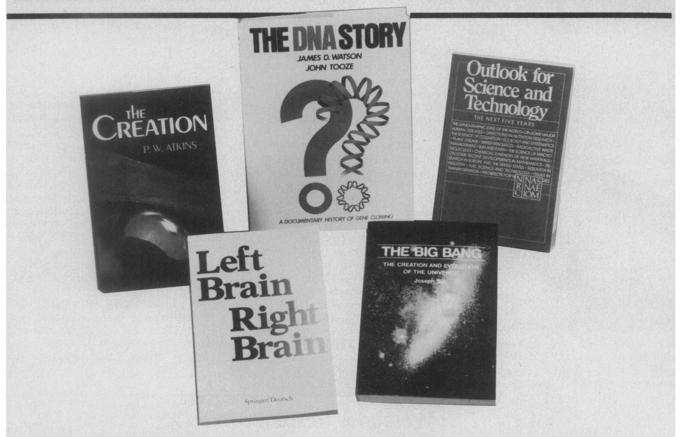
# Explore the REACHES OF THE MIND



A BLACK HOLES AND WARPED SPACETIME
William J. Kaufmann, III. What are black holes? Physicist
William J. Kaufmann, III, illuminates one of the greatest mysteries of
modern science. 221 pages, 113 illus. (16 in full color), paper \$9.50

**B** PLANETS AND MOONS
William J. Kaufmann, III. Planets and Moons will interest anyone curious about our closest neighbors in space. "An erudite and informative book." —Publishers Weekly. 219 pages, 111 illus. (8 in full color), paper \$9.50

C STARS AND NEBULAS
William J. Kaufmann, III. "A highly effective and rapid way to catch up on what is currently taking place in the realm of the stars."

—Science Books & Films. 204 pages, 104 illus. (8 in full color), paper \$9.50

**D** GALAXIES AND QUASARS
William J. Kaufmann, III. "Takes the armchair space-traveller on a voyage to the very edges of the known universe." —New Scientist. 226 pages, 115 illus. (8 in full color), paper \$9.50

THE BIG BANG
Joseph Silk. From the explosive beginning of the universe to its cold and distant death, *The Big Bang* tells the story of the cosmos. "An ideal companion to Steven Weisberg's *The First Three Minutes.*"—New Scientist. "A marvelous introduction to scientific cosmology."—San Francisco Examiner. 394 pages, 184 illus., paper \$10.50

FROM BEING TO BECOMING
Time and Complexity in the Physical Sciences
Ilya Prigogine. Prigogine shows how systems far from equilibrium
evolve elaborate structures: patterns of circulation in the atmosphere,
formation and propagation of chemical waves, the aggregation of
single-celled animals. To understand these phenomena, he explores
the philosophical implications of the work for which he received the
1977 Nobel prize in Chemistry. 272 pages, 123 illus., paper \$13.95

GRAVITATION
Charles W. Misner, Kip S. Thorne, and John Archibald Wheeler.
"A superb book. The authors are internationally known for their own work in relativistic astrophysics and the fundamental theories of gravitation. No less are they known for their abilities as articulate and lucid expositors." —American Scientist. 1,279 pages, 137 illus., paper \$43.50

THE CREATION
P. W. Atkins. *The Creation* takes readers on an entertaining journey to discover the ultimate nature and origin of the universe and the manner in which it came into being. Atkins will undoubtedly unsettle many conventional beliefs. 132 pages, hardbound \$9.95

Robert Decker and Barbara Decker. Written for interested non-specialists, *Volcanoes* is an authoritative introduction to the nature and power of these dramatic phenomena. It includes a list of worldwide volcano information centers and brief descriptions of the world's 101 most notorious volcanoes, including Mount St. Helens, which the authors discuss in relation to the current state of eruption forecasting. 244 pages, 122 illus., paper \$9.95

J SCIENCE AT SEA: Tales of an Old Ocean
Tjeerd van Andel. Tjeerd van Andel combines a love for the
life at sea with his professional knowledge of marine geology, a science
that has revolutionized our understanding of the Earth. The book is
personal in its approach and includes selections from the author's diaries
kept during cruises to study the Vema fracture zone in the southern
North Atlantic and the first expedition in a research submersible to the
Mid-Atlantic Ridge. 186 pages, 38 illus., paper \$7.95

THE DNA STORY: A Documentary History of Gene Cloning James D. Watson and John Tooze. This is an absorbing record of a social and scientific subject of incalculable consequence. A three-part documentary, *The DNA Story* provides a visual, historical, and scientific perspective. Included are: 8-page color insert of reproductions

H. W. H. Freeman and Company

of paintings by George Kelvin that capture the essence of the DNA story; documents collected from the last decade which give you a first-hand look at the concerns of the scientists who pioneered DNA research; a section of scientific background outlining the techniques for recombining DNA and identifying cloned genes. 605 pages, 122 illus. (53 with color, 8 in full color), hardbound \$24.95

