



Review: The Road to Utopia and Dystopia on the Information Highway

Reviewed Work(s): *City of Bits: Space, Place and the Infobahn* by William J. Mitchell; *The Virtual Community: Homesteading on the Electronic Frontier* by Harold Rheingold; *War of the Worlds: Cyberspace and the High-Tech Assault on Reality* by Mark Slouka; *Silicon Snake Oil: Second Thoughts on the Information Highway* by Clifford Stoll; *The War of Desire and Technology at the Close of the Mechanical Age* by Allucquère Rosanne Stone; *Life on the Screen: Identity in the Age of the Internet* by Sherry Turkle

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The Road to Utopia and Dystopia on the Information Highway

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When computer networks connect people and organizations, they are social networks. But can relationships between people who never see, smell, or hear each other be productive, supportive, or intimate? This question attracts enormous public, corporate, and state interest. Pundits outnumber analysts, and enthusiasts outnumber critics: There is more immediate reward in praising the future than in denouncing it. Although the essence of the debate is sociological, members of our profession have not played a major analytic role. Others, such as the authors of the books reviewed here, have filled our vacuum:

The Utopians

- MIT architecture dean William Mitchell has rediscovered on the information highway the established sociological idea that communities are based on information exchange rather than on space. In short sections, he meditates on a variety of topics, such as public and private space, the nature of on-line norms, and how computer-supported social networks may transform work and home life. His references come mostly from the mass media, and almost never from social scientific studies. A version is also available on the Web: http://www.mitpress.mit.edu/City_of_Bits/
- San Francisco author Howard Rheingold recently made news by appearing in an electronic orange outfit in the sea of gray business suits at the 1997 Davos World Economic Forum. "It wasn't just my mode of dress. The big buzzword among the marketeers this year is 'virtual community,' and I had to remind them that communities are made of people, not consumers" (personal communication). Rheingold starts by providing rich ethnographic detail to describe life in the WELL, the highly absorbing electronic community of which he is a veteran and central member. He goes on to provide less detailed accounts of such matters as the development of the Net and how adults and children participate in absorbing virtual

City of Bits: Space, Place and the Infobahn, by **William J. Mitchell**. Cambridge, MA: MIT Press, 1995. 225 pp. \$20.00 cloth. ISBN: 0-262-13309-1. \$10.00 paper. ISBN: 0-262-63176-8.

The Virtual Community: Homesteading on the Electronic Frontier, by **Harold Rheingold**. Reading, MA: Addison-Wesley, 1993. 325 pp. \$22.95 cloth. ISBN: 0-201-60870-7. \$13.00 paper. ISBN: 0-16-097641-1.

War of the Worlds: Cyberspace and the High-Tech Assault on Reality, by **Mark Slouka**. New York: Basic Books, 1995. 185 pp. \$20.00 cloth. ISBN: 0-465-00486-5. \$12.00 paper. ISBN: 0-465-00487-3.

Silicon Snake Oil: Second Thoughts on the Information Highway, by **Clifford Stoll**. New York: Doubleday, 1995. 247 pp. \$22.00 cloth. ISBN: 0-385-41993-7. \$14.00 paper. ISBN: 0-385-41994-5.

The War of Desire and Technology at the Close of the Mechanical Age, by **Allucquère Rosanne Stone**. Cambridge, MA: MIT Press, 1995. 212 pp. \$22.50 cloth. ISBN: 0-262-19362-0. \$10.00 paper. ISBN: 0-262-69189-2.

Life on the Screen: Identity in the Age of the Internet, by **Sherry Turkle**. New York: Simon & Schuster, 1995. 347 pp. \$25.00 cloth. ISBN: 0-684-80353-4.

communities, role-playing MUDs (multiuser dungeons) No citations, but a useful bibliography that includes social scientific stalwarts.

The Dystopians

- UC-San Diego literature and culture lecturer Mark Slouka argues that the Net is insidiously blurring the line between synthetic environments and real life. His book's first two chapters are " 'Reality Is Death': The Spirit of Cyberspace" and " 'Springtime for Schizophrenia': The Assault on Identity." He goes on to argue, always by anecdote, that cyberspace will lead to lost senses of place, community, and reality. "What the issue comes down to, then, is not whether or not

we are wiring ourselves up into a hivish network—we are—but whether this is a good thing or a bad thing” (p. 104). His citations are principally to other pundits.

