BOOK REVIEWS

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Cyburgs

The Virtual Community. Homesteading on the Electronic Frontier. HOWARD RHEINGOLD. Addison-Wesley, Reading, MA, 1993. x, 325 pp. $22.95.

Over the past decade, increasing numbers of people have communicated intensively over Internet and other computer networks, developing enduring social relationships with people they may never see in the flesh, thereby creating "virtual communities." Existing only in cyberspace, these cyburgs (as I suggest we call them) might function like small towns, providing a sense of participation in a meaningful human group as well as performing practical functions such as exchange of valuable information, development of new subcultures, and mobilization of collective energies for political action. Traditional sociology has been skeptical of the power of disembodied communication, believing that social structures require frequent face-to-face interactions among members. However, the sheer volume and variety of communications that individuals may transport over the Information Superhighway could be sufficient to build effective cyburgs, so in the absence of really good social-scientific studies this journalistic survey is a good introduction to what may become an important aspect of society.

Today, many scientific collaborations are conducted largely by e-mail, and as frequency and importance of communications increase participants may generate a significant social bond. The potential for real community arises when several people communicate simultaneously, in "real time," and share significant emotional experiences over an extended period. An Internet Relay Chat (IRC) is one variety of written conversation, usually oriented toward a particular topic area of interest. A Multi-User Dungeon (MUD) is a real-time, on-line fantasy game in which players adopt alternate identities and may invest weeks of time exploring, competing, and developing resources in an exotic world with its own peculiar rules and denizens. *Messageries roses*, to use the French term, are sex-chat services in which participants can interact erotically at a distance, with the added dimension that people may misrepresent any of their actual characteristics, and some

commercial services have hired men to pretend to be compliant women to attract other men to become customers. Scientific and scholarly systems are generally run as listserves or bulletin boards, on which individuals post messages to be received by others at a later time, thus avoiding the emotional stimulation of quick conversations while increasing the likelihood that participants will think carefully and do serious work.

Rheingold asserts that the technical opportunities for cyburgs were created by unconventional people with rare communal visions, but this is a hypotheses that can be confirmed or disconfirmed only by systematic historical research. His own experience came from a San Francisco conferencing system called the WELL, built by the Whole Earth Catalog with contributions from the Hog Farm commune and Grateful Dead fans, so it is not surprising that he believes the Net was largely created by remnants and successors of the 1960s counterculture. At the same time he recognizes that the chief Internet builders were the Advanced Research Projects Agency and the National Science Foundation, two mainstream government agencies. While suggesting that the creators of the personal computer were members of the counter-culture, chiefly citing the Apple and Lotus corporations, he acknowledges the leading roles of IBM and Microsoft. The role of radicals in new scientific and technological achievements is a social-scientific question of significant interest, but it may be greatly exaggerated by popular reports that emphasize uninhibited excitement.

Another troublesome theory, repeated throughout the book, is the notion that Western society has suffered a dramatic historical loss of community, greatly caused by modern technology. It is one thing to express the value judgment that modern society does not have enough community, but it is quite another to state as fact the proposition that our great-grandparents lived in a world that bound the individual into satisfying and all-encompassing social relationships. Research by historical demographers and sociologists indicates that we have lived for centuries in fluid, constantly changing social environments that bear little resemblance to the romantic villages

espoused by Rheingold's communards.

Rheingold believes that the distributed communications of the Net, into which millions of users may contribute their own uncensored messages, may counteract a powerful tendency toward concentration of world culture in the hands of a very few monopolistic mass-media corporations. At the same time, he recognizes three ways in which improper development of the Net could do harm: (i) commercialization could turn all public information into advertisements for commodities; (ii) the new technologies could be used for surveillance and control of individuals; and (iii) the Net could become a web of illusion in which people have lost the capacity to discern the real from the virtual. This book is valuable as a compendium of social questions, and as a general factual introduction to life in cyberspace.

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Actualizing Technologies

What Machines Can't Do. Politics and Technology in the Industrial Enterprise. ROBERT J. THOMAS. University of California Press, Berkeley, 1994. xviii, 314 pp., illus. $45 or £28; paper, $16 or £10.95.

The new microelectronic technologies for production afford U.S. manufacturers the opportunity to improve productivity by decentralizing authority in the workplace. In its May 1994 fact-finding report, the presidential Commission on the Future of Worker-Management Relations (or Dunlop Commission) claimed that interest in participatory employment arrangements will grow as the educational level of the labor force and global economic pressures increase and as "technology creates more opportunities to share information and delegate decisionmaking authority."

Workplace decentralization, however, is not a foregone conclusion of the new technologies. These technologies harbor a potential both for expanding workers' control of production decision-making and for maximizing the capacity of management to monitor and control the activities of workers. *What Machines Can't Do* is an innovative treatment of factors that affect how this potential will be realized.

The author spent three years combing company archives and conducting some 300 interviews with employees of four U.S. manufacturers about technological changes that occurred during the 1980s. The four