and arguments marshaled by its supporters and opponents inside and outside science and recounting the political maneuverings and legislative actions by which the project was launched and eventually canceled. Not only the obvious budgetary considerations but considerations of international competitiveness, quasi-religious associations, and claims regarding spin-off figure in his account. Writing in 1987, a time he characterized as a "prosperous calm," Kevles observed that a theme of his book is that "in good times as well as bad, the relationship of physicists to the American democracy has been marked by special tensions." Now, he concludes, "Physics in the United States has been irreversibly incorporated into the conventional political process, making it a creature of political democracy, its fortunes, like those of other interest groups, contingent on the outcome of the fray."

Katherine Livingston

Fifty Years of Antimicrobials. Past Perspectives and Future Trends. P. A. HUNTER, G. K. DARBY, and N. J. RUSSELL, Eds. Published for the Society for General Microbiology by Cambridge University Press, New York, 1995. xii, 376 pp., illus. $115 or £60. From a symposium, Bath, UK, April 1995.

Among the events of World War II that are being painfully revisited in this 50th anniversary year there is at least one that might give some cause for general satisfaction, the advent of antibiotics. *Fifty Years of Antimicrobials* is in part a commemoration of that advance (and also of the founding in 1945 of the Society for General Microbiology). The work begins by reprinting a 1946 lecture by Alexander Fleming, delivered just at the point when penicillin was becoming available for general use. Fleming begins by describing the means of local chemotherapy (antisepsis) available before the advent of penicillin. By the time Fleming began his career Lister's techniques of antisepsis had been rather displaced by the adoption of aseptic procedures and were used only sparingly because of their toxicity. The war of 1914–18 again made sepsis a major medical problem. Fleming describes treatments that were used at that time, especially one involving instillation of sodium hypochlorite (Dakin's fluid), which according to his observations owed its efficacy as much to its ability to drain wounded tissue as to direct antisepsis, and recounts studies of the interactions of such chemicals with leucocytes, including what to him was "the most important series of experiments I have ever done," determining the range of concentrations at which the substances were effective. He then proceeds to discuss Ehrlich's Salvarsan, "the first real success in the chemotherapeutic treatment of a bacterial disease," and the development of sulfonamides before passing quickly over the development of penicillin, streptomycin, and other antibiotics to comment on research needs of the time. The remaining 14 papers in the book are largely focused on current issues. A number are concerned with specific categories of antibiotics: non-azole antifungals for use in humans (Hunter), beta-lactam antibiotics (Rolinson; Cohen and Aharonowitz), fungicides for the protection of plants (Russell *et al.*), quinolones (Chu and Shen), antimalarials (Pudney), natural antibiotics produced as secondary metabolites (Demain), virus insecticides (Bishop *et al.*), antiviral nucleoside analogues (Darby), antiprotozoal drugs (Croft), and antiseptics and disinfectants, or "biocides" (Russell and Russell). Other papers (Zähner and Fiedler; Ryley; Kerr and Lacey) address more general questions regarding the continuing need for development of new antibiotics. Among the factors that figure in the answers are the persistence of certain tropical diseases, the emergence of previously unknown diseases or of resistant strains of known pathogens, and environmental and demographic stresses.

Katherine Livingston

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Books Received

Adolescence. A Developmental Transition. 2nd ed. Douglas C. Kimmel and Irving B. Weiner. Wiley, New York, 1994. xvi, 620 pp., illus. $57.95.

Alzheimer's and Parkinson's Diseases. Recent Developments. Israel Hanin, Mitsuo Yoshida, and Abraham Fisher, Eds. Plenum, New York, 1995. xx, 724 pp., illus. $149.50. Advances in Behavioral Biology, vol. 44. From a conference, Chicago, Nov. 1993.

Analytical Electrochemistry. Joseph Wang. VCH, New York, 1994. xii, 198 pp., illus. $59.95.

Backarc Basins. Tectonics and Magmatism. Brian Taylor, Ed. Plenum, New York, 1995. xxvi, 524 pp., illus., + plates. $95.

Calculating the Secrets of Life. Applications of the Mathematical Science in Molecular Biology. Eric S. Lander and Michael S. Waterman, Eds. National Academy Press, Washington, DC, 1995. xiv, 285 pp., illus. $39.95.

Deep Continental Structure of India. A Review. T. M. Mahadevan. Geological Society of India, Bangalore, 1994. xvi, 569 pp., illus., + plates. $60 or Rs 600. Memoir 28.

Electric and Magnetic Fields. From Numerical Models to Industrial Applications. André Nicolet and R. Belmans. Plenum, New York, 1995. xii, 376 pp., illus. $105. From a workshop, Leuven, Belgium, May 1994.

Field Guide to the Palms of the Americas. Andrew Henderson, Gloria Galeano, and Rodrigo Bernal. Princeton University Press, Princeton, NJ, 1995. x, 353 pp., illus., + plates. $75.