- Berkeley astronomer and computer systems administrator Clifford Stoll previously wrote a highly regarded book about computer fraud, *The Cuckoo's Egg*. His new “second thoughts” book has no table of contents and only a few references to stuff he likes. Stoll presents poorly documented assertions and anecdotes to counter overly hyped beliefs about the Net, such as its ubiquity, supportiveness, and its ease of information access.

The Social Identitists

- Texas interactive multimedia laboratory director Allucquère Rosanne Stone is known to have given a “riotous performance” at a conference where she “took to the stage and wriggled in and out of different costumes [including a ‘feather boa’],” showing how easily one could assume multiple identities. Her inspiration, she explained, was the Internet, a mecca of multiple-personality possibility” (Bennahum 1997, pp. 61–62). Stone sees her book as a compendium of intellectual provocations. In a series of thoughtful short essays, she is principally concerned about how people find and manipulate their identities on-line, be they cross-dressing psychiatrist, a phone sex worker, or a MUDer. She speculates about “emergent technologies, shifting boundaries between the living and the nonliving, optional embodiments . . . about the everyday world as cyborg habitat” (p. 37). Her interesting bibliography contains little mainstream social science.
- MIT social psychologist Sherry Turkle's book continues many of the themes in her earlier, influential *The Second Self*. Writing with less drama and hyperbole than Stone, Turkle too is interested in how on-line experiences affect identity and cognition. More than any other book reviewed here, her essays/chapters convey a sense of being in touch with the systematic thought of the scholarly world. Like Stone, she is neither utopian nor dystopian, but, instead, a person wrestling with the complexities of how the on-line experience is affecting relationships, multiple identities, and perceptions.

As is customary in discussions about the social implications of the Net, several authors are Manicheans who assert that the Net will either create wonderful new forms of community or will destroy community totally. The authors' criticisms and enthusiasms leave little room for the moderate, mixed situations that may be the reality. Mitchell and Rheingold hail the Net's potential for making connections without regard to race, creed, gender, or geography. By contrast, Slouka and Stoll are doomsayers, asserting that life on the Net can never be meaningful or complete because it will lead people away from the full range of in-person contact. Or, conceding half the debate, they worry that people will get so engulfed in a simulacrum virtual reality that they will lose contact with “real life.” Meaningful contact will wither without the full bandwidth provided by in-person, in-the-flesh contact.

The authors, like many writers about life on-line, tend to be presentist and unscholarly, seemingly unaware that they are continuing a century-old controversy about the nature of work and community, albeit with new debating partners. Consistent with the present-oriented ethos of computer users, they write as if people had never before worried about—or studied—the impact of new technologies on work and community. Yet researchers have described how the car, train, phone, and plane fostered nonlocal community and work long before the first computers ever talked with each other.

All of the books are parochial, seeing the Net as the ultimate transformer. They treat life on-line as an isolated social phenomenon, without taking into account how interactions on it fit with other aspects of people's lives. They usually ignore the fact that people bring to their on-line interactions such baggage as their gender, stage in the life cycle, cultural milieu, socioeconomic status, and off-line connections with others.

Only Turkle reports on a sustained program of scholarly research. The others report their experiences on-line and meditate about the implications of the ever-more-crowded, fast-proliferating information highway. Rather than sustained presentation of evidence, they provide short anecdotes gathered into loosely coupled chapters. They present quick analogies rather than systematic descriptions, comparisons, or precise analyses. Their

accounts of life on-line resemble bygone "travelers' tales," accounts of adventurous trips from the civilized world to newly discovered, exotic realms. Sometimes this works: Rheingold's is an intensely observed depiction of his experiences in on-line communities; Stone, who has had a complex professional and personal career, ranges with pertinent detail through a variety of issues. Despite their university affiliations, Mitchell's, Slouka's, and Stoll's are trade books of punditry: eschewing the subtleties, nuances, ambiguities, and complexities of scholarly research to provide deep thoughts. (For actual scholarly research about the Net, see the compendia in Rob Kling's 1996 *Computerization and Controversy* and Barry Wellman et al.'s literature review in *Annual Review of Sociology* 1996). What do these books tell us about on-line "virtual community":

Are On-Line Relationships Narrowly Specialized or Broadly Supportive? These and other accounts suggest that although people can find almost any kind of support on the Net, most on-line ties provide specialized support. The commonest form of on-line support is the provision of information. Yet Mitchell, Rheingold, and Turkle show how on-line ties also provide sociability, emotional support, material aid, and a sense of belonging.

