

## Books

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**Children's Secrets** — Thomas J. Cottle. A rare glimpse into the minds of children who have endured family traumas such as violence, infidelity, incest, alcoholism and mental illness. Without claiming to understand how these experiences affect the development of a child, the author, a psychologist at Harvard Medical School, reveals the strength, pain, courage and scars of these children simply by relating their heartbreaking secrets to us as they portrayed them to him. Required reading for all parents and for professionals who work with children. Addison-Wesley, 1990, 273 p., paperback, \$10.95.

**Encyclopedia of Human Evolution and Prehistory** — Ian Tattersall, Eric Delson and John Van Couvering, Eds. Alphabetically arranged entries cover every aspect of human evolution and paleontology, with explanations ranging from brief definitions of technical terms to essays on such topics as primatology, genetics and Paleolithic archaeology. The text, edited by a team from the American Museum of Natural History, is accessible to scholars, professionals and lay readers and is supplemented by hundreds of photographs and illustrations. Garland, 1990, 603 p., illus., hardcover, \$87.50.

**In the Country of Hearts: Journeys in the Art of Medicine** — John Stone. Essays by this medical professor and cardiologist offer a glimpse into the human and medical aspects of cardiology. His compassionate case histories educate the reader on such phenomena as the workings of the heart and cardiac afflictions and their treatment, while revealing the thoughts and emotions of doctors who treat and repair this vital organ. Delacorte, 1990, 213 p., hardcover, \$17.95.

**Losing Sleep: How Your Sleeping Habits Affect Your Life** — Lydia Dotto. Does sleep loss affect your intellectual performance? Can napping help restore it? Beginning with an overview of current theories and scientific understanding of the nature of sleep, Dotto investigates the impact of sleep deprivation, sleep disturbances and sleep disorders on job performance and alertness. She focuses on urban industrial lifestyles and writes for the lay reader. Morrow, 1990, 342 p., hardcover, \$21.95.

**Origins: The Lives and Worlds of Modern Cosmologists** — Alan Lightman and Roberta Brawer. A fascinating compilation of 27 interviews with such eminent cosmologists as Stephen Hawking and Roger Penrose, revealing the fundamental differences in their world views, motivations and prejudices and exploring how those differences affect their scientific thought. Some see the universe as too small; others see it as pointless. The interviewees steer the cosmologists toward the areas of modern theory that falter the most under scrutiny. Includes a helpful introduction to modern cosmology and a glossary. Harvard U Pr, 1990, 561 p., hardcover, \$29.95.

**Regulating Reproduction** — Robert H. Blank. Examines the social context of advances in reproductive technology, including artificial insemination, surrogate motherhood, sex preselection, DNA probes and prenatal diagnoses. Blank analyzes current efforts to regulate reproduction and how the need for such regulation will change as new technologies give us greater control over reproduction. Columbia U Pr, 1990, 272 p., hardcover, \$27.50.

**The Simple Act of Planting a Tree: A Citizen Forester's Guide to Healing Your Neighborhood, Your City, and Your World** — TreePeople. While planting a tree may be a simple approach to complex environmental problems, it's not an easy one, argues TreePeople, a community forestry group in Los Angeles. This workbook takes readers through the necessary steps for effective community tree stewardship, including organizing the community, finding funding, planning a site and choosing a tree, and planting and maintaining the tree. An essential resource for anyone wanting to confront environmental problems but unsure of where to start. Tarcher, 1990, 236 p., illus., paperback, \$12.95.

**"You want proof? I'll give you proof!"** — Sidney Harris. Harris, whose cartoons on science and technology appear regularly in *THE NEW YORKER* and *DISCOVER*, among others, is at it again. This collection, his tenth, contains 150 cartoons depicting a world where railroads run on Heisenberg's uncertainty principle and car repairs require systems analysts. W H Freeman, 1990, approx. 150 p., paperback, \$10.95.

# Philosophical Consequences of Quantum Theory

## Reflections on Bell's Theorem

James T. Cushing & Ernan McMullin, Editors

Einstein argued that quantum theory had to be regarded as fundamentally incomplete. Its inability, for example, to predict the exact time of decay of a single radioactive atom had to be due to a failure of the theory and not due to a permanent inability on our part or a fundamental indeterminism in nature itself.

In 1964, John Bell derived a theorem which showed that any deterministic theory which preserved "locality" (i.e., which rejected action at a distance) would have certain consequences for measurements performed at a distance from one another. An experimental check seems to show that these consequences are not, in fact, realized. The astonishing result is that local deterministic theories of the classical sort seem to be permanently excluded. Not only can the individual decay not be predicted, but no future theory can ever predict it.

The 15 papers in this book wrestle with this conclusion. Some welcome it; others leave open a return to at least some kind of deterministic world, one which must, however, allow something like action-at-a-distance. How much like it? One thing is certain: We can never return to the comfortable Newtonian world where everything that happened was, in principle, predictable and where what happened at one measurement site could not affect another set of measurements being performed light-years away, at a distance that a light-signal could not bridge. — *from the publisher*

Univ. of Notre Dame Press, 1989, 314 pages, 9" x 6", paperback, \$19.95 ISBN 0-268-01579-1

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