

final chapter (by Aronin and Schwartz) describing the regulation of *c-fos* expression in the SCN. This review is clear and informative, but, ironically, probably the most dated of all the chapters, as research on molecular events associated with phase-shifting has proceeded at an incredible pace during the past few years.

One serious omission is a thorough discussion of multi-oscillator models of the mammalian circadian system. Though Kittrell provides a valuable review of the controversy over SCN control of temperature rhythms, research results do not yet allow firm conclusions. On the other hand, work by Stephan and others has demonstrated the existence of a circadian oscillator, entrainable by restricted food access, which is definitely not located in the SCN. Adding a review of this important work would have strengthened the book.

In many cases, a reader of this book can almost hear various authors addressing each other, approaching the same question using different techniques or interpreting the same data in slightly different ways. The uniform quality of the literature reviews ensures that the book will not be quickly dated. Though this book is currently referred to within the field as "the SCN book," it certainly has the potential for being "The SCN Book."

Mary Harrington
Department of Psychology,
Smith College,
Northampton, MA 01063



High-Energy Preoccupation

The Structure of the Proton. Deep Inelastic Scattering. R. B. ROBERTS. Cambridge University Press, New York, 1991. x, 182 pp., illus. \$49.50. Cambridge Monographs on Mathematical Physics.

The structure of the proton has been one of the main preoccupations of high-energy physicists—experimenters and theoreticians alike—for the last three decades. A major breakthrough in the late 1960s, which occurred during scattering experiments at the Stanford Linear Accelerator Center, showed large probabilities for scattering electrons on hydrogen targets. These unexpected results indicated that the electric charge in the proton was carried by smaller entities variously called quarks or partons. The initial experiments spawned a great deal of subsequent experimental and theoretical activity, which is still ongoing. The original experimenters had to visit Stockholm two years ago.

Deep inelastic scattering is, however, only one of the windows we have for looking inside the proton. There is also a great deal of spectroscopic evidence, and the integration of the information from each of these fields of research is still rather clumsy at present and open to controversy. In *The Structure of the Proton*, Roberts deals only with data and interpretations from deep inelastic scattering experiments. The book gives a concise, complete, and up-to-date summary of the field, from precise definitions of lepton-nucleon cross-sections in terms of structure functions, to their interpretation in terms of the quark-parton model, to perturbative quantum chromodynamics and nuclear effects. All this is done in about 180 pages. The emphasis is on concise presentation, and one can find all the main equations and references to the literature very easily. For example, the topic of polarized structure functions, a subject of intense debate during the last four years, is disposed of in about four pages.

The book will therefore be of greater use to people who have an interest in the subject already (and wish to find a particular equation or reference) than to greenhorns. Roberts refers the reader to Frank Close's *An Introduction to Quarks and Partons* (Academic Press, 1979) and Richard Feynman's *Photon-Hadron Interactions* (Addison-Wesley, 1989) for a more historical introduction and broader discussion of the subject. I expect to see the present book on the shelves of friends who are involved in data analysis and the design of new experiments, but not among the broader ranges of graduate students.

Gabriel Karl
Department of Physics,
University of Guelph,
Guelph, Ontario, Canada N1G 2W1



Books Received

The Ant and the Peacock. Altruism and Sexual Selection from Darwin to Today. Helena Cronin. Cambridge University Press, New York, 1992. xiv, 490 pp., illus. \$39.95.

Applied Population Biology. S. K. Jain and L. W. Botsford, Eds. Kluwer, Norwell, MA, 1992. x, 295 pp., illus. \$125. Monographiae Biologicae, vol. 67.

Astrophysical Data. Planets and Stars. Kenneth R. Lang. Springer-Verlag, New York, 1992. x, 937 pp., illus. \$59.

Atrial Natriuretic Hormones. David L. Vesely. Prentice-Hall, Englewood Cliffs, NJ, 1992. xvi, 240 pp., illus. \$64. Endocrinology Series.

Autism. Identification, Education, and Treatment. Dianne E. Berkell, Ed. Erlbaum, Hillsdale, NJ, 1992. x, 319 pp. \$69.95; paper, \$29.95.

Awakening from Depression. Jerome Marmorstein and Nanette Marmorstein. Woodbridge, Santa Barbara, CA, 1992. 159 pp. Paper, \$9.95. Includes revised text from *The Psychometabolic Blues*.

Biological Risk Factors for Psychosocial Disorders. Michael Rutter and Paul Casaer, Eds. Cambridge University Press, New York, 1992. xviii, 246

pp., illus. \$64.95. Based on a workshop, Como, Italy, Oct. 1989.

