

Books — by, about, or of interest to Caltech people

SCIENCE AND MORAL PRIORITY Merging Mind, Brain, and Human Values

by Roger Sperry

Columbia University Press \$16.95

Roger Sperry's scientific life has been guided by a persistent quest for understanding of the relation of mind to brain. This quest grew out of his observations of the effects of surgically dividing the brain, and led him to examine the issues of consciousness, brain, and moral values. *Science and Moral Priority* presents his resolution of the conflict between the value-devoid mechanistic descriptions of science and traditional humanistic views of man and the world.

Since the late 1960s, Sperry points out, new concepts of brain and consciousness have given science an outlook in which the mind supersedes and controls matter, and the physical world and human psyche no longer reduce to quantum mechanics. With this foundation for a new understanding of the relationships between science and values, Sperry argues that it is not only possible but vital to merge the teaching of science and value questions. He sees such a fusion of ethics, religion, and science as the strategic key to a humane reversal of worsening world conditions.

Sperry is the Hixon Professor of Psychobiology at Caltech and a winner of the Nobel Prize in 1981.

JPL AND THE AMERICAN SPACE PROGRAM A History of the Jet Propulsion Laboratory

by Clayton R. Koppes

Yale University Press \$19.95

This is the biography of an institution that has played a leading role in the American missile and space program. It began in 1936 when a group of Caltech graduate students and local enthusiasts banded together to build rockets, but space exploration eventually represented JPL's greatest achievement.

Clayton Koppes gives the reader more than technical or scientific history, however. He also recounts the political controversies and human interactions that erupted in the lab; he traces the complex

relationships between JPL and Caltech, the government, and the aerospace industry; and he raises questions about the funding, control, and purposes of scientific and engineering research in relation to national security.

Koppes did his research and the bulk of the writing of the book from 1974 to 1978 while he was a senior research fellow in history at Caltech. He finished the manuscript at Oberlin College where he is currently assistant professor of history.

TOUCHED BY AFRICA

by Ned Munger

Castle Press, 516 N. Fair Oaks Ave., Pasadena, CA 91103.

At press . . . \$12.50; by mail . . . \$14.00

Ned Munger, professor of geography at Caltech, is the author of 7 books and more than 300 articles on Africa, and many of the 26 biographical sketches of friends and acquaintances of which this volume is composed are about Africans. Others of Munger's subjects have been touched by Africa largely through their relationship to Munger himself. They are a diverse group, including, for example, Max Delbrück, the Nobel laureate whose prize money went to a Nigerian; Martin Aliko, who may one day be president of Uganda; Henry, Doris, and Ann Dreyfuss, the industrial designer, his wife, and his daughter; Charles McGruder III, the first black American to enroll as a freshman at Caltech and graduate with a BS; and Walter Rogers, director of the Crane-Rogers Foundation, under whose aegis the American Universities Field Staff developed a corps of American specialists on foreign countries (Munger being one of them).

ENTROPY MINIMAX SOURCEBOOK

Volume 4 — Applications

edited by Ronald Christensen

Entropy Limited, So. Great Road, Lincoln, MA 01773 \$59.50

This book, part of a seven-volume series, is a compendium of entropy minimax applications covering two decades. Entropy

minimax is a new approach to predicting the future behavior of complex systems from limited observational data and employs modern information theory in its formulation. Reports are from diverse fields such as engineering, materials science, medicine, meteorology, social science, and business, and include predictive patterns for California precipitation, nuclear fuel element failure, survival prognosis for coronary artery disease patients, cancer, prison population, and more. Volume I of the series is a general description; Volume II discusses philosophical origins; and Volume III is about computer implementation.

Ronald Christensen, who is the author of the first three volumes, is a Caltech alumnus (MS '59) and president of Entropy Limited, a research firm that specializes in statistical analysis, engineering, and science, using the entropy minimax method of pattern discovery.

CHINA

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