and others in what Gould characterizes as the "reification of intelligence." Apart from the introduction the new edition is distinguished mainly by the inclusion of a reprinting of two reviews by Gould of *The Bell Curve* and three essays, gathered under the heading Three Centuries' Perspective on Race and Racism, that discuss the ideas of the British physician Thomas Browne, of the German naturalist J. F. Blumenbach, and of Darwin as represented in a pamphlet entitled "The Moral State of Tahiti."

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The World According to Wavelets. The Story of a Mathematical Technique in the Making. BARBARA BURKE HUBBARD. Peters, Wellesley, MA, 1996. xx, 265 pp., illus. $34.

Wavelets. Theory and Applications. GORDON ERLEBACHER, M. YOUSUFF HUSSAINI, and LELAND M. JAMESON, Eds. Oxford University Press, New York, 1996. xii, 510 pp., illus. $55 or £39.50. ICASE/LaRC Series in Computational Science and Engineering.

Since the mathematical decomposition technique known as the wavelet transform made its appearance in the 1980s a library of the subject has been building up. Accounts of six books on wavelets, including works authored by Yves Meyer, Ingrid Daubechies, and Charles K. Shui, have appeared in *Science* (**257**, 821 [1992] and **262**, 1589 [1993]). This season brings two further entries.

Hubbard's book is something of a new departure in the field, being an attempt by a nonexpert to explain this inevitably technical subject to an audience with little or no mathematical background. Expanding on an effort initiated for a National Academy of Sciences "Frontiers of Science" volume, Hubbard has set out to give an account that will include something of the "human side" of the subject. The first section of the book expounds wavelets without the use of any mathematical formulas, beginning with a description of Fourier analysis, of which they are an extension, giving some of the history of their development, and concluding with a consideration of their applications in signal processing. A second and longer section (Beyond Plain English) gives a more mathematical treatment of various aspects of the subject, and an appendix further explains some relevant mathematical concepts and operations. There are also a bibliography, a listing of software sources, a reference list, and an index.

The work edited by Erlebacher *et al.* is in a more directly tutorial mode, being based on a 1993 "short course" whose "emphasis was on providing as much as possible the practical knowledge which will enable applied scientists to evaluate objectively how useful these new tools are in relation to their needs." The volume opens with two introductory chapters in which Jameson and Strang, respectively, discuss the application of wavelets to partial differential equations and wavelets from filter banks. Tchamitchian then provides a 100-page account of the mathematical origins of wavelets and lays out their theoretical framework. Ensuing chapters deal with wavelet-based fast numerical algorithms (Beylkin) and with wavelet algorithms for partial differential equations and studies of turbulence (Liandrat). Finally, Arneodo provides a 150-page discussion of wavelet analysis of fractals. Each chapter has its own reference list, and there is an index to the work as a whole.

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Vignette: Infoworld

The old British Museum reading room provided an architectural interface to the vast book stacks that lay beyond. From outside, the classical, columnar facade functioned as an icon—signifier of an access point. From within the circular, domed reading room (which looks in plan like a sectored hard disk), books could be summoned up by the action of specifying a call number. Library attendants would then retrieve volumes from the stacks for use at a reading table. . . . the cycle would be completed by performing the task of reshelving the books until they were needed again. Functionally, the whole thing was a very large, very slow version of what computer technicians now know as a database server.

—*William J. Mitchell*, in *City of Bits: Space, Place, and the Infobahn* (MIT Press)

Books Received

The Artful Universe. John D. Barrow. Oxford University Press, New York, 1995. x, 274 pp., illus., + plates. $27.50.

At War Within. The Double-Edged Sword of Immunity. William R. Clark. Oxford University Press, New York, 1995. xii, 276 pp. $25.

Bangs, Crunches, Whimpers, and Shrieks. Singularities and Acausalities in Relativistic Spacetimes. John Earman. Oxford University Press, New York, 1995. xii, 257 pp., illus. $35.

