Incidental Paper

Cybercommunities and Cybercommerce: Can We Learn to Cope

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Program on Information Resources Policy

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Note

This paper was originally presented at a symposium on The Information Revolution: Global Change and the New Social Order, held at the College of Business Administration of the University of Notre Dame, on September 21, 1995.
At a meeting of lawyers in New York City on "Business and Legal Issues on the Internet and On-line Services," Kent Stucky, General Counsel of CompuServe, announced that he had invented two phrases appropriate to this new electronic environment. They are \textit{vija-de} and \textit{prestalgia}. The first, of course the opposite of \textit{déjà-vu}, is the feeling that, Wow, I've never been here before, isn't this new and interesting? \textit{Prestalgia}, the opposite of nostalgia, is the longing to live in the future now.

A good place to start this journey here at Notre Dame, with its deeply planted religious roots, is to look at religion in what I prefer to call "the Networld" rather than Cyberspace. Cyberspace is where you are when you are communicating through a computer, but the Networld is a universe of cyberspaces or new frontiers where netizens are homesteading, building fences, and establishing new on-line social environments—what I call "cyber-communities." Indeed, netizens who populate these cybercommunities are making the rules of the information superhighways and establishing a new area of netlaw to apply in their own cyberspaces.

Umberto Eco has defined the differences in religions in the Networld. The Macintosh world, he says, is "cheerful, friendly, conciliatory—here everyone has a right to salvation"—in other words, Catholic.\(^1\) The DOS world, he says, is really Protestant, even Calvinistic: "To make the system work you need to interpret it yourself." The Windows world is more Anglican: "big ceremonies in the cathedral but with the possibility of returning to DOS to fiddle with things." People like to carry into the Networld metaphors with which they are familiar. Indeed, we like to hope that we won't have to change very much to live there.

Politics has also come to the Networld. Vice President Gore has become the champion of computer networking both nationally and globally, and he held the first on-line press conference in 1993, whereupon \textit{The New York Times} conferred upon him the title "First Citizen in Cyberspace." Jock Gill, the White House computer guru who set up President Clinton's e-mail system (which responded to messages through the United States Postal Service, or what the computer cognoscenti call "snail-mail") refers to himself as "the Digital Postmaster General." Then, in early 1995, Newt Gingrich, leader of the House of Representatives, got carried away with the potential of the new technology and proposed what even he acknowledged was "a nutty idea," giving tax credits to the poor to enable them to buy laptop computers. The Library of Congress did come through with its new database,

Thomas, named for Thomas Jefferson, whose entire library became the foundation of the Library of Congress collections when its first collection was destroyed by fire in the War of 1812. Thomas makes available on-line the database, all the legislation enacted by the 103rd Congress and all the pending legislation, together with all resolutions and actions taken by the 104th Congress. Thomas was accessed a million times in its first six weeks of operation. To complete the loop, in February 1995 presidential hopeful Lamar Alexander was the first candidate to announce his availability on-line on the America Online (AOL) service. Washington insiders, asked about the new political opportunities in cyberspace, commented that it was not that they did not recognize that this was a new ballpark—they do, but they don’t like it.²

The availability of cellular telephones and laptop computers has changed the way business executives do business. These new technologies have changed our working and eating habits, even our social customs, as when dealing with secretaries on-line, rather than face to face. In fact, secretaries may become a dying breed as professionals take on more and more of their own wordprocessing and on-line communication.

The art world is also found in abundance in the Networld—from the Louvre to little-known local artists. The Louvre has its own home page. Indeed, very clear images of the new discoveries of the cave drawings were on the World Wide Web (WWW or “the Web”) shortly after they were discovered. But less well-known sources of art also are making their way onto the Web, and even those of us who thought we had no talent for art are finding that with new software like “Paintbrush” we may have talents we might have never realized without these new tools.

Entertainment is everywhere—even birthday parties on-line, avoiding the need to supply refreshments or clean up afterward. The Jack Daniels distillery, however, hopes that its 145th birthday party for founder Jack will prompt you to purchase its products for your real-world celebrations.

