THE WIRED SOCIETY: PROMISE AND PERFORMANCE

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The concept of the 'wired city' developed in the 1970's and implies the creation of a broad band, fully switched digital network in urban areas. No city in the United States has yet achieved an integrated, fully switched, broad band voice/digital network. No such cities are even planned although they may emerge from a variety of developments now taking place. American cities are now being wired with broad band coaxial cable by private companies involved largely in the distribution of television entertainment. There is sufficient unused capacity in these intallations to permit transmission of corporate and governmental data, and perhaps even to offer competition with telephone companies in the market for home telephone/digital services. Insofar as the 'wired cities' will appear in the U.S., they will be cable cities. Optic fiber is many years off.

It is now fifteen years since cable television began its spectacular move out of the antenna and redistribution business and into the new world of telecommunications just developing in the late 1960s and early 1970s. This is an appropriate moment to sit back and think about the promises made at various points in time for cable television and the actual performance. The 'wired city' in the dreams of technological forecasters is a cable city, and it is wise to ask if these dreams are realistic based on what we know now about cable systems. It's time to review the history of the future of cable. The cable industry began in 1950 with the establishment in Lansford, Pennsylvania of the first commercial cable television station.(1) The industry grew to 800 systems serving nearly a million subscribers in 1962, and to 2,700 systems serving 6 million subscribers in 1977 (about 10 percent of the national TV audience). Presently their are 4,500 cable systems serving 32 million subscribers (57 percent of the households passed by cable).(2) Cable has clearly established itself as an adjunct and perhaps as an alternative to traditional television broadcasting and other forms of telecommunication, and now that it has established itself, it's appropriate to review

the early projections and the early visions of cable television and compare them with the reality.

For me, personally, this is also an opportunity to review the

development of cable communications technology in light of the book that I wrote entitled Communications Technology and Democratic Participation, which was published in 1977. This book reviewed computer technology, broadcast technology (including one-way cable systems), and new forms of interactive communications technology such as two-way cable and electronic conference calls, and considered the potential of these new technologies for enhancing the operation of political democracies. Although I am sure I wasn't the first to use the term, in the first chapter of my book I referred to the demise of "the cable fable," and I pointed out some of the difficulties as seen from the vantage point of 1977 of wiring the entire nation with cable. At that time, the estimated cost of rewiring the nation was set at $1.2 trillion, and the cost of simply laying cables was extremely high: $10,000 per mile for suburbs and $75,000 per mile in New York City.(3) These costs, as it turned out historically, were about right. I used the term "cable fable" to poke fun at the wild predictions and speculations made about cable in the mid-1970s.

I also have a third reason for reviewing the promises and reality of cable: twice in the last decade I have signed up and then disconnected cable service. Once in the early years in Manhattan, and again recently in the suburbs of New York. I feel a little like a spurned lover--I want the cable fable to work out and pursue it when available. But the possession of the

cable has turned out be disappointing, indeed, it just doesn't agree with me. I want to explore briefly why cable has this impact on people.

The cable fable in the 1970s always had two sides to it. The optimistic side envisioned a technological wonderland based on the ultimate box of more than a hundred channels sitting on top of a home television set, a lavish menu of two-way services including home banking and teleshopping, home security and energy monitoring, video games, software distribution, political polling, political participation, news and sports scores, as well as a host of communications services such as information retrieval, catalog shopping, and data transmission. Some academics in high places were even predicting that cable would have an impact far greater than the revolution wrought by Guttenberg and the development of printing. Otherss, more action oriented, were predicting the "people" would rise up and demand a chunk of the new technology in the form of Sony Portapacks, and, so armed, would proceed shortly to attack the citadels of power in American society. With this kind of hype openly discussed and debated, it was difficult to avoid the sheer fun of criticizing the cable psychophants.

But there was a dark side to the cable fable as well, and it was in that sense that I used the word in my book originally. On the dark side, the visions of a technological cornucopia and resulting social revolution would ultimately flounder on the

rocks of social, economic, and political opposition. The dark side of the cable fable always took into account the social and political realities of cable television as simply one of many technologies which were in many respects competitive, and as a technology, like other communication technologies, subject to political regulation, to economic forces of concentration ,monopoly and oligopoly, and to institutional restrictions and prohibitions. The predicted social revolution of cable could easily be sidetracked, or, worse, turned against the forces of social reform to become just another tool of powerful institutions for the manipulation of mass tastes.

