

ness, and other implausible diseases. He has located a plethora of quotes to illustrate these sometimes-outlandish claims.

All of the individual essays contain copious references that will aid the reader in further study of this discipline. The editors have supplemented the essays with an index that, though extremely useful, focuses primarily on proper names. Overall, *Medicine, Mortality, and the Book Trade* will make a solid addition to collections focusing on the history of the book or medicine, and makes for informative and interesting reading to anyone interested in this subject.—*Lois Fischer Black, The New York Academy of Medicine.*

**Nardi, Bonnie A., and Vicki L. O'Day.**

*Information Ecologies: Using Technology with Heart.* Cambridge, Mass.: MIT Pr., 1999. 232p. \$27.50, alk. paper (ISBN 0-262-14066-7). LC 98-29318.

What should ordinary people do when faced with the rapid growth of technology, from the Internet to cloning, with its potential to dramatically change society and our lives? Bonnie Nardi and Vicki O'Day address this significant question in *Information Ecologies*. Their answer, in short, is "using technology with heart."

Nardi, a researcher at AT&T Labs—Research, has previously published two books related to human-computer interactions. O'Day was formerly a researcher at the Xerox Palo Alto Research Center and is now a graduate student in anthropology. Their book is divided into two major sections: The first is a theoretical interpretation of technology and is composed of six chapters; the second contains a conclusion and six case studies, including a case study of library services.

In the first section, the authors review and criticize two views and three metaphors of technology. The authors hold the middle ground against two extreme views of technology, namely, technophilia and dystopia. The technophile view accepts new technology uncritically whereas the dystopian view rejects new technology blindly. Both views assume the inevitability of technology. The three

metaphors are technology as tool, text, and system. Both the tool metaphor and the text metaphor enhance our understanding of certain aspects of technology, yet neither of them captures technology's totality. The system metaphor is very close to what the authors propose; however, in comparison with the authors' own ecology metaphor, the system metaphor does not distinguish among local settings. Locality is one of the essential attributes of the ecology metaphor; it is in various local settings that "individuals have an active role, a unique and valuable local perspective, and a say in what happens" regarding the use of technology.

Information ecology, which has much in common with biological ecology, is defined as "a system of people, practices, values, and technologies in a particular local environment." (Note that the word *ecology* used here does not denote an academic study or discipline such as sociology or psychology. Rather, it means a unit, a community, and a system.) Thus, a library is an information ecology; a hospital is an information ecology. According to this definition, most of the units (factories, families, business offices, etc.) in the developed countries today are information ecologies. People, with their moral and social values and who participate locally in the use of technology, are the primary agents in information ecologies. Their active participation and engagement has a great impact on technology. Technology's inevitability is, therefore, a myth.

An important aspect of active participation is the asking of the right questions. The book urges people to ask more why questions about technology instead of merely pursuing how questions because the former are more valuable. For instance, the question, Why should we use this technology? is much more important than the question, How do we implement this technology?

Of particular interest to librarians is that Nardi and O'Day have convincingly argued the important role played by librarians in the new information age. They

present reference librarians as information experts and therapists. The reference librarian is a key species in a library ecology where she or he uses the Internet and computer technologies responsibly to serve patrons. Consequently, the need for libraries and librarians will be increasing instead of diminishing in the coming years. Nardi and O'Day show great familiarity with reference services and admire this valuable work, much of it invisible to most library patrons.

Few would dispute the middle-ground view of technology that the authors espouse. The real appeal of this book, especially for librarians, is its exploration of the possibilities for an active role for av-

erage people in the use of information technology, in local settings. The ecology metaphor for information technology is an attractive one; it can be invigorating to question the assumption of technology's dominance. The book provides detailed notes and an adequate index.

The premise of *Information Ecologies* that the use of technology shapes the way technology works in our lives is convincingly argued. Less successful is the authors' development of the theme that contemporary technology use also influences technology's future development. —  
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