

vation, and above all by the extensive application in every direction of exact experimental methods to subjects which have, hitherto, hardly been approached along this path." Could there be a better creed for the present-day biologist?

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Some Other Books of Interest

Technology and Choice. Readings from *Technology and Culture*. MARCEL C. LAFOLLETTE and JEFFREY K. STINE, Eds. University of Chicago Press, Chicago, IL, 1991. viii, 341 pp., illus. \$30.95; paper, \$16.95.

This selection of essays that have appeared in the journal *Technology and Culture* from 1966 to 1989 provides "a spectrum of historical perspectives on how, when, or why individuals, societies, governments, and industries have made choices regarding the use of technologies."

The volume opens with discussions of two 19th-century cases of technological threats to public health and safety that raised issues about the regulatory functions of central governments—Carlos Flick on the movement for smoke abatement in Britain and John G. Burke on explosions of steam boilers in the United States. In a set of papers concerned with the effects of technology in the domestic milieu, Claude Fischer discusses the telephone industry's shift from representing that instrument as a practical device to promoting it as an avenue to sociability, Fred Schroeder recounts how the electrical plug-and-receptacle system came to replace the lighting fixture as a source of power for other appliances, and Suellen Hoy reports on the role of public health concerns in making the garbage disposer a common home appliance. Other essays in the first part of the book deal with mechanization in the Pacific Coast salmon canning industry (O'Bannon), the U.S. government and technology in the Great Depression (Pursell), Consolidated Edison's attempt to build a nuclear reactor in New York City in the early 1960s (Mazuzan), concerns about thermal pollution due to nuclear plants, 1965–1974 (Walker), and political factors that influenced the design of NASA's space station system (Fries).

The final four essays take a critical look at some traditional ways in which technologies have been viewed. In the first of a pair focused on women, Ruth Schwartz Cowan notes industries in which technological change has been variously accelerated (cigar-

making) and slowed (garment-making) by the availability of women workers and cites the "specter" of several million American women cooking supper every night over several million separate stoves as evidence that "the household has resisted industrialization with greater success than any other productive locale in our culture." Christine Bose *et al.* question the notion that new household technologies have been unalloyed benefits to women, citing among other counter-evidence the "stresses associated with selecting specific equipment from a large marketplace array, learning to use it, storing it, cleaning it, and repairing it." The final pair of essays is more concerned with matters of engineering: David Billington and Robert Mark, arguing in favor of "historical study from an engineering perspective," address misunderstandings centering on Gothic cathedrals and the long-span bridges of the late 19th and 20th centuries as symbols of their respective eras, and Eugene Ferguson calls for more consideration of the importance of visual imagination, as distinct from formal science, in invention, using examples as diverse as the Newcomen steam engine and wooden toy animals.

—KATHERINE LIVINGSTON

Sex in China. Studies in Sexology in Chinese Culture. FANG FU RUAN, with the editorial collaboration of Molleen Matsumura. Plenum, New York, 1991. xiv, 208 pp., illus. \$32.50. Perspectives in Sexuality.

Fang Fu Ruan, now at the Institute for Advanced Study of Human Sexuality in San Francisco, is a medical historian and physician who compiled the "first and only comprehensive sex handbook published in Mainland China since 1949." The present book was written out of his conviction that any genuine political reform in China will have to include a less "conservative and ignorant" attitude toward sexual matters than is currently displayed by the leadership of either conservative or reformist factions. In particular, he is concerned with "strengthen[ing] the position of the common people in their struggle for basic sexual rights" by documenting the existence in China of a tradition of positive attitudes toward sexuality and offering evidence to refute the idea that such phenomena as prostitution and homosexuality are imports from the West or results of progressive social reform. He begins his effort in this direction with an exposition of the concepts of Yin and Yang and of sexual attitudes in the three literate religious traditions of China. He then surveys classical Chinese "sexological" texts (dating from as early as 168 B.C., rediscovered in the 19th century, and currently not easily available in

China) and sexual techniques as represented in the literature of Taoism, China's only indigenous religion and "one of the few that has stressed the importance of using sexual techniques for individual benefit." Turning to practices that are currently subject to special efforts at repression, the author traces prostitution and then pornography from their earliest recorded origins in China, through efforts at abolition attendant on the advent of the Communist regime in the 1950s and their subsequent reemergence in the 1970s, to the crackdown that followed the events in Tiananmen Square. Similar treatments of homosexuality and of transvestism and transsexuality draw (in the absence of statistical information) on anecdotal reports of Chinese and other journalists and correspondence received by the author. In a final chapter, "Changing attitudes toward sex in China today," the author reports some survey and medical data indicating that the current official restrictions on sexual expression are at odds with the attitudes and behavior of the population and summarizes efforts in sex education instigated by Chou En-lai in 1963, in which he himself was a major participant prior to his departure from China in 1985. An annotated reference list gives further information about the classical and contemporary literature on which the author draws.

