

BOOK REVIEWS

Technologies of Freedom. By Ithiel de Sola Pool. Cambridge: Belknap/Harvard Press, 1983. Pp. 299. \$20.00

*Reviewed by David A. Anderson**

The communications revolution described in Ithiel Pool's *Technologies of Freedom* is here. Print and broadcasting, the two media that have divided our thinking about freedom of expression, are merging: most newspaper stories are written on video display terminals. Computers link the newspaper's out-of-town bureaus, and their copy flows into the editing system no differently than from desk to desk in the local news room.¹ Satellites transmit completed pages to printing plants nationwide, making possible the first national daily newspapers in our history.² Some cable systems carry stock market quotations (p. 199) and classified ads. Our largest weekly magazine is about television.³

Cable has dramatically expanded the diversity, if not the depth, of television programming available to Americans. It has challenged the networks' dominance and made possible our first nationwide all-news, sports, and religious channels. It has created an entirely new entertainment genre, video music. Service industries have been altered by "smart" computer networks. Airline travel agencies' computers, for example, not only transmit information about airline seat availability, but also formulate appropriate inquiries to other computers about alternative routes, evaluate the replies, and choose optimum plans (p. 216).

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¹ *USA Today Using ATEX System*, 115 EDITOR & PUBLISHER, Sept. 18, 1982, at 42. Stories are entered into a network of five computers. Through a "Copy Management Processor" a story entered on one computer can be edited on any of the others.

² Both *USA Today* and the *Wall Street Journal* transmit pages electronically by satellite. *Gannett Plans National Newspaper*, N.Y. Times, Dec. 16, 1981, at 21, col. 1.

³ *TV Guide* has a circulation of 17,516,890. See IMS DIRECTORY OF PUBLICATIONS 1135 (1983).

Retailers are beginning to offer video disk catalogues, which give shoppers a televised demonstration of the merchandise they are thinking of buying (p. 228). The research methods of lawyers, basically unchanged for a century or more, are rapidly being transformed by videotex.⁴

This communications revolution is not only technologically possible, but economically mandated. As Pool demonstrates, it is cheaper to handle information electronically than to put it on paper. The computer is already the most economical medium for the storage and transmission of information. Its advantage in input and output is not so clear, but there too the eventual dominance of electronic media is certain, because costs of filing and retrieving information on paper are rising while costs of doing it electronically are falling (pp. 190-93).

Pool makes no claim that print is dead. "People are not going to stop reading from and writing on paper, or carrying pieces of paper in their pockets and purses. . . . People did not stop talking when they learned to write, and they did not abandon pens when typewriters were invented." (P. 190). Indeed, the use of paper is likely to increase because it is cheaper to have the electronic system print a new copy than to store copies for reuse. "There is no reason to stockpile printed paper when a laser printer can produce a paper copy whenever a customer wants one." (P. 192). But he leaves no doubt that society's primary sources of information will soon be electronic:

As computers become the printing presses of the twenty-first century, ink marks on paper will continue to be read, and broadcasts to be watched, but other new major media will evolve from what are now but the toys of computer hackers. Videodisks, integrated memories, and data bases will serve functions that books and libraries now serve, while information retrieval systems will serve for what magazines and newspapers do now. Networks of satellites, optical fibers, and radio waves will serve the functions of the present-day postal system. Speech will not be free if these are not also free. (P. 226).

Our thinking about freedom of expression is still fixed on the print model. The printing press is our metaphor for freedom of expression, a metaphor blessed by the very words of the first amendment. It is also our historical frame of reference; our commitment to free expression sprang from the English response to the new technology of the printing press, and the press has provided both the occasion and the impetus for

⁴ See, e.g., Comment, *The Impact of Computers on the Legal Profession*, 30 BAYLOR L. REV. 829 (1978). Computer systems are used not only for legal research, but also for legal analysis. See Comment, *Emerging Computer-Assisted Legal Analysis Systems*, 1980 B.Y.U. L. REV. 116.

many of the decisions shaping our law.⁵ The print model is not irrelevant, of course, and much of the law it generated is transferable to the new media. But as a model for freedom of expression in the new communications era, print is terribly inadequate.

Inadequacy, however, is the least of the problem. The real problem is that we already have shown a disinclination to adapt the model to new technologies. When broadcasting arrived half a century ago, we decided it was fundamentally different from print, and we refused to extend to it the freedom that had evolved for print.⁶ Instead of adapting our historical model to the new technology, we preserved the model and modified the freedom. We have perpetuated the mistake to this day.⁷ Our repression of broadcasting, the form of expression that most resembles the emerging ones, does not bode well for our chances of successfully adapting to the new technology. Despite its exclusion of broadcasting, however, the system of freedom of expression we have created over the past two hundred years is a remarkably successful one, perhaps the most successful the world has ever known. Making sure it is not lost in the current communications upheaval is the concern of Pool's book.

