the social sciences. Public libraries may find that the less expensive *Encyclopedia of Adoption* meets their needs sufficiently until the ABC-Clio *Handbook* is updated.—*Joann E. Donatiello, Population Research Librarian, Donald E. Stokes Library, Princeton University, New Jersey*

Satellites. Frontiers in Space series. By Joseph A. Angelo Jr. New York: Facts On File, 2006. 336p. acid free $39.50 (ISBN 0-8160-5772-9).

Satellites is Joseph A. Angelo Jr.'s most recent contribution to Facts On File's Frontiers in Space series, a multivolume set targeted to high school students that "explores the scientific principles, technical applications, and impacts of space technology on modern society" (ix). This volume is a fine addition to the series. The author succeeds in meeting the set's mission by effectively interweaving the scientific, technical, historical, commercial, and political aspects of the development of satellite technology. Through its twelve chapters, seventy black-and-white photographs and illustrations, sidebars, chronology, glossary, and index, *Satellites* provides a basic yet thorough introduction to the subject. Through narrative that is engaging, informative, and at times, impassioned, Angelo answers the questions, "what Earth-orbiting spacecraft are, where they came from, how they work, and why they are so important" (xv).

The volume is sensibly arranged, with chapter 1 providing a solid historical foundation as well as a preview of the entire work. The concluding section of this chapter, "Satellites Transform Human Civilization," identifies six broad areas profoundly impacted by satellite technology. These correspond to the different satellite types that are the focus of subsequent chapters (for example, "Weather Satellites," "Military Satellites," and "Communication Satellites"). These chapters effectively illuminate the complex factors involved in technological change and provide insight into the broader context and impact of the work of aerospace engineers. There is some repetition of concepts and events because chapter content unfolds in parallel historical sequences, but this may serve as reinforcement of key details and themes for readers.

Basic concepts related to satellite orbital theory and design are presented in chapter 2, "How a Satellite Works," although many technical terms used in this chapter and elsewhere are not defined at first use. The index and glossary will thus be helpful tools for readers who desire additional information. For example, "electromagnetic spectrum" is not discussed in-depth until chapter 9, but readers needing earlier clarification will find that the index does point them to this later text reference, as well as to a helpful illustration. (The glossary also contains a definition.) The work includes numerous sidebars that expand upon topics mentioned in the chapters. These one-to-two-page discussions yield intriguing insights from a striking variety of perspectives: biographical, conceptual, organizational, and technical.

Because this book has the format of an introductory textbook rather than a ready-reference resource, it is not surprising that many interesting details—for example, the number of currently active satellites—can be discovered only through careful reading of the text. A reader would not necessarily know to look under "space debris" in the index for information about currently active satellites.

References include print as well as Web sources. One notable omission is a history of astronomy. Such sources would serve as a valuable supplement, especially to the author's treatment of pre-twentieth-century developments.

Angelo's passion for his subject comes through in his emphasis on the impact of satellites on civilization. This theme is fully realized in the final chapters, which deal with remote sensing and the use of satellites in the multidisciplinary field of Earth system science. In these chapters Angelo expands on a point raised frequently throughout the work, that satellites can help humans work toward "intelligent stewardship of Earth" (213). With its emphasis on the global impact and importance of satellites, this book will appeal to readers interested in earth and environmental sciences as well as astronomy and space technology. Angelo's treatment of satellites in the context of contemporary life and environmental concerns will undoubtedly be "career-inspiring" (xiii) to students considering a future in science or engineering. This work fills a gap in the literature between more juvenile treatments of the subject and more advanced works. *Satellites* is recommended for science collections in high school, college, and public libraries.—*JoAnn Palmeri, Department of the History of Science, University of Oklahoma, Norman*

Science Fact and Science Fiction: An Encyclopedia. By Brian Stableford. New York: Routledge, 2006. 729p. $165 (ISBN 0-415-97460-7).

Science fiction fans are a special group. When they know about something, they really know about it. No amount of information is too much. That's why there is an insatiable demand for more reference works explaining more esoteric aspects of the genre, which makes it surprising that we have had to wait this long for a really good reference work on the science that makes it science fiction. *Science Fact and Science Fiction* treats the truly scientific underpinnings of the field; it eschews the space opera, space cowboys, generic star wars, and fantasy that often are lumped with science fiction in favor of acoustics, chemistry, engineering, paleontology, physics, zoology, even food science.

Science Fact and Science Fiction is an A–Z encyclopedia with alphabetical and thematic lists of entries *and* a good index. If you've ever been frustrated trying to find a topic in a purely alphabetical work ("okay, it's not under that heading, maybe if I try this one"), you will appreciate this book's three-pronged approach to finding information. Entries are by topic or person (galaxy, Galileo) and are substantive, including useful embedded bibliographies. The paper is not acid free and there is some show-through, but the type is legible and the margins are adequate. The bibliography at the end is comprehensive: included are works by Jung, Marshall McLuhan, Loren Eisley, and Stephen Hawking as well as traditional sci-fi writers. As always, one can quibble about one's

favorite topic/work/author/scientist being left out, but overall Stableford has done a good job of covering the field.