There are many new cyberspaces coming on-line on the Web—a new Cybertown or a virtual city on the Web—where we find an information center directing viewers to a cyberbroadcasting center, a library with cross-references to many interesting materials available on-line in other cyberspaces; an education center; of course, a business district to which entrepreneurs of all kinds are invited to set up shop; a darker side of Cybertown, where the nonconformists may hide out in the “cyberhood”; and even an electronic zoo.

More important perhaps than these graphical sites on the Web are the “cyber-communities” that have been developing over the last decade through computer-mediated text. The WELL (Whole Earth 'Lectronic Link), one of the earliest, founded in 1985 in Marin County, includes not just subscribers and participants in the Bay Area of San Francisco but also computer pioneers all over the country. They gather on-line to share their interests, their politics, their joys and sorrows as well as aspirations for the future of the Networld. Howard Rheingold, in his very interesting book *The Virtual Community,* described how these on-line communities can become very supportive, helping members who are dying of cancer, saving the lives of people stricken with heart attacks, sharing the concerns of baby boomers about their entry into the “parenting” years, and meeting people from all over the world.

The inhabitants of the WELL suffered a traumatic experience several years ago when one of their members expunged all his messages from the on-line discussion and then committed suicide. The community arose not only with remorse but also outrage that he had removed himself from on-line memory. That memory was, they alleged, a community property from which one of the group had no right to remove material that had already been entered into it.

Another such community is the LambdaMOO, a virtual-reality environment set up by Xerox Parc for professionals interested in experimenting with multimedia and interactive services. Here the participants were confronted with what they considered to be outrageous behavior on-line—one male user’s taking control of a female persona on-line and committing what was considered to be “virtual rape.” Outraged participants in the group argued at length over what should be done to the perpetrator. After much deliberation about what constituted “due process” on-line, the group decided that the accused was guilty as charged and should be “toaded.” In fairy tale terms, that means turned into a frog—in cyberspace terms, thrown out of the LambdaMOO.

Special discussion groups have been set up for women, because they have, for the most part, found this universe of predominantly young male computer-literate users quite hostile. Recently, however, polls show that women as well as minorities are coming on-line in greater and greater numbers, so that the universe of users is beginning to reflect more nearly the real world population, albeit the more affluent portion of that population. CompuServe has SIGs, or “special interest groups.”

Both Prodigy and AOL also offer specialized services for special interests only some of which can be characterized as true “cybercommunities.” However, the Web pages seem to be cultivating cult or tribal loyalty, and many Usenet groups have developed into on-line

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*Reading, Mass.: Addison-Wesley, 1993.*
communities with their own rules of behavior or “netiquette.” Newcomers are invited to read the FAQ, or “Frequently Asked Questions,” before attempting to participate in group discussion. Last, of course, all the major corporations are developing internal e-mail services and establishing their own protocols to govern their use. IBM’s “profs” system is one of the oldest, and a doctoral thesis has already explored several dozen different electronic streams active within it. Clearly, netizens like to tailor their own cyberspaces to suit their own needs and interests.

What are some of the advantages that we have come to recognize in the Networld of electronic computer-mediated communication? First and foremost is the global reach to the far corners of the earth, thus facilitating the rapidly developing global marketplace, substituting information for gold bars as the coin of the realm, as Walter Wriston, former CEO of Citicorp, early recognized. Such computer-mediated communication is readily available to anyone with the money to buy a computer, a modem, and the right software and who has the expertise to use them. The electronic environment is quite innovative, making possible interactive exchanges and, for the first time in the history of communication messages, making possible not just one-to-one or one-to-many but many people interacting with many others in the same electronic spaces.

Thus, group activity on-line is becoming the new challenge as well as opening new opportunities for experimentation. So far, it has been largely unregulated, and, although there are not many cybercops yet, they are not just sitting in the wings and watching (or lurking); those that do exist are becoming quite active. Recently, the Secret Service raided 120 sites where pedophiles were using AOL services to exchange illegal images and to solicit explicit sexual encounters with young children. This sort of raid does soothe our fears that cyberspace activities may get out of hand and reassures us that abusive behavior on-line that spills over into the real world can be curtailed through existing law enforcement mechanisms.