The Cells of the Body. A History of Somatic Cell Genetics. Henry Harris. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1995. xii, 263 pp., illus. $59.

The Domestic Dog. Its Evolution, Behavior, and Interactions with People. James Serpell, Ed. Cambridge University Press, New York, 1996. xii, 268 pp., illus. $69.95; paper, $19.95.

The Ecology of Fire. Robert J. Whelan. Cambridge University Press, New York, 1995. x, 346 pp., illus. $59.95; paper, $27.95. Cambridge Studies in Ecology.

Ecology of Infectious Diseases in Natural Populations. B. T. Grenfell and A. P. Dobson, Ed. Cambridge University Press, New York, 1995. xii, 521 pp., illus. $59.95. Publications of the Newton Institute, 7. Based on a workshop, March 1993.

Free Radicals in Organic Chemistry. Jacques Fosey, Daniel Lefort, and Janine Sorba. Wiley, New York, and Masson, Paris, 1995. xiv, 307 pp., illus. Paper, $39.95.

Freud Scientifically Reappraised. Testing the Theories and Therapy. Seymour Fisher and Roger P. Greenberg. Wiley, New York, 1996. xiv, 353 pp. $37.95.

Handbook of Media for Environmental Microbiology. Ronald M. Atlas. CRC Press, Boca Raton, FL, 1995. iv, 540 pp. $99.95.

How We Learn; How We Remember. Toward an Understanding of Brain and Neural Systems. Leon N. Cooper. World Scientific, River Edge, NJ, 1995. x, 395 pp., illus. $99; paper, $53. World Scientific Series in 20th Century Physics, vol. 10. Reprints of selected papers.

Immune Responses in the Nervous System. Nancy J. Rothwell. Bios Scientific, Oxford, UK, 1995 (U.S. distributor, Books International, Herndon, VA). xvi, 233 pp., illus. $130 or £365. Molecular and Cellular Neurobiology.

India and Antarctica During the Precambrian. M. Yoshida and M. Santosh, Eds. Geological Society of India, Bangalore, 1995. xvii, 412 pp., illus. Paper, $50 or Rs. 400. Memoir 34.

Jurassic Magmatism and Tectonics of the North American Cordillera. David M. Miller and Cathy Busby, Eds. Geological Society of America, Boulder, CO, 1995. vi, 425 pp., illus. Paper, $95. Special Paper 299.

Lavoisier in European Context. Negotiating a New Language for Chemistry. Bernadette Bensaude-Vincent and Ferdinando Abbri, Eds. Science History Publications/USA (Watson), Nantucket, MA, 1995. x, 303 pp., illus. $45.95. From a workshop, May 1994.

Modern Glacial Environments. Processes, Dynamics and Sediments. John Menzies. Butterworth-Heinemann, Stoneham, MA, 1995. xxvi, 621 pp., illus. Paper, $69.95. Glacial Environments, vol. 1.

Particle Physics. Perspectives and Opportunities. Roberto Peccei *et al.*, Eds. World Scientific, River Edge, NJ, 1995. xii, 301 pp., illus. $82. Based on a workshop, Baltimore, MD, May 1994, and a meeting, Albuquerque, NM, Aug. 1994.

Quantum Mass Theory Compatible with Quantum Field Theory. Petar K. Anastasovski and Trevor M. Benson. Nova, Commack, NY, 1995. viii, 165 pp., illus. $87.

Science and Technology Policy Yearbook 1995. Albert H. Teich, Stephen D. Nelson, and Celia McEnaney, Eds. American Association for the Advancement of Science, Washington, DC, 1995. xii, 357 pp., illus. Paper, $24.95; to AAAS members, $19.95.

Technology's New Horizons. Conversations with Japanese Scientists. Hiroaki Yanagida, Ed. Oxford University Press, New York, 1995. xviii, 161 pp., illus. $35.

The Visual Brain in Action. A. David Milner and Melvyn A. Goodale. Oxford University Press, New York, 1995. xviii, 248 pp., illus. $62. Oxford Psychology, no. 27.