—KATHERINE LIVINGSTON

Books Received

The Altruism Question. Toward a Social-Psychological Answer. C. Daniel Batson. Erlbaum, Hillsdale, NY, 1991. x, 257 pp. \$39.95.

Ancient Light. Our Changing View of the Universe. Alan Lightman. Harvard University Press, Cambridge, MA, 1991. xiv, 171 pp., illus. \$18.95.

Anelastic and Dielectric Effects in Polymeric Solids. N. G. McCrum, B. E. Read, and G. Williams. Dover, New York, 1991. xvi, 617 pp., illus. Paper, \$15.95. Reprint, 1967 ed.

Animal Applications of Research in Mammalian Development. Roger A. Pedersen, Anne McLaren, and Neal L. First, Eds. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1991. xiv, 334 pp., illus. Paper, \$44. Current Communications in Cell and Molecular Biology, 4.

Bioorganic Chemistry Frontiers. Vol. 2. H. Dugas, Ed. Springer-Verlag, New York, 1991. xvii, 252 pp., illus. \$89.

Biotechnology of Blood. Jack Goldstein, Ed. Butterworth-Heinemann, Stoneham, MA, 1991. xiv, 463 pp., illus. \$115. Biotechnology Series. 18 chapters covering oxygen delivery systems plasma fractions, and in vivo and in vitro regulation of blood cell production.

Bird Migration. Thomas Alerstam. Cambridge University Press, New York, 1991. viii, 420 pp., illus. \$105. Translated from the Swedish edition (1982).

Blood Cell Biochemistry. Vol. 4. Basophil and Mast Cell Degranulation and Recovery. Ann M. Dvorak. Plenum, New York, 1991. viii, 415 pp., illus. \$89.50.

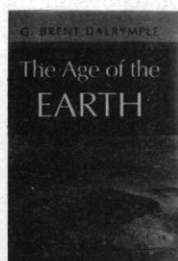
Cell Separation Science and Technology. Dhinakar S. Kompala and Paul Todd, Eds. American Chemical Society, Washington, DC, 1991. x, 299 pp., illus. \$69.95. Based on a symposium, Boston, MA, April 1991. ACS Symposium Series, 464.

Cellular Aspects of Pattern Formation. The Problem of Assembly. Gary W. Grimes and Karl J. Aufderheide. Karger, New York, 1991. x, 94 pp., illus. \$84. Monographs in Developmental Biology, vol. 22.

The Age of the Earth

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15 halftones, 14 maps,
98 line drawings. 492 pp. \$49.50



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10 halftones, 38 line drawings.

220 pp. Paper, \$7.95; Cloth, \$29.50

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Gastropod Mollusks

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RONALD W. GILMER

99 halftones, 55 line drawings,

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Edited by GARY A. POLIS

Over 150 photographs and drawings.

616 pp. \$85.00

Marmots

Social Behavior and Ecology

DAVID P. BARASH

Foreword by John Eisenberg

57 photographs, 95 drawings and
graphs, 1 map. 368 pp. \$49.50

Stanford University Press
STANFORD, CALIFORNIA 94305-2235

The Challenged Scientists. Disabilities and the Triumph of Excellence. Robert A. Weisgerber. Praeger, New York, 1991. xii, 194 pp., illus. \$42.95. Results of a study of factors affecting careers of disabled persons in science and related fields, with 21 personal profiles.

Density Matrix Method and Femtosecond Processes. S. H. Lin *et al.* World Scientific, Teaneck, NJ, 1991. viii, 217 pp., illus. \$28. World Scientific Lecture and Course Notes in Chemistry, vol. 6.

Desalination and Water Re-use. Miriam Balaban, Ed. Vol. 1, Economics, Membrane Distillation; Membrane Processes; Evaporative Processes—R&D. 528 pp., illus. Vol. 2, Seawater Reverse Osmosis; Solar Processes; Pretreatment. 402 pp., illus. Vol. 3, Fouling and Scaling; Wastewater Treatment; Synthesis and Characteristics of Membranes. 390 pp., illus. Vol. 4, Evaporative Processes—Operations; Cogeneration; Electrodialysis; Material Selection and Corrosion. 354 pp., illus. Hemisphere (Taylor and Francis), New York, 1991. \$95 each; the set, \$295. From a symposium, Malta, April 1991.