On-line communication is less intrusive than other mediums of exchange. Junk mail is not extensive yet, and cybercitizens have expressed outrage when “electronic junkmail” has reached their e-mail boxes.

On-line communication is more egalitarian than television or newspapers, or at least is purported to be, so opportunity beckons and business and lawyers as well as individuals are scrambling to be the first in cyberspace. Home pages are proliferating all over the Web. On the other hand, not everyone is as confident as the computer pioneers were in the mid-1980s.

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that computer-mediated communication will be democratizing, increasingly providing autonomy over information to individual users. Some fear that just the opposite will be the case. Indeed, James Beniger, writing for a conference on "public space" last spring at the Annenberg School for Communication at the University of Pennsylvania, expressed concern that the Web would be dominated by the corporate logos of well-known, well-heeled corporate enterprises much as global television advertising is dominated by multinationals.

Which scenario will play itself out in the Networld remains to be seen, but that is only one of the concerns that have come to the fore. The rapid growth of the Internet and other online services is exhausting the capabilities of all of us to keep up with the changes. The rapid development of the technology is equally daunting. A cartoon I recently ran across expressed the consternation with which many of us meet each new announcement of "progress." Windows 95, it declared, was named that because it causes us to throw our old computers out the window.

Other concerns include a real antipathy to advertising from long-time users of the Internet, a heritage of sharing of information, which, along with ease of copying made possible by the new technology, has led us to ignore the legal protection offered by the copyright laws to proprietary information. Pornographic images are cropping up, leaving us concerned about protecting our children from exposure to objectionable material as they "surf" the net. Anonymity and pseudonymity, which have been not just tolerated but encouraged in many on-line services and environments, especially the computer game rooms and virtual reality environments, can have real-world consequences injurious to innocent parties who cannot identify the culprits. Indeed, we are in a state of confusion about whose jurisdiction such abuses come under and whether we can govern cyberspaces at all.

What troubles many users is the lack of similarity between programs, the generally unfriendly user environment or incompatible user interfaces. Such incompatibility is due largely to the necessity for software designers to make their programs as different as possible in order to have something original that can be protected under the copyright law or something earth-shakingly nonobvious and new that can be protected by a patent. On the other hand, we simple-minded users want something as friendly and familiar as possible. Many of us do not like icons that make us feel like children of Egypt trying to learn hieroglyphics.

Of course, we could all throw in the towel and let Microsoft software become the industry standard. I have heard knowledgeable computer professionals admit that they would welcome such standardization. However, to bow to a hugely powerful monopoly would be

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contrary to the tradition of antitrust laws and to a dedication to the competitive market to satisfy our needs.

Somehow, we have not thought through the necessity to encourage software programmers to develop standardized building blocks that are as reliable and trustworthy as the interchangeable parts we use in our industrial machinery. If we are to rely upon artificial intelligence for our working tools and use programs that can threaten life and limb, then we will have to develop new legal tools that encourage, rather than discourage, similarity.

The new browsers for the Web are making it easier for many of us to enter the Networld comfortably and to wend our way around its various new electronic malls and Web pages. The Web on the Internet offers the opportunity to develop a true marketplace of information where competent users can insert whatever information product or advertise whatever product or service they desire. We are, therefore, on the threshold of one of the more exciting experiments in history—the development of an entirely new way of marketing, bartering, or giving away information. What we are doing is forging the infrastructure of an information economy. We have not yet untangled ourselves from the strictures of our industrial economy nor adjusted our economic thinking to the needs of information economies. The village market in the town square evolved into a larger community of independent merchants and, later, into even larger shopping malls of nationally advertised products, so that there has always been a “fair” or “agora” or place where buyers and sellers meet. Market day was when those who had something to sell and those who had something to buy gathered to exchange commodities and, at the same time, to exchange thoughts and opinions. The Web offers such a global marketplace to which any and all can contribute. Yahoo, one of the more popular indexing sites, offers information about 266 electronic malls as well as many thousands of companies that offer services on the Web.

