

The Weekly Newsmagazine of Science

SCIENCE NEWS

June 3, 1989
Vol. 135, No. 22
Pages 337-352



Supercontinental Schism

LIGHT, LASERS and OPTICS

By JOHN H. MAULDIN

Broad enough in scope to appeal to the general science enthusiast, yet technically specific enough for the experienced electronics hobbyist, this book fully explains the science of optics. You'll explore: everyday observations on light ... the theory and physics of light and atoms ... biological applications of light ... visual perception ... chemical uses of light ... computing with light ... optical information storage ... and much more!

Extremely well illustrated with over 200 line drawings, this book examines optical phenomena using visible and near visible light (near infrared and ultraviolet). Some mathematical symbols and descriptions are introduced, but the emphasis is on the physics of light and optics without mathematics.

— from the publisher

Topics include:

- The principles and facts needed to select good optical equipment — cameras, telescopes.
- The information necessary to make use of optical equipment that records images (still and video cameras) or examine images (binoculars and microscopes).
- How the eye automatically detects certain features in pictures and sends preprocessed information to the brain.
- The many ways light affects and is used by plants, animals and humans.
- Discussion of research in many optics-related fields.
- The use of optical science and technology to advance research and development of other fields.
- The problems of developing high-power lasers.
- The practical uses for holography.

TAB, 1988, 243 pages, 9" x 7", paperback, \$14.95
ISBN 0-8306-9338-6

Science News Books
1719 N Street, NW
Washington, DC 20036

Please send me _____ copy(ies) of *Light, Lasers and Optics*. I include a check payable to Science News Books for \$14.95 plus \$2.00 postage and handling (total \$16.95) for each copy. Domestic orders only.

Name _____
Address _____
City _____
State _____ Zip _____

RB1074

The Complete Chess Addict

By Mike Fox and
Richard James

Science News Books
1719 N Street, NW, Washington, DC 20036

Please send _____ copy(ies) of *The Complete Chess Addict*. I include a check payable to Science News Books for \$11.95 plus \$2.00 postage and handling (total \$13.95) for each copy. Domestic orders only.

Name _____
Address _____
City _____
State _____ Zip _____

RB1077

A private collection of Wow!-inducing facts, anecdotes, legends and quotes about the world's best game.

— from the preface

- How can you guarantee to get at least a draw off Kasparov and Karpov?
- Who is the greatest player of all time?
- Is chess a cure for diarrhea and erysipelas?
- Could a computer beat Nigel Short?
- How did a ten-year-old girl beat an International Master?
- Why did a dog play for Brighton third team?
- What was the worst blunder in chess history?
- Which pantomime character was world chess champion?
- How good was Humphrey Bogart? Che Guevara? Karl Marx?

- Which team includes four murderers and a magician in league with the devil?
- Could Frank Bruno have beaten Albert Einstein?
- Who said 'If you ain't cheatin', you ain't tryin' '?
- Which world champion (you'll never guess) reached professional standard at the Charleston?

Plus: what to do on a desert island

Plus: the sixty greatest games ever played

Plus: the sixty strongest players of modern times

Plus: an easy guide to chess notation

Plus: glossary of chess terms.

Faber & Faber, 1987, 264 pages, 9" x 6½", paperback, \$11.95 ISBN 0-571-14901-4

The Cosmic Blueprint

New Discoveries in Nature's Creative Ability to Order the Universe

By Paul Davies

With each successive work, physicist Paul Davies — author of *God and the New Physics* and *Superforce* — journeys further into the fascinating mysteries of creation. In *The Cosmic Blueprint*, he rejects the idea of a universe at the mercy of random forces, advancing an argument for the existence of a predestined universal plan — an essential, progressively unfolding order.

Attempting to understand the secret creative power that bestows unity upon nature, Davies draws on recent discoveries in fields as diverse as brain research, biological evolution, computers and astrophysics. He argues that all matter and energy have the ability to **self-organize** according to common holistic principles. Examining these principles, Davies suggests that the universe develops toward progressively higher levels of complex self-organization — from the pattern of a snowflake to the structure of organisms to the "cosmic blueprint" governing the entire structure of the universe.

—from the publisher

Contents include:

- The missing arrow
- Complexity
- Chaos
- Charting the irregular
- The source of creation
- The quantum factor

Science News Books, 1719 N Street, NW, Washington, DC 20036

Please send _____ copy(ies) of *The Cosmic Blueprint*. I include a check payable to Science News Books for \$8.95 plus \$2.00 postage and handling (total \$10.95) for each copy. Domestic orders only.

Name _____

Address _____

City _____

State _____ Zip _____

RB1072

"Bringing a light touch to technical enigmas, [Davies] develops a cosmic viewpoint that will appeal to those who want a universe full of meaning and purpose."

— Publishers Weekly

Simon & Schuster, 1988, 223 pages, paperback, \$8.95
ISBN 0-671-67561-3

Do there really exist laws of Nature out there waiting to be discovered? How did this notion of laws of Nature arise? And are these laws the ultimate reality or merely pieces of temporary legislation enacted by ourselves to guide us through the jungle of experience? Why are they so well described by mathematics? Are they the same everywhere and everywhen? Is it even possible that there really are no laws of Nature at all—that they are an illusion? How does our own existence limit what can be known about the Universe? This book presents a wide-ranging, interdisciplinary study of the evolving concept of laws of Nature. From the magical notions of primitive cultures to the latest ideas about chaos, black holes, inflation and superstrings the author traces the gradual development of our concept of what laws of Nature are and how we come to know them. This book gives the opportunity to see these new ideas discussed in a serious but non-technical style within a historical context.

—from the publisher

Oxford Univ. Press, 1988, 398 pages, 9 1/2" x 6 1/2", hardcover, \$24.95.
ISBN 0-19-851979-6

Science News Books
1719 N Street, NW
Washington, DC 20036

Please send me _____ copy(ies) of *The World Within the World*. I include a check payable to Science News Books for \$24.95 plus \$2.00 postage and handling (total \$26.95) for each copy. Domestic orders only.

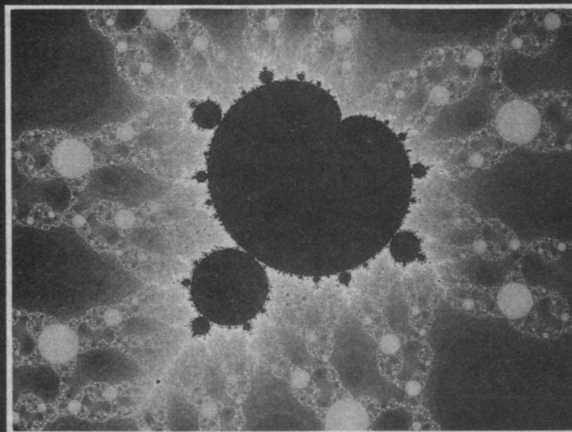
Name _____

Address _____

City _____

State _____ Zip _____

RB1075



THE
WORLD
WITHIN THE
WORLD
JOHN D. BARROW