What Pool fears is that we will fail to recognize that the new technologies are the speech and press of the future. We could delude ourselves into believing that since the printing presses are still free, expression is free, even though the important means of communication are closely regulated. This fear is hardly baseless. Broadcasting came to be regulated because, at its inception, it was seen more as a novelty than as a medium of communication. Had Justice Frankfurter known it would become the dominant means by which Americans receive the news, he might have been less certain that the "right of free speech does not include . . . the right to use the facilities of radio without a license."⁸ The new technologies rarely spring full blown as important media of expression. Cable, for example, began as CATV, and was treated by the law not as a medium of communication, but merely as an extension of the viewer's own antenna.⁹ By the time the new technologies are recognized as functional equivalents of printed media, they

⁵ See, e.g., *New York Times Co. v. United States*, 403 U.S. 713 (1971); *New York Times Co. v. Sullivan*, 376 U.S. 254 (1964); *Near v. Minnesota*, 283 U.S. 697 (1931).

⁶ See *NBC v. United States*, 319 U.S. 190 (1943).

⁷ See, e.g., *FCC v. Pacifica Found.*, 438 U.S. 726 (1978).

⁸ *NBC v. United States*, 319 U.S. 190, 227 (1943).

⁹ See D. RICE, M. BOTEIN & E. SAMUELS, *DEVELOPMENT AND REGULATION OF NEW COMMUNICATIONS TECHNOLOGIES* 9-12 (1980).

have already become encrusted with layers of regulation that are difficult, legally and politically, to peel away.

Technologies of Freedom provides a valuable survey of legal issues posed by the new technologies. The most obvious is whether the regulatory model from broadcasting will be witlessly applied to new media. As the cable experience shows, law has a strong tendency to force new shapes into old molds, a tendency often abetted by the myopic self-interest of entrenched media. If cable can be regulated because it competes with over-the-air broadcasting,¹⁰ and if direct satellite broadcasting can be regulated because it uses the airwaves,¹¹ it would be no long step to regulate newspapers that are transmitted by microwave or satellite. That almost surely will not happen; the inconsistency with our tradition of freedom of the press would be too obvious. The more realistic issue is whether freedom of expression will be determined by its medium, rather than its function. So far, that is the case: we restrict broadcasting because of the medium by which it is circulated, even though in function it has supplanted print as the primary source of news for most Americans.

The proper resolution of this issue is not difficult. It is, as Pool says, "that the First Amendment applies fully to all media. It applies to the function of communication, not just to the media that existed in the eighteenth century." (P. 246). The more difficult issues concern the organization of the new communications industries. Should cable be treated as a common carrier? Should carriers also be allowed to be program suppliers? Should owners of outlets in one medium be permitted to own other kinds of media? Should antitrust policy favor local television oligopolies (as it does currently) to prevent national competition from creating local monopolies? Should national telephone and postal monopolies be protected to assure universal access? If it becomes clear that local newspapers are natural monopolies, should their editorial autonomy be forced to yield to demands for public access?

Pool's touchstones in answering these issues are diversity, access, and freedom from regulation:¹²

In a free society, the burden of proof is for the least possible regulation of communication. If possible, treat a communications situation as free for all rather than as subject to property claims and a market. If resource constraints make this impossible, treat the situation as a free market rather

¹⁰ *United States v. Southwestern Cable Co.*, 392 U.S. 157 (1968).

¹¹ See *Direct Broadcast Satellite Serv.*, 51 RAD. REG. 2d (P & F) 1341 (1982), appeal docketed sub nom. *NAB v. FCC*, No. 82-1926 (D.C. Cir. Aug. 11, 1982).

¹² Pool is not the first to emphasize these values. See, e.g., Neustadt, Skall & Hammer, *The Regulation of Electronic Publishing*, 33 FED. COM. L.J. 331, 414 (1981).

than as a common carrier. But if resources for communication are truly monopolistic, use common carrier regulation rather than direct regulation or public ownership. Common carriage is a default solution when all must share a resource in order to speak or publish. (P. 246).

Despite this preference for other solutions, Pool concludes that many basic electronic carriers, including cable, have monopoly power and therefore should be treated as common carriers (p. 240). He concedes that local newspapers usually are monopolies, too, but rejects cable operators' attempts to compare themselves to newspapers on the ground that cable monopolies are government-aided (through municipal franchises), while newspaper monopolies are natural (pp. 238-40).¹³

Pool's prescription for cable illustrates his approach to communications issues generally. Cable's promise lies in its capacity to provide almost unlimited programming diversity. Its danger lies in the power and profit that its local monopoly power can generate. At some point in the twenty-first century, cable may lose its monopoly to an advanced telephone system using computers and optical fibers instead of conventional switches and wires, but in the meantime cable will have a monopoly that is aided, if not created, by the franchise to use the city's easements. In Pool's view, the way to maximize the social potential of cable is to treat it as a common carrier required to make channels available to all comers at prices established by nondiscriminatory tariffs (pp. 186-87).