Economic Geology. Mexico. Guillermo P. Salas *et al.*, Eds. Geological Society of America, Boulder, CO, 1991. x, 438 pp., illus. \$62.50. Translated by Cecily Petzall. The Geology of North America, vol. P-3.

Ecophysiology of Desert Arthropods and Reptiles. J. L. Cloudsley-Thompson. Springer-Verlag, New York, 1991. x, 203 pp., illus. \$98. Adaptations of Desert Organisms.

The Edges of Science. Crossing the Boundary from Physics to Metaphysics. Richard Morris. Prentice Hall, New York, 1991. xii, 244 pp., illus. Paper, \$10. Reprint, 1990 ed.

Effective Field Approach to Phase Transitions and Some Applications to Ferroelectrics. Julio A. Gonzalo. World Scientific, Teaneck, NJ, 1991. x, 226 pp., illus. \$48. World Scientific Lecture Notes in Physics, vol. 35.

First Contact. The Search for Extraterrestrial Intelligence. Ben Bova and Byron Preiss, Eds. Plume (NAL/Dutton), New York, 1991. xii, 337 pp., illus. Paper, \$12.95. Reprint.

The First 75 Years. A History of the Engineering Foundation. Lance E. Metz and Ivan M. Viest. Engineering Foundation, New York, 1991. xvi, 494 pp., illus. \$50.

Flowering Earth. Donald Culross Peattie. Wood engravings by Paul Landacre. Indiana University Press, Bloomington, 1991. xii, 260 pp. \$27.50; paper, \$10.95. Reprint, 1939 ed.

Geographic Information 1991. The Yearbook of the Association for Geographic Information. James Cadoux-Hudson and Ian Heywood, Eds. Taylor and Francis, New York, 1991. ix, 421 pp., illus. Paper, \$55.

Geographic Information Systems. A Guide to the Technology. John C. Antenucci *et al.* Van Nostrand Reinhold, New York, 1991. xiv, 301 pp., illus., + plates. \$59.95.

The Geography of Science. Harold Dorn. Johns Hopkins University Press, Baltimore, MD, 1991. xx, 219 pp., illus. \$35.95.

Goals in Space. American Values and the Future of Technology. William Sims Bainbridge. State University of New York Press, Albany, 1991. viii, 268 pp. Paper, \$17.95.

Indoor Air Pollution. A Health Perspective. Jonathan M. Samet and John D. Spengler, Eds. Johns Hopkins University Press, Baltimore, MD, 1991. xiv, 407 pp., illus. \$65; paper, \$24.95. Johns Hopkins Series in Environmental Toxicology.

Inhibitory Control Theory. A Mind/Body Theory of Sensory Signaling and Stressor Accommodation. Harold J. Margolis. Silogram, Green Valley Lake, CA, 1991. xviii, 664 pp., illus. \$57.

Internalizing and Externalizing Expressions of Dysfunction. Rochester Symposium on Developmental Psychopathology (Rochester, NY, 1988). Vol. 2. Dante Cicchetti and Sheree L. Toth, Eds. Erlbaum, Hillsdale, NJ, 1991. viii, 312 pp., illus. \$59.95.

Introduction to the Thermodynamics of Solids. J. L. Ericksen. Chapman and Hall (Routledge, Chapman, and Hall), New York, 1991. xii, 204 pp., illus. \$49.95. Applied Mathematics and Mathematical Computation, 1.

Light. R. W. Ditchburn. Dover, New York, 1991. xxii, 680 pp., illus. Paper, \$15.95. Reprint, 1961 ed.

Lunar Sourcebook. A User's Guide to the Moon. Grant Heiken, David Vaniman, and Bevan M. French. Cambridge University Press, New York, 1991. xx, 736 pp., illus., + plates. \$59.50.

Mechanical Properties of Bamboo. Jules J. A. Janssen. Kluwer, Boston, 1991. viii, 134 pp., illus. \$95. Forestry Sciences, vol. 37.

The Mechanism of Human Facial Expression.

G.-B. Duchenne de Boulogne. R. Andrew Cuthbertson, Transl. Ed. Cambridge University Press, New York, and Editions de la Maison des Sciences de l'Homme, Paris, 1990. xvi, 288 pp., illus. + plates. \$54.50. Studies in Emotion and Social Interaction. Translated from the French edition (Paris, 1862).

Multigrid and Defect Correction for the Steady Navier-Stokes Equations Application to Aerodynamics. B. Koren. Center for Mathematics and Computer Science, Amsterdam, 1991. viii, 127 pp., illus. Dfl. 39. CWI Tract, 74.

