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BOOK REVIEWS

Brand, Stewart. (1988). *The Media Lab*. New York: Penguin Books, \$10 (Softcover), \$20 (Hardcover), 264 Pp. (ISBN 0-1400.9701-5)

Reviewed by [Joseph McCade\(1\)](#)

Inventing the future at Massachusetts Institute of Technology (M.I.T.), the subtitle of Brand's book, reveals a good deal about its content. He describes the research efforts of some of the brightest people in the world at M.I.T.'s Media Lab. This unique facility allows these individuals to combine their talents with some of the world's most powerful computers in order to create radical developments in the field of communication. Yet, the true value of this book is not the articulate and understandable descriptions of exciting new technologies. Brand's insightful commentary concerning what the work of the Media Lab can reveal about the direction and impacts of these new technologies is the reader's true reward.

Brand quickly dispels the idea that the implications of the work of the Media Lab might be limited to communications. Reviewing the work of "information age" gurus, Brand reminds the reader of the economic importance of information-related activities. Information activities have now economically eclipsed activities in the agriculture, industry, and service sectors. Nicholas Negroponte, director of the Media Lab, believes that many of the communications modalities are converging. This will result, he predicts, in a major leap which will af-

fect society as profoundly as did the printing press. Driving this technological spiral is the computer. Computers will not only empower this pending revolution, but will allow communication to become much more individualistic, more human.

Facilitated first by the conversion to analog electronic communication and later to digital communication, information is beginning to migrate freely from one media to another. In fact, these media are beginning to overlap one another. Brand interprets Negroponte's beliefs about the importance of CD-ROM, E-mail, personal computers, and VCRs, in relation to this convergence of communication technologies.

Brand's experience as founder and editor of the Whole Earth Catalog and the Whole Earth Review helped him to understand and appreciate technology. It is this perspective of technology which allows him to interpret the predictions of faculty and students of the Media Lab. These predictions involve how technologies will interact and direct the future.

Although it is only a small part of the rich content of the book, technology educators will probably find that the most meaningful part in Brand's book is the chapter on the Hennigan School. This chapter explains Seymour Papert's experiment with a school of the future. More than simply a computer-rich environment, the Hennigan School embodies an alternative learning philosophy. Those who have not read Papert's *MINDSTORMS: CHILDREN, COMPUTERS AND POWERFUL IDEAS* will find that doing so will greatly increase their understanding of Papert's philosophy, a philosophy of learning by discovery. Children are encouraged to guess, explore, experiment and imitate. Learning rather than teaching is the focus. This more natural learning style, one in which children follow their own interests, is believed to encourage the development of a love of learning.

The computer is combined with a programming language called Logo, which Papert developed for children. Logo is intended to take advantage of the child's interest in the computer to encourage him or her to learn by doing--to experiment. A powerful graphics-orientated programming language, Logo rewards the user quickly. This provides Papert's philosophy with a platform. With a minimum of help or intervention children are supposed to "learn" Logo.

Of extreme interest to technology educators is the addition of LEGO to the Logo learning system. The LEGO construction system is linked to the computer via an interface and controlled by a special version of Logo. With sensors and actuators, the LEGO/Logo combination is a complete computer control system. Although the LEGO/Logo system may be an attractive way to teach computer control, this use will almost certainly overlook the most significant attribute of the system. The discovery learning potential of the system as a means of involving students in problem solving and higher order thinking is foremost in Papert's mind. The LEGO/Logo system when linked with hands-on experiments holds tremendous potential for technology education. If educators can look beyond the attractive appearance of the hardware to an understanding of the philosophical purpose of the system, a step toward improved technology education could occur.

This book should be required reading for technology educators. It facilitates the literacy of the reader on leading edge technology. More importantly, Brand's book has the potential of beginning something our programs have needed for a long time -- a well-articulated perspective on how technology might influence the future.

of Industry and Technology, Millersville University,
Millersville, Pennsylvania.

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