Much of the Web looks quite familiar, filled with corporate names we recognize—IBM and Eastman Kodak are prominent. The challenge of the electronic marketplace is to attract purchasers, subscribers, or adherents to one’s merchandise, service, or political persuasion. A review of pioneering Web pages of corporate enterprises suggests that many a lure is being devised to do so. Lures often come in the form of free information in exchange for looking in on a Web page, such as the Eastman Kodak’s images, free for the taking, or Godiva’s recipes, free for downloading. In economic terms, the lure constitutes paying prospective customers for devoting time to review the offerings of the merchandiser. Since time is the one inelastic commodity in today’s electronic market, it does not seem unreasonable to provide compensation for its use.

This ploy is not unlike the practice of corporations that offer premium discount coupons for purchasing a product. It is clear that tradeoffs are being devised to accommodate the need
to attract customers in the electronic environment as well. Time Warner may have a different strategy with its innovative home page, the Pathfinder, where "hot spots" direct the user to various locations throughout the vast information resources offered by the Time Warner empire. HotWired, for example, offers all its contents free but seeks to capture an ID for each "hit," thus making it possible to "sell" subscribers to advertisers by recording which sites the subscribers find attractive.

Apprehensive academics with whom I am acquainted refuse to enter the HotWired home pages for fear of being "captured" and "sold" to advertisers. Most of us are curious enough to see what HotWired is offering on-line that we forego protection and willingly offer our e-mail addresses for verification and capture and, no doubt, future sale to others. In a more perfect world, the law of privacy might require that a statement be made up front as to the nature of the ID being captured and what use will be made of it, so that the identified person could make a knowledgeable choice about what they are giving up to obtain the information on the HotWired home pages.

Should we seek to place a legal requirement on all of those merchants who offer free information in exchange for releasing our names, addresses, and preferences that they disclose any future intended reuse of that information? Should they be required to seek our permission for reuse? Should they be required to offer a realistic and simple way of opting out of such reuse, short of being denied access to the information? Perhaps the user should be given the option of exchanging free use of the information offered or charged a price for access if the user is unwilling to have personal data disclosed to third parties. Clearly, an information service that puts its wares on-line without a charge is seeking some other manner of compensation, such as advertisers who will pay for access to their subscribers.

Some of the trends in advertising on the Internet are becoming apparent. Advertisers are either offering information as bait, such as the Classic Car site, which not only provides a listing of classic cars for sale worldwide but also announces classic car rallies and provides travel diaries, such as that of "The Classic Car in Africa." Some sites offer new classification and cross-reference services similar to the yellow pages but vastly superior.

Other service providers are beginning to serve as intermediaries in the role of critics evaluating sites or offering "knowbots," knowledge robots that can roam the hidden byways and backwoods of the NetWorld in search of just the information that meets special interests and needs. Many sites are catering to herding instincts and attempting to attract viewers to their Web pages in much the same way that readers are attracted to magazines that address special interests in print.

The more forward-looking companies with a presence on the Web seem to be searching for viable ways to charge for distributing information on-line, because no one is making much
money on the Web, except the makers of Netscape, whose stock soared on the day of its first offering, more than doubling from an offering of $28 to $75 before settling down at $58.25, over night making its CEO the newest and youngest multimillionaire.⁸

Prodigy, the first to start out with advertising on most of its pages, offended the pioneer computer literati, who had come to look upon the Internet as a very special place to call their own and where advertising was prohibited by the "acceptable use policies" put in place by government funding for research purposes. Now that commercial interests have overwhelmed the pioneers with their concerns about making a profit and their reliance upon advertising techniques to market their wares, netizens have been rising up in anger to protest the dispatch of advertising material directly into e-mail accounts. One irate user suggested that "Private businesses should exist in a global yellow pages to which one can refer as one needs. To receive any unsolicited advertising in my file would be enough for me to pitch the computer out."

Well, that may have been hyperbole for emphasis. But when two lawyers in Phoenix spammed (which is like throwing a piece of spam at a fan) the Usenet groups on the Internet with thousands of e-mail messages advertising their services to immigrants seeking green cards, the user constituency went berserk in protest.⁹ Canter and Siegel's voicemail was stuffed to overflowing. Their e-mail box "flamed" with angry responses. One clever software programmer designed a "cancelmoose," a program that can be deployed to seek out and destroy Canter and Siegel messages. Eventually, Canter and Siegel's service provider curtailed service. Apparently without success, Canter and Siegel have sought lawyers in Phoenix to represent them in filing suit against the service provider based upon First Amendment considerations.