Bioscience=Society. D. J. Roy, B. E. Wynne, and R. W. Old, Eds. Published on behalf of Schering AG, Berlin, by Wiley, New York, 1992. x, 409 pp., illus. \$95. Schering Foundation Workshop. From a workshop, Berlin, Nov. 1990.

A Brief History of Time. A Reader's Companion. Stephen Hawking, Ed. Bantam, New York, 1992. x, 194 pp., illus. \$25.

Cancer Patient Care. Psychosocial Treatment Methods. Maggie Watson, Ed. British Psychological Society Books, Leicester, U.K., and Cambridge University Press, New York, 1992. x, 320 pp. \$84.95; paper, \$39.95.

The Computer-Based Patient Record. An Essential Technology for Health Care. Richard S. Dick and Elaine B. Steen, Eds. National Academy Press, Washington, DC, 1992. xiv, 190 pp. \$24.95.

Computers and the Imagination. Visual Adventures Beyond the Edge. Clifford A. Pickover. St. Martin's, New York, 1992. xx, 419 pp., illus. \$29.95.

Concise Encyclopedia of Modelling and Simulation. Derek P. Atherton and Pierre Borne, Eds. Pergamon, Oxford, U.K., 1992. xiv, 539 pp., illus. \$280. Advances in Systems, Control and Information Engineering.

Concise Encyclopedia of Polymer Processing and Applications. Patrick J. Corish, Ed. Pergamon, Oxford, U.K., 1992. xx, 771 pp., illus. \$280. Advances in Materials Science and Engineering.

Concurrent Programming. C. R. Snow. Cambridge University Press, New York, 1992. x, 238 pp., illus. \$65; paper, \$27.95. Cambridge Computer Science Texts, 26.

Confidence Intervals on Variance Components. Richard K. Burdick and Franklin A. Graybill. Dekker, New York, 1992. x, 211 pp. \$99.75. Statistics, 127.

Connected Speech. The Interaction of Syntax and Phonology. Ellen M. Kaisse. Academic Press, San Diego, CA, 1992. viii, 206 pp., illus. \$51.

The Cytokine Handbook. Angus W. Thomson, Ed. Academic Press, San Diego, CA, 1992. xii, 425 pp., illus. \$115.

Doing Physics. How Physicists Take Hold of the World. Martin H. Krieger. Indiana University Press, Bloomington, 1992. xxii, 169 pp. \$29.95; paper, \$9.95.

Down from Troy. A Doctor Comes of Age. Richard Selzer. Morrow, New York, 1992. 300 pp. \$20.

Duchenne Muscular Dystrophy. Animal Models and Genetic Manipulation. Byron A. Kakulas, John McC. Howell, and Allen D. Roses, Eds. Raven, New York, 1992. xii, 308 pp., illus. \$90. From a workshop, Perth, Australia, Aug. 1991.

Dust in the Galactic Environment. D. C. B. Whittet. Institute of Physics, Philadelphia, PA, 1992 (distributor, American Institute of Physics, New York). xii, 295 pp., illus. \$95. Graduate Series in Astronomy.

Dynamic Modeling of Transport Process Systems. C. A. Silebi and W. E. Schiesser. Academic Press, San Diego, CA, 1992. xiv, 518 pp., illus. \$99.50.

Electromagnetic Fields and the Risk of Cancer. Report of an Advisory Group on Non-ionising Radiation. National Radiological Protection Board, Chilton, Didcot, U.K., 1992 (distributor, HMSO, London). iv, 138 pp., illus. Paper, £10. Documents of the NRPB, vol. 3, no. 1.

Enantioselective Synthesis. Natural Products from Chiral Terpenes. Tse-Lok Ho. Wiley Interscience, New York, 1992. xii, 324 pp., illus. \$69.95.

Energy Policy in the Greenhouse. Florentin Krause, Wilfrid Bach, and Jonathan Koomey. Wiley Interscience, New York, 1992. xxii, 328 pp., illus. Paper, \$29.95.

Engineering Applications of Unsteady Fluid Flow. P. H. Azoury. Wiley, New York, 1992. xviii, 383 pp., illus. \$89.95.

Environmental Epidemiology. Vol. 1, Public Health and Hazardous Wastes. National Research Council. National Academy Press, Washington, DC, 1992. xiv, 282 pp., illus. \$29.95.

Environmental Microbiology. Ralph Mitchell, Ed. Wiley, New York, 1992. xii, 411 pp., illus. \$96. Wiley Series in Ecological and Applied Microbiology.

Ephemerides of X and Y. The Discovery of the Tenth and Eleventh Planets of our Solar System: