

enough, there follows a cartoon so vulgar and so lacking in humor that I think many American publishers would hesitate to allow it in one of their books.

I wish I could end this review on a happy note, but I cannot. The book is badly type-set, and has many typos; poor editing has allowed unusual spelling, grammar and punctuation to proliferate. There is also no index, but this hardly matters, as the subjects debunked are in alphabetical order and each section is short.

Don Eldridge
Science-Art Research Centre
Brisbane, QLD, Australia

Close Encounters? Science and Science Fiction by Robert Lambourne, Michael Shallis, and Michael Shortland. Bristol and New York: Adam Hilger, 1990, 184 + xiii pp.

Science fiction today serves many functions reserved for folklore in the past. The parallels between the two are often close and striking.

In bygone eras myths described the relationships of gods with humans, legends told of extranormal encounters in an everyday setting, and tales spun fanciful yarns of quests and adventures in magical realms, providing audiences with explanations of how the universe was ordered, warnings of supernatural dangers, and entertainment to escape from the humdrum of daily existence.

Times change. The medium has switched from oral narrative to literature and movies, supernatural powers have metamorphosed into futuristic technology to maintain plausibility in the modern world; but for all the alterations in outer guises, the underlying story endures. Visits to the other-world and visitors from it are the stuff of folk narratives, and equally the substance of science fiction. Strange beings, wonderful powers, worlds that might be or ought to be, our worst fears and fondest hopes for the future — these subjects have always held a favored place in storytelling, long ago as well as today, and whether the narrator is "primitive" or "civilized," it still seems no exaggeration to say that such themes orbit a permanent core of human concerns.

Paranormal beliefs draw from a similar pool of wonders, and represent another mode of expression for the same timeless concerns. Accounts of UFOs, monsters, ESP, apparitions, and *fortean* phenomena thrive today as claims of true experiences, mirror images of fantasy, horror, or scientific fiction. Yet, **paranormal** reports occupy a gray area between fiction and truth. They are beliefs with a basis in experience, but not necessarily a basis in truth, subjective realities that may or may not rest on objective foundations. Paranormal claims tantalize the investigator with too much substance to dismiss them entirely, and too little evidence to accept them as fact.

Wherever claims of fact mingle with fiction and new beliefs entangle with the old, the researcher enters dangerous territory. Here be monsters; and any

map to show the way offers a welcome aid. One candidate to guide the reader through the cultural influences of science fiction is the book, *Close Encounters? Science and Science Fiction*. The three authors include two practicing physical scientists and a lecturer in the history and philosophy of science. Their goal is a look at the portrayal of science and scientists in science fiction, with an emphasis on movies, oft-neglected, oft-despised aspects of the genre, but immensely influential with the public. Movies are especially important in studies of paranormal phenomena as seedbeds of imagery and ideas with a potential to influence millions of viewers. Movies are the leading exponents of the science fiction message, for better or worse. Any insights into the drift of that message are welcome, though this book offers only limited glimpses of how science fiction shapes and is shaped by cultural beliefs.

The book begins with a history of science fiction and its scientific roots, hitting such high spots as Jules Verne and H. G. Wells, Hugo Gernsback and *Amazing Stories*, the golden age of the 1940s-1950s and subsequent directions. This story has been better told, but the chapter serves as a useful summary to prepare for the chapters to come.

A second chapter treats the scientific content of science fiction, and bemoans the relative poverty of good science throughout the genre. The science ranges from rigorous application of known or hypothetical principles throughout the plot to jargon or patter thrown in as a backdrop to conventional adventures or romances, with the balance tilted heavily toward the latter. An enlightening classification of such usages serves purposes of literary criticism well, but says little about cultural ties. In fact the entertainment dimension largely slips away as the authors seem to frown on the scientific impurities an ignorant public swallows, without analyzing what the public really looks for in science fiction. A chapter concentrating on the science of time travel movies continues this line by recognizing their misuse of causality rather than the human interest in things to come or things as they might be, where the audience-pleasing potential of these stories usually lies.

Some redress follows in the remaining chapters, which treat how science and scientists relate to society, religion, and morality in science fiction, and trace a downward arc in esteem for science over the past 40 years. The 1950s marked a high tide of confidence in science. Atomic energy offered hope in those days; space travel a new frontier. Hollywood retired Dr. Frankenstein and adopted the favorable image of the scientist as a romantically eligible "regular guy," who spoke down-to-earth vernacular and acted in harmony with military and civil authorities to defeat monsters or invaders — a team player whose heroism lay in achievement of the common goal rather than in single-handed salvation.

A darker image intertwined with this prevailing view, an image of the scientist as an impious magus who tampered with things better left to God. This side grew over the years into dystopic, even anti-scientific stereotypes of blind, greedy exploitation of the earth, a form of science without noble purpose and

fraught with unforeseen consequences. The thrill of exploration and the quest for knowledge have been reduced to a stock morality play where scientists tamper with nature and suffer the consequences of their temerity — along with a great many innocent victims.

In this way science fiction has reversed its former role as an exponent of science to become its critic, even its enemy. Such emphasis on the sinister possibilities inherent in exploring the unknown contribute to a climate supportive of mysticism and uncritical belief. This much the book makes clear, but it leaves aside cultural consequences of the trend. Despite the use of "close encounters" in the title, the authors pay little attention to the paranormal and its relationship with science fiction, either the borrowing and lending between them, or how they assume the functions of folklore for a modern audience. The authors aim inward toward analysis of the genre itself, rather than outward toward its influence in the real world.

It is of course unfair to criticize a book for omitting subjects its authors never intended to treat, but for students of the paranormal and its cultural allegiances, this book provides background reading rather than substantive examination of the complex currents where imaginative fiction crosses supernormal belief. For this crucial understanding, the reader must look elsewhere.

Thomas E. Bullard
517 E. University St. #2
Bloomington, IN 47401

The Great Dinosaur Extinction Controversy by Charles Officer & Jake Page. Reading (MA): Addison-Wesley, 1996. xiii+209 pp. \$25 (c). ISBN 0-201-48384-X. (Available at \$23 from Sourcebook Project, P. O. Box 107, Glen Arm, MD 21057.)

What "everyone knows," may be quite wrong (Martin, 1988). The common knowledge that AIDS is caused directly and solely by HIV may be an instance. (See book reviews in JSE 10, 3, 1996, p. 430-42.)

Since about 1980, just about everyone has known that the extinction of the dinosaurs, which occurred 65 million years ago at the boundary between the Cretaceous and the Tertiary Periods, was caused by the impact on Earth of a large meteor or asteroid. Among the silent or unnoticed groups that *did not* know this was the majority of the paleontological community — those geologists whose special interest it is to understand the history of life, in large part through proper dating and interpretation of the fossil record and geological strata.

It has been my good fortune to be at the same university as Dewey McLean,