I confess that in the mid-1970s my view of the prospects for cable television were more towards the negative cable fable vision. I believed then that cable would probably not reach more than half of the available homes in the United States -- there are about 83 million homes in the United States and cable now reaches about 32 million of those homes. (4) I believed that if cable was indeed a success, the small local stations and independent producers would quickly be bought up by large corporate interests in the other communications industries, and that just like broadcast television and narrow-band telephone communication technology, cable would be a negotiated technology subject to the same political forces that shaped these other technologies such as broadcast TV and the telephone. Therefore, in my view, cable would not bring about a Guttenberg level of

revolution in the foreseeable future. Indeed, I believed that insofar as cable succeeded, it would quickly be controlled and influenced by the same groups and forces which control and influence broadcast technology.

This opportunity today provides me a chance to look over my somewhat pessimistic predictions for the future and compare them with the reality. What I want to talk about today is the history of the future of cable television. All the modern technologies have a history of their future. Steam technology was widely ballyhooed in the early years of its development as potentially replacing virtually all forms of animal and human labor, a theme picked up by Karl Marx in Das Capital who saw in stream-driven machine tools the potential liberation of mankind from work, a future world in which a man could work in the morning, philosophize in the afternoon, and socialize in the evening. Transcontinental railroads, when they first emerged in the middle 19th Century, were predicted to bring about the integration of the European continent, and in the case of America, the development of a united nation. What followed was, of course, a period of nearly a hundred years of sustained European conflict accompanied by an American civil war. Network radio technology, when it first appeared in the 1920s, was lauded by the President of the United States as bringing to millions of Americans the level of culture and knowledge which in the past could be obtained only by the few. And the development of network

television in the late 1940s and early 1950s was accompanied by strongly held expectations that the new technology would be used to elevate the level of culture in the United States by exposing millions of viewers to symphonies, ballets, and dramatic presentations.

In the case of cable, there are seven aspects of the cable fable that we can use to judge how well cable has performed.

1. Independence

One of the hopes of cable television was that it would provide the American public with independent sources of entertainment, news, culture, and information. The hope here was that the thousands of small local cable television systems would be economically, politically, and institutionally separate from other large American corporations, large communication corporations, and in particular from the braodcast television industry. The belief in the 1970s was that cable television was uniquely suited to be a competitor to other forms of broadcast and written communication, and this competition would produce both cultural and economic benefits to the American telecommunications scene.

This vision of an upstart, independent, small operator (almost backyard) kind of technology standing up to the communications cartels of America just has not worked out.

Illustration 1 provides an indication of the large and growing levels of economic concentration in the cable industry. The top ten system owners alone have more than 44 percent of the cable subscribers in America. As it turns out, the capital requirements of wiring suburban and urban areas are simply too severe for small cable companies to undertake. Moreover, the expertise required to program and to operate cable systems is generally beyond the capabilities of small operators. Hence, a number of institutional ties exist between cable systems and other communications and broadcast media: ABC, for instance, a few months ago bought out the country's biggest cable television service -- the Entertainment and Sports Programming Network (ESPN); the New York Times recently established a beach head in the cable industry by purchasing more than $100 million of cable systems in New Jersey . (5) Time, Inc., owns the second largest cable television operator -- American Television and Communications, as well as the largest pay subscription service -- Home Box Office (HBO). Group W Cable -- the third largest operator -- is owned by Westinghouse Electric, Cox Cable Communications is owned by a subsidiary of Cox Communications, Storer Cable, a subsidiary of Storer Communications Miami, Times Mirror Cable, a subsidiary of the Times Mirror Company of Los Angeles, and Warner Amex Cable, a joint venture of Warner Communications and American Express.

The idea n that cable as a source of independent cultural,

ILLUSTRATION I

TOP TEN CABLE COMPANIES

COMPANY	SUBSCRIBERS
TELECOMMUNICATIONS INC. (TCI)	2,772,000
AMERICAN TELEVISION	2,250,000
GROUP W CABLE	1,950,000
COX CABLE COMMUNICATIONS	1,414,000
STORER CABLE COMMUNICATIONS	1,371,000
WARNER AMEX CABLE	1,362,000
TIMES MIRROR CABLE	907,000
NEWHOUSE BROADCASTING	788,000
CONTINENTAL CABLE BROADCASTING	748,000
VIACOM CABLE	730,000
TOTAL	4,200,000
% OF TOTAL SUBSCRIBERS	44%

Source: The New York Times, March 4, 1984 and
The National Cable Television Association

political and social views, as a new source of information, as a new channel of political influence, fundamentally independent from the kinds of economic forces which shaped other media from newsprint to broadcast television turn out to be untrue. The record of cable suggests a different pattern: declining independence from existing communications institutions and ever greater levels of economic concentration and interpenetration.

