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The Social Impact of Computer-Based Communications

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The Social Impact of Computer-Based Communications

I. Introduction

Computers now affect all aspects of our lives, either directly or indirectly. In industrial societies, even the older technologies, when they survive at all, have had their forms and functions altered by the newer technologies. As Daniel Boorstin put it, "New technology forces the old technology into new niches" (1994). Much the same can be said about social structures and cultural patterns: Nothing remains quite the same in the wake of the massive application of computers and related forms of electronic technology to problem solving.

Computers do our record keeping. They monitor our every movement. People face a dilemma. Either they will adapt to the computerized environment or they will suffer the fate met by the dinosaurs when their environment changed, or that of the tribal people of the American Great Plains when the buffalo herds vanished.

The threat faced by those who find change difficult is amplified by computers' seemingly near-human abilities, and is especially evident in the evening division programs of universities, as older students return to classes to learn what the new technologies are all about. One such student, Sherry L. Cecil, put her fears into print when she had to write a term paper on the topic. She titled it, "'Thing' and I: A Personal Computer Anxiety Odyssey." The following is some of what she wrote:

I know the nervous feeling in the pit of my stomach that came with the installation of "Thing" on my desk, the panic that I felt when first asked to produce a simple spreadsheet on "Thing," and the absolute terror of having the entire Oklahoma City matrix drop off "Thing's" B-drive. "Thing" ingested it with great gusto, leaving me a paltry three lines of the only major project that wasn't on "Thing's" hard drive. I even thought that I heard a soft, electronic burp.

"Thing" resisted all efforts to recapture that rather gigantic tidbit of data. I spent days rebuilding it, pounding "Thing's" keyboard with a vengeance and letting dust build up on his screen. I toggled his CPU switch to "off" in a final act of punishment and grounded him for an entire weekend. "Thing" has

yet to repent.

Then came the awful realization that SLU [Saint Louis University] wasn't going to let me out without a whole semester's course on "Thing"! I begged, I pleaded; I expounded upon the fact that I was acquainted with "Thing" and had hammered out a grudging peace with him. It was best, I assured my advisor, to leave well enough alone when it came to "Thing."

Obviously, the advising office didn't see it my way. It seems that "Thing" has lots of minutely detailed, if somewhat gross, electrical innards, many ancestors, various schizoid "relatives" and other noxious challenges of which I was blissfully ignorant. Too bad, lady, welcome to CS150-60. (Cecil 1994)

The computer in Sherry Cecil's life meant big changes in her work habits. She viewed change as a threat. She feared losing status or power, a fear of interacting with computers. This is a common feeling among workers and students as they face something that is new, something they do not comprehend. (Footnote: Sherry now teaches computer literacy to pupils in kindergarten through eighth grade!)

In addition to the computer, society has embraced electronic mail (e-mail) and the World Wide Web (WWW), an interactive graphical interface that allows one to point and click on highlighted text or graphics to move to another link. Today, e-mail sometimes overwhelms one. One noted scholar, Pierre Babin, responded with two answers to the question: "Why don't you answer me?" The first was, "The answering medium does not suit you (Or -you cannot have access to it-)." "The second reason not to answer is a lack of time." (Babin 1996)

Furthermore, just trying to stay current is a difficult task. Technology changes so fast, even as it transforms the world that uses it. What was current or relevant yesterday is now, today, ancient history. This issue of *Communication Research Trends* will suggest some of the things leading researchers are doing and their thoughts about the social implications of developments in computers and related technologies.

II. Where Are We, and Where Are We Going?

Internet. "The American Internet User Survey: New Survey Highlights." <http://etrg.findsvp.com/features/newinet.html> (June 1996).

Mitchell Kapor. "Where Is the Digital Highway Really Heading?" <http://www.hotwired.com/wired/1.3/features/kapor.on.nii.html> (June 1996).

William Lehr (ed.). *Quality and Reliability of Telecommunications Infrastructure*. Mahwah, NJ/Hove, UK: Lawrence Erlbaum Associates, 1995.

Where Is the Digital Highway Really Heading?

Mitchell Kapor (1996) describes the case for building the infrastructure of what he calls a "Jeffersonian Information Policy." In his view, the information highway should reach into every home and workplace to make available to all an expanded universe of information and entertainment.

The means to accomplish this is the Integrated Services Digital Network (ISDN). It is a technology designed for public switched telephone networks that permits low cost communication in data, voice, graphics, and video. It is designed to run over the existing copper wires that connect telephone companies' central offices to each local subscriber.

ISDN is not an information service, but a transmission medium for delivering and receiving information in a variety of forms. With the "Plain Old Telephone Service" (POTS), copper-pair wires reaching into the home can carry only a single voice call or data at rates up to 14,400 Kbits (kilo-bits) per second. With ISDN, this bandwidth capacity is increased ten-fold, to 144,000 Kbits per second. Standard compression techniques can push that figure even higher.

These innovations will make a vastly increased variety of services possible for the average customer without a need for costly rewiring of the whole system.

The American Internet User Survey

Some 9.5 million Americans now use the Internet, including 8.4 million adults and 1.1 million children under 18, who tap into it from the workplace, school, and homes, according to findings from the American Internet User Survey (Internet, June 1996). The survey found fewer total Internet users than some recent research had led many analysts to believe. Even so, the total found in that survey nearly matches the estimate of 10 million users of commercial on-line services in a study by Arlen Communications at the end of 1995.

Home access is higher than expected. Overall, personal use is definitely rising fastest. E-mail remains the number one Internet application, used by more people and most frequently. In fact, most users have visited fewer than 100 Web sites in depth.

The survey confirms that men are much more likely than women to use the World Wide Web and such specialized applications as file transfer protocol (FTP) and the Usenet. However, women are slightly more likely than men to use Internet e-mail and to participate in Internet mail lists. Other findings include indications that Internet usage is most likely to displace TV viewing and the use of long distance phone calls. Today's users see the future of the Internet foremost as "information access, communications, and education."

For the latest information on the Survey, use the following address: <http://etrg.findsvp.com>

Bumps and Bandits on the Highway

In his Introduction, William Lehr remarks on the reliability achieved by contemporary telecommunications systems, which provide the essential infrastructure for all forms of electronic network communication. For example, the 1989 and 1994 earthquakes in California interrupted many other basic utilities but not the telephone service in the hardest hit localities (Lehr 1995: 1).

At the same time, we are becoming more and more dependent on that reliability of service, and the increasing complexity of the telecommunications network is introducing new factors which could upset its sometimes delicate balance. One factor is deregulation, which reduces government controls and thereby increases healthy competition, but which also opens the infrastructure to potentially damaging influences. Interfaces between public and private systems, or between systems regulated differently by their respective controlling bodies also can be troublesome, as Neal Stolleman points out in regard to incentives (in Lehr 1995: 63-82).

John C. Wohlstetter (in Lehr 1995: 225-238) discusses how the greater freedom and flexibility allowed by deregulation and by the disappearance of monopolies has been accompanied by anomalies and abuses. For example, when AT&T (American Telephone and Telegraph) had an effective monopoly of U.S. telephone services it could require that only equipment produced by Western Electric to AT&T's

own specifications could be attached to its lines. Now, no one can control what is attached to the network—all kinds of electronic hardware produced by all kinds of manufacturers, large and small, reliable and unreliable.

This is fine in terms of flexibility, but both hardware and software failures can potentially disable the networks of whole regions, and the mischievous or malicious can pry into "off limits" areas of the Internet and cause all kinds of trouble, including diversions of emergency calls and the introduction of computer viruses (*ibid.*, pg. 229). The author says he prays about the danger from terrorism: "Every time I sit at my PC I thank the Lord that 'Saddam don't know software.' So far, at least that we know, terrorists seem to prefer buckets of blood to evil electrons." (pg. 234) More

moderate "revolutionaries" have discovered the Internet, however. The use of fax and e-mail at the time of China's Tienanmen Square incident is now legendary, and the Zapatista rebels in Mexico's Chiapas State continue to use the Internet vigorously to promote their cause around the world (Hoechsmann 1996). Furthermore, potentially fatal kinds of equipment failure, such as might result from lightning strikes, etc., are more likely to occur when so much unstandardized equipment is being used.

The Internet is now extremely flexible and its online services are valuable, but it remains vulnerable to its own growing complexity, and, as Wohlstetter indicates, there is no real solution to this vulnerability in sight.

III. Some Social Implications

Thomas F. Baldwin, D. Stevens McVoy, and Charles Steinfield. *Convergence: Integrating Media, Information and Communication*. Thousand Oaks/London/New Delhi: Sage, 1996.

Nick Heap, Ray Thomas, Geoff Einon, Robin Mason, and Hughie Mackay (eds.). *Information Technology and Society: A Reader*. London/Thousand Oaks/New Delhi: Sage/Open University, 1995.

Michael Marien. "New Communications Technology: A Survey of Impacts and Issues." *Telecommunications Policy*. Vol. 20, No. 5 (June 1996), pp. 375-387.

Khalil F. Matta and Naji E. Boutros. "Barriers to Computer-Based Message Systems in Developing Countries." *Computers and Society*. Vol. 19, No. 1 (March 1989).

Elizabeth Reid. "Informed Consent in the Study of On-Line Communities: A Reflection on the Effects of Computer-Mediated Social Research." *The Information Society: An International Journal* (Royal Melbourne Institute of Technology. E-mail: emr@rmit.edu.au). Vol. 12, No. 2 (April-June 1996), pp. 169-174.

Richard S. Rosenberg. *The Social Impact of Computers*. San Diego: Academic Press, 1992.

Alvin Toffler. "Shock Wave (Anti) Warrior." <http://www.hotwired.com/wired/1.5/features/toffler.html> (June 1996).

Privacy

André Bacard (1993) represented a rising tide of concern in saying that, while computers are useful for accessing information and communicating with others through networks, they also are used by governments and corporations for electronic surveillance. That surveillance permeates our very lives. It makes available many kinds of private information, such as our credit status, medical records, bank accounts, and police records. All these, and more, are easily accessed and available to others. Economical desktop or laptop computers let us search encyclopedias, dictionaries, and vast databases by pressing a few buttons. This is the positive power made available by the Information Age. But its negative side is that we, too, and much that we would like to keep private, have become public

knowledge.

In a feature article in *USA Today*, Leslie Miller reinforces Bacard's warning, citing the remarks of privacy activist Janlori Goldman of the Center for Democracy and Technology:

Computers can log every click of your computer mouse and collect its electronic 'mouse droppings' for future use by World Wide Web developers, marketers, and others. If your visits to a cigarette company's Web site result in getting discount coupons, you may not mind, Goldman notes, but if your insurance company gets the information and decides to raise the premiums of people believed to be smokers, you may be more concerned. All companies that do business on line should tell users

up front 'what information they're collecting and what they're going to do with it,' says Goldman. (Miller 1996)

Social Impact

Any technological innovation brings a certain amount of social change. The pervasiveness of computer uses in contemporary society makes the attendant changes even more apparent than most previous innovations. Some people view change as a threat, have fear of losing status or power, fear of interacting with computers, fear of the impact of computers on society, and fear of job displacement (Applebaum and Primmer 1990). Many of the fears are for continued economic security. Stephen P. Robbins specifies some of these:

...a source of individual resistance is concern that changes will lower one's income, changes in job tasks or established work routines also can arouse economic fears if people are concerned that they won't be able to perform the new tasks or routines to their previous standards... (1993: 672-673)

Even the most cautious incursions of computer mediated activities into existing societies can have unanticipated effects. That is true of networked societies as well as others. Elizabeth Reid (1996) carried out a study using the Internet as a research vehicle. She did a participant-observation cultural study of MUDs (Multi-User Dungeons), a form of text-based community found on the Internet. Although she took many precautions to insure that her research was done in an ethical and responsible manner, she nevertheless caused an adverse effect in at least one of the communities she studied. That community has consequently become more discreet in its membership recruitment, more suspicious of outsiders. The members of the system have traded "freedom to" for "freedom from."

Richard S. Rosenberg (1992) offers a broad look at the effects and possible future of this collision between the machine and society. Rosenberg asks the right question: "Will technology bring about Utopia or 1984? Are we entering an age of unprecedented access to knowledge and power or are we becoming a fragmented society of technological haves and have-nots?"

The computer society has given rise to a new kind of recluse, the "urban hermit." Baldwin, McVoy and Steinfield describe the urban hermit as a person who is safely isolated from all physical human contact. The hermit buys essentials such as food, clothing (if needed), amusements, etc., via a computer terminal. An

occasional video conference may be necessary. The introverted, alienated person may become even more withdrawn from society. Fortunately, few such extreme cases have thus far been reported. The authors go on to describe a more normal use of the integrated broadband network:

The healthy version of the full service broadband environment is the use of the services for more efficiency in distasteful tasks (whatever they may be for an individual—shopping, homework, research, business communication, account balancing, and so on) thereby freeing time for more rewarding tasks (whatever they may be for an individual—watching movies, browsing the Internet, socializing face-to-face, participating in sports, and so on). As full service communication systems develop, individuals should attempt to assess for themselves whether a positive balance occurs. (1996: 388)

Contemporary social changes, apart from those due to technology, also have created new demands on the average person's time. For example, patterns of divorce and remarriage have created new obligations across broken and extended families which also constrain time. The Internet can be a means to free some time from more mundane tasks which can be used for these more urgent social purposes.

Barriers to Computer-Based Message Systems in Developing Countries

Matta and Boutros (1989) have listed a number of barriers to the introduction of computer systems into Less Developed Countries (LDCs). They fall into four categories:

Technological Barriers - The lack of domestic availability of the necessary technology to receive, store, and transmit data. Communication lines can be characterized at best as unreliable in many countries. Individuals must be trained in using computers.

Economic Barriers - Computer terminals and local area networks can only be acquired and maintained if sufficient capital is available.

Political Barriers - Nationalism is a major factor. Most countries view information as a national resource that should be supervised and protected by government-imposed rules and regulations.

Social Barriers - The main social barrier is national pride. A low level of education, fear of change, and intimidating language differences are all obstacles to the widespread use of electronic mail systems.

Even the awareness of and access to particular, familiar information sources can become barriers. Once

an individual is familiar with a source, he or she may tend to continue to use it beyond the point where it is any longer an efficient means of accomplishing the desired goal (Johnson 1996: 93). "The costs of achieving low levels of ignorance can be substantial, especially for effective information processing systems" (Johnson 1996: 97).

Peter Senker points out that

Developing countries are at a disadvantage in relation to securing employment from new technology, because they usually import it: jobs producing the new technology are usually located in advanced countries. ...Several developing countries may find that the use of these materials threatens jobs in the extraction of traditional raw materials. (Senker, in Heap, Thomas, Eison, Mason, and Mackay 1995: 141).

Transition Period - A Crisis?

Marien (1996: 375) lists some of the names recently coined by different writers to describe the new, computer-influenced society. P. F. Drucker has called it both a "knowledge society" and a "network society." Alvin Toffler calls it the "Third Wave civilization." M. Connors says it is an "intelligent state." According to F. Koelsch it is the "info-media age." *Time* magazine (in a 1995 special issue) and others have popularized "cyberspace." And S. G. Jones calls it "cybersociety."

In several best-selling books—*Future Shock*, *Third Wave*, *War and Anti-War*—Alvin Toffler has said that the period we are moving into is not the period of "the crisis of communism" or "the crisis of capitalism," but the general crisis of industrialism. He stresses that not only is accelerating change hard to adapt to, but the acceleration itself has effects on the socio-cultural system. Information, including misinformation, will change the world militarily and economically. If we look at global power, in the broadest sense, the most basic division in the world has not been between East and West, but between industrial and non-industrial powers, between "first wave," or agrarian countries, and "second wave," or industrial countries. There will

continue to be agrarian countries and mass-manufacturing cheap-labor suppliers, at least for a transitional period. At the same time, however, a chain of info-intensive countries is developing, whose economies depend not on the hoe or the assembly line, but on brain power.

Toffler chose "third wave," rather than "information age," "computer age," or "space age," to describe this period of change because he sees it as effecting changes in every aspect of civilization. "Computer age" or "digital age" would focus too much on a single parameter, neglecting others which are also important in contributing to the single wave of change which can move through a society at one time.

Marien discusses many of the developments and expectations which are affecting the information society. They have their "pros" and "cons"—both of which are stressed, or overstressed, by different observers. The explosive growth of Internet and World Wide Web is a fact of current history. "Smart cards" with a wide range of functions have been foreseen as coming soon, to become a major link between the individual and the world. E-mail has been predicted to become the dominant telecom medium within 15 years. Some predict the abolition of long-distance charges by 2001. The potential of electronic health care services to the home is being advanced as one approach to prohibitive health care costs.

Others have emphasized the downside of the information society. Jacques Ellul, Neil Postman, and others have complained of information overload, or "infoglut." Rather than it being a panacea for Third World nations, they face a real threat of Western cultural domination, whether well-intentioned or not. The computer is making it easy for big business and governments to erode our right to privacy. Growing credit card use facilitates consumption, and in doing so the credit card becomes a chain of bondage for many consumers. Many of the activities undertaken in shopping malls will soon be more easily and efficiently carried out at the "information mall." The advent of "E-money" will facilitate "buying sprees at the virtual mall," according to S. Levy (1994).

IV. Religion and the Information Society

Jorge Reina Schement and Hester C. Stephenson. "Religion and the Information Society," in *Religion and Mass Media: Audiences and Adaptations*, by Daniel A. Stout and Judith M. Buddenbaum. Thousand Oaks/London/New Delhi: Sage, 1996, pp. 261-289.

Capitalism and industrialization are the primary forces that converged and caused a transformation in

the production and distribution of information. One evolutionary development of industrial capitalism is the

information society. This evolution occurred over a long period of time, but it has been a continuous process.

Schement and Stephenson argue that dispute and debate in the United States are precipitated by the following tensions related to information: (1) Whether to rely on market forces or to depend on the government for the proper allocation of information is the fundamental question of information policy. (2) More and more institutions continue to gather information about individuals without much regard for their right to privacy. (3) Large media organizations, together with a few politicians and their consultants, so control political discourse that citizens become apathetic or rebellious at election times. (4) Recent declines in literacy rates threaten the American national knowledge base and international economic competitiveness. (5) People tend to respond to the images they receive from the media rather than making judgements based on facts about problems of substance. (6) Lack of information means lack of power and inability to participate in public discourse (1996: 264-265).

The invention of the printing press and the subsequent rise of the idea of information have been intertwined with the shaping of modern Christian religious institutions and with the development of the information society. Schement and Stephenson (1996: 266) cite the view of E. L. Eisenstein that the shift from script to print was a truly fundamental "revolution" in that it made possible the Reformation, the Renaissance and the Scientific Revolutions.

