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## Free Speech and High Tech

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# FREE SPEECH AND HIGH TECH

*Francis Dummer Fisher\**

TECHNOLOGIES OF FREEDOM. By *Ithiel de Sola Pool*. Cambridge, Mass.: Harvard University Press. 1983. Pp. 299. \$20.

TELETEXT AND VIDEOTEX IN THE UNITED STATES: MARKET POTENTIAL, TECHNOLOGY, PUBLIC POLICY ISSUES. By *John Tydeman, Hubert Lipinski, Richard P. Adler, Michael Nyhan and Laurence Zwimpfer*. New York: McGraw-Hill Book Co. 1982. Pp. xii, 314. \$34.95.

As "speech" becomes increasingly electronic, how much freedom of speech will Americans have? Less and less, these two books suggest, unless American citizens learn quickly about the new communications technologies that are revolutionizing our intellectual life. We need to catch up with business interests that are already establishing for us in the new media patterns of communication that are based not on maximizing liberty but on maximizing profit. Our courts must overcome the difficulty of applying an eighteenth century first amendment to twenty-first century technology.

Indeed it is not just our freedom to an intellectual life that is at risk. For we will be using the new information and communication systems for a good bit of our social and business activities as well. Unless we are able to communicate electronically as freely as we have been able to with speech and print, we face a challenge to our liberty matched in our history only by the danger of subjection to foreign totalitarian rule in World War II.

## I. ELECTRONIC "SPEECH"

Suppose the next time you dialed a telephone you were told that the line you wanted had been disconnected, or that *all* lines to your phone had been disconnected — except for 100 or so which led to businesses that had paid the phone company for the right to get your ear. When you asked if you could please have another line to reach your teacher or your lawyer or the police, the phone company replied "No, if we added any more lines, we could not charge so much for their use. Moreover, we intend to reduce the number of companies that can talk to you just as soon as the phone company itself can get into such businesses as education, banking, and security. We are

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going to use our monopoly power as the only supplier of phone lines," the company explains, "in order to capture you as a customer for these new businesses of ours. We're going to make a lot of money and to hell with your freedom."

Outrageous? Yes. Unlikely? No, for this is exactly the system by which most cable TV companies operate today. The same company that owns the limited number of channels decides who can have access to the customer and also has a financial interest in the business done over the line.

Most Americans do not yet feel outrageously limited by cable TV because it offers us more choice than broadcast TV. Cable can offer 50 or 100 channels instead of four or five. And for general entertainment purposes that is a lot of choice. But in the new Information Age, the cables into our homes and businesses (which will increasingly be the same place) will carry two-way messages that will be used for much more than entertainment.

To find out how much more, the National Science Foundation, asked the Institute for the Future to project for ten to twenty years the usage of information that will be made available electronically through wires (videotex) or broadcast over the air as an extra feature of TV transmission (teletext). *Teletext and Videotex in the United States* may sound as though it concerns gadgetry you do not now own and have not thought of buying. But the conclusions about videotex and teletext apply in large part to the telephone, television, computer data-banks, video-recorders, indeed to all the electronic channels through which information of every kind will flow.

This is so, as the fact-filled consultants' report makes clear, because the different communication technologies are merging. Now that sound and pictures can be reduced to the same digital "bits" as numbers and letters, the same machinery will store, manipulate and transport information of whatever form. You have probably already observed that a TV screen works fine for displaying computer output, but you may not have thought of interactive cable television as really just a computer with a wire between screen and "memory" that is measured in kilometers rather than millimeters. Or that in the electronic era the publisher of a "newspaper" and the user of a "computer data-bank" may be describing the same communication channel from different vantage points.

As the technologies of communication merge, information that used to be received passively is now the subject of two-way communication and can be individualized, making it more valuable to us. When we can search vast data-bases we are not limited to what an editor decides to publish (or broadcast), nor is the information we seek buried amidst a lot that we do not want.

The electronic system is so efficient that it will deliver many of

the messages we now receive in printed form: newspapers, magazines, books, mail. Business information, advertising, and offers of goods and services will be delivered electronically and two-way connections will permit the conduct of business that once required the passing of paper or face-to-face bargaining.