New Aspects of the Genetics of Molecular Evolution. Motoo Kimura and Naoyuki Takahara, Eds. Japan Scientific Societies Press, Tokyo, and Springer-Verlag, New York, 1991. xiv, 322 pp., illus. \$119.

The New Evolutionary Paradigm. Ervin Laszlo, Ed. Gordon and Breach, New York, 1991. xxvi, 204 pp., illus. \$36. World Futures General Evolution Studies, vol. 2.

The New Hacker's Dictionary. Eric S. Raymond, Ed. Assistance and illustrations by Guy L. Steele, Jr. MIT Press, Cambridge, MA, 1991. xxii, 433 pp., illus. Paper, \$10.95. Second edition of *The Hacker's Dictionary*.

New Perspectives in Sponge Biology. Klaus Rützler, Ed. Smithsonian Institution Press, Washington, DC, 1991. x, 533 pp., illus. \$50. From a conference, Woods Hole, MA, Nov. 1985.

Perspectives on Cellular Regulation. From Bacteria to Cancer. Essays in Honor of Arthur B. Pardee. Judith Campisi *et al.*, Eds. Wiley-Liss, New York, 1991. xviii, 355 pp., illus. \$59.50. MBL Lectures in Biology, vol. 11.

Phase Diagrams of the Elements. David A. Young. University of California Press, Berkeley, CA, 1991. x, 291 pp., illus. \$39.95.

Phase-Interface Phenomena in Multiphase Flow. G. F. Hewitt, F. Mayinger, and J. R. Riznic, Eds. Hemisphere (Taylor and Francis), New York, 1991. x, 600 pp., illus. \$125. From a seminar, Dubrovnik, Yugoslavia, May, 1990.

Regular Complex Polytopes. H. S. M. Coxeter. 2nd ed. Cambridge University Press, New York, 1991. xiv, 210 pp., illus. \$59.50.

Religion, Learning and Science in the Abbasid Period. M. J. L. Young, J. D. Latham, and R. B. Serjeant, Eds. Cambridge University Press, New York, 1990. xiv, 587 pp., illus. \$95. The Cambridge History of Arabic Literature.

Renormalization and Asymptotic Expansions. V. A. Smirnov. Birkhäuser, Boston, 1991. x, 380 pp., illus. \$85. Progress in Physics, vol. 14.

Rice Insects. Management Strategies. E. A. Heinrichs and T. A. Miller, Eds. Springer-Verlag, New York, 1991. xiv, 347 pp., illus. \$98. Springer Series in Experimental Entomology.

Self and Process. Brain States and the Conscious Present. Jason W. Brown. Springer-Verlag, New York, 1991. xiv, 201 pp., illus. \$42.50.

Self-Modifying Systems in Biology and Cognitive Science. A New Framework for Dynamics, Information, and Complexity. George Kampis. Pergamon, New York, 1991. xx, 543 pp., illus. \$100. International Federation for Systems Research International Series on Systems Science and Engineering, vol. 6.

Sense and Nonsense about IQ. The Case for Uniqueness. Charles Locurto. Praeger, New York, 1991. xxx, 197 pp., illus. \$47.95; paper, \$16.95.

Shaping Invention. Thomas Blanchard's Machinery and Patent Management in Nineteenth-Century America. Carolyn C. Cooper. Columbia University Press, New York, 1991. xiv, 326 pp., illus. \$45.

Die Theorie der Relativen Bewegungen. Johann Kocher. Elementon-Verlag, Nuremberg, 1991. 165 pp. Paper, DM16.

Theory of Magnetic and Electric Susceptibilities for Optical Frequencies. P. K. Anastasovski. Nova, New York, 1990. xiv, 237 pp., illus. \$74.

The Theory of Singularities and its Applications. V. I. Arnold. Cambridge University Press, New York, 1991. iv, 72 pp., illus. \$19.95. Rezioni Fermiani.

Thermodynamic and Optical Properties of Ionized Gases at Temperatures to 100 eV. Yu. V. Boyko *et al.*, Eds. Hemisphere (Taylor and Francis), New York, 1991. viii, 198 pp., illus. \$85.

Wild Pigs in the United States. Their History, Comparative Morphology, and Current Status. John J. Mayer and I. Lehr Brisbin, Jr. University of Georgia Press, Athens, 1991. xxii, 313 pp., illus. \$40.

Woman in Science. With an Introductory Chapter on Woman's Long Struggle for Things of the Mind. H. J. Mozans. University of Notre Dame Press, Notre Dame, IN, 1991. xxiv, 452 pp. Paper, \$14.95. Reprint, 1913 ed.