The information economy is a place where messages count as distinct goods and consumers purchase information. The authors point out that, in such a world, it is difficult to differentiate a church's messages from those of other "vendors." Churches are often viewed as businesses that participate in the market economy. Hence, their followers are viewed as consumers. Once a church member was regarded as a devotee or a pilgrim, but today he or she has become simply a consumer of another kind of commodity: religion. In that role, the person may shop around at a variety of different churches or of different affiliations within the same denomination or sect. How often one may have changed religions or parish memberships because of something that was said with which they disagreed. More often than not, choosing a church or a religion may be experienced as bargaining. Ministers often attend seminars on marketing techniques to attract clients to their product, as G. Niebuhr has pointed out (as cited in Schement and Stephenson 1996: 270). The emphasis tends to be on the visual and the oral. Since these also are the senses most appealed

to by the mass media, the line between media entertainment and media religion will continue to blur.

Organized religion has always depended upon media in some form or another. Originally, there were the sermon, the written and printed text, and the revival meeting. They were followed by radio sermons and now televised services. For example, the Reverend Billy Graham preached at worldwide satellite hookup revival meetings. "In 1995, Graham beamed his message from Puerto Rico to satellite dishes in 165 countries and to 10 million people from Rwanda to Latin America and Oceania," according to P. Landers (as quoted by Schement and Stephenson 1996: 272). The pope's activities often are broadcast live to many in the nations he visits. These examples serve to underline the view that much of the work of most churches is about communication.

Privacy once meant to be left alone. The solitude of a person in the presence of God is privacy's religious dimension. However privacy has to be balanced by participation in the public sphere. Religion always has had forms of expression in the public sphere, but Americans now tend to define the public sphere as "secular."

For the most part, Americans hesitate to disclose their religious fervor in the workplace or in the community beyond a perfunctory acknowledgment of attendance at a particular church. The family that regularly says grace before meals is not likely to do so when eating out. In the home, religious expression can still be found, whether through the ritual gatherings of Jews, the icons typical of Catholic and orthodox practice, or the Protestant preference for behaviors such as bedtime prayers. Given the traditional distinction between the two spheres, the private offers a refuge from worldliness and fragmentation. (Schement and Stephenson 1996: 274)

Now, however, the home has been reinvented, as a window to the world facilitated by consumer media and devices for processing information. The private sphere, in consequence, has grown in importance. Home-based media meet the secular demands of individualism, but the parallel development of home-based religious media has expedited the private pursuit of religious experience. Religious solitude is undergoing a revival, but what are the effects of these developments on public religious expression? To some degree—and in some denominations—traditional congregational expressions of religious life are holding their own. But the interaction of religious life with the developing electronic media has raised questions not

only of the individualization of some people's religious lives but also of new forms of electronic religious communities.

There has been a resurgence of religion in recent years—although often in non-traditional forms. It may be traced in part to the decline of community, brought about by the fragmenting tendencies of the information society. Personal, face-to-face communities no longer dominate life, as we live further from our personal communities—family and friends. The more connected one becomes, via the Internet, etc., the more dependent one will become on secondary relationships to replace the daily interactions of the personal communities.

Yet, the desire for community remains alive, and therefore membership in religious bodies is one solution—"the yen for intimate community continues unabated" (pg. 282)—as is membership in virtual electronic communities. The inevitably developing interaction between religion and these technologies is likely to result in increasing religious expression within the context of virtual communities. One may soon join electronic congregations, where members will know little about one another. These are likely to adopt religious practices centered in the home, not the church, partly because of ease of access to them over home computers.

V. Educational Implications

Steven H. Appelbaum and Brenda Primmer. "An HR_x for Computer Anxiety." *Personnel*. Vol. 67 (1990), No. 9, pp. 8-11.

Paul A. Soukup. "Invisible, Inevitable, Paradoxical Technology." *Conversations on Jesuit Higher Education*, No. 9 (Spring 1996), pp. 23-27.

John M. Staudenmaier. "'Technology'—Reading the Signs of the Times." *Conversations on Jesuit Higher Education*, No. 9, (Spring 1996), pp. 5-11.

Helping the Computer Anxious

Appelbaum and Primmer have broken down the process of training the computer-anxious into four major steps. The first step is to assess training needs, which may be done by identifying the target audience's specific needs, their levels of experience, and the needs of the individual. The next step is to account for the human factor in training design. Step three involves desensitization. Training should begin with simple, non-threatening situations and advance to more complicated situations only when the anxieties at the previous level have been eliminated. Trainees should be able to voice their objections and fears without fear of rebuke. The final step is to offer advanced training. Classes should be small enough to ensure individual attention, and it is important that the trainees be on the same skill level.

Two Symbolic Meanings for Technology

John Staudenmaier stresses that "we need to consider not only how technology affects and shapes our lives but also how we tend to think and talk about it" (1996). There is one tendency, at least in the United States, to symbolize technology as a powerful, godlike force, called "science" or "technology," which was turned loose on the world during Europe's scientific and industrial revolutions. In that view, human beings have set themselves free from the burdens nature had laid upon them. Science and technology represent a

liberated humankind, a humankind that is capable not only of conquering space, but time, sickness, and death, as well. The images that accompany this symbol set typically evoke what we have come to call "high-tech."

A second symbol set tells us that the dream just sketched has fallen apart. It says that our technological systems are beginning to disintegrate, that they brought with them many more problems than they solved, and that we are drifting ominously toward ecological and societal disaster. Individuals have nothing to say about what happens anyway, in this conceptualization.

Consequently, the author feels, "the students we teach now have inherited a profound ambivalence about the claims and denigration of technological progress. If that is true, what does it imply about the way we teach (or should teach) them?" (ibid.)

Later, he suggests a possible answer: "We might respond by emphasizing even more than our schools have throughout the twentieth century the centrality of what [Saint] Ignatius [Loyola] and his followers called 'discreta caritas,' a far-reaching love for the world that is tempered by discernment." Essentially, critical thinking must be united with an active engagement in the unfinished decision-making processes affecting today's world.

The Technological Mirror and Teaching Implications
Jacques Ellul has long been an influential

commentator on the impact of technological change on the human individual, society and culture. Paul Soukup (1996) recently examined Ellul's work with respect to the doubts Ellul raises concerning the positive contribution of technology to the realization of the full potential in human living.

According to Soukup, Ellul has advanced a persuasive argument that "technology is so much a part of how we live that our very thinking is characterized by what he calls '*la technique*.'" This is not only a dependence on external technologies, but it means that "we adopt a technological attitude toward the world." It implies the adoption of standardized means to achieve preset ends. This attitude affects all sectors of life—not only science and business, where it would seem most appropriate, but also communication, politics, education, and sometimes even religion. It has broad implications for the way we approach living.

For the technician, efficiency matters more than outcome, performance more than human good, clear methods more than content. In the long run, people adopt technique for its own sake; there is no end or goal, only a progressive growth of technology (and for Ellul, dehumanization) as they submit to technique. (Soukup 1996: 25)

Soukup feels that one reason for the ambiguous feelings we have about technology is its association with change. It affects all the cultural institutions and social groups which define our everyday lives. It has become an intrinsic part—in fact, a propelling force—of

the contemporary ideology.

In contemporary society, capitalism and technology have entered into an unshakable alliance. The market-based system of raising capital and developing technology leads to a system in which the two reinforce each other and prevent many from full participation. (Soukup 1996: 25)

Linked to this ideological role is the way technology reinforces rampant consumerism, which many find threatening to true humanization. Many also feel that the technological mindset is related to—or even responsible for—the development and proliferation of weapons of mass destruction (*ibid.*).

Soukup argues that the technological challenge can best be dealt with by educators by modeling for their students different ways to encounter technology. He outlines three steps: First, technology should be part of our teaching. Second, the technology itself should play a revelatory role. Each new technology casts down prior technologies from their privileged position. Third, any use of technology should always lead to reflection on key questions facing our society, from policy issues to human issues. By teaching technology, teaching with technology, or reflecting on technology we implicate our students in a larger problem of social justice. They, like us, will take a privileged role in an unjust world. Perhaps they will merely become good technicians. Perhaps they will evolve into something more (*ibid.*).

VI. Implications for the Media

J. D. Lasica. "Net Gain." *American Journalism Review*. Vol. 18, No. 9 (November 1996), pp. 20-33.

The following papers were presented at the meeting of the International Communication Association, Chicago, May 1996:

David L. Altheide. "Computer Formats and Bureaucratic Structures."

George A. Barnett and Joseph G. T. Salisbury. "The International Telecommunication Network 1978-1992."

Michael Robert Dennis. "Disenfranchisement, Disempowerment, Distancing and Disenchantment: Computerized Automation's Alienating Influence on the Role Perceptions and Interactions of Clients and Staff in the Welfare State."

Theresa Bolmarcich Ditton. "The Unintentional Blending of Mediated and Direct Experience: The Role of Enhanced Presentation Technologies."

Patrick D. Hadley and Rohan Samarajiva. "Regulation of On-Line Content in the New Trade Environment: NAFTA and Communication Policy."

Linlin Ku and Lin-Woei Leou. "Social Influence, Media Richness, and Critical Mass: Electronic Messaging in Organizations."

Roger Silverstone. "Technologies, Texts and Discursive Spaces: Notes Towards the Interactive."

S. Shyam Sundar and Clifford Nass. "Source Effects in Users' Perception of Online News."

Intensive Interest

The intensive interest in the impact of technological changes on the electronic media is testified to by the large numbers of scholarly papers on the subject being delivered at the conventions of communication research organizations. Typical of this is the array of such papers delivered at the May 1996 convention of the International Communication Association. Most of these represent North American perspectives, but the rapidity of change in that part of the world has made it a "laboratory," foreshadowing changes which eventually will affect other regions. David Altheide, in his paper (1996), notes that a reason for this intensive interest in technological innovation is that the media are "not a passive channel over which symbols flow," but instead form a determining portion of the whole process of communication. The media not only enable the process, but they also constrain it, determining what it cannot do, as well as what it can do.

The Role of Enhanced Presentation Technologies

Theresa Ditton (1996) examined the role of enhanced presentation technologies, as dealt with in the works of Marcia Johnson. Johnson, regarded as the leading expert on source monitoring processes, according to Ditton, says that memory can be conceived of as being made up of three subsystems: perceptual, sensory, and reflective. The way the memory stores a mediated message, may be similar to the way it stores the result of a direct perception that is not mediated. Memories acquired from a fictional portrayal might be assigned a high level of *social realism*. It is a cumbersome if not impossible task to think about where every piece of information being used for a judgment was obtained. An event witnessed through a fictional portrayal will be experienced and applied to the decision at hand. A clear and more complete understanding of how unintentional blending of television and direct experience occurs cannot be gained until specific research hypotheses are derived to test these propositions.

E-mail Use in Organizations

Linlin Ku and Lin-Woei Leou examined two aspects of E-mail use: the amount and the purposes of use. Their study examined the headquarters of a semiconductor manufacturer in Taiwan, which has a branch office in Silicon Valley, California, and distribution centers all over Asia. Factors contributing to E-mail

use include social influence, perceived media features, perceived task requirements, media experience and skill, accessibility, critical mass, geographic dispersion, organizational roles and personal differences. Social influence, perceived media features, and critical mass contributed uniquely to the use of electronic mail. Influence from co-workers also is important. Those who perceived electronic mail to be a rich medium were more likely to consider it useful. Time pressure encouraged people to use electronic mail for work-related purposes.

People with higher levels of education, in the Taiwan company headquarters, tended to use electronic mail more often than those with less education, but they still believed electronic mail to be less rich and less useful than other means of communication. Although the respondents had an average of almost two years of experience in using electronic mail, it was not their normal choice of communication channel.

The findings of this study suggest that people used electronic mail only when it was necessary, and that they may prefer other types of media if they have a choice. This may have something to do with the fact that electronic mail was less frequently used in this Taiwan organization, as compared with its American counterparts. (Ku and Leou 1996)

The Computerized Welfare State

The automation of the welfare process in Indiana, and in one county office in particular, is profiled in the paper by Michael Dennis. The Indiana Client Eligibility System (ICES), the computer program adopted for this purpose, was studied for its effects on the welfare subcultures of clients, supervisors, and caseworkers. Dennis concludes that "Clients see themselves as the disenfranchised, supervisors perceive their own disempowerment, and caseworkers feel both distanced and disenchanting." These alterations in the different groups' interpretations of their own and others' statuses in turn result in less frequent and less meaningful exchanges among the three subcultures. "While the adopted technology serves to meet the state's quest for efficiency, it does not tend to satisfy the intended end-users." (Dennis 1996)

Source Effects in Users' Perception of On-line News

Sundar and Nass examined the recent growth of on-line communications. They state that it has created a new channel for news, but in the process it also has

created questions about the way scholars understand some of the most fundamental communication concepts. The authors say that "in the on-line news environment, for example, ontological distinctions between source, medium, and receiver may not apply in the same way they did to traditional mass media."

In some of the on-line news services (e.g., the *New York Times* on America On-line) the editors are the source of all news. Other services (e.g., "News Hound" of the *San José Mercury News*) depend on computer interfaces to select daily news. Technology, in those cases, becomes the "editor" and source of the news. Others, such as the Internet news groups, allow the news for consumption to be selected by the users, the members of the audience acting collectively. In a final example, some services—notably in the World Wide Web—let individual receivers choose the content. "In this case, the receiver himself or herself becomes in a way the source of on-line news" (Sundar and Nass 1996).

NAFTA and U.S. Communication Policy

Every human society must, to some degree, regulate public morality—particularly sexual and erotic expression. Despite its constitutional guarantees of "free speech," the United States is no exception. In February 1996, President Clinton signed into law the Telecommunications Act of 1996, which is often referred to as the "Communications Decency Act of 1996." Patrick D. Hadley and Rohan Samarajiva's analysis of "the relationship between U.S. regulation of on-line pornography and the relevant provisions of NAFTA [the North American Free Trade Agreement] shows that U.S. action is constrained." Exceptions inserted into the NAFTA treaty wording by the various parties, because of their own domestic policies, "may be utilized to circumvent the restraints." General trade liberalization essentially involves the liberalization of telecommunication service. "The intercommunity and international nature of on-line communication makes the definition of the boundaries between 'domestic' and 'foreign' jurisdictions increasingly arbitrary, and raises critical issues of extraterritorial jurisdiction" (Hadley and Samarajiva 1996).

The International Telecommunication Network

George Barnett and Joseph Salisbury used data gathered by the American Telephone and Telegraph Corporation (AT&T) to describe the international telecommunications network in the period from 1978 to 1992. Although the world network was relatively stable during that period, communication networks gained increasing importance as a factor in global

interaction. The authors, following Mulgan, describe the world in the information age as being connected by a "lattice of networks." The ongoing information revolution involving data storage, processing, transmitting, and retrieval, obviously affects all aspects of social, political, and economic life. Industrial society was based on the production of goods, but the new information society is built on the creation and distribution of information (Barnett and Salisbury 1996).

The Net: Audience Activity and Creativity

Roger Silverstone suggests that the "Net" may become the equivalent of the Citizen's Band or short-wave radio of the future. The media experience of the late twentieth century has been characterized by hybridization, as it reworks "orality, literacy, word and image, 'activity' and 'passivity'." Now, interactivity has added a new dimension—the role of the audience as communicator—of receiver as sender.

The move to a concern with audiences and to qualitative studies of audience activity and creativity which has emerged in the studies of television, especially, in recent times has had a profound impact on how we come to think of mass mediation. (Silverstone 1996)

Interaction as a Net Gain for the Press

In his article for the *American Journalism Review*, J. D. Lasica addresses the crisis newspapers and magazines face with the explosion of on-line services and interaction. New kinds of news providers have been stealing the thunder of the traditional press. Author Michael Crichton warned the National Press Club, in a 1993 speech, that news organizations would have to reinvent themselves if they are not to become as obsolete as the dinosaurs which inspired his novel, *Jurassic Park*. Despite 1,300 newspapers jumping into on-line publication in the intervening three years, Crichton and others continue to insist that they have not done enough and are, in fact, "more out of touch than ever" (Lasica 1996: 22).

Intellectual property rights—embodied in copyright—form the valuable product sold by the news media, and the value of that product is compromised if news is released prematurely or becomes distorted. Editorial control—"gatekeeping"—ensures that will not happen, so gatekeeping is a prime concern of many news media. Lasica notes that the *Wall Street Journal* has gone so far as to "prohibit its reporters from participating in online discussions outside of the paper's own Web site..." because "...the company doesn't want its reporters to give away a 'unique product' to others

when their real audience ought to be the paper's nearly two million readers" (Lasica 1996: 31).

Lasica feels it is time to ask some basic questions:

What will be the role of journalists when anyone with a computer and modem can lay claim to being a reporter, editor and publisher? Will professional journalists be needed in an era when people can get their news 'unfiltered'?

What are the ground rules for news in the free-for-all of cyberspace? Do the rituals and conventions of journalism that arose in an era of hot lead and Linotype have any relevance today?

Even more fundamentally, what is our job as journalists? Indeed, what is news in an era of information glut? And whose news is it? (*ibid.*)

The wave of the future appears to be "viewer-based news," in which participants increasingly tell their own stories, without the intervention of journalists; or in which the very legitimacy of the media depends on their willingness to talk to their audiences and answer questions, objections and challenges.

On the one hand, the Net can become a journalistic morass, in which wild claims and undocumented stories cannot be differentiated from accurate, carefully researched and soberly presented professional material. On the other hand, Lasica feels that newspapers bring both professional credibility and "rich layers of information" to both their on-line and off-line editions which the amateur attempts cannot duplicate. But they "need to approach this young medium with a fresh set of eyes" (pg. 27).

The author recommends a six-step transformation to help journalism succeed in the electronic environment:

VII. Multimedia: Present and Future

Nicholas W. Jankowski and Lucien Hanssen (eds.). *The Contours of Multimedia: Recent Technological, Theoretical and Empirical Developments* (Acamedia Research Monograph 19). Luton, UK: John Libbey Media/University of Luton Press, 1996.

High Stakes and Reality Checks

The biggest gamble in the world of mediated communication lies in one's choice of which new technology to adopt. The individual is affected by choices he or she must make among computers, data storage systems, audio and video receivers, network alternatives, etc., but those personal gambles are small compared to the risks faced by large communication systems and networks.

Even whole industries, whose members might be

(1) Journalists must adopt a new mindset in which they are "guides" or "facilitators" rather than "gatekeepers," and are willing to listen as well as talk.