At present, however, Pool concedes it would be counterproductive to treat cable as a common carrier. The most expensive part of cable operation is the initial cost of building the cable network. Once the cable is laid, the cost of operation is relatively low. More than half of American homes are still beyond cable's reach¹⁴ and the areas yet to be wired will probably be more expensive to wire than those already reached.

What inspires entrepreneurs to invest the large sums of money necessary to build the systems is the belief that once the majority of homes are on the cable "the systems will then be money machines for anyone who can control them." (P. 174). The big money will not be made from common carriage, but from the operators' ability to sell their own pro-

¹³ Pool recognizes that cable systems are not true governmental monopolies, since their franchises are normally nonexclusive, and that most of them probably would be natural monopolies in any event, but insists that the fact of the franchise, together with cable operators' lack of a tradition of sensitivity to the speech interests of others, justifies treating them differently from newspapers.

¹⁴ As of July 1983, cable serviced 32.93 million out of 83.7 million television households. A. C. Neilson Co. statistics provided by National Cable TV Association Public Affairs Office, 1724 Mass. Ave. N.W., Washington, D.C. 20036, (202) 775-3629.

gramming. "Returns from the lease of channels alone would not get the systems built." (P. 183). Pool's solution is to treat cable operators as broadcasters initially, allowing them to profit from sales of their own programming and services, but then gradually convert the industry to the common carrier model once the systems are in place (pp. 183-88). From the very beginning, operators should be required to provide excess channel capacity, on the theory that they will happily lease channels to others if they have no use for them, but will not do so if it takes channels away from them (p. 188). As the system grows, the city should demand at franchise renewal time that progressively more channels be leased until, at maturity, cable comes to resemble the telephone common carrier system (p. 187-88).

This solution seems dubious, both economically and politically. Unless this strategy is kept secret from the entrepreneurs, their willingness to invest surely will be diminished by the prospect of losing their programming profits. Pool's answer to this seems to be that "[s]ince no franchisee is guaranteed renewal of a franchise, the entrepreneur from the start has to calculate a budget to recover costs within the franchise period, which generally runs fifteen years." (P. 187). But obviously expectations of renewal do affect the operator's investment decisions. In any event, if investment is encouraged by allowing cable operators to profit from programming for fifteen years, it presumably would be encouraged even more by allowing them to do so for a longer period (or at least not announcing a contrary intention).

As a political matter, it is difficult to understand how cable operators, who so far have thwarted all attempts to make them common carriers, will be less successful in resisting those attempts after they have consolidated their power as owners of lucrative local monopolies. Here Pool's answer is that the cable industry is being short-sighted:

It is tempted by quick profits rather than a permanently viable system. In the short run, large profits can be made from movies, sports, and entertainment offered by a monopoly that is created by control of the physical cable. In the long run, public action against such a monopoly is inevitable.

. . . .
. . . One way or another, there is likely to be a rebellion against any system that gives one electronic publisher the means to select and control what gets published on the cable. (P. 173).

However farsighted it might be to forego immediate large profits to forestall some future adverse public reaction, it is not a convincing political scenario.

The failure to deal plausibly with political realities is a pervasive difficulty in this book. For the most part, Pool ignores the political di-

mension. He assumes that once we understand the technology and economics of the new communications industries we will rationally structure and nurture them. One difficulty is that neither Pool's nor anyone else's technological and economic analyses will be universally accepted. But even assuming a consensus on the technological and economic issues, we still need an agenda of the policy issues and a political strategy for deciding them. Pool provides neither. Instead, he assumes that the first amendment, properly applied to new technologies, will resolve the issues.

Pool is correct, of course, that the first amendment should not discriminate against broadcasting and newer media of communication. If the justifications for this discrimination ever were valid, they are no longer.¹⁵ More importantly, as print and electronic media merge technologically, distinctions between them become increasingly arbitrary and irrational. Merely saying that, however, hardly provides a blueprint for organizing the new communications technologies. As Pool recognizes, most of the issues arise from structural questions of the sort mentioned above. Should telephone companies be allowed to provide mass media services in competition with their customers? Should computer data networks be treated as telephone companies? Should cable operators be required to lease channels? Should telephone companies be allowed to own cable systems? Should municipalities be permitted to regulate cable systems? Should users of roof-top antennas be required to compensate owners of copyrighted programming they receive via satellite? Should carriers be compelled to permit competitors to interconnect with them? Should government impose technological compatibility requirements to facilitate interconnection?

