

Actually, Bennett could have made his points in just 20 pages. The book rambles a lot; the writing is dense. Bennett is a world-class name-dropper and refers ad nauseum to scores of famous works of literature, politics, and philosophy. Every page, it seems, advances the thoughts of some famous non-scientist. I perceive here a connection to the fact that the original Fortean Society and many later copy-cat organizations were and are composed almost exclusively of writers, artists, and other non-scientists. Emulating Bennett's name-dropping, I see in Forteanism hints of C.P. Snow's "two cultures"; that is, the Liberal Arts versus Science.

Does Science really conspire to snuff out Forteana—those observations that do not fit its paradigms? Of course it does to some extent. Every human social system tries to preserve and protect its turf. And, to be honest, some Forteana should be classified as pseudoscience.

Even in his 206 pages, I don't think Bennett has proved a grand conspiracy in which Science has significant roles in hiding truths or in social control.

I cannot recommend this book as a realistic picture of Science or evaluation of Fort's work and influence. There is no great C.P. Snow-type confrontation. Science in general does not even know Forteanism exists; and few, if any, Forteans are scientists or even familiar with scientific methods.

Nevertheless, to be fair, Fort did amass in his four tomes many valid observations that are still not well explained. Some Forteana are legitimate scientific anomalies suggesting fertile research areas. Then, too, Science does have some fantastic and bizarre elements of its own that can be fairly classified as Fortean, such as cosmology's "dark energy" and quantum mechanics' "entanglement"!

WILLIAM R. CORLISS
Glen Arm, Maryland
www.science-frontiers.com

Encyclopedia of Space Science and Technology by Hans Mark, editor. Indianapolis, IN: John Wiley & Sons, 2003. 1864 pp. two-volume set. \$550. ISBN 0-471-32408-6.

The Encyclopedia of Space Science and Technology is a nice pair of books, coming in at over 900 pages each. The goals are worthy. An online statement says: "This state-of-the-art reference outlines what astronomers know about the sun, planets, galaxy, and universe as well as the effect of the space environment on human and other biological systems." The preface claims that not only will such scientific results, obtained by space missions, be presented at a high technical level, but the enabling technology will be described by authors who are or have been active participants. Editor Richard Truly, a former head

(Administrator) of NASA, has actually flown in space on the Shuttle and editor Hans Mark served as a NASA Deputy Administrator. Spanning the range from Muscle Loss in Space: Physiological Consequences to Saturn System, it sounds promisingly comprehensive.

But in terms of actual content this set is less than it purports to be: an encyclopedia. An encyclopedia is "a work that contains information on all branches of knowledge or treats comprehensively a particular branch of knowledge." This pair of books does not. Indeed the only way to know what subset of its purported domain it does cover is by flipping through the entire 1800 or so pages.

This points to the first of several amazing blunders. Although the preface specifically states "There is an appropriate index and a table of contents," the purported table is nowhere to be found. This is quite an oversight . . . and an annoyance. Not wishing to count as I thumbed through the two volumes, I will take the editors' word that there are nearly 80 articles. However they specifically state that this consists of "80 articles organized under eight separate categories". Once again, a blunder. The articles appear in strict alphabetical order showing no trace of any deeper categorization. Finally, from reading the preface signed by both Truly and Mark (in that order), I had assumed that Truly and Mark had co-edited this. But the title page shows a managing editor as well as two associate editors and Mark at the top as editor. No mention of Truly. What happened? At least there is an extensive index as promised.

Good evidence that the editor(s) took what they could get is the second entry. Coming after "Air and Ship-based Space Launch Vehicles" and prior to "Arianne Rocket Program" is a 90-page article on Apollo 17 and the Moon by scientist-astronaut H.H. Schmitt. Nothing against this topic per se, but would it warrant five percent of a real encyclopedia attempting to cover over 40 years of space exploration . . . including programs other than just those of the United States as again specifically claimed in the preface? And what happened to the other Apollo missions? Two other Apollo missions were designated as science missions (rather than what one might characterize as technology demonstrations). Moreover the "Moon" entry is only one quarter as long as Apollo 17 and the Moon.

The catch-as-catch-can approach is also evident in "Astronauts and the People Who Selected Them". This is a list of each round of astronaut selections including the names of everyone on the selection board ranging from Group 1 in 1959 (the original heroic seven) to Group 18 in 2000. Owing to the level of details such as affiliations and credentials, this article comes to 30 pages. Interesting "for the record" but having little to do with science.

Thankfully all of the planets do have individual entries, as do asteroids, comets, our Moon and the Sun. Those articles certainly address hard science, but what to make of the 28 pages devoted to "Conversion of Missiles into Space Launch Vehicles?" It may be rocket science but it has little to do with the quoted objective in the opening paragraph (above).

Further topical comparisons: "Arianne Rocket Program" warrants 30 pages,

topping "Comets" at 27 pages and "Asteroids" at 17 pages. There is a 17-page "Astronomy-Infrared" article, but no sign of any Astronomy-Ultraviolet ... or X-ray ... or Gamma-ray.

There is an entry for the "Chandra X-ray Observatory" and of course one for the "Hubble Space Telescope." But where is the International Ultraviolet Explorer (this 17-year mission is cited on one page under "Comets") or the Einstein X-ray Observatory (one page under "Sun" in which the discussion is actually about stars, since the Einstein Observatory was designed for cosmic rather than solar observations), both of which revolutionized our understanding of the high-energy universe long before Chandra? The bottom line is that there are dozens of astrophysics and planetary and space science missions that do not even warrant a page of space.

Most of the line drawing figures are just fine (though a few were clearly not designed for the space allowed) but most of the pictorial illustrations are rather low-resolution black and white, and for most of them there is an entry in the figure caption stating "This figure is available in full color at ..." listing a Wiley Interscience website. I don't object to saving the color versions for online perusal, but I do object to the low resolution of some of the published illustrations, which I would guess were made from compressed files.

Each article identifies its author or authors, and with reputations at stake this leads to well-written articles. The articles properly include references, but the number varies dramatically. Returning to the two moon pieces, "Moon" has eight references whereas Apollo 17 and the Moon has 660!

All in all, if you are a real space buff and consider \$550 to be entertainment money, then by all means purchase this set. You will find both useful and intriguing information, but only on a scattershot subset of topics. You will not be getting a true encyclopedia, even though you will be getting a large amount of enjoyable reading.

BERNARD HAISCH
Chief Science Officer
ManyOne Network
Scotts Valley, California
haisch@rnanyone.net

Weep for Isabelle—A Rhapsody in a Minor Key by Mel Month. 1st Books Library, 2003. 664 pp. \$28.95 (paper). ISBN 1-4107-3253-3 (e-book, 1-4107-3252-5).

Much interesting and even important material about Big Science is buried in this book: about the need for flexibility and the incompatible need to plan far ahead; about the relations among technical expertise, research management, and politics; about the relation between science and technology; about the degree