There really is not anything directly comparable to *Science Fact and Science Fiction.* Stableford was a contributing editor to John Clute and Peter Nicholls's *The Encyclopedia of Science Fiction* (Orbit, 1993) and provided several entries on science topics from asteroids to evolution to nuclear power. John Clute edited *Science Fiction: The Illustrated Encyclopedia* (Dorling Kindersley, 1995) which touches on technology but does not address science. George Mann's *The Mammoth Encyclopedia of Science Fiction* (Carroll and Graf, 2001) is not even in the running. Stableford's other nonfiction works, such as his contributions to the fifth edition of *Anatomy of Wonder: A Critical Guide to Science Fiction* (Libraries Unlimited, 2005) and *A to Z of Science Fiction Literature* (Scarecrow, 2005, a revision of his *Historical Dictionary of Science Fiction Literature*), also do not focus on the science of science fiction, although he was a contributor to Nicholls' *Science in Science Fiction* (Michael Joseph, 1982).

At $165 this work may be out of the reach of school libraries, which might have to content themselves with Robert Bly's much less scholarly and complete popular-level *The Science in Science Fiction: 83 SF Predictions That Became Scientific Reality* (BenBella, 2005), but public and college/university libraries—not to mention a goodly number of fans—will definitely want to buy *Science Fact and Science Fiction*.—*Cindy Stewart Kaag, Interim Director of Libraries, Washington State University, Pullman.*

Sports and the Physically Challenged: An Encyclopedia of People, Events, and Organizations. By Linda Mastandrea and Donna Czubernat. Westport, Conn.: Greenwood, 2006. 169p. acid free $75 (ISBN 0-313-32453-0).

The authors' introduction states that this volume aims to cover "people important to the disability sport movement, some key pieces of the history of the movement, and many of the organizations and events that have been part of it" (xxi). The work is primarily focused on the United States.

Author Mastandrea is herself a highly successful international athlete in wheelchair track events, and her entry in this book indicates that she is a lawyer and the first disabled athlete to serve on the U.S. Olympic Committee's board. Her coauthor and sister, Donna Czubernat, is also familiar with disability issues. In addition to reading about remarkable athletes like Mastandrea, we can learn many things from the entries in this book. We can learn that the Italian game of Boccia is particularly useful for athletes with cerebral palsy and that blind athletes play a special version of baseball called Beep Baseball. We can learn of original games such as goal ball, wheelchair rugby, and sitting volleyball. We can learn the aims of a host of organizations such as Wheelchair Sports, USA and the mechanics of technologies like "Sip and Puff."

Entries are listed alphabetically and fall into one of five categories: equipment, legislation, organizations, people, and sports and events. Most entries run three to five paragraphs but some are lengthier. There are only150 pages devoted to the entries, though, so some information is missing. For example, it's surprising that there is no mention of Gallaudet University, the oldest institution of higher education for the deaf in the country, with a long history of athletic competition. There is also no notice of Jami Goldman, a runner with two prosthetic legs who wrote a well-received account of her physical challenge, *Up and Running* (Pocket Books, 2001), as well as being the subject of an Adidas commercial, and playing the role of the Spice Girl Robot in the film *A.I.*

One of the most useful and fascinating parts of the book is also somewhat frustrating. The "Disability Sport Timeline" covers the 1870s to the present and provides a good chronological overview of the issue. However, this section would have been a good place to recognize some of the significant achievements of the disabled in professional sports. Baseball history has been enriched by a one-armed outfielder (Pete Gray), two one-handed pitchers (Hugh Daily and Jim Abbott), and two pitchers with prosthetic legs (Bert Shepard and Monty Stratton). The man who kicked the longest field goal in NFL history, Tom Dempsey, was born with a deformed arm and foot. Deaf athletes have played baseball (Bill Hoy and Luther Taylor) and football (Bonnie Sloan and Kenny Walker), and the NFL has had a quarterback who was blind in one eye (Tommy Thompson) and another who was a hearing-impaired lip-reader (Bill Donckers). Beyond this, the football huddle was invented by Gallaudet's deaf quarterback Paul Hubbard in 1894, and the practice of the plate umpire signaling balls and strikes was instituted for the deaf Hoy more than 100 years ago. Although the focus of this book is not professional sports, these are all important benchmarks for the general acceptance of disabled athletes and should be noted.

The work also contains a list of entries by subject, an appendix that lists disability organizations, a bibliography, and an index. This is a unique and very specialized reference work on a very timely subject matter. Both public and academic libraries should be interested.—*John Maxymuk, Reference Librarian, Rutgers University, Camden, New Jersey*

UXL Graphic Novelists: Profiles of Cutting Edge Authors and Illustrators. By Tom Pendergast and Sara Pendergast. Detroit: U-X-L, 2006. 3 vols. alkaline $172 (ISBN 1-4144-0440-9).

Aimed at a high school or young adult audience, this beautifully produced work is a "squeaky clean" and noncontroversial encyclopedia, deliberately lacking in adult content. It is a unique contribution to the field of graphic novels, which, according to the authors, had three separate but interconnected beginnings: in the 1930s in Europe with Hergé's *TinTin* stories; in the late 1940s in Japan with manga (rooted in twelfth-century Japanese artistic traditions); and with Will Eisner's *A Contract with God* in the United States in 1978.

Entries about graphic novelists (GN) run five to eight pages and the writing is uniformly clear throughout. Each entry includes a sidebar listing the GN's best-known works