### **MATHEMATICS**

**Problem Solving Through Recreational Mathematics** Bonnie Averbach and Orin Chein. An enjoyable way to learn or review mathematics, this book engages you in word problems that illustrate key mathematical ideas and sharpen your mathematical intuition. 400 pages, 691 illus., hardbound \$18.75

HOW TO SOLVE PROBLEMS Elements of a Theory of Problems and Problem Solving Wayne A. Wickelgren. The general problem-solving methods described in this book virtually guarantee that you will never again have a blank mind when trying to solve a problem. "Built upon some of the ideas of Newell, Simon, and Polya, the text is written in a readable, interesting, and straightforward manner; it is a practical how-to-do-it book. -Choice. 262 pages, 73 illus., paper \$8.95

A PRIMER OF DRUG ACTION, Third Edition Robert M. Julien. An expert in medical pharmacology, Robert M. Julien presents a thorough treatment of the actions, uses, limitations, and side effects of drugs that affect the central nervous system. Sedatives, tranquilizers, stimulants, opiates, alcohol, marijuana, and psychedelics are covered in detail. 306 pages, 61 illus., paper \$9.50

VITALITY AND AGING Implications of the Rectangular Curve

James F. Fries and Lawrence M. Crapo. We can dramatically extend the period of our mental and physical vigor, if not the length of our lives The authors show how an increase in the vitality of the elderly can be predicted and conclude that all of us can be healthier and more vital in old age. 172 pages, 36 illus., paper \$8.75

LEFT BRAIN, RIGHT BRAIN Sally P. Springer and Georg Deutsch. This is the first book to critique the important material collected during the last hundred years of research and observation in this exciting field. The book discusses topics of wide interest such as left-handedness, learning disabilities, sex differences in higher mental functions, psychiatric illness, and more. 243 pages, 51 illus., paper \$8.75

SELF-CONSCIOUSNESS AND SOCIAL ANXIETY Arnold H. Buss. Everyone feels self-conscious at times, and this informative and useful book helps us understand these feelings. Buss defines public self-consciousness as the link integrating four kinds of common social anxiety—embarrassment, shame, audience anxiety, and shyness. 270 pages, 5 illus., paper \$9.50

# THE POLITICS OF CONTRACEPTION

Birth Control in the Year 2001
Carl Djerassi. Carl Djerassi, the scientist who pioneered the development of the Pill, discusses birth control, present and future, from the triple perspectives of science, industry, and public policy. "This book deserves the widest possible readership. Carl Djerassi is ... a figure of our time, a man we ought to know."—The New York Times Book Review. 282 pages, 58 illus., paper \$9.95

### **BEYOND THE TURNING POINT** The U.S. Economy in the 1980s

Ezra Solomon. Ezra Solomon examines each of the three major sets of problems—inflation, energy dependence, and big government—which, after brewing for years, "matured, converged, and blew up in our faces" in the early Seventies. 157 pages, 20 illus., hardbound \$13.95

### **OUTLOOK FOR SCIENCE AND TECHNOLOGY** The Next Five Years

National Research Council. This volume provides a unique panorama of the achievements and prospects for science and technology. Outlook for Science and Technology considers ecology, nutrition, chemical synthesis, mathematics, industrial research, and many other topics. 788 pages, 105 illus., paper \$15.95

### MACHINES WHO THINK

Pamela McCorduck. With a reporter's regard for facts and a novelist's feeling for drama, Pamela McCorduck traces the course of artificial intelligence, drawing on her interviews with major figures in the field. "Engrossingly thoughtful, sometimes dramatic and at times amusing...likely to be one of the most widely read popular treatments of advanced computer science to date." —Publishers Weekly. 375 pages, 19 illus., paper \$9.95

SIGNALS: The Telephone and Beyond

John R. Pierce. The telephone is an element of everyday life that we have come to take for granted. For a genuine understanding of the medium, we must look beyond technology: whatever our personal and commercial requirements, it is economics, government regulations, and legislation that will ultimately dictate where we go from here. 181 pages, 93 illus., paper \$7.95

THE AGE OF TELEVISION

Martin Esslin. A few of the topics Esslin probes in this provocative assessment of television are: the impact TV will have on generations growing up under its influence; how TV turns fiction into reality and reality into fiction; the long-term effects TV will have on our abilities to reason, to read, to create; and alternatives to commercial TV as it currently exists. 138 pages, 30 illus., paper \$7.95

PHOTOGRAPHY: Art and Technique Alfred A. Blaker, RBP. This is the complete guide for the beginner and an essential reference for the experienced photographer. Photography features full coverage of all aspects of photography from aesthetics and form to step-by-step guidance on darkroom layout The book comes with a separate camera-bag booklet for convenient reference. 460 pages, 266 illus. (19 in full color), paper \$17.95