All of the books show how the Net supports both market and cooperative approaches to finding social resources. With more ease than in most real-life situations, people can shop for resources within the safety and comfort of their homes or offices. Travel and search time are reduced without major investments of money or energy. Hence interactions on-line are a technologically supported continuation of a long-term shift to communities organized by shared interests (sometimes narrowly focused) rather than by shared place (neighborhood or village) or shared ancestry (kinship group).

Yet skeptics such as Slouka and Stoll think that on-line relationships are too narrowly defined and lacking in quality. They worry that the Net's ease of use enables unqualified people to provide misleading information. Yet laypeople have always given each other advice about health, cars, and so on. The Net has simply made the process more accessible and more visible to others, including experts whose claims to monopolies on advice are threatened. Stoll also cautions that the Net's speed and greater connectivity can accelerate

the spread of (mis)information when people often send messages to scores of friends and to large email lists. Messages transmitted through the Net can merge the two-step flow of communication into a one step, combining the rapid dissemination of mass media with the persuasiveness of personal communications.

In What Ways Are the Many Weak Ties on the Net Useful? Net users are like 1960s hippies in trusting strangers. Rheingold provides many accounts of how users obtain information on-line from weak ties. He shows how the accumulation of small acts of assistance can sustain a large community because each act is seen by the entire group and helps to perpetuate an on-line sense of generalized reciprocity and mutual aid. Perhaps this is because on-line assistance is often observed by entire on-line groups and positively rewarded by its members. "The person I help may never be in a position to help me, but someone else might be" (p. 60). Rheingold and Turkle both show that the process of providing support and information on the Net can be a means of expressing one's identity, particularly if technical expertise or supportive behavior is perceived as an integral part of one's self-identity. Moreover, on-line interaction can generate a culture of its own, as when jokes (or virus warnings) sweep the Net. Yet Slouka and Stoll warn about the consequences of making affiliations in an electronic medium teeming with strangers whose biographies, social positions, and social networks are unknown. Stone, by contrast, sees this as an opportunity for on-line identity adventures.

The lack of social and physical cues on-line makes it harder to discover participants' social and physical characteristics. This can empower members of lower-status groups by providing more control over the timing and content of self-disclosures. The relatively egalitarian nature of Net contact encourages attention to the message itself, fostering contact based more on shared interests and less on shared social attributes.

Are Strong, Intimate Ties Possible On-Line? Stoll and Slouka worry that the narrower bandwidth of computer-mediated communication should work against the maintenance of strong ties. They doubt that such ties can be strong without the physical and social cues and the immediate response that face-to-face contact supplies. "Electronic communication is an instantaneous and illusory contact that creates a sense of

intimacy without the emotional investment that leads to close friendships" (Stoll, p. 24).

Part of their fear is wrongly specified because they (like all the authors) speak of relationships as being solely on-line and ignore those ties that also operate off-line. All the books focus much more on engrossing "virtual communities" than on situations where people use the Net as just one of several means to interact. Turkle and Stone each do a good job of describing on-line role-playing environments in which they have been involved, while Rheingold gives a good feeling of what it is like to be heavily involved in on-line communities. Yet people rarely spend their full time in such environments, however engrossing. Rather, the Net fosters participation in multiple, partial communities. People often subscribe to multiple discussion lists and newsgroups, and some send messages to on-line personal communities of their own making, perhaps keeping different lists for different kinds of conversations. They vary in their involvements in different communities, participating actively in some, occasionally in others, and being silent "lurkers" in still others. Such communities develop new connections easily because the Net makes it easy to exchange information and advice with distant acquaintances and strangers.