(2) They must have a new concept of news, stressing direct access to unfiltered news and a storehouse of information in depth.

(3) They must "find a new voice," which maintains objectivity while adopting some of the individual point of view, personal storytelling, and emotion valued by much of the public. "We need more curmudgeons and wicked writers on our staffs and more loose cannons rolling through the decks," according to Lasica's quotation from Dominique Paul Noth, an online media consultant.

(4) They must use "multimedia's full palette," providing the raw material and multimedia tools from which their audiences can build news stories which best fit their own needs and purposes.

(5) They should learn to carry on a true dialogue with their readers, recognizing that they can no longer hide from their public, whether behind physical or human barriers, or that of their voice mail.

(6) They must take a central role in the developing "virtual commons," using "technology's new tools to reach out to our communities, to ignite civic discussion of topics important to the community, to bring people together and help them overcome the sense of isolation that is tearing at the fabric of society" (*ibid.*, pp. 28-33).

Lasica summarizes the promise the Net offers to journalism, saying, "Journalism, at its core, is an interaction between a writer and a reader. The Net brings those two closer together. And that's something to celebrate" (*ibid.*, pg. 33).

expected to be in hot competition with each other on all fronts, are often forced to collaborate in decision-making about technologies in order to avoid self-destructive mistakes. One striking example of this is CableLabs (Cable Television Laboratories, Inc.), a research facility established near Boulder, Colorado, in 1988, by a consortium of North American cable system operators. They are said to represent over 85% of cable subscribers in the United States, 75% of those in Canada, and between 5% and 10% of those in Mexico

(CableLabs, n.d.). CableLabs' aim is described as follows:

One of the most difficult tasks facing the cable television industry is integrating technological change with bottomline objectives. CableLabs was established with a goal of ensuring that technology is made practical and is made accessible to the cable television industry in a timely fashion.

CableLabs ensures a reality check on technological change. It examines technologies for application in operating and managing cable systems. (*ibid.*)

Put less diplomatically, the facility is designed to offset the inflated claims made by hardware and software producers by critically testing their products and by making realistic projections about how those products might best be incorporated into the communication system architectures of the future.

Cable television systems, as they exist today, may not often qualify as "multimedia," but their problems of systems evaluation and selection are typical of all electronic media users, and may even be compounded in the rapidly-developing area of multimedia systems.

Multimedia: A Definition

"Multimedia" can mean different things to different people, often referring to almost any combination of electronic media. Jankowski and Hanssen introduce their collection of studies by Dutch researchers by noting an emerging agreement that multimedia involves different media forms integrated within a single carrier of information (pg. 3). Thus, the message could be delivered through television or through computer networks or through compact discs, utilizing text, still or moving pictures, sound, etc. A carrier need not be interactive to be multimedia, according to them, even though some earlier commentators have regarded interaction as a necessary component of multimedia (*ibid.*).

They do feel that it has been the emergence of compact disc technology which has specified the "single carrier" provision in the definition, departing from the earlier, looser and more specifically educational meaning of any use of a variety of media for a single, pedagogical purpose (*ibid.*).

Predictive Pitfalls

Efforts to carry out evaluative research on new media are daunting. In a complex industry, with new and promising inventions and designs appearing practically every day, attempts to predict future developments are especially problematic. Jankowski and Hanssen cite Denis McQuail as concluding "that

existing (social) theory is, essentially, adequate to the job of understanding those phenomena known as new media" (1996: 8, citing McQuail 1986).

Nevertheless, the two editors have some reservations, saying that,

...it remains the case that mass communication theories and models are almost inherently constrained by the dominant characteristics of mass media and, as such, generally fail to consider the distinct features of many new communication technologies—the demassified, individual and interactive nature of communication with these technologies (pg. 8).

Harry Bouwman and Anne de Jong cite projections concerning the adoption of videotex use in Europe as an example of defective prediction. Actual use, by 1992, had failed even to approach the levels anticipated in the 1980s in almost all countries except France—where estimates were vastly exceeded due to a government decision to incorporate it into the telephone system (in Jankowski and Hanssen 1996: 162-163).

One qualitative forecasting method, used in many contexts for years, is the "Delphi" method. That approach asks the opinions of experts concerning the course they expect future developments to take. The same authors seriously question the use of this method. "The results strongly depend on the choice of experts, the questions asked, biases of panel members and time effects." Because of these predetermining factors, some Delphi-based predictions about communication technologies, viewed in retrospect, have been so wrong as to be "quite hilarious," according to the authors (*ibid.*, pg. 164). The development of scenarios based on "a set of well-defined assumptions on the basis of which alternative developments are described" is subject to similar limitations, often hinging on "the degree to which these assumptions are realistic" (pp. 164-165).

Any system of prediction can overlook factors which initially seem negligible but ultimately prove to be critical. Factors may be technological, economic (at macro-, meso-, and micro-levels), political, socio-cultural, etc. The relative influence of the various interacting factors must also be estimated accurately (pg. 168).

Predictions very frequently "are used to contribute to a public opinion climate which, in turn, is meant to stimulate attitudes towards adoption of information technology in a positive way" (pg. 170). In other words, providers and developers of services may make predictions in the hope that they will become "self-fulfilling prophecies" which create a favorable climate

for marketing their products. The authors consequently warn that "one should be very suspicious about the personal interest some parties may have in predictions." (*ibid.*) The source of any prediction should be examined carefully. Following Schnaars' (1990) formulation, the authors recommend that "technological wonders" should be avoided, while giving priority to the needs of consumers, and that special attention should be paid to asking fundamental questions about markets and to cost benefit analysis (*ibid.*).

The War of the Discs

CD-ROM and other disc-format data storage systems provide an example of the rapidity of new developments and of the difficulty of predicting which of the many competing systems will achieve long-term viability. Earlier examples of such competitions include the long-drawn-out battle between Beta and VHS formats for video cassettes, ultimately "won" by VHS, and the more recent contest among differing standards for high-definition television (HDTV).

Jak Boumans lists twenty different compact disc formats which appeared in the single decade from CD-ROM, introduced for personal computers by Philips and Sony in 1985, to DVD (digital video disc) for both PCs and television, made available by a consortium consisting of Toshiba, Sony and Philips in 1995 (Jankowski and Hanssen 1996: 24).

Different systems hold different attractions for consumers. For example, CD-ROM has had a drawback for motion pictures because its maximum running time for movies is only 74 minutes—necessitating two discs for the average-length film. Two competing alternatives were proposed, by the Philips-Sony and Time Warner-Toshiba alliances, respectively, which had sufficient compression to accommodate the average film on a single disc. A new war, comparable to that between Beta and VHS, threatened. But common sense prevailed.

By October 1995 both camps had negotiated a truce in order to avoid what all sides felt would otherwise be a costly conflict over technical standards. By December 1995 specifications for the Digital Video Disc (DVD) had been established and accepted by nine electronics and amusement companies (*ibid.*, pp. 26-27).

Broader Competitive Challenges

But agreement on standards solves only part of the problem confronting the compact disc multimedia industries. The rapid development of on-line services, including those available through interactive cable services as well as computer-accessible networks such as Internet, could be more attractive to consumers—

especially because of their lower cost.

Eventually, differentiation of functions between the two kinds of multimedia (CD and "Net") may leave the field of stable data and information open to CDs, while the networks stress current events (pg. 30).

Of course, competition is not limited to CD formats but extends to all corners of the electronic communications industries. Marc van Wegberg views the competition among multimedia systems as a competition of different "architectures." He defines an architecture as "a consistent, complementary set of standards" (Jankowski and Hanssen 1996: 32). Any architecture's internal consistency almost guarantees that it will be incompatible with a different architecture, developed by a different company and based on a different set of standards. The struggle among multimedia corporations and consortia therefore becomes, in part, a struggle for "architectural control."

The core concept here is the architectural control a firm has when it determines who has access to the architecture. The basic premise is that architectural control is the major source of a sustainable competitive advantage in multimedia. (pg. 32)

Viability of Architectures

A consumer's choice of a particular system or architecture should take into account the architecture's potential viability. The company which produces it may decide to cease production of that line, leaving the buyer without access to spare parts, repairs, software, or other essentials. The company itself may even go out of business, with the same results.

Additional variables interact with architectural control to determine the architecture's competitive strength. Van Wegberg applies hypotheses embodying these variables to several multimedia companies in an effort to evaluate their relative strengths in the market, as of late 1994. According to him, the size of the "installed base," or actual number of systems in use, and the compatibility of the architecture with accepted standards, taken together, "have a positive effect on the viability of an architecture." The extent of the firm's irreversible commitment to the architecture indicates its own confidence in the product and, in turn, builds consumer confidence in it. A company's larger size gives it an obvious advantage of economy in scale and scope. The degree of an architecture's relatedness with multimedia is important. The centrality of a firm in a network of firms collaborating by means of alliances, mergers and various agreements, gives it access to others' research and development, allows it to share costs and pool risks, etc. (pp. 34-42).

The author then assesses the overall effect of these factors to evaluate the architectural strategies of eleven major multimedia companies. He concludes that Microsoft and Apple have the best prospects, with "high" or "medium" scores on all hypotheses. Consumer electronics companies, on the other hand, tended to do poorly in most respects (pp. 42-44).

Greater Focus on the User

Cees Leeuwis notes that the development of communication technology has been pushed by the evolution of the technologies, themselves, rather than led by the actual needs of consumers. Users' needs change rapidly, and they often outrun the built-in capabilities of the technologies, causing the users to become bored with, or disdainful of the existing technologies (pg. 93).

He feels that a more functional classification of the technologies can be made possible, placing less stress on particular hardware and software and more on the functions they need to fulfill. To make this possible, he calls for a more participatory and social-science research approach in the early stages of the development of any communication technology (pg. 100).

Maddy D. Brouwer-Janse calls for much the same

kind of "user-centered design" in the early stages of development, rather than a focus on engineering models. As multimedia architectures proliferate and achieve greater capabilities, the interfaces between them and their users also have become more complicated and difficult for the individual to master and use. "Hundred-button remote controls" and "three-dimensional mice" are mentioned as two examples, among others. Also "there is not yet a common and well-established language of communication between practitioners from different disciplines to transform user needs to formal system and user interface requirements" (pg. 150).

In fact, the author feels, "it is impossible to determine user needs and requirements in advance" (pg. 155). The increasing heterogeneity of the user population introduces even more unpredictability. Multimedia systems add greater complexity, since "every form of representation, from video to text, can be stored, processed, and communicated using the same device." User interfaces must be developed that use psychological and sociological research to "go beyond the design of graphical user interfaces" (pg. 159), which are no longer equal to the task.

VIII. Implications for Libraries

Peter Lyman. "What is a Digital Library? Technology, Intellectual Property, and the Public Interest." *Daedalus: Journal of the American Academy of Arts and Sciences*. Issue title: "Books, Bricks, and Bytes." Volume 125, No. 4 (Fall 1996), pp. 1-33.

Are Libraries Outmoded?

The new technologies have created new relationships between authors and their audiences which raise questions about libraries—the traditional storage houses of information (or, more precisely, of "potential information catalysts")—whose functions will be called into question if the same information is available in cyberspace. Peter Lyman, University Librarian at the University of California, Berkeley, prefixes his article with the observation that

A library is a distinctive kind of public place, a place that defines the center of a community and polity, but cyberspace is cosmopolitan, encompassing the globe. Is it possible to create public institutions in cyberspace? (Lyman 1996: 2)

He goes on to develop the implications of this description and question:

A library is more than its collections or buildings; it

is part of a social strategy to create 'progress in the Sciences and Useful Arts,' in the words of the [U.S.] Constitution. How might a digital library support the new kinds of research and creativity of an information society? (*ibid.* pg. 3)

Lyman asks whether the free access implied by "cyberspace" can generate the incentives needed, in the practical order, for investment in research, education and publishing. He also wonders if the digital library can fill the role of the library as a public institution that promotes public interest in learning "as well as facilitating the democratic debate about ideas" (*ibid.*). He does not feel that the computer will replace the book, "any more than the book has replaced speech" (pg. 4), but what will affect libraries is the changing interrelationships among the book, the computer, and various other forms of communication.

One special characteristic of the printed text is its fixed character, which lends it an authority not present in the more malleable digital information:

The facticity of print creates an authority that transforms the writer into an author; printed texts are authoritative because the author and publisher control the context of information for the reader. In digital documents, the reader is given the power to reformat and reorganize the text and thereby the context within which the information appears; thus authority is replaced by provenance. (*ibid.*, pp. 6-7)

Advantages of Digital Communication

He does not argue that digital communication is inferior to books and other print media, only that it is different. For example, studies have shown that comprehension of an identical text can be better in the form of hypertext—"a program that enables the reader to organize the flow of information by jumping around the text to follow a theme of personal interest"—than in the linear form of a printed book (pg. 10). Multimedia offers tremendous possibilities, lacking in printed formats, for the integration of many kinds of sensory inputs to communicate various forms of information more effectively than print or any other "mono-medium" format could do.

Digitized information may be accessed electronically, but often it is used in printed-out form (pg. 12). Various drawbacks of the digitized library include cost for constant updating, as well as for the initial investment in equipment—copyright questions, and the fact that "paper is a far more durable medium for the preservation of knowledge than is the computer" (*ibid.*). A whole range of new kinds of markets and new kinds of regulatory forms have arisen, as well as the new kind of relationships between author and readers (pg. 13). Cyberspace also "imposes the social and economic relationships of industrial culture upon

Internet communication" (*ibid.*). It was the product of the need for ways to solve problems of inventory control, transportation, and other needs more akin to engineering than to humanistic or social concerns. New social forms have had to be generated to meet the new social demands of cyberspace. Some important questions have arisen which are not being answered, according to Lyman.

What is not being addressed in policy debates are the embryonic new social formations that are already developing in cyberspace; it is this new dimension that will shape our concept of the public sphere and the place of the library within it. (Lyman 1996: 16)

The Library as a Public Forum

Libraries have filled a traditional role as a place where public access to knowledge can be sought in an atmosphere of peace, transcending race, age, ethnicity, and social class. But to create this kind of public space they have had to be subsidized—either governmentally or philanthropically. A digital library might fill similar functions in cyberspace, but the author fears an "absence of legislative interest in a national digital library" (pg. 23). The information highway is seen as a way of transmitting private property, not as a way to create a new kind of public forum. National information policy in both the United States and Europe have neglected the public interest aspect of cyberspace, viewing the "information marketplace" metaphor as sufficient (pp. 23-24). Furthermore, the clashes between developed and developing nations over intellectual property rights are likely to become even more intense concerning digitized information than they have been over printed media (pg. 29).

IX. The Philosophy of the Net: Metaphysics, Epistemology, and a Bit of Pragmatism

Rob Shields (ed.). *Cultures of Internet: Virtual Spaces, Real Histories, Living Bodies*. London/Thousand Oaks/New Delhi: Sage, 1996.

Tom Koch. *The Message Is the Medium: Online All the Time for Everyone*. Westport, CT/London: Praeger, 1996.

How real is Internet?

The papers in Shields' volume represent a largely Canadian and anthropological perspective on the socio-cultural implications of computer mediation in the public sphere. The book attempts to remedy a situation in which "over-hyped and over-sensationalized—whether for its promise or scandal—Internet and all existing versions of cyberspace have been under-

examined" (pg. 1).

"The Net" has, in a few short years, created a new kind of society, with new kinds of social interactions, new demographics, new kinds of social problems and new structures of meaning. Often unremarked is the way it has reshaped social classes, contrasting the electronic "haves"—those with access to the Net and expertise in its use—with "have-nots"—who have little

or no access or expertise, as Joerge Dyrkton suggests in his discussion of Jamaica (in Shields 1996: 49-57). By some criteria, at least, cyberspace is a zone of freedom, promising an unlimited bonanza of information and power to experts in its use. On the other hand, the inept non-experts—most of the world's population—without access, are increasingly disadvantaged by its imperial expansion into and domination of the most important spheres of human concerns and needs.

Katie Argyle and Rob Shields, in chapter four (pp. 58-69), ask the question, "Is there a body in the Net?" Technology both unites and separates people. We can reach more people on the Net than we can directly, and regardless of distances, but we do so in a mediated, truncated way. Nevertheless, "bodies cannot be escaped" (pg. 58), and initial contacts over the Net can sometimes be converted into face-to-face interactions of the more bodily kind. As long as it remains mediated, however, the interpersonal electronic interaction has its own peculiar limitations and possibilities. Part of its emotional impact, according to the authors, lies in one's inability to verify the truth of another's description of his or her identity—including even whether it is a "he" or a "she"!

Virtual Reality in Cyberspace

Ken Hillis points out the increasing penetration of virtual reality technologies into the cyberspace of the Net—which heretofore has been dominated by the print-filled screen. The user feels an increasing sense of presence, but it is a "presence" in which "things have no physical form and are composed of electronic data bits and particles of light" (pg. 70).

The author sees VR as "a machine to realize... desires for bodily transcendence" (pg. 71). That transcendence still depends on the age-old metaphor of "vision" to describe the goal of the expansion of knowledge.

In its historical development, as sketched by Hillis, VR has interacted with science fiction (SF), threatening, at times, to create a closed loop between SF and VR, feeding on itself and shut off from outside innovations. More broadly, this concept of the closed loop can be applied to other presuppositions, "ideologies or developmental logics that underlie the intention behind technologies then get built into the technologies themselves" (pg. 93).

Demythologizing the Electronic Age

Tom Koch is not overly enthusiastic about the work of Marshall McLuhan, whom he describes as "the

erudite but generally unintelligible Toronto professor who insisted that 'the medium is the message'." Koch insists that a given medium is only the carrier of messages which would be essentially the same carried by any other medium. Exaggeration of the psychological effects of different media is, for him, one of the many myths that have blossomed with the blooming of the electronic age.

He is equally trenchant about other "overstatements." For example:

If the medium is not the message, then data are not information. There can be no 'information highway,' because information remains, whatever the medium, a precious commodity... Information is what we need, and data are how we get it. (Koch 1996: 2-3)

and:

Everything you have heard about the Internet is false, incomplete, exaggerated, inaccurate, and/or outdated. It is simultaneously a voraciously democratic medium, a vox popular, and an anarchistic system in which no voice or venue can dominate. It is historically elitist, benefiting academics and the well-to-do most of all, but it is becoming a general resource for people who use it through library-based hook-ups and 'free-net' community access systems. (Koch 1996: 101)

Similarly:

There is no 'virtual reality.' From the perspective of daily experience, life is never 'almost,' or 'nearly,' real. Fantasies and imaginings are titillating experiences whether they are fueled by literature, the cinema, or an online forum. And yet, every day, someone writes another article about the glories of the new 'virtual reality' as if experience came in degrees that could be measured against some external yardstick of the real. (Koch 1996: 147)

Technology Is Not a Threat

At the same time, he disagrees with those who see the advances in communication technology as culturally destructive or threatening:

Some see this as a dangerous trend, a symptom of the death of democracy and a thoughtful, informed society. Neil Postman, a principal defender of old times and old ways, assumes that, in turning away from traditional media and old means of communication, we are *Amusing Ourselves to Death*.