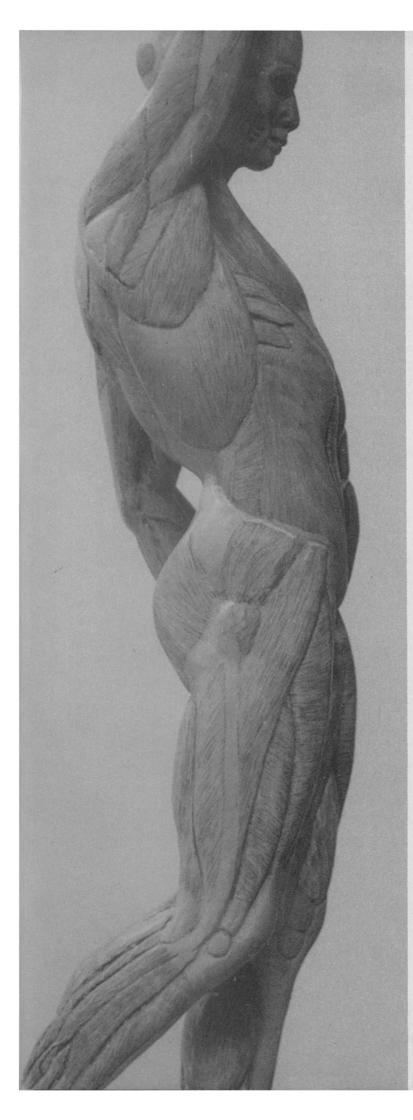
THE WHY AND HOW OF HOME HORTICULTURE Y D. R. Bienz. This is a scientifically sound and eminently practical guide to home horticulture. Some of the features of this volume are: "The Handbook," a self-contained, 160-page how-to-do-it section covering everything from soil preparation to processing the harvest; information keyed to regional climates; quick reference tables for plants, pests, planting dates, and other important aspects of home gardening. 
"Any gardener with more than a superficial interest in the subject should read this book and keep it as a handy reference." —The Newark, New Jersey, Star Ledger. 513 pages, 393 illus., hardbound \$19.95

COLOR IN TOWNSCAPE

Martina Düttmann, Friedrich Schmuck, and Johannes Uhl. Illustrated with examples from throughout the twentieth century and around the world, Color in Townscape shows how theories of color and form have been brought to life in modern architecture. This striking volume, replete with 392 full-color photographs, brings together the ideas and images that have shaped our environment. 191 pages, 520 illus. (392 in full color), hardbound \$39.95

HORSES: A Guide to Selection, Care, and Enjoyment AA J. Warren Evans. Accessible to everyone from the novice to the experienced horse owner, this new book contains basic information necessary for the competent care and recreational use of horses. The book includes numerous illustrations showing step-by-step management procedures, in addition to more technical information of value to the advanced owner. 683 pages, 390 illus., hardbound \$22.95

T	U						
	C	V	W	X	Y	Z	AA
City/State					Zip		
					Subtotal		
Cal	lifornia	residents	s add app	ropriate	sales tax		
		1	Postage &	handlin	ig charge	\$1	.50
					Total		
	Address City/State Ca	Address City/State California	Address City/State California residents	Address City/State California residents add app Postage &	Address  City/State  California residents add appropriate  Postage & handling	Address Zip Subtotal  California residents add appropriate sales tax  Postage & handling charge  Total	Name



# The Body Machine

## CHRISTIAAN BARNARD Consulting Editor

A completely current report of everything science knows about the body, from why we need sleep to what kinds of research doctors are doing on the control of chronic pain, from what makes hair turn gray to how human fertility may be significantly improved in the years to come.

Prepared by a team of medical experts under the editorial direction of Dr. Christiaan Barnard, the renowned surgeon who performed the first human-to-human heart transplant, the Body Machine offers a clear, direct look at the human body, exploring the way it grows, develops, and regulates itself, and what conditions help maintain it at peak performance. Profusely illustrated, 256 pages.

### Contents

### Introduction

### **Body Systems**

Cell

Reproductive system

Chassis

Nervous system

Endocrine system

Heart

Blood

Lymphatic system

Immune system

Respiratory system
Digestive system

Liver

Renal system

### On The Road

Prenatal development Infancy

Adolescence

Adulthood

### The Ghost In The Machine

Stress

Mental abnormality Mind medicines

### **Body Maintenance**

Lifestyles

Diet

Sleep

Drugs Smoking

Alcoholism

Tropical diseases

Birth control: how and why

Check-ups

World public health

Urogenital problems

Dealing with a heart attack

The con brigade

### In The Workshop

The future course of medicine New parts for old

Genetic engineering

The search for immortality

**Health Quiz** 

### Science News Book Order Service

1719 N Street, N.W., Washington, D.C. 20036

Please send copy(s) of The Body Machine. I include a check, payable to Science News Book Order Service, for \$19.95 plus \$1.00 handling (total \$20.95) for each copy.

Name

State

Zip