They made enough profit out of their efforts, however, to seek yet another time to "spam" thousands of news groups earlier this year. This time, by more devious methods, they posted ads from a third party's site but with a return address to their own e-mail box. The ploy was detected early in its use, and the service provider cut off access to the Internet before too much opposition could be generated.¹⁰

Clearly, unsolicited advertising is considered a no-no by many long-time residents of the Networld. One of them suggested that receiving the Canter and Siegel ads was like having

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¹⁰Ibid.
your mailbox stuffed with thousands of letters with postage due! Clearly, the Networld differs from the real world, and real costs associated with junk e-mail may be considered unacceptable. Clearly, advertisers must be careful as they enter the Networld to try to understand its culture. Advertisers can interact with existing user groups without offending them while seeking to attract more outsiders to these sites. Here are a few suggestions found on-line:  

(i) Learn what is acceptable  
(ii) Post only to appropriate forums  
(iii) Keep messages short and snappy  
(iv) Avoid sensationalism  
(v) Create your own forum  
(vi) Interact with the on-line community  
(vii) Be creative and captivating  
(ix) Avoid deception and annoyance  

Every society has taboos. Ours now prohibits advertising tobacco and hard liquor on television. There are already twenty-two breweries and seven distilleries on the Web, so we have to ask ourselves, “Is cyberspace more like television or magazines—or so different that it requires writing new regulations for cyberspace? Should we seek to prohibit advertisers from dispatching unsolicited advertising material into our e-mail accounts? our postal boxes? our telephone voicemail?”  

There would seem to be no crying economic need for advertisers or politicians or nonprofit organizations to impose their positions upon unwilling receivers, either by telemarketing or by e-mail, if we recognize that people in their roles as citizen, contributor, or consumer have ample opportunities to seek out what is of special interest to them. Perhaps such an “option” carries with it the economic burden of providing equitable access to the electronic agora through centralized communications centers or strategically placed public computer terminals.  

There is no reason why the private sector might not be prompted to place public terminals where they can attract consumers to the electronic markets. Already there are electronic cafés, which provide sophisticated software to access electronic information services to customers sipping cappuccino or herbal tea. Such access could also be provided in beer halls, shopping centers, schools, hospitals, or wherever the computer literate population of the future might care to obtain access to the electronic marketplace. If the private sector is to be

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11 Ibid.  
12 Mstrange@Fondrola.Net.
relied upon to offer the publicly accessible terminals, the opportunity for the equivalent of redlining in real estate is apparent. The terminals will probably be installed in the more affluent neighborhoods, just as the newer interactive cable systems are being installed in affluent suburbs as a priority over poorer neighborhoods absent a requirement that all of the franchised service area be wired. The size of the World Wide Web, and its thousands, even millions, of opportunities to communicate alternatives, may not make possible a global public space into which ideas and opinions might flow. The Web is not the broadcasting environment of the 1950s, 1960s, or 1970s in the United States, where only four alternative channels were available on television and a President might commandeer them all for a visit with his constituents. Thus, we might ask what price we may be paying for the lack of “public space” if we require and achieve a relatively strong level of personal privacy and personal autonomy over information sources coming into and out of our information domains.