I, on the other hand, believe it to be a hopeful trend affirming the intelligence of an increasingly perceptive electorate. ...Changes in reader and viewer habits are not the death of democracy, the end of literacy, or the termination of an informed citizenry. In fact, they may signal a real democratization, an increase in literate communication, and the first opportunity we have ever had for an informed and

Perspective

This issue of *Trends* focuses on the social impact of computer technology. The information superhighway is flourishing. It will not disappear. Thus, we must make the appropriate choices to seek the right way. This highway impacts us in many ways. It impacts us not only socially, but also economically, politically, and culturally.

The implications for privacy are enormous. Worldwide, people have fought and died for their individual rights. The right of privacy is one such right. Is privacy something one wants to give up so that the information superhighway can buzz through?

The information revolution is a case of the haves versus the have-nots. The gap that already exists will certainly become wider. This is true of not only the United States but the entire global economy. At the most fundamental level, access may mean only the right to have wired services available at reasonable rates. Can this be done for the entire world?

If it is not done for the entire world, then will political unrest result? Most certainly. No industrial country lives in a vacuum. The integrated broadband network liberates time. It seeks to provide information to the entire world at a moment's notice, assuming that the users are enabled, both technically and by

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perceptive populace (Koch 1996: 18).

The new media are, in Koch's estimation, useful tools which can help us accomplish many tasks in highly efficient ways. To use them most effectively, we must know both their possibilities and their limitations, swayed neither by excessive claims for their miraculous abilities nor by baseless fears about their supposed dire effects.

education.

Due to divorce and remarriage, extended families exist. These family obligations make ever increasing demands upon our time. Churches are often viewed as businesses that participate in the market economy. Some people shop around at a variety of different churches or affiliations within the same sect to find a church that matches their developing values. Sometimes they shop for a minister who makes them feel good. Ministers have taken marketing courses just to retain their flocks. How often have people changed religions or parish membership because of something that was said that they disagreed with. Some are not attending church services at all. Instead they seek the solitude of being alone with God in the privacy of their home, isolated from all external contact. Is church-hopping or isolation what we really seek?

Another key ramification of the information age is a change from a relatively passive to a more active consumption. Human contact might be sacrificed for new loyalties to virtual communities. One can become an urban hermit. However, these new communities could be enriching and broadening. The choice is ours. Which will you make?

—Ralph Olliges, PhD

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Afterword

By W. E. Biernatzki, SJ, Editor

The changes being brought about by new, computer-based communication technologies certainly cannot be escaped. So, painful as it may be for those of us who are rather set in our ways, there is little alternative but to learn as much as we have to in order not only to acquire the bare essential skills needed to survive but also to be able to take advantage of at least some of the new opportunities the new technologies have opened to us. The opportunities are considerable, but there also are many caveats—some of which are only gradually becoming evident.

Like any other sector of life, the constructive use of the Internet requires both prudence and self-discipline. To begin with, the hardware and software markets can be jungles, with many dangers for the unwary. The temptations of new capabilities advertised by the manufacturers are all too clear, in the abstract, but all too beguiling as the limitations of one's existing hardware and software become more and more irritating. The ways we use the full potential of the Internet also have to be disciplined, lest we join the ranks of the "urban hermits," credit-card debtors or other accident victims strewn along the shoulders of the information superhighway. Time wasted learning new, but marginally useful techniques may pass without notice, but represents a loss nonetheless.

The Internet reaches across the world and can instantly give us access to data and vicarious experiences undreamed of only a few years ago. It also can expose us to vast amounts of junk data, unreliable rumors, pornography, racist and other extremist propaganda, invasions of privacy, etc. Many such dangers have been mentioned in the text of the review

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article. The superhighway can help us develop new social contacts, but it can give rise to new social problems, as well, some of them so subtle, at least in their early stages, that we might not recognize them as problems until they have evolved into real threats.

As settlers on any new frontier, those who move into the new world of cyberspace face an unexplored wilderness, in a very real sense. The new customs, laws, social structures and cultural institutions needed to make that new environment reasonably safe will only be elaborated gradually, after considerable suffering has been endured.

To focus on one problem, a considerable effort and expenditure seems essential if all children—not just those of the wealthy or privileged—are to have an opportunity to learn to use the new technologies. Educators must develop pedagogies which prepare students to use all the media constructively—and that includes attention to their ethical and moral dimensions. Mechanisms also will have to be worked out to give the poor access to the Internet—possibly through an extension of the public libraries into cyberspace. Without egalitarian social measures of these kinds a large computer-illiterate social class could easily develop, which would have inevitable economic implications as well, causing new lines of class alienation and class conflict to form.

Even those who can use and benefit from the technologies can experience alienation, often from the very characteristics which make these media most efficient and cost-effective. The danger cited by Jacques Ellul, of all social life coming to be dominated by "la technique" could be a real one. It could triv-

lize the most important human values—values which are, at the same time, both subtle and fragile, easily overwhelmed by a drive for efficiency at all costs.

So, while preparing ourselves to enjoy the obvious benefits of the new technologies we should stand back a little from them, from time to time, to make sure we are using them in the right ways.

Settlers on new frontiers have had to band together to discuss the challenges they faced and to work out ways their new communities could effectively deal with them. A similar collective effort is even more necessary to deal with the challenges of the technological frontier. New educational approaches are needed for both children and adults, so they will have both the skills to manage existing media and the flexibility to deal with new, unforeseen technologies as they arise and create new situations. New social and

legal structures also are needed to channel newly unleashed forces into constructive paths, while maintaining basic human rights and freedoms. They can only be created through vigorous and informed communal discussion and action.

The spiritual challenges of the media age also are considerable, and religious groups must recognize them and work out innovative ways to meet them. Religion tends, in many ways, to be conservative, and some concern certainly is needed to preserve the essential elements of faith received from earlier generations. But religion, too, must live in the present, media-dominated environment; and failure by religious leaders to face the demands of that environment with resourcefulness and flexibility can only result in confusion and spiritual harm to their followers.

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Current Research

Some Sources:

The three conventions cited are indicated by the following abbreviations:

IAMCR 96 = the 20th General Assembly and Scientific Conference of the International Association for Mass Communication Research, Sydney, Australia, 18-22 August 1996.

ICA 96 = the 46th Annual Conference of the International Communication Association, Chicago, Illinois, USA, 23-27 May 1996.

SCA 96 = the 82nd Annual Meeting of the Speech Communication Association, San Diego, California, USA, 23-26 November 1996.

Australia

Richard Joseph (University of Wollongong, IACT Dept., Wollongong, NSW 2522; Tel: +61 42 214 143; Fax: +61 42 214 170) presented a paper, "Political Myth, High Technology and the Information Super-highway: An Australian Perspective," at IAMCR 96.

David Marshall (University of Queensland, Media and Cultural Studies Centre, Dept. of English, Brisbane QLD 4072; Tel +61 7 3365 2712; Fax: +61 7 3365 2799) delivered a paper, "The Web and the Commodity: Subjectivity, Interactivity and the Generation of Value in the 'Graphic Internet Age'," at IAMCR 96.

Jeffery Pittam (Dept. of English, University of Queensland, Brisbane, QLD 4072; Tel: +61 7 3365 2589; Fax: +61 7 3365 2779; e-mail: JEFF@PSY.UQ.EDU.AU) and E. Sean Rintel (of the same university) presented a paper, "Strangers in a Strange Land: Managing Interaction on Internet Relay Chat," at ICA 96.

Jen St Clair (Bureau of Transport & Communications

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Economics, GPO Box 501, Canberra ACT 2601; Tel: +61 6 274 7407; Fax: +61 6 274 7170) presented a paper, "Becoming Digital: Networked Technologies in Australian Homes," at IAMCR 96.

Fay Sudweeks (Key Centre of Design Computing, Architectural & Design Science, University of Sydney, Sydney NSW 2006; Tel: +61 2 351 5933; Fax: +61 2 351 3031; e-mail: FAYS@ARCH.SU.EDU.AU) chaired a panel on "Theoretical Issues in New Information Services" at ICA 96. Sudweeks, with Marcel Allbritton (University of New Mexico, Albuquerque, NM, USA), also presented a paper, "Collaborative Communication in a Computer-Mediated Group of Scientific Researchers," at ICA 96.

Peter B. White (Dept. of Communications and Media, La Trobe University, 20 Macartney Avenue, Kew, Vic 3101; e-mail: pbwhite@latrobe.edu.au) delivered a paper, "Online Services and 'Transactional Space': Conceptualising the Policy Issues," at IAMCR 96.

Belarus

Oleg Manaev (Belarusian State University) scheduled a paper, "Fighting for Public Information Highway: Communication Strategies and Policies in Transition Society," at IAMCR 96.

Belgium

Jean-Claude Burgelman (Sectie Communicatiewetenschap, Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussels; Tel: +32 2 641 259; Fax: +32 2 641 2861; e-mail: jcburgel@vnet3.vub.ac.be) was respondent at a session on "Democracy and the National Information Infrastructure Debates: The Role of Noncommercial Stakeholders and Visions," ICA 96.

Brazil

Pat Aufderheide (University of Brasilia, CP 15 2951, 70910 Brasilia D.F.; University Tel: + 55 61 274 0022) chaired a

plenary session on "The National Information Infrastructure" at ICA 96.

Maria das Graças Targino (University of Brasilia, CP 15-2951, 70910 Brasilia, DF; University Tel: +55 61 274 0022) prepared a paper, "Internet, Social Impacts on Electronic Networks - Social Impacts on Information and Society," for IAMCR 96.

Canada

Urs E. Gattiker (University of Lethbridge, 4401 University Drive, Lethbridge, Alberta T1K 3M4; Univ. Tel: +1 403 329 2111) and Ronald E. Rice (Rutgers University, New Brunswick, NJ, USA) delivered a paper, "Computer-Mediated Communication and Organizational Structuring" at ICA 96.

Stephen D. McDowell (Carleton University, 3-24 Powell Ave., Ottawa K1S 2A1; Tel +1 613 237 4680; e-mail: SMCDOWE@CCS.CARLETON.CA) presented a paper, "Noncommercial Stakeholders in the Canadian National Information Infrastructure Debate: Redefining the Public Interest Without Public Interest Groups?" at ICA 96.

Annie Méar (Dept. of Communication, University of Montreal, CP 6798, Succ "A," Montreal, Quebec H3C 3J7; Tel: +1 514 343 7808; Fax: +1 514 737 0224) convened a special session, "Working on the Information Highway: Communication Strategies and Policies," at IAMCR 96, and delivered a paper, "Telework: Quo Vadis?" on telework policy and organization at the same session.

Jocelyne Picot (McGill University, 30 Berlfox, Apt P1 5, Verdun, QC H3E 1L3; Tel: +1 514 283 4236; Fax: +1 514 283 3096) presented a paper, "Health and Medicine on the Information Highway: Issues Associated with Telehealth and Telemedicine," at IAMCR 96.

Gaetan Tremblay (Université du Quebec a Montreal, C.P. 8888 - Succ. A, Montreal H3C 3P8; Tel: +1 514 987 8591; Fax: +1 514 987 4164) presented a paper describing "The Canadian Discourse on the Global Information Infrastructure" at IAMCR 96.

Kevin G. Wilson (Tele-Université, Université du Quebec, 7222 Rue Denoue, St. Leonard, Quebec H1S 2E4; Tel: +1 541 728 3075) presented a paper, "Convergence Competition and the Information Highway: Canada's New Regulatory Framework," at IAMCR 96.

Croatia

Mario Plenkovic and Vitomir Grbavac (both at the University of Zagreb, Trg Marsala Tita 14, POB 815, 41000 Zagreb; University Tel: Tel: +385 41 272 411) presented a paper, "The Conception of Structure of the Global Communication System: Model for Croatia," at ICA 96.

Egypt

Hussein Y. Amin (The Adham Center for TV Journalism, American University in Cairo, 113 Kaser El Aini St. #2511, Cairo; Tel: +20 202 357 6203; Fax: +20 202 355 7565; e-mail: H_AMIN@EGAUCACS) presented a paper, "Arab Culture in the Information Age: Opportunities and Concerns," ICA 96.

Finland

Sinikka Sassi (Dept. of Communication, University of Helsinki, Box 54, Helsinki FIN-00014; Tel: +358 0 171 8840; Fax: +358 0 191 8849) presented a paper, "The Formations of Social Relations and Communities in the Network," at IAMCR 96.

Helena Tapper (Dept. of Communication, University of Helsinki, Box 54, Helsinki FIN-00014; Tel: +358 0 171 8848; Fax: +358 0 191 8849) delivered a paper, "Information Society--A Late-Modern Economy?" at IAMCR 96.

France

Laurence Caby and Christine Jaeger (Centre National d'Etudes des Telecommunications (CNET), 38-40 rue de Général Leclerc, 92131 Issy les Moulineaux; Centre Tel: +33 1 45-29-44-44), with Charles Steinfield (Michigan State University, East Lansing, MI, USA) presented a paper, "Factors Influencing the Use of Inter-Company Networks for Processing Transactions," at ICA 96.

Pascal Jaques-Gustave (University of Poitiers, 15 rue de Blossac, 86034 Poitiers Cedex; University Tel: +33 49 45 30 00; University Fax: +33 49 45 30 50) prepared a paper, "Another View of Information Networks' Ability for 'Maximising Informational Potential' in Crisis Situation," for IAMCR 96.

Marie France Kouloumdjian (Equipe METIS - CNRS, Ecully [no further address available. Central office of CNRS is at 15 quai Anatole France, 75700 Paris; Tel: +33 1 47 53 15 15; Fax: +33 1 45 51 73 07]) prepared a paper, "From Institutional Guideline to Participant's Actions: Network Teleresearchers," for IAMCR 96.

Divina Frau-Meigs (Paris 3-Sorbonne University, CNET; 33 Bld St. Martin, Paris 75003; Tel and Fax: +33 1 42 77 91 69) and Philippe Maarek (Paris 12 University, 41 Rue Du Coltsee, Paris 75008; Tel: +33 1 42 25 85 82; Fax: +33 1 43 59 57 03) presented a paper, "Cybersex, Censorship and the State: The Pornographic Uses of Technology," at IAMCR 96.

Claude Meyer (University of Paris XII/Société Française des Sciences de L'Information et de la Communication, B.P. 17, 75261 Paris Cedex 06; Fax: +33 1 4021 0940; e-mail: meyer@creteil.univ.parisiz.fr) presented, "Internet, From a Public Research Tool to a Business Medium," at IAMCR 96.

Yvonne Mignot-Lefebvre (University of Paris I and Société Française des Sciences de L'Information et de la Communication (SFSIC), 30 Rue Du Pressoir, Paris 75020 [or] B.P. 17, 75261 Paris Cedex 06; Tel: +33 1 46 36 03 22; Fax: +33 1 40 21 09 40) presented a paper, "From Multimedia to Knowledge-Based Systems," at IAMCR 96.

Germany

Herbert Kubicek (University of Bremen, Bibliotheksstr., 2800 Bremen 33; University Tel: + 49 421 2181) presented a paper, "Noncommercial Stakeholders in the German National Information Infrastructure Debate: The Dynamics of Marginalization," at ICA 96.

Irene Neverla (Institut für Journalistik, Allendeplatz 1, Hamburg D-20146; Tel: +49 404 123 6260; Fax: +49 404 123 4506) delivered a paper, "On Time Budgets and Time Philosophy of Internet Users," at IAMCR 96,

Arnold Picot (University of Munich, Geschwister-Scholl Platz 1, 8000 Munich 22; University Tel: +49 89 21800) presented a paper on "The Emergence of Electronic Capital Markets" at ICA 96.

Hong Kong

Huang Yu (Hong Kong Baptist University, Kowloon Tong, Hong Kong; Fax: +852 2339 7890) prepared a paper, "Seeing the World Without Government Control: The Role of New Electronic Media in China," in collaboration with Hao Xiaoming (Nanyang Technological University, Singapore) for delivery at IAMCR 96.

India

Leela Rao (Dept. of Communication, Bangalore University, 79/2 Eleventh Main Road, Malleswaram, Bangalore 560003; Tel & Fax: +91 80 334 8226) presented a paper, "Working on the Information Highway: Communication Strategies and Policies - An Indian Perspective," at IAMCR 96.

Ireland

Ellen Hazelkorn (Department of Communications, Dublin Institute of Technology, Aungier Street, Dublin 2; Tel: +353 1 402 3000; Fax: +353 1 402 3001; e-mail: c/o Nora French < n french@dit.ie >) presented a paper on "New Media Technologies and Changing Work Practices in the Media Industry: The Case of Ireland" at ICA 96.

Paschal Preston (School of Communications, Dublin City University, Glasnevin, Dublin 9; Tel: +353 1 704 5478; e-mail: PRESTONP@DCU.IE) delivered papers on "Beyond Consumerism: Citizenship, Information, and the Emerging New Communications Order in Europe and Asia" and "Noncommercial Stakeholders in the European Union and United States New Information Infrastructure Debate: Digital Democracy Deficits and the Exclusion of Household Consumers," at ICA 96.

Japan

Yasufumi Shibana (University of Tokyo, Dept. of Social Psychology, 1-8-28 Dojokita, Chuo-ku, Chiba City 260; Tel: +81 43 222 4513; Fax: +81 33 815 6673; e-mail: shibanai@tansei.cc.u-tokyo.ac.jp) and Ken'ichi Ikeda (same department, Hongo, Bunkyo-ku, Tokyo 150; Tel: +81 3 3812 2111 (ext. 3870); e-mail: ikeken@tansei.cc.u-tokyo.ac.jp) presented a paper, "Perceived Reality and Information Explosion in the Networked Society," at IAMCR 96.

Korea

Sunny Yoon (Korea Broadcasting Institute, Eunpyung Ku, Pulkwang 1 Dong, Misung Apt., Seoul; Tel: +82 2 354 6367; Fax: +82 2 521 6680; e-mail: syoon@krehwacc.bitnet) presented a paper, "Old Power in the New Coming Information Society: An Ethnographic Study of Female Workers at Korea Telecom," exploring labor, power and gender relations as they are affected by advanced technology among lower-level female workers in the telecommunications industry, at IAMCR 96.

