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Cover: A NASA F-16XL (below) gets ready to probe the shock waves generated by an SR-71A as part of a sonic boom research program conducted at the Dryden Flight Research Center in Edwards, Calif. Information from the program will guide efforts to develop a commercial high-speed transport quieter than current supersonic airliners. (Photo: NASA)



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Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the *Directory of Student Science Training Programs for Precollege Students*.

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Letters

Whither the library?

"The Library That Isn't There" (SN: 6/3/95, p.344) asks the question: "...what is a library? Is it fundamentally a building, a collection of books, or a way of organizing materials?" As one who has worked much of my professional life in academic and public libraries, I would like to offer my answer.

Long before the many other forms of recorded communications were developed, the word was derived from the Latin *librarius*, of books. During the years following the introduction of films and records, it became

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necessary to broaden the definition. Later, when magnetic tapes and magnetic storage disks were introduced, the definition was broadened again. And as new forms of recording are invented, we will have to broaden the definition again and again.

But I have found it useful to say that a library is a collection of recorded communications in whatever form. And a librarian is one who selects copies of these communications with the needs and desires of potential users in mind.

James H. Pickering
Asheville, N.C.

The transfer of old documents onto CD-ROMs raises an additional problem of long-term preservation. The lifetime of CD-ROMs as a storage medium has not been established. One study by Kodak has suggested it may be as short as 20 years.

Will we lose our entire historical heritage in the 21st century because of CD-ROM dete-

rioration? Until this question can be more comprehensively researched, preservation should be through reprinting on acidfree paper. Multiple copies should be dispersed throughout the world to safeguard against a disaster at any major archive.

Frederick Pilcher
Associate Professor of Physics
Illinois College
Jacksonville, Ill

Many communities are unable or unwilling to fund the libraries they have now. How are they to pay for the sophisticated hardware and software necessary to go digital?

A personal computer, and its peripherals, capable of handling all of that good digital stuff is currently beyond the reach of all but the well-to-do.

While on the subject of money, I note that the author states in the very first paragraph

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Books

Books is an editorial service for readers' information. To order any book listed or any U.S. book in print, please remit retail price, plus \$2.00 postage and handling charge for each book, to **Science News Books**, 1719 N St., N.W., Washington, DC 20036. To place Visa or MasterCard orders, call 1-800-544-4565. All books sent postpaid. Domestic orders only. Please allow 4-6 weeks for delivery.

The Axemaker's Gift: A Double-Edged History of Human Culture—James Burke and Robert Ornstein. Two leading authors in history and psychology, respectively, join forces to evaluate the impact of people whose thoughts and inventions have directed and changed the world, our minds, and the values by which we live. Shamen, astronomers, printers, cardinals, engineers, philosophers, and quantum physicists are just some of the ax makers Burke and Ornstein profile as they proficiently and gracefully evaluate society as it has evolved and the perils we face today as a result of these great achievements. In conclusion, they state that they have confidence in these ax makers to help us overcome the dilemmas posed by our rapid movement into modern society. Grosset-Putnam, 1995, 348 p., hardcover, \$27.95.

The Complete Guide to Household Chemicals—Robert J. Palma with Mark Espenscheid. Chemistry professor Robert Palma tours a typical home to answer questions about products found in the kitchen, bath, laundry room, garage, living room and backyard. How does antifreeze protect a car's radiator? What is freezer burn? What is an "all fabric bleach"? How does cement differ from concrete? These are just a sampling of the questions posed and answered. Prometheus Bks, 1995, 325 p., hardcover, \$24.95.

Dr. Pitcairn's Complete Guide to Natural Health for Dogs & Cats—Richard H. and Susan Hubble Pitcairn. With the help of his wife, veterinarian Pitcairn has updated his classic guide to natural pet care. They show how to select a healthy pet and one appropriate for your lifestyle, then provide a comprehensive overview of homeopathic remedies for ailments that might develop over its lifetime. The Pitcairns stress the importance of a healthy diet in preventing disease and list the ingredients in commercial pet foods (most of which you wouldn't intentionally feed to your dog), and then outline a number of alternatives. Rodale Pr Inc, 1995, 383 p., b&w illus., paperback, \$16.95.

Five Golden Rules: Great Theories of 20th Century Mathematics—and Why They Matter—John Casti. The author of *Complexification* examines the origins of some of the most important modern mathematical discoveries and the boundless ways in which they apply to everyday problems and events such as optimizing investment returns, sending people into space, and creating modern computer technology. Casti offers the minimax theorem (game theory), the Brouwer fixed-point theorem (topology), Morse's theorem (singularity theory), the halting theorem (theory of computation), and the simplex method (optimization theory) as those with the greatest influence during the last century. Wiley, 1996, 235 p., b&w illus., hardcover, \$24.95.

Instant Physics: From Aristotle to Einstein, and Beyond—Tony Rothman. Breezily written, this often wry primer introduces the layman to the fundamentals of physics. Here "physics-lite" readers will gain insight into the theories of Greek philosophers, learn why gravity is a "romantic" force, and acquire the ability to discuss the derivation of $E=mc^2$. Fawcett, 1995, 242 p., b&w photos and illus., paperback, \$10.00.

The Physics of Immortality: Modern Cosmology, God and the Resurrection of the Dead—Frank J. Tipler. After acknowledging that many will question his contention that "...theology is a branch of physics" useful in calculating the existence of God, Tipler nonetheless ardently presents his case. He begins from a viewpoint that humans are a type of machine and the soul is just a program being run on our computerlike brains. He then goes on to argue how these machinelike attributes allow him to "prove" humans probably possess free will, shall have life after death, and that life itself "can be regarded as the cause of the universe." Originally published in hardcover in 1994. Anchor Pr, 1995, 527 p., paperback, \$14.95.

The Zone: A Dietary Road Map—Barry Sears. A pioneer in biotechnological cancer treatments presents his research into the manipulation of eicosanoid hormones through diet. Eicosanoids control virtually every human body function, from the immune system to the cardiovascular system. With the low-carbohydrate dietary regime explained here, Sears contends that people can reach a peak physical and mental level often referred to by professional athletes as "the zone," while preventing disease. HarperCollins, 1995, 286 p., hardcover, \$22.00.

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that this grand vision is to be free of charge. Two-thirds of the way through the article, he tells us that there's no such thing as a free lunch and goes on to discuss pricing and billing techniques. Which is it to be?

A family with three youngsters can check out enough books to satisfy the requirements of the moment. How do you get three kids to share a single computer at home-work time?

Finally, on a blustery winter night, how do you curl up with a good computer?

*Donald Chandler
Lincoln, Calif.*

The vision is to have free access to information; the reality may prove somewhat different. Even today's public library isn't actually free—it depends on tax dollars. —R. Lipkin

As journal costs increase and library budgets decrease, many libraries are becoming marginally useful information resources. As a doctoral student in New York City, I found that about 60 percent of the articles I needed had to be acquired through interlibrary loan from libraries outside the city.

I'm looking forward to the day when all those hard-to-get journal articles are available on-line. Then again, as a librarian, I may be out of a job!

*Phil Stoffer
Brooklyn College
Brooklyn, N.Y.*

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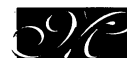
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