Another area of consternation is copyright protection for valuable information assets. Copying is so easy in the Networld that many of us think nothing of downloading an article or an image and re-posting it to our on-line discussion group. But there is an order of magnitude difference between copying something to share with two or three friends and posting it to your closest one hundred thousand correspondents on-line in a news or Listserv group. Authors and publishers are justifiably concerned. The copies are as good as the originals. Many authors and publishers hesitate to permit their writings to be incorporated into on-line services. Protection of proprietary claims is one of the most troubling areas from a legal standpoint, generating both case law in the courts and government white papers proposing to tweak the copyright law a little here and there to stem the tide of unauthorized copying. In *Playboy v. Frena*, a bulletin board operator was found to have infringed *Playboy*’s copyright despite protestations by the operator that he had no knowledge that one of the bulletin board’s subscribers had uploaded the images.\(^{13}\) In *U.S. v. LaMacchia*, on the other hand, a District Court Judge in Boston refused to find an MIT student guilty of an old statute prohibiting use of transmission lines for nefarious purposes for providing a space into which users could both upload and download copyrighted software, because Congress has not specifically found such behavior to be a crime.\(^{14}\) The National Information Infrastructure (NII) white paper recently released by the working group responsible for recommendations to facilitate the use of computerized communication recommends a change approving a criminal offense without specific intent if the value of the software transmitted is valued at $5,000 or more.\(^{15}\)

\(^{13}\)Playboy enterprises, Inc. v. Frena, 839 F. Supp. 1552 (M.D. Fla. 1993).


Here we have a conflict of positions ranging from those like John Perry Barlow, who think that we are beating a dead horse to try to modify copyright law to fit computer communication, to those long-standing copyright and patent lawyers, who defend their turf with a vengeance that defies understanding. Clearly, the law is in a state of flux, both domestically, and internationally, and it is not clear yet how the law will come out with respect to protection of information assets. Some see encryption, of all transactions, as the solution, others, digital cash, which could be used to make small purchases of information to be downloaded with a secure payments system record as the outcome. Already, however, efforts to set up a secure system for making payments on-line using MasterCard and Visa accounts has been compromised within a few weeks by a group of Frenchmen using 120 personal computers and a couple of parallel linked supercomputers. Two students at Berkeley with an interest in cryptography discovered the flaw in Netscape’s security by using much less burdensome means.

Bugs in the software are a problem that will not go away in the near future. Small glitches, like the mathematical error that Intel sought to minimize, can become quite burdensome and costly, leading to unexpected and unreliable results. The software industry must mature substantially before we, as users, will be willing to rely upon this new technology, unless we can be assured that our transactions are not being tracked, our credit cards stolen, and that the programs can deliver certifiably reliable information and systems software.

Another area that has led to much consternation on-line among users and among lawyers seeking to understand the on-line environment is the conflict between anonymity and accountability. Clearly, there has been a great deal of exchange of anonymous messages on the Internet, and according to the well-circulated cartoon from The New Yorker, “On the Internet nobody knows you are a dog.” Well, that was true when all was in text. But it is less true on the Web, where it is obvious that you are a cat if your image is featured on the White House home page. Consequently, the problem of anonymity may diminish, but it will not go away as users hasten to adorn home pages with images as well as text, audio, and video segments.

There is a long-standing heritage of anonymous political material since the issuance of the Federalist Papers as anonymous writings. Women authors have sought to hide their gender for fear that readers would not seek out a woman author. Whistle blowers may be reluctant to sound off their complaints unless their identity is protected from those who would seek retribution for disclosures about alleged wrongdoing. The Supreme Court has only

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recently, in the *McIntyre v. Ohio Election Commission* case,\(^1\) confirmed that anonymous political speech is protected by the First Amendment. However, this does not necessarily mean that all anonymous communications are also clothed with immunity from accountability. In 1976, in *Buckley v. Valeo*,\(^2\) the Supreme Court upheld a requirement that political contributions over a $100 be identified as to source. So there is sufficient room within the precedents to tailor the requirements for identification within the Networld to provide a measure of accountability without offending the First Amendment. This area is likely to be troublesome and fraught with confrontation, because many netizens consider anonymity a right and in many cybercommunities pseudonyms are a well established practice, rather than the exception.

Should we expect human behavior to be different on-line from what it is in the real world? Interestingly enough, the disappearance of face-to-face or voice-to-voice encounters seems to have peeled off a layer of civilization, and sometimes behavior on-line seems more brutal and frank and sometimes more hurtful. Cases are beginning to come into the courts in an attempt to determine where the responsibility should reside for abusive behavior of users. We have significant cultural differences concerning identification and accountability for behavior, but many of the developing cybercommunities will want to decide for themselves what kind of electronic environment they choose to navigate. So long as their behavior does not spill out into real-world impacts, there is no reason why they should not be given a certain amount of autonomy. Many cybercommunities will resist any effort of the outside world to make them conform to standards with which they do not agree, and the technology permits bypassing most controls if the user is determined to do so and willing to pay the price to reach another site or node on the global network.