Mexico

Martha Burkle Bonecchi (Departamento de Comunicación, Universidad Iberoamericana, Prolongacion del Paseo de la Reforma 880, Lomas De Santa Fé, Mexico D.F. 01210; Tel: +52 5 292 0258; Fax: +52 5 292 2891) presented a paper, "Women and New Communication Technologies: A Feminist Approach," at IAMCR 96.

Carmen Gómez Mont (Universidad Iberoamericana, Depto. de Comunicación, Prolongacion del Paseo de la Reforma 880, Lomas de Sta. Fé 01210 Mexico D.F.; Tel: +52 5 292 0258; Fax: +52 5 292 2891) delivered a paper, "Telecommunications' Liberalization in Mexico, from a Strategic Sector to the Free Marketplace Game," on the impact of new technologies in Mexico, at IAMCR 96.

Netherlands

Nicolas W. Jankowski (Dept. of Communication, University of Nijmegen, P.O. Box 9104, Nijmegen 6500 HE; Tel:+31 24 361 2372; Fax:+31 20 638 4608) and Anna Malina (Queen Margaret College, Edinburgh, UK) presented a paper, "Virtual Communities, Virtual Democracies and New Forms of Local/Global Entrepreneurialism in Cyberspace," at IAMCR 96.

Bart J. van den Hooff (University of Amsterdam, Vakgroep Communicatiewetenschap, Oude Hoogstraat 24, 1012 CE Amsterdam; Tel: +31 20 525 3506; Fax: +31 20 525 2086; e-mail: vandenhooff@pscw.uva.nl) delivered a paper, "Incorporating Electronic Mail: Towards an Explanation of E-mail Effects," at ICA 96.

Norway

Tom E. Julsrud (Telenor Research & Development, PO Box 83, Kjeller N-2007; Tel: +47 63 848 637; Fax: +47 63 810 076) delivered a paper on "Teleworking in Norway: Status

and Strategies" at IAMCR 96.

Bjorn Sorensen (Dept. of Drama, Film and Theatre, University of Trondheim, N-7055 Dragvoll, Trondheim; Tel: +47 7 359 1822; Fax: +47 7 359 1830) presented a paper, "Spatial and Temporal Metaphors in Net Communication," at IAMCR 96.

Singapore

Hao Xiaoming (Nanyang Technological University, SCS, NTU, Nanyang Avenue, 639798, Singapore; Tel: +65 799 5012; Fax: +65 791 3082) delivered a paper, "Seeing the World Without Government Control: The Role of New Electronic Media in China," in collaboration with Huang Yu (Hong Kong Baptist University, Hong Kong) at IAMCR 96.

Duncan Holaday (Nanyang Technological University, School of Communication Studies, Nanyang Avenue, 639798 Singapore; Tel: +65 799 6112; Fax: +65 792 4329) delivered a paper, "Singapore: National Unity in a Regional Media Hub," where the concept, "media hub" is restricted to technological infrastructure, "insulated from the population by what the Minister of Information and the Arts has referred to as a 'civic immune system'," at IAMCR 96.

Spain

José Manuel Gomez y Mendez (Universidad De Sevilla, Facultad Ciencias de la Informacion, Gonzalo de Bilbao 7y9, 41003 Sevilla; Tel: +34 5 441 9450; Fax: +34 5 442 5268) presented a paper, "Hacia un modelo de periodico cibernetico" (Toward a Model of the Cybernetic Newspaper), at IAMCR 96.

Taiwan R.O.C.

Nien-Hsuan Fang (Graduate School of Telecommunications, National Chung-cheng University, Chia-Yi 621, Taiwan R.O.C.; Tel: +886 5 242 8103; Fax: +886 5 272 1186; e-mail: Telnhf@ccunix.ccu.edu.tw) presented a paper, "Discourse Analysis of Computer-Mediated Communication: A Habermasian Approach," at ICA 96.

Linlin Ku (National Chiao-Tung University, 1001 Ta Hsueh Road, Hsinchu; University Tel: +886 35 712121; University Fax: +886 35 714031) delivered a paper on "Social Influence, Media Richness, and Critical Mass: Electronic Messaging in Organizations" at ICA 96.

Chung-Chuan Yang (Department of Information and Communication Technology, Yuan Ze Institute of Technology, 135 Yuan-Tung Rd., Nei-Li, Chung-Li 32026; Tel: +886 3 463 8800 x 643; Fax: +886 3 463 8277; e-mail: ickyang@saturn.yzit.edu.tw) presented a paper on "Noncommercial Stakeholders in the Asian National Information Infrastructure Debate: Taiwan in the 'Four Tiger' Context" at ICA 96.

United Kingdom

Des Freedman (University of Westminster, CCIS, Flat A, 30 Milldenhall Road, London E5 0RU; Tel: +44 181 986 1604) delivered a paper, "Politicians and the Information Superhighway," at IAMCR 96.

Alfred Hermida (BBC World Service Television, BBC Worldwide, Bush House, Strand, London WC2B 4PH) is scheduled to chair a session, "Third Wide Web: The Internet in Developing Nations" at SCA 96.

Anna Malina (Department of Communication and Information Studies, Queen Margaret College, Corstorphine Campus, Clerwood Terrace, Edinburgh EH12 8TS, Scotland, UK; Tel: +44 131 317 3502; Fax: +44 131 317 3256) and Nicolas W. Jankowski (University of Nijmegen, Netherlands) presented a paper, "Virtual Communities, Virtual Democracies and New Forms of Local/Global Entrepreneurialism in Cyberspace," at IAMCR 96.

Roger Silverstone (Graduate Research Centre, University of Sussex, Falmer, Brighton, BN1 9ON; Tel: +44 1273 678 261; Fax: +44 1273 678 835; e-mail: R.S.SILVERSTONE@SUSSEX.AC.UK) presented a paper, "Technology, Text, and Discursive Spaces," at ICA 96.

United States

Debashis Aikat (School of Journalism and Mass Communication, University of North Carolina, Campus Box 3365, Chapel Hill, NC 27599-3365; Tel: +1 919 962 4090; Fax: +1 919 962 0620; e-mail: DAIKAT@EMAIL.UNC.EDU) presented a paper, "Adventure in Cyberspace: Exploring the Information Content of the World Wide Web Pages on the Internet," at ICA 96.

Marcel Allbritton (SRC 313, University of New Mexico, Albuquerque, NM 87131; Tel: +1 505 277 1879; Fax: +1 505 277 4206; e-mail: marcel@hydra.unm.edu), with Fay Sudweeks (University of Sydney, Australia), presented a paper, "Collaborative Communication in a Computer-Mediated Group of Scientific Researchers," at ICA 96.

Philip J. Auter (University of South Alabama, Mobile, AL 36688; Comm. Dept. Tel: +1 205 380 2800) chaired a session on "High-Tech Instruction: Using Internet, World Wide Web and Teleconferencing to Enhance the Classroom Experience" at SCA 96.

Russell Barclay (Southern Methodist University; & 9131 Valley Chapel Ln., Dallas, TX 75220; Tel: +1 214 768 2129; Fax: +1 214 768 2784; e-mail: rbarclay@mail.smu.edu) chaired a session on "International Perspectives on the Impact of Communication Technologies" at ICA 96.

Clifford G. Christians (Institute of Communications Research, University of Illinois, 222B Armory Building, 505 East Armory Avenue, Champaign, IL 61820; Tel: +1 217 333 1549; Fax: +1 217 244 7695; e-mail: icr@uiuc.edu)

presented a paper, "Freedom of Expression as a Conundrum in Technological Democracies," at ICA 96.

Edward A. Comor (School of International Service, American University, 2745 Ordway Street, NW, Apt. 4, Washington, DC 20008; Tel: +1 202 885 1668; Fax: +1 202 885 2494) presented a paper on "The United States and the Global Information Infrastructure: Orchestrator, Mediator, or Functionary?" at IAMCR 96.

Michael R. Curry (Dept. of Geography, Univ. of Calif. at Los Angeles, Box 951524, Los Angeles, CA 90095-1524; Tel: +1 310 825 3122; Fax: +1 310 206 5976) delivered a paper, "On Place and Identity in Cyberspace" at IAMCR 96.

William Drake (U. of California at San Diego, La Jolla, CA 92093; University Tel: +1 619 534 3135) chaired a session on "Democracy and the National Information Infrastructure Debates: The Role of Noncommercial Stakeholders and Visions" at ICA 96, and delivered a paper, "Noncommercial Stakeholders in the United States NII Debate: Is the Glass Half Empty or Half Full?" in that session.

Robert Epstein (University of Central Oklahoma, P. O. Box 1859, Edmond, OK 73083-1859; Tel: +1 405 341 2980 X2445; Fax: +1 359 9722; e-mail: EPSTEIN@AIX1.UCOK.EDU) chaired a session on "Users and Computers: Organizations and Computer Mediated Communication" at ICA 96

Howard H. Frederick (Emerson College; & 360 Somerville Ave., Apt. 4, Somerville, MA 02143; Tel: +1 202 885 1635; Fax: +1 202 885 2494; e-mail: hfrederick@igc.apc.org) continues to be interested in computer networking by human rights and environmental organizations.

James L. Gaudino (National Office, Speech Communication Association, 5105 Backlick Rd., Bldg. E, Annandale, VA 22003; Tel: +1 703 750 0533; e-mail: jgaudino@scassn.org) chaired a session on "Homepages, Databases, Listservs, and Newsgroups: Use of Speech Communication Association's Electronic Services" at SCA 96.

Tracy Irani (Duquesne University; 818 Alder Dr., North Huntingdon, PA; Tel: +1 412 396 6445; e-mail: irani@duq3.cc.duq.edu) chaired a panel on "Building the Electronic Community: Teaching, Learning, and Creating on the World Wide Web" at SCA 96.

Ron L. Jacobson (Department of Communication, Fordham University; 20 Osee Place, Cos Cob, CT 06807; Tel: +1 718 817 4849; Fax: +1 203 629 3664) chaired a session, "Steering Through Cyberspace Theory and Research," at SCA 96.

The Mass Communication Division of the Speech Communication Association (SCA National Office: 5105 Backlick Rd., Building #E, Annandale, VA 22003)

sponsored a panel on "New Technology, Policy and Research: Where Do We Go From Here?" at SCA 96. Panelists are James R. Walker (St. Xavier University, Chicago, IL; e-mail: walker@sxu.edu), Robert V. Bellamy (Duquesne University, Pittsburgh, PA; e-mail: bellamy@duq3.duq.edu), Dineh David (University of Hawaii at Manoa, Honolulu, HI; Dept. of Speech Tel: +1 808 956 8202), Augie Grant (University of Texas at Austin, Austin, TX; e-mail: augie@mail.utexas.edu), and Dale Kunkel (University of California at Santa Barbara, Santa Barbara, CA; e-mail: kunkel@alishaw.ucsb.edu).

Margaret L. McLaughlin (University of Southern California, 5574 Avenida Fiesta, La Jolla, CA 92037; Tel: +1 213 740 3942; Fax: +1 213 740 0014; e-mail: MMCLAUGH@ALMAAK.USC.EDU) and Kerry K. Osborne (of the same university) presented a paper, "Virtual Community in a Telepresence Environment," at ICA 96.

Youngme Moon (Dept. of Communication, Stanford University, Stanford, CA 94305-2050; e-mail: YOUNGME@LELAND.STANFORD.EDU) and Clifford Nass (Dept. of Communication, Institute for Communication Research, Stanford University, Stanford, CA 94305-2050; Tel: +1 415 723 5499; Fax: +1 415 725 2472; e-mail: NASS@LELAND.STANFORD.EDU.INTERNET) presented a paper, "The Effects of Personality and Changes in Personality in Human-Computer Interaction" at ICA 96. With B. J. Fogg (of the same department) they also delivered a paper, "Can Computers Be Teammates," and Fogg independently presented one titled "Silicon Sycophants: The Effects of Computers that Flatter" at the same session.

Mary Beth Oliver (Department of Communication Studies, Virginia Tech University, Blacksburg, VA 24061-0311; Tel: +1 703 231 7163; e-mail: olivermb@vt.edu) chaired a session on "Examinations of Newer Communication Technologies" at SCA 96.

David J. Phillips (University of Pennsylvania, 252-B Church Hill Road, Landenberg, PA 19350; Tel: +1 610 268 0442) delivered a paper, "The Construction of Routine Surveillance Practice in the Electronic Marketplace," at IAMCR 96.

Rohan Samarajiva (Dept. of Communication, Ohio State University, 3016 Derby Hall, 154 N. Oval Mall, Columbus, OH 43210-1339; Tel: +1 614 292 3713; Fax: +1 614 292 2055) and Patrick D. Hadley (same department), presented a paper, "Online Content Regulation: The Interaction of Domestic and Supranational Law" at IAMCR 96, and one on "Regulation of On-Line Content in the New Trade Environment: NAFTA and Communications Policy," at ICA 96. Samarajiva chaired and was respondent for a session, "Shaping New Communication Technologies and Networks: The Role of Specific Users and Spaces," at ICA 96.

Concetta M. Stewart (Temple University, 71 Old York Rd., Ringoes, NJ 08903; Tel: +1 215 204 5181; Fax: +1 215 204 5402; e-mail: cstewart@astro.ocis.temple.edu) and Lori Collins-Jarvis (Rutgers University, 64A Burton Ave., South River, NJ 08882; Tel: +1 908 932 8145; Fax: +1 908 932 6916; e-mail: ljarvis@scils.rutgers.edu) co-chaired a session, "Beyond Access: Toward Gender Democracy in Cyberspace," at ICA 96. Collins-Jarvis also presented a paper, with Janet Fulk (University of Southern California, 20790 Rockpoint Way, Malibu, CA 90265; Tel: +1 213 740 0941; Fax: +1 213 740 8036; e-mail: fulk@bcf.usc.edu), on "Mediated Meeting Technologies as Uncertainty Reduction Tools: A Comprehensive Review of Theory and Research," at ICA 96.

Wake Forest University's Department of Communication (Winston-Salem, NC 27109) reported on its "Longitudinal Study of the Impact of Computers on Higher Education" at SCA 96. Participating researchers include Michael Hazen (Chair; Box 7347, Reynolda Sta., Winston-Salem, NC 27109; Tel: +1 910 759 5404; Fax: +1 910 759 4691; e-mail: HAZEN@WFU.EDU), Michael J. Hyde, Allan Louden, Jill J. McMillan, Ananda Mitra, and Randall Rogan,

Acknowledgements

Walter J. Ong, SJ (St. Louis)

BOOK REVIEWS

Reviewers: Paul J. Duffy, SJ (PJD)
W. E. Biernatzki, SJ (WEB)

Book Publishing Revisited

Editor's Note: The following books should have been discussed in the previous issue of *Trends*, or at least might have been especially relevant to its theme, "book publishing." For various reasons, however, they were omitted and are being included here as a postscript to that issue.

Badaracco, Claire Hoertz. *Trading Words: Poetry, Typography, and Illustrated Books in the Modern Literary Economy.* Baltimore/London: Johns Hopkins University Press, 1995. Pp. xiii, 259. ISBN 0 8018 4859 8 (hb.) \$35.00.

Trading Words concentrates on the period between 1900 and 1940, in which "the marketplace transformed literary culture" (pg. 1). The typographic developments during that period might be exemplified by the work of Jan Tschichold, whose book, *The New Typography*, was discussed in the previous issue of *Trends* (vol. 16, no. 1, pp. 4-5). Badaracco's treatment covers a broader range, relating the contributions of Tschichold and others on the European continent to Anglo-American developments (e.g., pp. 10-29, 78-84, and passim), but concentrating on the latter.

The author calls the period one in which "ordinary English and American readers... came to value all printing for its ability to speak to them, whether it conveyed a commercial message or poetic image. It was a change that was

all of the same department.

Eunice Hsiao-Hui Wang (University of Hawaii at Manoa; 1777 East-West Road #1149, Honolulu, HI 96848; Fax: +1 908 945 3615; e-mail: HSIAO@UHUNIX.UHCC.HAWAII.EDU) delivered a paper, "Telecommunications and Economic Development in an East-Asian NIE: The Case of Taiwan," at ICA 96.

Nessim Watson (Westfield State College, 71A Taylor Hill Rd., Montague, MA 01351; Tel: +1413 572 5752; e-mail: swatso@asc.upenn.edu) presented a paper, "Computer-Mediated Communication and Consumer Participation in Cultural Processes," at ICA 96.

Rolf Wigand (School of Information Studies, Syracuse University, 4-293 Center for Science and Technology, Syracuse, NY 13244-4100; Tel: +1 315 443 5608; Fax: +1 315 443 5806; e-mail: rigand@syr.edu) chaired a session on "Electronic Commerce and Markets: Trends and Developments" at ICA 96, and delivered a paper, "An Overview of Electronic Commerce and Markets" at the same session.

Rob Anderson (St. Louis)

revolutionary in its implications" (pg. 1). It was a time in which the "proverbial aesthetes"—the artists and writers who previously had worked alone—"left the garret, studio, and private press for the factory floor. Suddenly there were two classes of printing that mattered above all—book composition and display advertising—and it was imperative that both catch the public eye or rapidly become obsolete" (pp. 1-2).

The technological foundation for many of the typological breakthroughs of the time was the invention of the Linotype and Monotype. Beginning as one firm, the two companies diverged, with development of the Linotype dominating American printing, while the British considered it outmoded and concentrated on Monotype, with "its innovative typeface specifications," which proved highly adaptable to most of the world's languages (pg. 68).

Another divergence between the two major English-speaking countries was discerned by Beatrice Warde, an American expatriate who was a prominent designer and publicist for the Monotype company. Warde said that the British still regarded printers as craftsmen, while "the United States public considered printers to be working class, with little interest in the arts." The American "printing plant" was, in Britain, "referred to respectfully as a 'printing house'" (pg. 68). In both countries, however, the typographic revolution concentrated on "a deep concern about the industrial standards for book production, typography for newspapers

and advertising, and the aesthetic value added to any printing enterprise by employing versatile illustrators" in contrast to the more political interests of the continental typographers (pg. 12).

While typographic developments were important, illustration also evolved during the period. Badaracco's book is profusely illustrated with examples, including not only book illustrations, such as one by Picasso for a 1934 edition of *Lysistrata*, but also covers and a mailing envelope for *The Colophon* (subtitled: "The Book Collectors' Quarterly"), and even a baker's label by Eric Gill.