The first amendment does not tell us how communications industries should be organized. Pool is not the first to seek in the first amendment some affirmative dimension, some mandate to the government to help make the system of freedom of expression work better. Chafee believed that "[p]hysical space and lack of interference alone will not make discussion fruitful. We must take affirmative steps to improve the methods by which discussion is carried on."¹⁶ Emerson asserts that "government must affirmatively make available the opportunity for expression as well as protect it from encroachment."¹⁷ My own view is that once

¹⁵ See, e.g., *Brandywine-Main Line Radio v. FCC*, 473 F.2d 16, 63-80 (D.C. Cir. 1972) (Bazelon, J., dissenting), *cert. denied*, 412 U.S. 922 (1973). See generally Powe, *Or of the [Broadcast] Press*, 55 TEX. L. REV. 39 (1976).

¹⁶ Z. CHAFEE, *FREE SPEECH IN THE UNITED STATES* 559 (1941).

¹⁷ T. EMERSON, *THE SYSTEM OF FREEDOM OF EXPRESSION* 629 (1970).

these notions become more than merely hortatory, they become pernicious. Government should seek to promote freedom of expression, not merely restrict it. But this truism is not a rule of law, although there have been a few misguided attempts to make it one. The first was the effort to impose on the press a legal right of public access. Happily this was rebuffed in *Miami Herald Publishing Co. v. Tornillo*.¹⁸ Another was *Red Lion Broadcasting Co. v. FCC*, the Court's unconvincing attempt to justify governmental control of broadcast content in the name of protecting "the right of the public to receive suitable access to social, political, esthetic, moral and other ideas and experiences."¹⁹ I agree with Glen Robinson:

As a general conception, the listeners' rights theory makes nonsense of the First Amendment; in fact, it stands it on its head. . . . To deny the individual right in the name of the collective right transforms the First Amendment from a guarantee of individual freedom into its very opposite, rule by public clamor. . . . [W]e err when we stray beyond the simple proposition that the First Amendment is a *restraint* on government—nothing less, but also nothing more. [We should reject] the misleading and mischievous notion that the First Amendment is an expression of the right of the public, through their government, to regulate speech in the interest of listeners.²⁰

Whatever one's views about affirmative implications of the first amendment, it cannot possibly be extended far enough to reach the issues that Pool wants it to resolve. It cannot sanely be read to require interconnection among communications networks, disclosure by common carriers of accounting methods, fixed time limits on monopoly licenses, and licensing schemes for uses of intellectual property that were not contemplated by drafters of the copyright act. To be sure, Pool recognizes that these are policy issues, and that legislatures have a role to play in resolving them (pp. 246-50). But they are not, in Pool's view, political issues. He believes that once the technology is understood, the first amendment will make clear the appropriate solution, and that the courts ultimately will determine whether we have "technologies of freedom."

Lack of technical grasp by policy makers and their propensity to solve problems of conflict, privacy, intellectual property, and monopoly by accustomed bureaucratic routines are the main reasons for concern. But as

¹⁸ 418 U.S. 241 (1974).

¹⁹ 395 U.S. 367, 390 (1969).

²⁰ Memorandum Opinion and Order on Reconsideration of the Fairness Report, 58 F.C.C.2d 691, 706-07, 36 RAD. REG. 2d (P & F) 1021, 1040-41 (1976), *aff'd in part, vacated in part*, 567 F.2d 1095 (D.C. Cir. 1977), *cert. denied*, 436 U.S. 926 (1978).

long as the First Amendment stands, backed by courts which take it seriously, the loss of liberty is not foreordained. (P. 251).

Pool is one of the many Americans to whom we have oversold the constitutional mystique. The Constitution in general, and the first amendment in particular, have become the repository of all his hope. He distrusts the regulators and the legislators (p. 231). They do not understand the technology and economics, and they lack the vision to see either the historical antecedents or twenty-first century implications of current communications policy choices. He sees the Constitution not merely as a limitation on governmental choices in communications policy, but as the very source of that policy: "America's basic communications policies are found in" the post office clause, the copyright clause, and the first amendment (p. 231).

Pool is simply wrong. The Constitution is not the source of our basic communications policies. They come from the Congress, the city councils who award cable franchises, the trust-busters who break up telephone companies, the political appointees who run the Federal Communications Commission, and the state regulators who set telephone rates. These men and women may be myopic or visionary, venal or noble, stupid or unwise. They may be, on the whole, more myopic, venal, and stupid than judges, though the history of judicial involvement in the making of communications policy makes that less than self-evident. But it is the legislators and regulators, not the judges, who bear primary responsibility for our communications policies for the twenty-first century, and it is they who most need the many valuable technological and economic lessons this book teaches. By insisting that the first amendment dictates answers to the questions that the new technology raises, Pool invites us all to believe that the responsibility for American communications policy rests ultimately with judges. The sad irony of this book is that its thesis deprecates the role of those who could benefit from it most.