The Golden Helix. Inside Biotech Ventures. Arthur Kornberg. University Science, Sausalito, CA, 1995. xiv, 287 pp., illus. $28.50.

Histology of the Nervous System of Man and Vertebrates. S. Ramón y Cajal. Oxford University Press, New York, 1994. 2 vols. xl + x, 1611 pp., illus. $195. History of Neuroscience, no. 6. Translated from the French translation (1909–1911) of the original Spanish (1899–1904) by Neely Swanson and Larry W. Swanson.

Inventing the Universe. Plato's *Timaeus*, the Big Bang, and the Problem of Scientific Knowledge. Lus Brisson and Walter Meyerstein. State University of New York Press, Albany, 1995. viii, 193 pp., illus. Paper, $14.95. SUNY Series in Ancient Greek Philosophy. Translated from the French edition (Paris, 1991).

Jupiter. The Giant Planet. Reta Beebe. Smithsonian Institution Press, Washington, DC, 1994. vi, 250 pp., illus., + plates. $29.95. Smithsonian Library of the Solar System.

The Laboratory Quality Assurance System. A Manual of Quality Procedures with Related Forms. 2nd ed. Thomas A. Ratliff, Jr. Van Nostrand Reinhold, New York, 1993. vi, 259 pp. Loose leaf, $69.95.

Mass Spectrometric Study of the Vaporization of Oxide Systems. 2nd ed. V. L. Stolyarova and G. A. Semenov. J. H. Beynon, Ed. Wiley, New York, 1994. xii, 434 pp., illus. $130. Translated from the Russian edition (Moscow 1990).

Negro Business and Business Education. Their Present and Prospective Development. Joseph A. Pierce. Plenum, New York, 1995. xxx, 338 pp., illus. $45. Plenum Studies of Work and Industry. Reprint, 1947 ed.

PSA 1994. Vol. 1. David Hull, Micky Forbes, and Richard M. Burian, Eds. Philosophy of Science Association, East Lansing, MI, 1994. xxxii, 464 pp., illus. $22; paper, $20. From a meeting, New Orleans, LA, Oct. 1994.

Scientific Methods. Conceptual and Historical Problems. Peter Achinstein and Laura J. Snyder, Eds. Krieger, Malabar, FL, 1994. viii, 160 pp. Paper, $19.50. Open Forum Series. Based on a seminar, Baltimore, 1992.

***Thermus* Species**. Richard Sharp and Ralph Williams, Eds. Plenum, New York, 1995. xiv, 233 pp., illus. $75. Biotechnology Handbooks, vol. 9.

Topics in the Constructive Theory of Countable Markov Chains. G. Fayolle, V. A. Malyshev, and M. V. Menshikov. Cambridge University Press, New York, 1995. vi, 169 pp., illus. $44.95.

Toxic Metals in Soil-Plant Systems. Sheila M. Ross, Ed. Wiley, New York, 1994. xvi, 469 pp., illus. $125.

Transformation of Plants and Soil Microorganisms. Kan Wang, Alfredo Herrera-Estrella, and Marc Van Montagu, Eds. Cambridge University Press, New York, 1995. xx, 176 pp. + plates. $84.95. Plant and Microbial Biotechnology Research, 3.

Transportation and Energy. Strategies for a Sustainable Transportation System. Daniel Sperling and Susan A. Shaheen, Eds. American Council for an Energy-Efficient Economy, Berkeley, CA, 1995. xviii, 305 pp., illus. Paper, $32. ACEEE Books on Energy Policy and Energy Efficiency. From a conference, Pacific Grove, CA, Aug. 1993.

Vaccine Design. The Subunit and Adjuvant Approach. Michael F. Powell and Mark J. Newman, Eds. Plenum, New York, 1995. xlvi, 949 pp., illus. $145. Pharmaceutical Biotechnology, vol. 6.

Visions of the Future. Art, Technology and Computing in the Twenty-First Century. Clifford A. Pickover, Ed. St. Martin's, New York, 1994. xxviii, 212 pp., illus. $29.95; paper, $16.95. Reprint, 1992 ed.

The War of Desire and Technology at the Close of the Mechanical Age. Allucquère Rosanne Stone. MIT Press, Cambridge, MA, 1995. xii, 212 pp. $22.50.

Publishers' Addresses

Below is information about how to direct orders for books reviewed in this issue. A fuller list of addresses of publishers represented in *Science* appears in the issue of 26 May 1995, page 1220.

Cambridge University Press, 110 Midland Ave., Port Chester, NY 10573-4930. Phone: 800-872-7423; 914-937-9600. Fax: 914-937-4712.

Harvard University Press, Customer Service, 79 Garden St., Cambridge, MA 02138. Phone: 800-448-2242; 617-495-2577. Fax: 800-962-4983; 617-495-8924.

Oxford University Press, Inc., Order Dept., 2001 Evans Rd., Cary, NC 27513. Phone: 800-451-7556; 919-677-0977. Fax: 919-677-1303.