Aspects of developments during the period are highlighted by special attention to the contributions of Beatrice Warde, at Monotype (pp. 67-114), R. R. Donnelley and Sons, of Chicago, whose creative response to the challenge of typographic innovation helped make it the largest U.S. commercial printer (pp. 115-149), and George Macy's Limited Editions Club (pp. 150-191), which "approached book design and illustration from a modern American advertising perspective" (pg. 150).

The logistical contribution the Centre for the Study of Communication and Culture, publisher of *Communication Research Trends*, was able to make to her research in London is acknowledged by the author (pg. xii). —WEB

LaFollette, Marcel C. *Stealing into Print: Fraud, Plagiarism, and Misconduct in Scientific Publishing.* Berkeley/Los Angeles/London: University of California Press, 1992 (paperback edition 1996). Pp. viii, 293. ISBN 0520 07831 4 (hb.) \$30.00; 0 520 20513 8 (pb.) \$13.95 (£10.95).

Truth swings along a wide arc in the late twentieth century. In politics and popular entertainment, people accept deception as commonplace. The trust that society places in science, however, traditionally assumes different standards, including assurances of authenticity and accuracy in all that science does or recommends. (pg. 1)

These first lines of LaFollette's book spotlight the importance of truth in scientific writing and the serious betrayal of public trust inherent in deliberate deception by authors who identify what they write as "science." Yet, as he notes, instances of scientists being "accused of forging, faking, or plagiarizing their way to success" became common, or at least more publicized, in the United States during the 1980s, inspiring an intensive move to reevaluate review policies and monitoring machinery (pp. 1-2).

Plagiarism can be as simple as a direct translation which claims authorship of a scientific paper originally published in another language. LaFollette cites two nineteenth century examples of that variety then goes on to more complex cases from the 1980s. One biologist published under his own name articles by others which had appeared originally in rather out-of-the-way journals, and, in one case, did so with another person's article before the latter was even able to publish it. In a more complicated instance, a junior

researcher at Harvard Medical School published falsified data and involved his "honorary co-authors," who had relied on his integrity without verifying the data for themselves. Two "whistle blowers," who tried to call the co-authors to account for their negligence, brought down on themselves threats of libel suits and were unable to publish their article about the incident due to the fears of such suits by many editors—until it finally was published in the *Congressional Record*, as an outgrowth of a hearing of the House Committee on Science and Technology (pp. 5-13).

The high monetary stakes involved in modern scientific research can present big temptations to falsify evidence, whether to meet report or publication deadlines, to qualify for continuing grants, or under other, similar pressures. Many additional factors come into play, however, including the apparent inability of scientific communities to police themselves (pg. 19), the competitive nature of certain fields, such as biomedical research (pp. 19-20), oversimplification and sensationalism by the mass media (pg. 20), and lack of sufficient oversight by funding agencies, including Congress (pp. 21-27). LaFollette also points out that a "new economics" has come into play which simply makes scientific ideas more valuable and therefore more "worth stealing" (pg. 27). Furthermore, as debates about scientific ethics move outside the sphere of particular sciences, wherein definitions and procedures could be understood and taken for granted, misunderstandings abound and much more clarification of issues is required (pg. 31).

In subsequent chapters, the author discusses such questions as problems of classifying violations of scientific ethics, the organization and economics of scientific publishing, whistle-blowers, and remedial or punitive action. The final chapter discusses how scientific fraud and the controversies over scientific ethics may affect the scientific endeavor itself, and the public interest, both now and in the future. —WEB

Messick, Brinkley. *The Calligraphic State: Textual Domination and History in a Muslim Society.* Berkeley/Los Angeles /London: University of California Press, 1993 (paperback 1996). Pp. xii, 341. ISBN 0 520 20515 4 (pb.) \$18.95 (£14.95).

Research for this book was carried out in Yemen by the author from September 1974 to March 1976 and January to June 1980. It marks a time of transition from a calligraphic culture to print culture. The idea of printing—and attendant institutions such as modern schools and new ideas about the state—had been there since the late nineteenth century, but their real impact had not made itself felt in the country until the third quarter of the twentieth century. The study focuses on the relationships between texts and authority, and "the literary processes behind the constitution of authority in texts and the social and political processes involved in articulating the authority of texts" (pg. 1). The study of a society in which printing has only recently become significant is especially valuable for our understanding of Islamic cultures, in many of which the printing of sacred texts, especially the

Koran, has tended to be considered sacrilegious.

Shari'a law is treated by Messick "as the centerpiece of a societal discourse," and "the specific types of text involved are basic manuals of *shari'a* jurisprudence and their commentaries" (pg. 3). The author cautions that, although the *shari'a* is conventionally glossed as "Islamic law," it is, in fact "a type of 'total' discourse, wherein 'all kinds of institutions find simultaneous expression'" (*ibid.*, quoting Marcel Mauss). Past attempts to understand the *shari'a* "in terms of the Western standard for law" have "obscured the *shari'a*'s different range of social importance and its distinctive modes of interpretive dynamism" (pg. 4). It has been applied with varying degrees of strictness in the Muslim world, although "in Yemen, the level of *shari'a* applicability has been comparatively high" (*ibid.*)

Messick's field research in the highland town of Ibb (reported elsewhere) situates the historical and textual discussion which dominates the book. He uses evidence "from various periods and several categories...to create a composite view of the calligraphic polity and discursive condition" (pg. 6). That material is interspersed with chapters "devoted to a specific course of historical change in highland Yemen over the past hundred years" (*ibid.*).

Authoritative texts are as fundamental to the history of *shari'a* scholarship as they are to the history of any other intellectual disciplines. ...Authority in a text depended on a combination of attributes both ascribed and achieved: there were the built-in features of textual ancestry and authorship as well as an acquired reputation and record of dissemination. (pg. 16)

Ultimately, the authority of the *shari'a* depends on the sacred prototype of the *Koran* (also spelled *Quran*). "Substantively, the *Quran* and the *Sunna*, the practice of the Prophet, constituted the two fundamental 'sources'..for the elaboration of *shari'a* jurisprudence" (*ibid.*). Nevertheless, any Revelation must "be implemented through the medium of human understanding" (pg. 17). And the authority structures shaping that understanding have changed greatly during the past century.

In Yemini everyday society, "*shari'a* discourse is characterized by a textual and lived heteroglossia" (pg. 167).

The account presented here has emphasized the advent of novel forms of order. *Shari'a* codification, new methods of instruction, changes in court procedures, and legal-document registration are among the diverse expressions of a fundamental reordering of Yemini society. (pg. 254)

These changes are "part of the gradual incorporation of Yemen into the structures of the world system..." in the highlands, but they have "occurred at a pace marked by an unusual absence of outside intervention" (*ibid.*). The end point of change, like the beginning, is ambiguous. "Just as there was no original society of stationary traditional institutions, there is no terminus reached, no modern society

completely achieved" (pg. 255).

—WEB

Neuman, Susan B. *Literacy in the Television Age: The Myth of the TV Effect, Second Edition*. Norwood, NJ: Ablex, 1995. Pp. xiv, 233. ISBN 1 56750 161 3 (hb.) \$55.00; 1 56750 162 1 (pb) \$24.50.

Does television erode literacy? Does it take valuable time away from more constructive leisure pursuits, such as reading? Does it influence the very way people think, assaulting the senses and conditioning the brain to change? Does it condition students to short-term gratification that harms school-related behavior, such as the ability to concentrate?

All these questions have been asked about the medium for many years, but with no definitive answers based on research. Some observers take a contrary view,

...suggesting that television may be stimulating children's interests and learning. Some educators maintain that television has opened up a window to the world for children, providing them with an extraordinary information resource. Supporters claim that television has undoubtedly contributed to children's knowledge of current events and general understanding. (pg. xiii)

Neuman tries to present the current state of understanding of these issues, based on "literature from psychological and educational studies and communication research. [She]..then moves to a series of studies, analyzing the relationship between the medium and literacy using both quantitative and qualitative measures" (*ibid.*). She concludes that, "while television is clearly no panacea," it "has certainly not replaced or diminished literacy. On the contrary, there is a synergy among media. Interests in one medium tend to be reflected in another...a spirited interplay between print and video activities that may..enhance literacy opportunities" (pp. xiii-xiv).

The "central issues" are summed up in four theories "displacement, information processing, short-term gratification, and interest stimulation" (pg. 23). A chapter is devoted to each of these. The author finds it "intriguing" that television has never been shown to displace reading (pg. 54). The development of the view that the child is "actively engaged in processing television content" (pg. 81) influences the information-processing theory. The content of any symbol system, not the form of television, influences comprehension, and there seems to be little difference in this between television and text. Television does tend to be processed more casually than reading, but when context shifts, the depth of processing also shifts (pg. 84). Learning is a "multimodal process"; so if reading skills and other inputs are also stressed any "short-term gratification" effect of television on learning ability should be insignificant or non-existent. "A diverse culture demands diverse multimodal strategies to ensure that all children, regardless of their particular strengths and weaknesses, are given opportunities

to learn," according to the author (pg. 99). Finally, the interests stimulated by television are usually fleeting, but can be enhanced by improving the context of viewing (pg. 116).

Research does not indicate that television viewing has replaced either reading or homework, and television viewing "has not lessened the desire for achievement." Its overall effect depends on the ways it is used and the context of its use (pg. 153).

Although television has its limits it can be used constructively for intellectually stimulating the young child. Exposure to a variety of media presentations is desirable (pg. 183). Innovation should be stressed. The author even sees some good in "Channel One," a highly commercial and widely-criticized plan offering free equipment and wiring to schools which will sign a three-year contract. Although the programs, which stress current events, have some learning potential, few teachers in the 10,000 schools which have subscribed use it in an integrated way and recall of content seems minimal (pp. 191-193).

A major emphasis of the book is that media are complementary to each other, so their most constructive use is one which will provide "an integration of knowledge from many domains of experiences" (pg. 200). Although "television is not an instrument of teaching, yet the medium may have much to offer in educational value" such as, in particular, uses which emphasize its "remarkable" quality as a disseminator of information (pg. 201). —WEB

Nunberg, Geoffrey (ed.). *The Future of the Book*. Berkeley/Los Angeles: University of California Press, 1996. Pp. 306. ISBN 0 520 20450 6 (hb.) \$45.00; 0 520 20451 4 (pb.) \$14.95.

In the last issue of *Communication Research Trends*, on "Book Publishing" (Vol. 16, No. 1), the question kept recurring: Does the book have a future? The general consensus of authors cited in that issue was, "yes," but they also recognized that the functions of the book would inevitably be altered somewhat by new technologies which could, in some situations, do the same job more efficiently.

Nunberg's volume was not cited in that issue because it arrived at the CSCC when the issue was already in press. The book resulted from a conference held at the Center for Semiotic and Cognitive Studies of the University of San Marino, in 1994, under the direction of Umberto Eco and Patrizia Violi. The Center has as one of its main interests the semiotic impact of the development of technology, and the conference was focused on "what is undoubtedly the oldest technologically mediated form of communication: the book and the act of reading" (pg. 7).

The bibliophilic inclinations of its participants are suggested by the editor, who in his Introduction (pg. 9) quotes one of his contributors, James O'Donnell, quoting in turn (on pg. 37), novelist E. Annie Proulx, as quoted by the *New York Times*: "Nobody is going to sit down and read a novel on a twitchy little screen. Ever."

In his essay, however, O'Donnell does not agree quite so

readily with Proulx. He does not believe that the book will disappear in the immediate future, but he comments that "the status of the book is surely labile now as it has not been in five hundred years" (pg. 37). O'Donnell juxtaposes three diverse theoretical positions. One is that of Abbot Johannes Trithemius, whose book, *De laude scriptorum*, praised the manuscript over printing, although his own book was printed (in 1492), and in later writings he admitted that printing was a "marvellous art" (*ars illa mirabilis*) (pg. 44). The second theorist is Marshall McLuhan, "the most visible anti-Trithemius of our time" (pg. 46). Finally, he cites Cassiodorus, who struggled to revive classicism and Christian textual study in the sixth century A.D., to be admired as "a colleague, a practitioner who innovated, failed, innovated again.." (pg. 52).

George P. Landow, in his chapter, "Twenty Minutes into the Future, or How Are We Moving Beyond the Book?" discusses many of the innovative technologies mentioned in the present issue of *Trends*. He notes, however, that any shift to the new technologies is not a shift to technology, itself, since "writing and printing and books are about as technological as one can be. Books, after all, are teaching and communicating machines" (pg. 216).

Umberto Eco—whose spirit seems present in some of the other contributions as well—closes the book with his own commentary on books. He notes that, even if printed on acid paper, "they are more durable than magnetic supports.. they do not suffer power shortages and blackouts..books still represent the most economical, flexible, wash-and-wear way to transport information at a very low cost" (pg. 299). He suggests that "the problem is not to oppose written to visual communication. The problem is how to improve both" (pg. 298). The resulting construction may look like one of the fantastic machines "invented" by cartoonist Rube Goldberg, but "a Rube Goldberg model seems to me the only meta-physical template for our electronic future" (pg. 306).—WEB

General Reviews:

Bourne, Richard. *News on a knife edge: Gemini journalism and a global agenda*. London/Paris/Rome: John Libbey, 1995. Pp. viii, 216. ISBN 0-86196-486-1 (pb.) US\$26 / £16.

In 1967 Derek Ingram, then deputy editor of the London *Daily Mail*, realized a dream he had of providing newspapers in Third World countries with a news service attuned to their needs, and of offering reports by indigenous journalists from those countries to newspapers in the industrialized world. Bourne tells the story of the 27 years of service which the Gemini news features agency has given to "development journalism." It is the story in particular of Ingram, who gave up his *Daily Mail* job to start the fledging news service, in competition with the big players: Reuters, United Press International and Agence France Press. His vision was to establish a journalistic bridge between English-speaking industrial countries and English-language media in the Third World.

Traditionally most reporting of the Third World was done

by reporters from the affluent industrialized nations, whose perspective and interests were those of the developed countries. Ingram wanted to publish reports of developing countries from their local perspective, "in the context of a North-South dialogue, and the interests and aspirations of the South" (pg. 3). At first he used the framework of the newly-formed British Commonwealth to link country with country, in an effort to educate the new states in one another's history and current situation, and to create close bonds between their journalists. Later he broadened his network of contacts to new states beyond the Commonwealth. He saw the need and opportunity for these new states to provide the Western world with well-informed reports, written by indigenous journalists, and recording not just the problems of these countries but also their achievements.

His agency helped train many aspiring young journalists in their careers in the new states; education thus became a key part of Gemini's service to those nations. The value of its services was recognized when, in 1981, it looked as though financial problems would force the agency to close; at this there were worldwide expressions of dismay. At that time 150 newspapers in 60 countries were taking its service. Bourne's history of the agency's growth and service includes reprints of several of the original articles, with introductions, to give the reader a taste of what Gemini offered. The "knife-edge" in the book's title refers to the agency's precarious financial condition for most of its existence. Recent new financial arrangements have given it a more assured stability.

—PJD

Burdick, John. *Looking for God in Brazil: The Progressive Catholic Church in Urban Brazil's Religious Arena.* Berkeley/Los Angeles/London: University of California Press, 1993 (paperback edition 1996). Pp. xii, 280. ISBN 0 520 20503 0 (pb.) \$14.95 (£11.95).

This is an ethnographic study of Christian Base Communities (*comunidade de base* or *comunidade eclesial de base* [CEB]) carried out in 1987 to 1989, in São Jorge, "a settlement of about eight thousand people, wedged in a valley in the foothills of the Serra dos Marcondes, at the northern rim of the great, flat drainage basin known as the Baixada Fluminense, twenty miles north of metropolitan Rio de Janeiro." It is a semirural district of the municipality of Duque de Caxias. "At about a million inhabitants, Duque de Caxias is currently the largest suburb of Rio de Janeiro" (pp. 10-11).

While the author is generally sympathetic to the Catholic CEB movement, his research indicates that its social and political impact on Brazil, and possibly its religious impact as well, have been overrated. Numerically, other religious movements, not related to the Catholic Church, such as the pentecostals (*crentes*) and the Afro-Brazilian religion (*umbanda*) have "at least two, and possibly as much as three or four" times the number of followers as the *comunidades* in the country as a whole (pg. 4). CEBs have been valuable as "an umbrella for a variety of struggles for social justice..." but "...a growing number of observers have noted that other,

less socially activist tendencies are often present in the *comunidades*, even those with long histories of influence by progressive clergy and pastoral agents" (pg. 5).

Burdick, an assistant professor of anthropology at Syracuse University, aims to explore several questions related to the "paradox" of the CEB movement's relative lack of success: "Why is the People's Church less popular than its rivals? Why are the CEBs losing the battle for souls? What do pentecostalism and *umbanda* signify and offer to Brazil's masses that the People's Church does not?" (pg. 5).

The religious life of Brazil is complex, and the author tries to reveal some of its complexity in São Jorge by building a "kind of polyphony" through eliciting life stories which will explore "the different meanings religion has for different clusters of adepts" (pg. 10).

The ninety or so adults who are active in the São Jorge CEB—out of about 3,500 adults in the town—manifest a degree of exclusivism or elitism which seems counter-productive to influencing others in the community. They are notably disinclined to ecumenical contacts, and are even critical of religiously active Catholics who do not happen to belong to the *comunidade*. Some members refer disparagingly to the latter group as "host-eaters," in reference to their allegedly non-socially-involved interpretation of their religion, even though the local CEB, itself, manifests a "relative political quiescence," compared to CEBs in other parts of Brazil and even of the same diocese (pg. 13).

The development of the CEB as the central core group of the Catholic parish may actually have had a negative influence on Catholic life in the town. Burdick describes trends in Catholic and pentecostal development as follows:

...over the course of a decade, while the number of leaders of São Jorge's central Catholic congregation has probably doubled, the number of its nonleading participants has fallen off dramatically. In contrast, the Assembly of God church has continued in the 1980s to grow at a rate of about fourteen new converts per year. (pg. 14)

The author advances several reasons for these trends, based on his study of the town: The CEB has reinforced an institutional class differentiation similar to that of earlier forms of Brazilian Catholicism, "while pentecostalism tends to accommodate a broader sociomaterial range of workers." Married women dislike the "atmosphere of gossip" allegedly nurtured in the Catholic parish, and so they turn to the more supportive atmosphere of the pentecostals and *umbanda*. Pentecostalism permits youths to break more clearly with the past and to develop "less-pressured social networks" better suited to working out problems arising from urban pressures and "heightened expectations for consumption and sexuality." Few blacks are involved in the CEB because it "has failed to forge an effective counterdiscourse to racism," such as that provided by *umbanda* and pentecostalism "through the inversions made possible by their peculiar kind of spirit possession" (pg. 15).

