), Baltimore, 1958. 422 pp. \$5.

Difference Methods for Initial-Value Problems. Robert D. Richtmyer. Interscience, New York and London, 1958. 250 pp. \$6.50.

Morphological Integration. Everett C. Olson and Robert L. Miller. Univ. of Chicago Press, Chicago, 1958. 332 pp. \$10.

The Living Museum. Experiences of an art historian and museum director, Alexander Dorner. Samuel Cauman. New York University Press, New York, 1958. 225 pp. \$10.

Rheology. Theory and applications. vol. II. Frederick R. Eirich, Ed. Academic Press, New York, 1958. 604 pp. \$15.

Topics in Microbial Chemistry. Antimycin, coenzyme A, kinetin and kinins. F. M. Strong. Wiley, New York; Chapman & Hall, London, 1958. 177 pp. \$5.

Bird Wonders of Australia. Alec H. Chisholm. Michigan State Univ. Press, East Lansing, 1958. 253 pp. \$5.

Museum Registration Methods. Dorothy H. Dudley, Irma Bezold et al. American Assoc. of Museums, Washington, 1958. 236 pp. \$7.50.

Endocrine Aspects of Breast Cancer. Proceedings of a conference held at the

University of Glasgow, 8-10 July 1957. Alastair R. Currie, Ed. Livingston, Edinburgh, 1958 (order from Williams & Wilkins, Baltimore). 356 pp. \$8.50.

The Mammalian Cerebral Cortex. B. Delisle Burns. Arnold, London, 1958 (order from Williams & Wilkins, Baltimore). 126 pp. \$5.

Carter Briefhand. Theodore Hampton Carter, M. Herbert Freeman, E. C. McGill, Theodore Yerian. Allied, Chicago, 1958. 112 pp.

Analytical Mechanics. F. W. Van Name, Jr. Prentice-Hall, Englewood Cliffs, N.J., 1958. 180 pp. \$5.75.

Photosensors. A treatise on photo-electric devices and their application to industry. W. Summer. Macmillan, New York, 1958. 691 pp. \$21.

Basic Principles of Chemistry. Eugene C. Winslow. Van Nostrand, Princeton, N.J., 1956 and 1958. 289 pp. \$4.75.

The Effects of Atomic Radiation on Oceanography and Fisheries. Report of the Committee on Effects of Atomic Radiation on Oceanography and Fisheries of the National Academy of Sciences Study of the Biological Effects of Atomic Radiation. Publ. No. 551. National Acad. of Sciences-National Research Council, Washington, 1957. 146 pp. \$2.

Research in Affects. Psychiatric Research Repts. No. 8. Edited by members of the Committee on Research 1956-57. American Psychiatric Assoc., Washington 6, 1958. 186 pp. \$2.

Spiders, Scorpions, Centipedes and Mites. The ecology and natural history of woodlice, Myriapods and Arachnids. J. L. Cloudsley-Thompson. Pergamon, New York and London, 1958. 242 pp. \$9.

Facts and Theories of Psychoanalysis. Ives Hendrick. Knopf, New York, ed. 3, 1958. 423 pp. \$6.

General Biochemistry. Joseph S. Fruton and Sofia Simmonds. Wiley, New York, ed. 2, 1958. 1089 pp. \$18.

General Zoology. Claude A. Villee, Warren F. Walker, Jr., Frederick E. Smith. Saunders, Philadelphia, Pa., 1958. 896 pp.

Introduction to Atomic and Nuclear Physics. Rogers D. Rusk. Appleton-Century-Crofts, New York, 1958. 498 pp. \$7.50.

Recent Advances in Gelatin and Glue Research. Proceedings of a conference sponsored by the British Gelatine and Glue Research Association held at the University of Cambridge, 1-5 July 1957. G. Stainsby, Ed. Pergamon, New York and London, 1958. 277 pp. \$12.

Cultural Anthropology. The science of custom. Felix M. Keesing. Rinehart, New York, 1958. \$6.

Progress in the Chemistry of Fats and other Lipids. vol. 5 of *Advances in Technology*. R. T. Holman, W. O. Lundberg, T. Malkin. Pergamon, New York and London, 1958. 345 pp. \$14.

The Dynamics of Bacterial Populations Maintained in the Chemostat. Publ. No. 614. Herman Moser. Carnegie Institution of Washington, Washington, 1958. 136 pp. Paper, \$1.15; cloth, \$1.40.

The Astronomical Universe. Otto

Struve. Univ. of Oregon Press, Eugene, 1958. 55 pp. \$1.50.

Programming for an Automatic Digital Calculator. Kathleen H. V. Booth. Academic Press, New York; Butterworths, London, 1958. 245 pp.

Snakes in Fact and Fiction. James A. Oliver. Macmillan, New York, 1958. 212 pp. \$4.95.

Forestry Terminology. A glossary of technical terms used in forestry. Soc. of American Foresters, Washington, ed. 3, 1958. 102 pp. \$3.50.

Zone Melting. William G. Pfann. Wiley, New York; Chapman & Hall, London, 1958. 252 pp. \$7.50.

Introduction to the Moon. Dinsmore Alter. Griffith Observatory, Los Angeles, 1958. 108 pp. Paper, \$1.65.

Scientific Basis of Athletic Training. Laurence E. Morehouse and Philip J. Rasch. Saunders, Philadelphia, Pa., 1958. 238 pp. \$4.50.

Homology Theory on Algebraic Varieties. Andrew H. Wallace. Pergamon, New York and London, 1958. 123 pp. \$5.50.

The Lipoproteins, Methods and Clinical Significance. Symposia on Research Advances Applied to Medical Practice, No. 3. F. Homburger and P. Bernfeld, Eds. Karger, Basel, Switzerland, 1958. 94 pp. \$4.

Danger Cave. Anthropological Papers, No. 27. Jesse D. Jennings. Univ. of Utah Press, Salt Lake City, 1958. 328 pp. \$6.

Electron Microscopic Atlas of Normal and Leukemic Human Blood. Frank N. Low and James A. Freeman. McGraw-Hill, New York, 1958. 355 pp. \$25.

The Sloane Herbarium. An annotated list of the *Horti Sicci* composing it; with biographical accounts of the principal contributors. Based on records compiled by the late James Britten; with an introduction by Spencer Savage. Revised and edited by J. E. Dandy. British Museum (Natural History), London, 1958. 246 pp. £7. 7s.

Comparison of the Large-Scale Structure of the Galactic System with That of Other Stellar Systems. International Astronomical Union Symposium No. 5. Held in Dublin, 2 Sept. 1955. N. G. Roman, Ed. Cambridge Univ. Press, New York, 1958. 72 pp. \$3.

Russian-English Glossary of Acoustics and Ultrasonics. P. Robeson Jr., Ed. Consultants Bureau, New York, 1958. 193 pp. \$10.

Earth, Moon and Planets. Fred L. Whipple. Grosset & Dunlap, New York, 1958. 302 pp. \$2.95.

The Cosmic Radiation. J. E. Hooper and M. Scharff. Methuen, London; Wiley, New York, 1958. 172 pp. \$2.75.

The Chemistry and Chemotherapy of Tuberculosis. A compilation and critical review of existing knowledge on the chemistry of tubercle bacilli and their products, chemical changes and processes in the host, and chemical aspects of the treatment of tuberculosis. Esmond R. Long. Williams & Wilkins, Baltimore, Md., ed. 3, 1958. 468 pp. \$12.

Physics. Henry Semat and Robert Katz. Rinehart, New York, 1958. 935 pp. \$9.