The ties people develop on-line are much like most of their "real-life" community ties: intermittent, specialized, and varying in strength. Many of those that Rheingold, Turkle, and Mitchell describe do have the characteristics of strong ties. They encourage frequent, companionable contact, they withstand physical separation. Replying on-line to requests for help is easy, and the ties are usually voluntary (work situations being an exception). Studies of computer-supported cooperative work show that strong ties develop on-line, although they take longer to strengthen because on-line exchanges are asynchronous (and slower) and have less bandwidth available to provide verbal and nonverbal information. Despite Slouka and Stoll's contentions, there may not be much antisocial behavior on-line other than uttering hostile "flaming" remarks and "spamming" with profuse junk mail. However, as Stone points out, on-line ties foster uninhibited discussion, nonconforming behavior, and group polarization. Indeed, Rheingold, Stone, and Turkle show how on-line masquerading

can have a playful, creative aspect that allows people to try on different roles. A greater threat to on-line ties is the ease by which they can be disrupted. The narrow bandwidth of communication facilitates the misinterpretation of remarks, the asynchronous nature of most conversations hinders the immediate repair of damages, and it is harder to mobilize group pressure.

How Does Virtual Community Affect "Real-Life" Community? Stoll and Slouka fear that high involvement in virtual community will move people away from more authentic involvement in "real-life" communities. Such fears treat community as a zero-sum game, assuming that if people spend more time interacting on-line, they will spend less time interacting in "real life." As most people have only 10–20 active community ties in real life, the real issue is whether on-line interactions will be an inadequate replacement for traditional relationships or will extend the range of personal communities (as Rheingold and Mitchell suggest). Moreover, most contemporary "real world" communities in the developed world do not resemble rural or urban villages where all know all and have frequent face-to-face contact. They rely on the telephone to maintain spatially dispersed community ties between face-to-face encounters, yet the telephone was originally seen as an exotic, depersonalized form of communication. Few persons neatly divide their relationships into two discrete sets of those seen in person and those contacted on-line. It is the relationship that is the important thing, and not the communication medium. Yet because of the current fascination with computer-mediated communication, authors are treating life on-line as something special.

Are Virtual Communities "Real" Communities? Rheingold, Turkle, and Stone describe how life on-line is developing norms and structures that are not just pale imitations of "real life." The architecture of the Net may encourage significant alterations in the size, composition, and structure of communities. It supports the maintenance of many community ties, its distance-free cost structure transcends spatial limits even more than the telephone, the car, or the airplane, and its asynchronous nature encourages communication over different time zones.

The Net nourishes contradictory developments in the structure of communities. It fosters multiple memberships in partial communities but also

weakens the solidarity that comes from membership in densely knit, bounded groups. Yet the Net's ease of group response and personal forwarding fosters the folding of participants into more encompassing communities. People's lives may be becoming more "globalized." Global connectivity deemphasizes the importance of locality for community when on-line relationships become more compelling than suburban neighborhoods. At the same time, those connecting on-line to telework or virtual community are often based at home, the most local environment imaginable.

Pundits worry that virtual community may not truly be community. These worriers are confusing the pastoralist myth of community for the dispersed reality. It is even possible that the proliferation of computer-mediated communication may produce a counter trend to the contemporary privatization of community as the Western world has shifted lives indoors from public spaces to private homes. Virtual communities provide possibilities for reversing the trend to less contact with community members because it is so easy to connect on-line with large numbers of people. Because participants in on-line groups can read all messages — just as in a barroom conversation — groups of people can talk to each other casually and get to know the friends of their friends. "The keyboard is my café," William Mitchell enthuses (p. 7).

On-line communication enhances people's ability to move between ties and social networks. Even as the Net may accelerate the trend to moving community interaction out of public spaces, it may also build social capital and integrate social systems, supporting ties that cut across interest groups, localities, organizations, and states.

Where are the sociologists? Only a few of us are studying life on-line, and we have had to struggle to be recognized. Some computer scientists prefer the simplifiers, the artists, and the pundits. They want a sound-bite vision that will inspire the design of an application; they do not want a complex set of ambiguous findings. As influential Yale professor David Galanter says, "We definitely don't want CS to become like sociology. We want to become like architecture, design, or music. Social science can disappear from the universe, and nobody would mind . . . The problem with sociology is pretending that it's a science when it's not" (Steinberg 1997, p. 207).

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