Clearly, this study raises issues in the dynamics of

participatory communication which should be recognized and confronted by the leadership of Brazilian CEBs, as well as those involved in similar parish and community development work in other countries. —WEB

Cagle, Van M. *Reconstructing Pop/Subculture: Art, Rock, and Andy Warhol*. Thousand Oaks/London/New Delhi: Sage, 1995. Pp. viii, 240. ISBN 0 8039 5743 2 (hb.) \$46.00; 0 8039 5744 0 (pb.) \$22.95.

Reconstructing Pop/Subculture is a cultural studies view of the evolution of pop culture in the United States and Britain from the early 1960s into the early 1970s. It focuses on two major figures of the movement: Andy Warhol, especially at the beginning of the period, and David Bowie, at its end. Much of what they produced was

..amusing on the surface yet, underneath, decidedly (and dead) serious. ..Both artists selected and used 'raw materials' from a variety of popular sources, and in so doing, they transformed the contextual meanings commonly associated with those sources. Specifically, Warhol's pop art projects..'raided' the world of consumer culture (Coke bottles, Brillo boxes), thereby provoking critical debates that focused on the *reasons* we should (or should not) contemplate the aesthetics of popular commercial objects. Likewise, many of Warhol's films translated the boredom of everyday life (sleeping, getting a haircut) into something worthy of our critical observation.

In a comparable manner, David Bowie altered the very nature of rock and roll representation in the early 1970s by swirling together certain aesthetic premises from Warhol's Factory 'underground' with lessons he had learned from Antonin Artaud and Lindsay Kemp. (pg. 3)

The two saw "taken-for-granted situations," such as lectures and interviews, as occasions "through which the chaotic aesthetics of pop (as art and as lifestyle) could receive an inordinate amount of public attention through mass media" (*ibid.*). They used the mass media blatantly "as a channel for expressing their most 'insidious,' and subsequently, their most lethal, artistic ideas and arguments." The media became their "canvas," one which had to be watched closely by those "with it" enough to understand (pg. 4).

Any attempt to analyze this period of pop culture's evolution faces the ambiguities of the postmodernism whose early stages it represented. This book approaches the period from various perspectives. It "provides a series of integrated case studies that examine the interactional foundations that gave rise to the genre of glitter rock" (pg. 15). It focuses on "the ways that a number of genres (leading up to and through) glitter were actually composed," then on "the ways that these genres came to be represented..." (*ibid.*). It also relates some of the tensions and confrontations among the styles and factions which emerged (pg. 16). "Finally, the

book can be read... as a way in which cultural studies provides theoretical configurations and avenues for the interrogation of already interrogative cultural practices" (*ibid.*).

The later chapters consider "glitter rock," the extreme development, by David Bowie and others, of trends begun or encouraged by Warhol. But, "...even though glitter rock performers lifted elements from the Warholian underground, they also precisely rearticulated the essence of these elements" (pp. 97-98).

In the process, the "subculture" came to be "transmitted by way of a mass-mediated and highly commercial format" (pg. 98). Cagle has to conclude that, "...even though glitter rock attempted to remain incoherent, this quality did not provide complete insurance against commercial incorporation" (pg. 222). Like punk rock, in a slightly later period, this movement which so radically denounced and undermined traditional values came to be coopted by an all-devouring capitalist consumerism, and turned into just another commodity for sale. —WEB

Dholakia, Ruby Roy, Norbert Mundorf, and Nikhilesh Dholakia (eds.). *New Infotainment Technologies in the Home: Demand-Side Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, 1996. Pp. viii, 291. ISBN 0 8058 1626 7 (hb.) \$59.95 (Special Prepaid Price \$27.50).

The theme of *New Infotainment Technologies in the Home* is that there is "a convergence of the information and entertainment businesses to create a new infotainment industry" (pg. vii). That was the theme, too, of the 1993 colloquium, "New Information Technologies: Panacea or Peril?" at which the papers collected here were delivered.

The editors say much has changed since the colloquium. The growth of Internet and World Wide Web have been "phenomenal" and "will fundamentally alter the ways in which we design, deliver and consume infotainment goods and services" (pg. vii). Although the book does not deal with the Internet, "many of the conceptual and analytical frameworks presented here are clearly applicable broadly to all information technologies" (*ibid.*).

"Demand-side" influences on development of the industry are stressed because they "will determine whether the supply-side pressures will be received with welcome arms and open pocket books or met with yawning indifference and even direct hostility from the consumer" (*ibid.*).

In their introductory chapter, "Bringing Infotainment Home: Challenge and Choices," the editors discuss some changes beginning to appear in the industry in the early 1990s, such as the 500-channel cable system, the supply of information technologies to households, and interactive, broadband, multimedia technologies (pp. 1-4). They then address some of the challenges. Many of the optimistic predictions about imminent developments are based on little more than conjecture, speculations, "and probably a great degree of 'hype'..." (pg. 4).

Mats Samuelsson cautions that sales hype will not bridge all the pitfalls which can reduce the pace of information

technologies' adoption in homes. The equipment must meet felt needs. Cable TV was adopted only gradually, penetrating 60% of U.S. homes after 20 years of effort. Easy-to-understand video games were quickly accepted, as were compact disks and answering machines. Personal computers gathered dust because sales stressed technology without clearly useful applications in the home. Videotex was too slow and not valuable enough for wide usage. (pg. 25).

The book is divided into three parts: managerial perspectives, user perspectives, and policy perspectives—discussing factors determining choices by producers, consumers, and regulators, respectively.

John Carey and Martin Elton consider challenges and alternatives in forecasting demand for new consumer services (pp. 35-57). Strategies for broadband services are discussed by Paul M. Orme (pp. 59-74). Movies-on-Demand are the topic of Ruby Roy Dholakia (pp. 75-88).

Jennings Bryant and Curtis Love show, from the user's perspective how entertainment drives new information technology (pp. 91-114). Gregory W. Cermak sketches an approach to mapping entertainment alternatives (pp. 115-134). Carol Felker Kaufman and Paul M. Lane address the growing nexus between time and technology (pp. 135-156). Norbert Mundorf and Stuart Westin outline some of the contributing factors to the adoption of information technology (pp. 157-172). A. Fuat Firat considers literacy in the age of new information technologies (pp. 173-193).

In part three, from the policy perspective, James J. Malachowski discusses regulation in relation to telecommunications policy and economic development (pp. 197-210). William H. Dutton presents some lessons from U.S. innovations in electronic service delivery in the public sector (pp. 211-237). Charles Steinfield considers the creation of an electronic information services marketplace in the United States (pp. 239-253). Finally, John C. Thomas, looks at the long-term social implications of new information technology (pp. 255-275). He says that, while there are both opportunities and dangers in new technology, he feels "that greater communication will result in more good in the world" because "people are basically more good than evil," but success will require cooperation. (pp. 273-274). —WEB

Dordick, Herbert S., and Georgette Wang. *The Information Society: A Retrospective View.* Newbury Park/London/New Delhi: Sage, 1993. Pp. xi, 168. ISBN 0 8039 4186 2 (hb.); 0 8039 4187 0 (pb.) \$18.50.

Scholars and others have been predicting the emergence of an "information society" for thirty years or more. In the view of the most sanguine the information society would replace industrial society—heralding an Information Revolution which would take the place of the Industrial Revolution.

The authors ask whether, in retrospect, this is in fact happening and, if so, to what extent. They are looking for more than an historical overview, but preface their search by carefully defining "informatization"—on three dimensions:

infrastructure, economy and "social"—and by limiting their study to 19 countries—distributed among high-, middle- and low-income, according to their Gross Domestic Product (pg. viii).

The definition is based on certain statistical indicators. The degree of informatization of infrastructure is measured: telephone main lines per 100 population, television sets per 1,000 population, newspaper circulation per 1,000 population, and "amount of data terminal equipment on the public telephone and telex networks." Economic informatization is measured by the "percentage of information workers in the nation's work force," "contribution of information sector to GNP/GDP," and its contribution to industrial productivity. The two "social parameters are: rate of literacy [and] percentage of nation's school age population attending tertiary schools" (pg. 60).

By these criteria, "Japan and the United States are considered forerunners in the race toward informatization" (pg. 109). But, "disparities among nations were very noticeable in all of the measures utilized in this work... The information infrastructures in the low-income nations are inadequate and unevenly distributed" (pg. 126).

However, the statistics do not tell the full story. The authors say that "information technologies, including telecommunications, are permissive technologies" (pg. 114). An accurate evaluation of the behavioral changes needed to use the technologies constructively requires more "solid theories of learning" than are currently available (*ibid.*).

The determinists have erred when communication messages were thought to have the effect of a hypodermic needle; they erred when development communication was treated as panacea to problems in Third World nations; and we believe they are wrong today when information technologies are portrayed as the panacea for equitable world economic growth. (pg. 131)

—WEB

Dozier, David M., Larissa A. Grunig and James E. Grunig. *Manager's Guide to Excellence in Public Relations and Communication Management.* Mahwah, NJ/Hove, UK: Lawrence Erlbaum Associates, 1995. Pp. xii, 258. ISBN 0 8058 1809 X (hb.) \$59.95; 0 8058 1810 3 (pb.) \$34.50.

"This book reports the findings of a \$400,000, three-nation study of public relations and communication management sponsored by the International Association of Business Communicators (IABC) Research Foundation" (pg. vii). The study was based on responses to questionnaires by "top communicators, their bosses, and a sampling of employees in 321 organizations in Canada, the United Kingdom, and the United States," in 1990-1991, and case studies in 24 of those organizations, in 1994 (pg. 3).

One task of the study was to establish the key characteristics of communication excellence, as distinct from the "less-than-excellent programs." Communication excellence is conceived of as three spheres: an inner core,

consisting of the "knowledge base of the communication department," an intermediate sphere of "shared expectations of top communicators and senior managers about the function and role of communication," and an outer sphere consisting of the organization's culture, which "provides the larger context that either nurtures or impedes communication excellence" (pg. viii; cf., pg. 10ff.). The authors say that the principles of communication excellence are basically the same for all organizations, large or small, profit or non-profit, governmental or non-governmental.

Parts I, II, and III of the book elaborate on the knowledge base, shared expectations, and the character or culture of organizations. The three chapters of Part IV examine "how communicators put excellence to work managing communication programs" (pg. 193). The final chapter sums up the value of communication excellence to an organization by showing how it affects the "bottom line in a number of direct and indirect ways" (pg. 235). The "bottom line" varies with the kind of organization. It may be stated in monetary terms, but it also may emphasize lives saved or other measures of value.

—WEB

Featherstone, Mike, and Roger Burrows (eds.). *Cyberspace, Cyborgs, Cyberpunk: Cultures of Technological Embodiment.* London/Thousand Oaks/New Delhi: Sage, 1995. Pp. 280. ISBN 0 7619 5084 2; 0 7619 5085 0 (pb.) \$26.95.

Commenting on the postmodernist ridicule of modernist optimism about progress and the sense that "something completely new could be just around the corner," the editors charge that "at its most extreme, this postmodern sensibility leads to a *fin de millénium* pessimism, with the assumption that there are no new moves in the game and that we are confronted by a future which 'has already happened.'" But they see new developments in the three "cybers," in the book's title, as a breakdown of the postmodernist paradigm and a revival of "utopian impulses, coupled with the sense that we are on the edge of moving into a reconfigured world which bears little relation to our previous speculations." (pg. 1). We are, in short, possibly moving into an exciting post-postmodern "cyberworld" of exploration and adventure.

The "cy-" words all are derived from the term "cybernetics," said to have been coined in 1948, "to describe a new science which united communications theory and control theory," and which was originally intended to comprehend all intelligence, human as well as machine, by reducing it "to the common denominator of control and communication" (pg. 2).

This effort has had many subsequent ramifications, ranging from science to science fiction, and has raised questions in philosophy—metaphysical as well as epistemological. The contributors start with the idea of the cyborg, "a self-regulating human-machine system," which encapsulates many of the questions relating to cybernetic developments and speculations.

The "cyborgs" of the title are, within limits, the most

real of the three "cybers" in the title, if we restrict them to technological body modifications—prosthetics—and the many human-machine interactions which are becoming so commonplace. Cyberspace is real, too, in the "ragged... world spanning electronic tangle" which is the Internet (pg. 5, quoting B. Sterling). Virtual reality can be added to Internet, expanding cyberspace through artificial sensual stimuli. Virtual reality actually trembles on the brink between the real and the unreal, but "cyberpunk" goes over the edge, bringing together all the realities, possibilities and speculations in the free-wheeling zone of science fiction.

The contributors are from across the English-speaking world, from Scotland and England across Canada and the United States, to New Zealand and Australia. Their topics include the whole range of issues which the three "cybers" raise. These include moral issues which have been given new dimensions by the new technologies.

For example, Kevin Robins cites the moral realities which might be obscured in cyberspace. He says that "we must demythologize virtual culture if we are to assess the serious implications it has for our personal and collective lives" (pg. 153).

Similarly, Samantha Holland sees a link between cybernetics and paranoia expressed in the cyborg film, in which the individual is threatened by forces beyond his or her power to control, especially in the areas of sexuality and gender (pp. 170-171).

Vivian Sobchack attacks Baudrillard's alleged misinterpretation of a novel which, to him is techno-pornographic—picturing a "techno-body as 'under the gleaming sign of a sexuality that is without referentiality and without limits'" (pg. 212)—a misinterpretation which ignores the author's explicit statement, in his introduction, that "the novel 'is a warning against the brutal, erotic and overlit realm that beckons more and more persuasively to us from the margins of the technological landscape'" (pg. 206, quoting J. G. Ballard in *Crash* [1985]). Sobchack thinks Baudrillard should undergo

...a little pain—maybe a lot—to bring him to his senses. Pain would remind him that he doesn't just *have* a body, but that he *is* his body, and that it is in this material fact that 'affect' and anything we might call a 'moral stance' is grounded. ...If we don't keep this subjective kind of bodily sense in mind as we negotiate our techno-culture, we may very well objectify ourselves to death" (pg. 213).

—WEB

Gawiser, Sheldon R., and G. Evans Witt. *A Journalist's Guide to Public Opinion Polls.* Westport, CT/London: Praeger, 1994. Pp. xiv, 171. ISBN 0 275 94722 X (hb.) \$49.95; 0 275 94989 3 (pb.) \$14.95.

Polls are an increasingly significant factor in elections around the world, but especially in the United States, where they sometimes seem to make the real election anticlimactic. They also can change the results. A concession of defeat by a national candidate, based on overwhelmingly negative

polls, while local or regional candidates of the same party are still struggling to win by narrow margins as voters continue to cast ballots in their areas could cause them to lose as voters jump to what seems to be the winning side. Walter R. Mears says in the Foreword that the polls

...do not only reflect what people think about candidates, issues, problems and products. The polls also condition that thinking, by telling people what everybody else presumably thinks, by setting expectations for political candidates, and in other ways... (pg. x)

The public gets almost all its information about poll results from journalists, so every political journalist should be well informed about exactly what polls are and what they mean. Unfortunately, many are not well informed. Mears describes how the book aims to remedy that:

For most of us, including many of us who write about polls, the inside of a poll is a maze. Getting in is easy. This book is a guide to getting out, too, and reporting on the whole process, responsibly and readably. (pg. xi)

According to the authors, the polls, the media and the public form the three sides of a triangle: the polls measure what the public thinks, the media reports the polls' results, and the public sees or hears the media's reports (pg. 3).

A brief history of polls sets the stage, including the disaster which befell the *Literary Digest*, in 1936, when it used a massive, but poorly structured poll to predict that Alf Landon would defeat Franklin D. Roosevelt in the American presidential election. The three professional polling organizations all had correctly picked Roosevelt. The *Literary Digest's* 19% error was the "last straw" which caused it to go out of business (pp. 18-19).

The growth of television networks led to more direct polling by news media, and projections of election results from early returns became a finely tuned art. Computers developed it further, and polling became a major factor in "precision journalism" (pp. 27-28).

Chapter five outlines the status of polling today. Subsequent chapters ask the critical questions everyone should ask about poll results: Who did it? and Who sponsored it? The mechanics of polling—sampling, questions, timing, sampling error, other sources of error—are given their own chapters. Pseudo-polls and "SLOPS" —Self-selected Listener-Oriented Public opinion Surveys—are condemned for their complete lack of reliability. Reporting of polls is discussed in detail, including the vital need to keep the numbers in context (pp. 111-118). The special characteristics of political surveys, exit polls and projections are described (pp. 119-143). The final chapter suggests what might happen in the future, as technology makes more and more poll information and statistical projections instantly available to journalists who must evaluate them before reporting their results.

Appendix A gives "The World's Shortest Course in Statistics," including probability, sampling, and the trap of attri-

buting causal significance which is not justified by the data.
—WEB

Groen, Janny, Eefke Smit, and Juurd Eijvoogel (eds.). *The Discipline of Curiosity: Science in the World*. Amsterdam/London/Paris/New York/Tokyo: Elsevier Science Publishers, 1990. Pp. vi, 156. ISBN 0 444 88861 6 (pb.) n.p.

Opinion leaders from around the world were interviewed by the editors and others, and asked to give their opinions about the changing role of science in society. The fifteen influential men (no women), whose views appear in this book, represent political, business, communication and social roles. Three are based in Britain, three in the United States, two each in the Netherlands and Japan, and one each in Nigeria, Spain, Germany, Belgium and Sweden.

Federico Mayor Zaragoza, Secretary General of UNESCO and a biochemist, feels that UNESCO's role is as much to promote science as it is the humanities. Since decision-makers do not, for the most part, understand the language of science, scientists must reach out to them and they must reach out to scientists to develop mutual understanding and collaboration in problem-solving (pp. 31-32).

David Halberstam, American journalist and author, stressed education as the driving force of economic development. In his view, the Japanese have been economically successful because of their educational stress on high science and on investment in research and development. "In this century economic power will come from the maximization of the human intellect" (pg. 10).

Communication analyst Tudor Oltean, a Romanian now working in the Netherlands, discussed science communication in Eastern Europe in the terminal days of Communist control, noting that ideology requires an information monopoly, including a ban on publishing "real news." Controls give rise to a "black market of information," not only political information but also science information (pg. 102). "The history of communism proves that it is hard to direct science in an ideological mould" (pg. 103). He feels there is neither "too much information" nor excessive cross-border information flow—at least not of scientific information. What is needed, and what databases can provide, is a means to select precisely the information needed from the vast array available (pg. 105).