Traffic in pornographic images has become a major topic of discussion in recent months, as mentioned earlier, because parents have discovered their children “surfing” the alt.sex Usenet groups where such material is easily identifiable. The Carnegie Mellon study of traffic in pornographic images has been criticized by social scientists who challenge the methodology through which the claims of large percentages of accessed files containing such images were obtained is flawed.\(^3\) Such criticism does not diminish the genuine concern that has been expressed about the availability and ease of access to such images. The Senate passed a bill\(^4\)

\(^{1}\)McIntyre v. Ohio Election Commission, (93 986 April 95) 63 U.S. LAW WEEK 4279.


prohibiting the posting of obscene images, whereas the House passed a bill\textsuperscript{21} guaranteeing more open access according to individual tastes.

The Amateur Action Bulletin Board case now going through the courts raises some important questions. The proprietors of the bulletin boards (BBS) were convicted for sending what were determined to be obscene images from California into Memphis, Tennessee, and face prison sentences. The question that may be determined on appeal is, whose standards should apply, those of the local community (deep in the Bible Belt) or those of the "virtual community" of adult subscribers to the Amateur Action Bulletin Board. Or is there a generic standard that may be applied to determine what is objectionable and no longer protected by the First Amendment? Having seen a number of the images transmitted on Amateur Action, I will not be surprised if the Supreme Court Justices, should the case reach them, may look on them as Justice Potter Stewart did other pornographic images, saying he wasn't sure he could describe obscenity but he knew it when he saw it. They may look and say, "This is obscene," thus changing the standard from local community standards to a generic norm.

Nonetheless, however the litigation and legislation are decided, information providers are scurrying around to design technical means for identifying material that users may consider objectionable, so that the users may maintain more control over their own information traffic. The real question is, "Can we protect the children?" As we all know, that which is prohibited to our children often becomes the most attractive to find, and determined young computer users will find ways around most restrictions.

I suspect that the problem is self-correcting. If college students spend too much time downloading images from the Internet, they will probably flunk their courses. Parents and professors worry about Web addiction. It does not really create a major problem, except to the afflicted, unless users playing games or exploring the virtual-reality realms use up so much of the space for traffic that they clog the information highways, restricting traffic for more important files being transferred, such as heavy traffic between hospitals and research facilities. Indeed, the Australians used this as an excuse to block many sexually explicit news groups.

Information privacy is one of the major problems confronting on-line communication. Most of us say we are concerned about it, but most of us do not know what we mean. Transaction-generated information is the most troublesome, because information is being collected about our travels, state of health, and purchases. A couple of years ago, I started purchasing copper pots for a new house I was building in Colorado. Only a few weeks had gone by before a catalog of copper pots appeared in my mail. Clearly, someone was

watching. This example is a benign one, even a useful identification of my tastes that permitted marketers to target my particular interests, but it leaves me apprehensive that I have no control over where my name, address, and transaction-generated information are sold and to whom and for what purposes. When computers first came into our lives we were worried about Big Brother, the government, looking over our shoulders and invading our private lives. Today, we are discovering that Big Brother is Big Business, which is the real "snooper" robbing us of the seclusion and privacy to which we feel we are entitled.

In order to rationalize the concerns about privacy, I have started dividing them into specialized categories, such as: seclusion (the right to avoid unwanted intrusions), secrecy (the right to avoid unwanted disclosures), autonomy (the right to control one's own information environment), confidentiality (the right to release personal information with the expectation that it will not be disclosed to third parties without our knowledge or consent). It is important that we specify what is objectionable, so that we may identify legal and technical and social means of satisfying our various concerns.