2. Business Uses

One of the visions of cable was that it would provide Americans with an alternative to driving around in the family car to do the shopping. Theoretically, cable could provide a teleshopping service in which people sitting at home could browse through electronic catalogs and order everything from toys to crystal to theater tickets either from their personal computers connected to the cable or through a simple black box attached to the cable system.

This vision hasn't worked out for cable, in any event, although other technologies are providing such services. As we point out below, teleshopping services via cable require a two-way cable system and currently two-way cable systems are uneconomic and are virtually collapsing. Moreover, the vision outlined above of cable as the hub of the automated home failed to take into account the role of competing technologies, in this case the ordinary telephone. For the first time in its history,

Compucard International in Connecticut turned a profit last fall as did ByVideo, Inc. in California, and View Data Corporation of America, a subsidiary of Knight-Ridder.(6) These businesses provide teleshopping services via telephones, and in some cases video game shopping services in central locations such as shopping centers and malls. It's possible, for instance, with a home computer, to dial into the Compucard system and have displayed a listing of thousands of items available at wholesale prices and which can be purchased through credit cards on the Compucard system. A little more than 8 percent of American households now have a computer, and that number will rise to more than 40 percent by 1990 and more than 75 percent by the mid-1990s.(7) Given the limited band width of ordinary telephone cable, it is virtually impossible to get a decent color electronic catalog displayed on a home computer terminal. This raises the possibility that cable systems and local telephone systems could work in combination as a sort of hybrid in which cable could be used to display catalogs and pictures of items and the telephone used to order these items. On the other hand, the level of animosity between telephone systems and cable systems is great, and their cooperation to date has been minimal. In any event, the promise that cable television would by itself provide opportunities for businesses to advertise and to display their wares and to sell their goods has been largely a disappointment.

3. Information Retrieval

A third vision of the cable fable was that cable television would become the digital thruway providing citizens with access to the vast information data banks available in the computer age and would potentially provide the telecommunication links between the home and office and from one home to another, displacing the telephone system, mail service, and other early technologies. As in the case above of business uses of cable TV, so also with this vision there was a failure to recognize that other technologies would be competing in the information retrieval area and the data transmission area. Although it is true that most American homes will soon have a home computer, and it is true there will be a significant demand for transmission of data amongst homes and between homes and offices, and demand for access to large information pools, it would appear that cable offers little in this area capable of competing with the ordinary telephone. It is true that cable with its greater band width can permit very high-speed data transmission in the megabyte per second range, but most people at home terminals don't require this level of speed. Twisted wire telephone cable is capable of data transfer in the range of 5 to 9,000 kilobits per second, and this is more than adequate for electronic mail systems, and transferring small blocks of data. As more than 10,000 personal computers are sold each day in the United States (IBM alone sells 6,000 PC's per day), the information retrieval and data transmission business is

growing very rapidly.(8) The largest corporation in this area, the Mead Corporation, which operates Nexis, Lexis, Lexstat and other specialized information data banks for remote retrieval, has been growing in the last few years in terms of annual gross income at 42 percent per year.(9) In the near-term future, cable is unlikely to play a large role in this rapidly-expanding business because of the competitive advantages of ordinary telephone cable.

4. Accountability

The promoters of cable in the 1970s emphasized not only the extent to which cable systems would be small independent companies competing with the giants, but also emphasized the potential for accountability of cable systems to local political, social and economic interests. Because cable was a relatively new technology which was not a broadcast technology and was not a telephonic voice communications technology, it came under no existing federal or state regulatory framework. Yet because cable involved the crossing of city, town, and municipal properties, it did come within the regulatory jurisdiction of cities and towns. The promoters of cable emphasized the extent to which cable companies could be negotiated with by local political entities to make their services accord with the desires of local viewers, as opposed to large networks who were not

accountable to local viewers at all. Cable television offered the vision of a people's technology in the sense of a technology controlled by local political institutions. How has this claim fared since the early 1970s?