Shigeo Minowa, a professor of Kanagawa University and formerly Head of Scientific Information Resources for the United Nations University, in Tokyo, feels that "the problem of 'science beyond control' is bigger in Japan than anywhere else" (pg. 137). That is because Japanese scientists work without "religious, ideological or philosophical constraints" and, consequently, "...do not look at the social implications of their work" (*ibid.*). Minowa feels that Japanese remain internally traditional and communicate poorly with the rest of the world. At the same time, they have a naive belief that science will solve all problems, without sufficient regard for the human values which may be destroyed by certain scientific advances (pg. 139).
—WEB

Groombridge, Brian, and Jocelyn Hay (eds.). *The Price of Choice: Public service broadcasting in a competitive European market place*. London/ Paris/ Rome: John Libbey, 1995. Pp. v, 154. ISBN 0-86196-477-2 (pb.). £16.00/US\$26.

The Price of Choice summarizes the proceedings of the second Voice of the Listener and Viewer international conference on the future of public service broadcasting, held in 1994. Many notable authorities on broadcasting addressed the conference, which drew nearly a hundred participants from twenty countries. With the focus on European broadcasting, the central question in all the discussions was: how well will public broadcasting fare in the new era of commercially funded media whose primary aim is profit?

Many speakers emphasized the importance of public service broadcasting in producing quality programs that sustain and develop cultural and democratic life and national identity and values. That kind of programming is now under threat, as the market expands with a greatly increased number of channels whose reach crosses national frontiers with programs geared primarily to returning profits to their owners. In this environment, governments are tempted to question the need for continued funding of public broadcasting, given the variety of choices now available with fifty or more channels. The variety of channels does not, of course, guarantee innovative, quality programs which public broadcasting provides, on subjects which go well beyond the sameness and triviality of much commercial broadcasting.

The conference expressed concern at the growth of monopoly and cross-media ownership which is now a feature of the media world, and participants wondered how long it would be before this trend would reduce access to a plurality of views. Threading through the discussions was the theme of citizens' rights in the new European broadcasting order: how were the viewers' and listeners' voices to be heard in the deliberations on policy for the future of both public service and commercial broadcasting in Europe? The conference sent a resolution to the European Union and the Council of Europe setting out these concerns, and calling for

a European Convention which would commit each signatory state to safeguarding independent public service broadcasting organizations charged with the civic responsibilities of impartially informing citizens on matters of current political and industrial interest, developing their national culture, identity and values, and educating them to think for themselves. (pg. 147)

—PJD

Harris, Linda M. (ed.). *Health and the New Media: Technologies Transforming Personal & Public Health*. Mahwah, NJ: Lawrence Erlbaum Associates, 1995. Pp. xv, 262. ISBN 0 8058 1569 4 (hb.) \$59.95; 0 8058 1954 1 (pb.) \$24.50.

Interactive multimedia has vast potential for use in health care. This book is a result of a U.S. government-sponsored conference on that potential, held in Washington, DC, in

1992. The purpose of the conference was "to bring health policy makers and new media researchers together 'to promote informed design, production, and use of multimedia for the promotion of health and prevention of disease'" (pg. xi).

In her overview chapter, Linda Harris notes that more technology will not necessarily bring about better health care. However, proper understanding and use of the technology does offer great potential (pg. 3). She goes on to suggest "a framework for evaluating health care systems and their new media tools" (*ibid.*).

The evaluation framework consists of the primary health goal, health care system objectives—access, quality and cost management, and characteristics of new media tools—interactive, seamlessly connected and user driven. Each chapter in this book provides a unique perspective on the goal, the benchmarks for success, and new tools to meet these objectives. (pg. 4)

The first and last chapters are critical, questioning whether the information infrastructures proposed will really help improve health care in the ways envisioned by their advocates (pg. 4).

Barry Zallen discusses the role of communications in developing managed health care systems. Interactivity allows many health care situations to be dealt with in the home. It also facilitates the accumulation of medical history information which is instantly available to the physician when needed (pp. 21-43).

Donald M. Vickery presents the new media's potential for demand management and self-care as means to reduce medical costs. Demand management gives individuals a wider range of relevant information on which to base their own decisions whether or not to seek professional care in particular situations. Information available on a medical information system would include not only self-care information but also information about alternative forms, sites, costs, etc., of professional care, should that seem warranted (pp. 45-63).

Jane Preston outlines the potential applications of the new media to health care in remote areas (65-86).

Collaboration among doctors is addressed by G. Anthony Gorry, et al., in chapter five (pp. 87-105).

Part III (pp. 109-141) deals with questions of health information carried on the new media. Part IV (pp. 145-205) discusses changes in health education, including professional education, made possible by the new media. In Part V, "Potholes Along the Information Superhighway" (pp. 209-227), Francis Dummer Fisher asks whether all this can or will come to pass, and, even if it does, will it be available to all, or only to those able to afford it? Finally, Part VI, provides a glossary, with which to decipher the road signs along the projected superhighway to health.

—WEB

Kamalipour, Yahya R. (ed.). *The U.S. Media and the Middle East: Image and Perception* (Contributions to the Study of Mass Media and Communications Number 46). Westport, CT/London: Greenwood, 1995. Pp. xxi, 242. ISBN 0 313 29279 5 (ISSN 07324456) (hb.) \$59.95.

This collection of critical studies zeros in on a large and vulnerable target: misrepresentations of foreign persons, places, things and events by the U.S. mass media. Specifically, it discusses American media treatment of Arabs (including Palestinians), Iranians, and Turks. The authors focus exclusively on Islamic populations, rather than including Copts, Armenians, Maronites or other Christians, Bahaists, Jews or other non-Muslim groups.

In his Foreword, George Gerbner notes the increasing conglomeration and consequent standardization of the world's news sources. He notes that in the United States anti-trust laws against multiple and cross-media ownership have become ineffectual in controlling this process, with the result that one, "seamless" cultural environment is being created, wherein stereotypes and misinformation can thrive unchallenged (pp. xiv-xv).

Hamid Mowlana says that two changes are necessary to correct Western perceptions of the Middle East: Westerners must see that region in the perspective of its historical development; and the polity of Islamic countries must be altered internally to become "compatible with Islamic social and religious beliefs" (pg. 16).

Mazharul Haque tries to isolate some of the components of Middle Eastern culture—at least the regionally "universal" cultural components of religion and values—which must be understood by Westerners in order to facilitate cross-cultural communication (pp. 16-24).

After the "Introductory Perspectives" of the first three chapters (Part I), Part II gives a general perspective of the U.S. media and the Middle East in regard to Palestinian leadership, Middle Eastern women, the Intifada, American pop culture representations of Iran, and the "routine" exclusion of news about Iran from U.S. mass media. Part III focuses on U.S. media and the Gulf War. Part IV has three chapters dealing, respectively, with the Arab image in political cartoons, coverage of Arabs in *Time* and *Newsweek* magazines, and newsmagazines' coverage of Turks. Part V considers the role of motion pictures. Part VI discusses media impact and perception in the cultural encounter between Islam and the West, U.S. children's media-derived images of Middle Eastern cultures, and "American Students' Perception of Arabs in Political Cartoons."

In discussing Gulf War media coverage, Lee Wigle Artz and Mark A. Pollock note that American popular culture has long been marked by pervasive images of Arabs "limited to a few derogatory stereotypes of Arabs as double-dealing and sinister" (pg. 123). This precondition, in the authors' opinion, made it relatively easy for the American government to manipulate public opinion during the war (pp. 119-135).

Analyzing the way American pop culture represents postrevolutionary Iran, Hamid Naficy discerns certain means

by which television "produces, circulates, and naturalizes a certain limited representation of society's others." For example, it stereotypes through "a combination of condensation and displacement," a situation encouraged by lack of specialized knowledge among reporters, and it relies excessively on visualization, ignoring "invisible" factors. (pg. 75).
—WEB

Lee, Philip (ed.). *The Democratization of Communication*. Cardiff: University of Wales Press, 1995. Published on behalf of the World Association for Christian Communication. Pp. xii, 223. ISBN 0-7083-1323-X (pb.) \$26.

This book of twelve essays on the role of communication in promoting a more just and democratic world is dedicated to Michael Traber, for many years a leading figure in the World Association for Christian Communication (WACC) and a champion of the communication and educational interests of people in Third World countries. Philip Lee introduces the subject by emphasizing the importance of communication to education, in the drive to empower people for active participation in the democratic life of their communities. Such empowerment will happen only if the state maintains public service media, with guaranteed autonomy, as an integral part of political democracy, and ensures it is open to everyone. Cees Hamelink considers the constitutive dimensions of the democratic ideal, and stresses equal entitlement to communication resources as an essential for democratic practice. Arguing that today's world communication order is exclusive, inequitable, and lacking in procedures for accountability and redress, he lists five 'enemies' of the democratic ideal, and concludes that, since current powerholders resist democratization of the world communication order, local communities seeking to empower the people need to network to form a 'globalization-from-below' (pg. 34).

Majid Tehranian and Katherine Kia Tehranian offer a conceptual framework which focuses on the interactions of democratization with modernization and communication. Democratization processes are primarily 'bottom-up', modernization processes are generally 'top-down', while communication processes often mediate among and sometimes integrate the competing democratic values" (pg. 39). In his chapter, "Communication ethics as the basis for genuine democracy," Clifford Christians analyzes the legacy we have of the Enlightenment's failure to integrate freedom with the moral order, by its promotion of 'a pervasive autonomy'. Communication studies have a key role to play in bringing about such integration "by articulating a holistic view of truth in moral rather than epistemological terms" (pg. 75). Christians outlines the task ahead:

...the vision of a more democratic international order inevitably means revolutionizing our communications systems. When truth with moral significance becomes communication's defining feature, the global community has at least the basic resources for peace, solidarity,

mutual respect, and equality... For students and practitioners of communication, recovering truth as a master norm is preferable to allowing the public media to lurch along through a post-factual modernity with an empty centre, while we put our scholarly energies into their short-term predicaments (pp. 88-9).

Robert White considers the democratization of communication as "a social movement process," and argues the case for constituting the media as a public cultural sphere in which all cultural identities are represented (pp. 92-113). Kaarle Nordenstreng looks at the three key players in media-society relations: journalist (media), politician (government) and citizen (people)—and finds that the media in fact occupy not the servant's place but the master's place: "democracy is not living up to its ideals, and the media and journalists constitute a central part of the problem" (pg. 119). There needs to be a shift away from the "notion of a self-centred profession—fortress journalism—" to a positioning of the citizen as owner of the right to information (pg. 120).

Colleen Roach studies the issues which communications technology raise for women. Earlier research focused on media images of women and job-related discrimination in communications. Today's areas of concern include: women and communications technology, technology and social relations, and power relationships.

In "Traditional Communication and Democratization," Pradip N. Thomas lists the many meanings of "traditional," noting how misconceptions, particularly of a Western kind, lead to a misunderstanding of how a community communicates through its traditions. Faced with modernization, traditional forms of communication often use a pragmatism that allows for both continuity and change, and "are a gentle reminder that true cultural democracy is forged in the interplay of difference.." (pp. 153).

For George Gerbner today's struggle for democracy is on the cultural frontier, and "the cultural arms of new systems of colonisation are now centralized, conglomeratized and globalized" (pg. 155). Cultural mass-production has taken control of the socialization process away from home, school and church, and cultural policy-making is now out of democratic reach. To counter these trends he developed the Cultural Environment Movement, a great and varied coalition of organizations, whose purpose is to work for freedom, fairness, diversity and democracy in the media.

Ned Thomas is concerned with the cause of 'territorial linguistic groups' which exist within a larger nation-state, such as the Welsh in Britain and similar groups in France and Spain. He studies their communication needs and the opportunities they can exploit.

Stewart Hoover explains why relations between religion and the media 'seem universally to be problematic' (pg. 185). The problems need solutions because contemporary cultures face increasing religious diversity, especially as more people move in migrations and move closer together socially. He argues the need for religion to have access to the public arena of communications, and posits four primary categories of the terms of access: demands for presence,

consensus, plausibility and credibility.

WACC General Secretary Carlos Valle gives a resumé of the last 20 years of international debate about the imbalances between the industrialized nations and the developing countries in matters of communication, and the efforts of the MacBride Commission and its successors to address five basic problems facing Third World countries in relation to the industrialized world's global dominance of the media. He proposes several ideas for better ways of communicating, among them an insistence that communication be recognized as a human right, and that communication "be at the service of integration, dialogue and mutual respect" (pg. 213).—PJD

Moragas Spà, Miquel de, and Carmelo Garitaonandía (eds.). *Decentralization in the Global Era: Television in the Regions, Nationalities and Small Countries of the European Union*. London/Paris/Rome: John Libbey, 1995. Pp. vi, 234. ISBN 0 86196 475 6 (pb.) £18.00, \$29.00.

The chapters in this book survey regional television in the twelve nation-states of the European Union, stressing that while progressive political unification of Western Europe is attracting major attention, much localized differentiation also is taking place. The history of centralization of media in each country has shaped the television of the various regions according to patterns common to that country, but in many places differentiation remains vigorous (pg. 2).

The reasons for regionalized programming often differ widely. They include economic and commercial factors, language differences, geography, cultural and historical differences, and political considerations—or various mixtures of these and other influences (pp. 5-6).

Chapter titles characterize the media situation in each country. Luxembourg's ends in a question mark: Is it "Local, regional, national or transnational?" In fact, a powerful media company, the Compagnie Luxembourgeoise de Télédiffusion (CLT) spread out from that country to establish itself in several other countries. "Ironically however, this Luxembourgian group has always attached little importance to the Grand Duchy of Luxembourg" (pg. 136).

France is said to have an "Identity crisis of regional television and expansion of local television" (pg. 43). Germany is marked by "The initiative in the hands of the Länder" (pg. 65). In Greece there is "Unbridled deregulation" (pg.83). Ireland's attention is shifting "From nation building to economic priorities" (pg. 93). Italy has "Regional television without a regional vocation" (pg. 117). The Netherlands is "In search of a niche for regional television" (pg. 139). Portugal makes insularity "the basis of regional television" (pg. 161). Spain must face "The contradictions of the autonomous model" (pg. 173). The United Kingdom is characterized by "More centralization than meets the eye" (pg. 201). Belgian social realities have forced a "Federalization of broadcasting and community television" (pg. 21).

Denmark has gone through various experimental phases, which now range "From community radio to regional television" (pg. 35). Denmark's situation is complicated by

having most of its territory, but very little of its population, in two farflung places: Greenland and the Faroe Islands. Most programming in Greenland is in Danish, as is all programming in the Faroe Islands, where a nationalistic language movement for Faroese appears to have become eclipsed since the introduction of all-Danish television in 1979 (pg. 40).
—WEB

Paletz, David L. (ed.). *Political Communication Research: Approaches, Studies, and Assessments, Volume II.* Norwood, NJ: Ablex, 1996. Pp. xviii, 293. ISBN 1 56750 163 X (hb.) \$49.50; 1 56750 164 8 (pb.).

The second edition of a book which first appeared in 1987 is called "Volume II" because only one piece from "Volume I," "The Media-Policy Connection: Ecologies of News," by Harvey Molotch, et al. (pp. 41-61), has not been totally rewritten. Of the other thirteen chapters, three are by authors included in the first edition, but have been entirely revised and updated. The remainder are by authors not included in the earlier edition, according to the editor (pg. xv).

The book's three sections deal, respectively, with "Approaches"—systems theory, structural/ideological, public policy, legal, and social psychological—"Studies"—Finnish elections, mainstreaming in Turkey, women in Turkish election advertising, mass media in Malaysian elections, and U.S. television's framing of the 1990 Nicaraguan elections—and "Assessments"—media agenda setting and elections, audience research and science, Latin American technology and development, and international information.

The chapter, "Ecologies of News," by Molotch, Protes and Gordon, the only one repeated unchanged from the earlier edition, focusses on how extrinsic factors may influence the publication and/or impact of journalistic investigations. The authors say that,

One of the most striking impressions we are left with after our examination of the Watergate and other instances of the press-policy connection is the fragility of media projects, given the ongoing dependence of journalists on symbiotic actions from prominent actors in other realms... Even if brought to fruition through competent publication, there may be no impact, no change. (pg. 58)

On the other hand, even investigations which are aborted and never published can have a "latent life," which continues to live "in the gossip mills of journalists, politicians, or academics," to influence future stories and other actions (pg. 48).

Josep Rota and Clemencia Rodriguez discuss the ways in which information technology, interacting with culture, has influenced national development in Latin America. The situation is complex, affected by historical factors, economic organizations which differ from those of industrialized countries, dependency, lack of adequate national policies, and discontinuities between culture and technology. The

authors conclude that for the majority of Latin Americans,

technology has not become part of their direct experience.. On the contrary, we believe that the incongruous ways in which Latin American societies adopt modern technologies is widening the gap that excludes large majorities from participating in national decision-making processes. (pg. 250)
—WEB

Reseaux: The French Journal of Communication. Vol. 4, No. 1, Spring 1996. Luton, UK: John Libbey Media/ University of Luton Press. ISSN 0969-9864. Institutional Subscriptions: Surface: £45.00/year (North America: \$90.00); Air: £50.00 (\$100.00). Individual Subscriptions: Surface: £25.00 (North America: \$45.00); Air: £30.00 (\$54.00).

According to its own self-description:

Reseaux: The French Journal of Communication is the English language expression of *Réseaux*, the well-established French journal of the same name published by the Paris-based Centre National d'Etudes des Télécommunications.

Launched in 1993, this journal appears as two numbers per annum and is devoted to the publication of carefully selected and translated texts taken from the original title. The balance of chapters drawn from recent issues of the parent journal is aimed at providing a non-francophone audience with some of the best French thinking on all aspects of communications (pg. 1)

This issue contains articles by Guy Lochard and Jean-Claude Soulages on "The Imaginary in Televised Talk," by Tamar Liebes on "Notes on the struggle to define involvement in television viewing," by Michel de Fornel on "The Interactional Frame of Videophonic Exchange," by Dominique Mehl on "The television of intimacy," by Dominique Pasquier on "'Dear Hélène': Social uses of College series," by Dominique Cardon on "'Dear Menie': Emotions and engagement of Menie Grégoire's listeners," by Brigitte Le Grignou and Eric Neveu on "Transmitting Reception: How political television programmes anticipate audience reaction," and by Geneviève Jacquinot, "Television: A cognitive terminal."

An introductory editorial, by Dominique Pasquier, notes how French research on television in recent years

has gone a long way towards bridging the gap between French research and that carried out in the English-speaking world—a gap that can be ascribed both to the structure of France's academic environment and to the particular history of television in French culture. (pg. 5)
—WEB