New sorts of businesses will grow out of the system's capabilities. Videotex experiments in Columbus, Ohio have already demonstrated that a popular use of interactive cable is to provide burglary protection by monitoring homes. We will also monitor health and energy. The line between an interactive information search and educational discourse will blur and learning will become an activity much less restricted to the geographical location of school. Perhaps most importantly the technology will be used in ways not yet thought of. The Institute for the Future concludes that the electronic communication systems of the coming decades will be new in character and pervasive.

## II. PRECEDENTS: PRINT, TELEPHONE, BROADCASTING

The pervasiveness of the coming technology is what makes our freedom to use it so important; its newness is what should make us fear that protections designed for older technologies may not be carried forward to assure that freedom. Such is the warning that Ithiel de Sola Pool gives us in *Technologies of Freedom*. Pool carefully traces how the first amendment protection of freedom from government regulation of the printing press was not carried over to the later technologies of telegraph, telephone, radio and broadcast TV.

Pool identifies two distinct lines of legal precedent: the first amendment protection of the press and the government regulation of monopolistic common carriers to assure that everyone has access to an essential service. An assumption behind the first amendment is that any writer can gain access to a printing press without the help of government. Indeed, government-imposed requirements for access to the medium of print, such as the Florida statute giving a political candidate the right to rebut a newspaper's attack upon him, have been held to be an unconstitutional abridgment of the publisher's right to print whatever he wants.<sup>1</sup>

When the telegraph and telephone came along, they were seen as natural monopolies and the government began regulating them as it had been regulating the railroads and electric companies, monopolies which carried things other than messages. Protecting the citizen's right of access to a public utility, along with controlling rates, was seen as an important government function. No one considered

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1. Miami Herald Publishing Co. v. Tornillo, 418 U.S. 241 (1974).

that regulation of communication carriers might violate the first amendment.

Radio and broadcast television were bastards. They resembled print in that someone was "publishing" something, as contrasted with the mere vehicular assistance to conversation rendered by the telephone. But because of the limited electromagnetic spectrum available for broadcasting, radio and TV had some of the monopolistic character of a public utility. As a result, Pool argues, we got the worst of both lines of precedent — government regulation on the utilities model with no right of access because of the "publisher's" first amendment rights. And, alas, government regulation of the airwaves expanded to include control over the sensitive area of content.<sup>2</sup> Yet although renewal of broadcast licenses is based on what has been broadcast, courts have not seen such control as unconstitutional censorship but rather the equivalent of issuing a franchise to a utility based on "public convenience and necessity."

While Pool questions the constitutionality of broadcast regulation, his main concern is with the protection of freedom in the use of the new technology. This can best be assured, he argues, if we select from the dual lines of precedents those principles which promote rather than restrain freedom. To the extent that there is no monopoly over the new technology, Pool hopes that communication using the technology will be protected by the first amendment and that government will keep its hands off, as in the "print" model. To the extent that a natural monopoly does exist, he hopes that government will protect the right of access to the communication channels, as in the "common carrier" model.

Thus, it is important to examine in what respects the new technology will have a monopolistic character. The analysis of this question in *Teletext and Videotex* shows that the answer is complicated. Some of the electronic communication will be delivered by television, whether broadcast from antennas or satellites, and while the spectrum of frequencies for broadcast is expanding, it is still limited and invites government rationing. But broadcast TV is not the only form in which visual images can be transmitted in one direction. Video cassettes can be purchased in a store or obtained through the mail. The monopoly of broadcast television may be breaking down.

For two-way communication the situation is also complicated. A telephone line provides public utility transport for computer data in two directions, but only at a fairly slow pace. The telephone system is used now by persons with a home computer to access popular data banks and for transacting business with real banks. Scientists plug in over the telephone lines to powerful computers at distant universi-

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2. See *FCC v. Pacifica Foundation*, 438 U.S. 726 (1978).

ties to perform complicated calculations. But a phone line cannot accommodate a rapid interchange of visual images or equally concentrated computer data. What is needed for that is a coaxial or fibre optic cable. Whether called cable TV or videotex or computer networking, the business of carrying this information to and from home or business may constitute a natural monopoly, for it is unlikely that either economics or the city fathers, who control the digging up of streets and the stringing of wires along them, will permit multiple cable networks.<sup>3</sup>

### III. THE PROBLEM OF ACCESS

How access will be assured to this new carrier of information is seen in both books as a pressing and major public issue. Pool assumes that the present technology, which permits up to 108 channels of cable TV, may provide sufficient capacity for the next fifteen years or so (to the time when most present cable franchises will be up for renewal). The problem he sees is the right of access to those channels.