The real difficulty is the lack of parity between consumer and marketer, although many direct marketers are beginning to understand that marketing methods of protecting our privacy is good business strategy. Some are offering opportunities to opt out of selling our names to other businesses. Surprisingly, the only areas where we have expressed sufficient concern to obtain legal protection are in those of video privacy—two laws protecting us from disclosure of our viewing habits on cable television and in video rental stores. A third federal law seeks to have state legislatures provide opportunities for citizens to opt out of being included in motor vehicle records sold to businesses.

The determination not to release information without the assurance that it will not be sold, exchanged, or otherwise released without permission will, I expect, eventually become the norm, rather than the exception. Recently, an individual in the Virginia suburbs of Washington, D.C., filed suit under a Virginia statute against *U.S. News and World Report* for transferring his name and address, without his permission, to the *Smithsonian* magazine for the purpose of soliciting his subscription. For individuals to have to bear the burden of litigation is a severe deterrent to obtaining general relief for an entire population.

Citizens in the real world and netizens in the Networld are increasingly militant in claiming what they perceive to be their rights to maintain autonomy over their own information environments. Strategies include a variety of methods: (i) curtailing service by information providers where behavior contravenes standards set forth in terms of service; (ii) designing technical means so the user can filter or destroy objectionable e-mail; (iii)

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“flaming” those who fail to live up to the “netiquette” set forth for particular cybercommunities; (iv) expelling users who exhibit intolerable behavior; or (v) migrating into other cyberspaces and leaving the objectionable parties behind.

We have a long way to go to facilitate navigation around the Internet and the World Wide Web, but we are beginning to see pointers and gateways to help us locate where we want to be. The most popular locator, Yahoo, had 44,000 entries in early September. Gateways from one Web page to another are becoming common. Cross-posting from one entrepreneur to another is the name of the game. Getting as many others to point to your home page has become a must.

In summary, the bad news is that not everybody has a computer or a modem, nor are we all computer literate. Digital cash is not secure yet but promises to become so very soon. Few cyberlaws are in place, and much global confusion exists about what the law on-line is or should become. Privacy concerns have not yet been adequately addressed. But the future looks promising.

The good news is that almost everyone wants a home page, and theoretically everyone can have one. Even without one, a user can surf the Web to one’s heart’s content and every taste can be satisfied. There will be a mixture of political, social, and commercial activities on-line, just as in the real world. Fortunately, unlike the real world, cyberspaces are expandable, so cybercommunities will continue to proliferate. This is a healthy trend, unless it leaves us too divided into our various constituencies to reach consensus about mutual problems.

What does the future hold? For one thing, many questions concerning global governance of the global Networld. The controls of the network, contrary to the popular notion that the Internet is uncontrollable, are at the interconnection points and in the hands of network managers. That is where the borders of the information highways exist. As a consequence, there are many doubts about how we will govern ourselves within these boundaries, how we will interact, and, especially, how the Networld dovetails with the real world. Can national boundaries be maintained and patrolled, and can undesirable information kept out? Should these borders be controlled?

One scenario of the future describes a situation in which all of us democratically sit at our computer consoles sending and receiving “perfect” information, so that we are all tuned into the same Networld. Given such perfect information, an information marketplace, a marketplace of ideas, should function to permit consensual decisions without the intervention of governments at all. Neal Stephenson, in his fascinating but troubling science fiction novel
*Snow Crash*, describes a more sinister world where governments like the United States are so insignificant that the U.S. president is no longer recognizable as an important world figure. Instead, large commercial consortia finance their own armed agents to maintain order in physical spaces under their control, and our individual "avatars" move comfortably throughout the virtual world, interacting with one another on-line in a manner that seems to merge real and virtual worlds into a seamless Web.

Whether either or these scenarios will become the reality or another yet to be determined will arrive depends upon those of us who reside in the real world but are exploring and learning how to live in the Networld.

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**Acronyms**

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<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AOL</td>
<td>America Online</td>
</tr>
<tr>
<td>BBS</td>
<td>bulletin boards</td>
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<tr>
<td>CEO</td>
<td>chief executive officer</td>
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<tr>
<td>NII</td>
<td>National Information Infrastructure</td>
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<tr>
<td>WELL</td>
<td>Whole Earth 'Lectronic Link</td>
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<tr>
<td>WWW</td>
<td>World Wide Web, or “the Web”</td>
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