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Bucky Works: Buckminster Fuller's Ideas for Today—J. Baldwin. A 30-year colleague of Fuller, Baldwin depicts Fuller's genius and shows how some of his ideas and inventions are only now being realized—with the advent of suitable materials—and may continue to influence us into the next millennium. Most famous for the geodesic dome, the strongest and most cost-effective structure ever devised, the great architect-engineer-mathematician extended his interests to avant-garde ideas such as the dymaxion car and synergetics. Baldwin complements more than 200 illustrations with explanations of their function and of Fuller's vision for his work. Wiley, 1996, 243 p., b&w photos and illus., hardcover, \$29.95.

Ecologies of the Heart: Emotion, Belief, and the Environment—E.N. Anderson. A cultural ecologist who has spent nearly 30 years observing the ecological "policies" of a multitude of cultures from around the world relays some of them here and assaults those predominant in the West. For instance, villagers in remote areas of Hong Kong believe that dragons live in the mountains and that if they cut too deeply into the surface, floods and landslides will ensue—as, indeed, they will. While these ideas may not seem scientifically founded, they have been quite effective. He pushes for finding the middle ground between emotional and economic environmental policy for shoring up a sound future and outlines what that entails. OUP, 1996, 256 p., hardcover, \$25.00.

Good Natured: The Origins of Right and Wrong in Humans and Other Animals—Frans de Waal. Are animals like elephants and monkeys ethical beings? Or is a moral code exclusive to humans? In this intriguing glimpse into the growing field of cognitive ethology, de Waal argues that morality is grounded in the biology of all animals and is a product of evolution. On the basis of hundreds of observations of creatures from marine animals to primates, de Waal describes numerous instances of compassion, sharing, cooperation, conflict resolution, and caring. He questions why animals behave the way they do and whether they are cognizant of their social hierarchy. HUP, 1996, 296 p., b&w plates and illus., hardcover, \$24.95.

Manifesto for a New Medicine: Your Guide to Healing Partnerships and the Wise Use of Alternative Therapies—James S. Gordon. According to Gordon, nearly one-third of all adults annually seek some kind of alternative treatment. Through first-hand experience with his own patients and as director of the Center for Mind-Body Medicine, Gordon has amassed a wealth of information and case studies, some of which he presents here to bridge the gap between traditional and alternative treatments. The importance of understanding a patient's mental as well as physical condition is underscored as Gordon explains the various treatments he recommends and tells why they work, especially in cases of chronic illness. Addison-Wesley, 1996, 358 p., hardcover, \$25.00.

A Short History of Planet Earth: Mountains, Mammals, Fire, and Ice—J.D. MacDougall. Novice geologists will get a taste of the field and its basic principles in this summary of the formation of Earth and the development of life, from the Archean to the Cenozoic to the present. Scientific methods for reading ancient rocks and fossils are explained to give the reader a command of the geologic and biological underpinnings of the modern world. Wiley, 1996, 266 p., b&w illus., hardcover, \$24.95.

The Simple Science of Flight: From Insects to Jumbo Jets—Henk Tennekes. Since biological and mechanical flying objects obey the same principles of aerodynamics, Tennekes compares paper airplanes and Boeing 747s to gnats and gulls as he explains the underlying principles of lift, drag, and wind loading. Equations necessary to explaining the relationship between an airplane's weight, wing area, and cruising speed, for example, are integrated comfortably into the text. MIT Pr, 1996, 137 p., b&w illus., hardcover, \$20.00.

The Third Culture: Beyond the Scientific Revolution—John Brockman. Contending that C.P. Snow's theory of the polarization of two cultures made up of literary intellectuals and scientists is now fact, Brockman shows how a third culture of popularization of scientific data has emerged. Through a series of one-on-one interviews with prominent members of this third culture, he presents a treatise on the most important philosophies espoused by scientists. Among others, Marvin Minsky uses a computer model to explain the brain and Murray Gell-Mann proposes a study called plectics, which combines the laws of physics with complex systems in order to explain nature. Originally published in hardcover in 1995. Touchstone, 1996, 413 p., paperback, \$14.00.

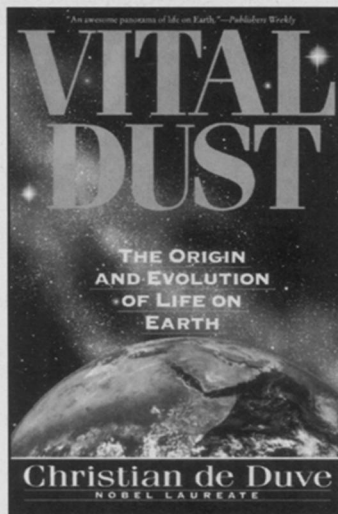
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Carefully forming analogies that present the mysteries of life in terms as familiar as the letters of the alphabet, Christian de Duve, a Nobel Prize-winning biochemist, guides us on a wondrous journey through the past 4 billion years. From the formation of the first biomolecules to the complexities of the human mind, from microscopic chains of amino acids and nucleotides to cataclysmic events in distant galaxies, he arrives at the compelling conclusion that the universe is strewn with "vital dust" capable of spawning life anywhere under the right conditions. Life and mind are not accidents; they are natural manifestations of matter.

At the heart of *Vital Dust* is the concept of seven increasingly complex "ages" of life on Earth. De Duve shows the key event that defined each age and the new event that led to the next. He argues that simple, deterministic chemical reactions put life on track but that other mechanisms led inexorably to greater complexity and biodiversity: the development of a lock-and-key system that serves as the universal device of biological recognition at the molecular level; the emergence of a common ancestor of all organisms, from amoebas to humans; the great oxygen holocaust; the conversion of some bacteria into complex cells; and the successive improvements in reproductive strategies that made possible the spectacular diversity of life on Earth.

Provocative and powerfully argued, *Vital Dust* is one of the most important science books to come along in some time.

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