"Access," however, can be used in at least two important senses. One is access for the publisher. This is the sense that lies behind Pool's phrase "electronic publishing." It is also the sort of access that the first amendment does not require printers to grant those who want to have a message printed. It is this kind of access that municipalities are requiring TV cable franchise holders to provide members of the public who have messages they want to broadcast. (Pool reports that the Boston cable franchise requires that one channel be made available for leasing by the city, even to competitors of the franchise-holding company.) Access in this sense is the right to initiate a message to a passive recipient.

But with the possibility of interactive messages, access should also be seen as meaning the right of the consumer to exercise choice, to tell the cable company that he would like to be able to choose among all those who might want to do business over the cables. The customer wants the right of access to any bank, any security company, any data-bank. In short, to use the two-way electronic communication system for business that is his own and not just for business belonging to the cable TV franchise holder.

While Pool thinks that the public will eventually demand a com-

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3. For certain sorts of information, the distinction between one-way and interactive delivery may soon become blurred. For if enormous amounts of information are broadcast, the chances are that what is wanted can be received without having to send a request message. The Institute for the Future points out that in one hour a TV station could broadcast the equivalent of 30 million pages of information in the form of words. This is because words use up far fewer "bits" than do pictures (the works of Shakespeare equal a few seconds of MASH). Equipped with a large electronic memory, a recipient could pluck out a substantial quantity of information and interact with it at his convenience.

mon carrier status for a monopolistic system, he does not emphasize enough, it seems to me, the question of choice for the customer, nor does he give sufficient attention to the technological possibilities that now exist for installing a point-to-point communication system in the new media, much in the form of the network that we now have for the telephone. Instead of running a limited number of channels into the home where a selection is made among them, we could have a system, as with the telephone, where a single two-way line runs between the home and a switching center where a connection can be selected to any of millions of information sources. France is beginning to build just such a national network of point-to-point electronic communication and Britain is now giving longer TV cable franchises to companies which can assure the capacity to adjust to such a switching system.

Pool asserts that, at least for the present, economics dictate that fledgling cablecasters be permitted to discriminate in favor of information sources in which they have an interest, rather than act as common carriers. Uncharacteristically, however, he presents little evidence to support that assertion.

Besides access to the cable for the originator of the message and access of the receiver to the desired source, there is a third problem of access to the new information technology. That is the right to have information included in a data-bank, whether stored in a computer memory or floating in the airborne library of digits. If a system of switched access to an unlimited number of information channels emerges in the United States, this problem is less serious; there may always be some data-bank which will maintain your information in an accessible file. Or you can offer it yourself. But if channels, and hence data-banks, are limited, or if there are economies of scale which make banks of certain sorts of data natural monopolies because no one could competitively duplicate the base, access to communication channels together with access to data-banks may not guarantee access to information. It is in part to meet this problem that Great Britain already maintains a public data-bank in which anyone can deposit information available to all for whatever charge the depositor specifies.

Freedom of access to information may also be restricted by the laws concerning intellectual private property and copyright. Both books make this point, although they do not develop it, and urge that these laws be reviewed in light of technological change to assure that they still serve their purpose of assuring widespread distribution.

The public policy questions of our freedom to information over the new technology are pressing upon us. The cable-TV industry is hard at work right now seeking to persuade Congress not only to decide against the common carrier model, which would assure citi-

zen choice, but to prohibit states and municipalities from requiring this protection of our freedom. If you are concerned with your liberty, but feel confused by the mumbo-jumbo surrounding the new technology, these two books can guide you through the choice we face: greater freedom to explore a new universe of information or greater control by the owners of systems of electronic communication.