The President has recently signed the Cable Franchise Policy and Communications Act of 1984 removes cable television from local regulatory control. The cable television industry strongly supported this federal legislation which permits automatic annual increases in rates, franchises with a presumptive right of renewal, the ability to alter contracts in mid-stream, and the ability to deny access to competitors of other services, such as burglary alarms, home banking and computer linkages.

The industry claimed that it was harmed by the impact of local regulation, as well as the competitive forces of other communications media. One's view on these matters depends a great deal on one's view of how cable television is faring in general. The industry argues that the rate of growth in its subscribers has slowed, profitability has slipped, and rate increases--averaging about 5% annually since 1980-- have failed to keep pace with inflation. (10) On the other hand, the FCC statistics show a very healthy industry which doubled its assets since 1980, last year increased its revenues by 60 percent, and in the last four years has doubled the number of subscribers from 15 to approximately 32 million subscribers. (11) In New York, in

the last decade, 350 cable systems have come before local government review boards and not a single cable system was denied a license.(12)

The argument that the cable industry is in deep trouble and that the principal cause of this trouble is local regulations and limitations, has received considerable support in Congress. It appears likely, therefore, that in the near-term future, cable television will become less accountable to municipal authorities. At the same time, none of the legislation currently on the table envisages increasing the regulatory authority of the federal government. Hence, it would be fair to say that the current legislative trends point towards decreased accountability of cable systems to any kind of government regulation at any level, especially at the local level. The vision, therefore, of cable systems being held accountable to local standards and local demands for service appears to have been untenable.

5. New Programming Diversity

In the technological wonderland originally envisaged for cable, the ultimate box of 108 channels could provide to viewers unprecedented diversity of programs targeted to specific segmented audience subgroups which the broadcast media could not afford to serve even if it was technologically possible. Only a few years ago, the potential of cable in programming appeared to be unlimited. Rushing for urban franchises, cable operators were

willing to promise almost anything. Along with 100 plus channels, they promised special channels and studios for local politicians, special culture channels, special children's programming channels, and free basic services. Even neutral observers would argue today that the cable companies and promoters shamelessly overpromoted their product.

The largest free service that is offered by the cable industry is the Entertainment and Sports Programming Network (ESPN) which has around 30 million subscribers and comes free with the basic cable service in most areas. The programming on this network can hardly be thought of as diverse because it is almost entirely concerned with sports entertainment. The largest premiere pay cable service is Home Box Office (HBO) with approximately 13.5 million households. Although HBO has continually promised to generate new and diverse kinds of programming, it still focusses almost entirely on the showing of first and second run Hollywood-produced movies, in addition to a few of its own made-for-TV movies. HBO is experiencing difficulty because its ratings are currently falling even though the number of subscribers is rising. This suggests, according to HBO spokesmen, a declining satisfaction with the programming at HBO. HBO has worked through the backlog of first-rate Hollywood movies, and has a shortage of new hit movies capable of sustaining HBO's mass audience. HBO has plunged into the movie business in one effort to halt these trends, but the public is

even less willing to accept these movies. (13)

If you look at the kinds of programming that sells to really large audiences on cable, this programming is not diverse or new and it essentially revolves around sports and movies.

Another aspect of the promised programming diversity was the supposed ability of cable television to economically reach small segmented audiences with special interests. The idea was that with 108 channels, local systems could broadcast cultural and other events to audiences who would be willing to pay for these services. The reality is, however, that the culture cable programming networks and outlets have virtually all disappeared with the exception of Bravo, a purveyor of foreign movies. CBS cable, which focussed on cultural events, as well as another network called Spotlight, both recently in the last year went out of business.

A second aspect of the promised diversity of cable was in programming television for children. The hope was that cable, with its great channel capacity, could avoid the pernicious influence of advertisers on children's programming which the broadcast industry has experienced, and at the same time continue the age-specific programming initiated by Sesame Street and Electric Circus. Commercial children's programming lumps the 2 to 11 year-olds in one audience and serves up a dish of undifferentiated cartoons and nature stories. It was hoped that cable television could develop programs for specific sub-groups

within the 2 to 11 year-old audience. Because each of these sub-groups is relatively small, advertiser support was not thought to be very likely for such programs. Nickelodian was the cable industry's answer developed by Warner-Amex. Nickelodian is beamed over 3,000 cable systems and can be picked up in 18 million homes. It is generally a part of the basic cable package offered by local cable systems. (14)

Unfortunately, Nickelodian has lost money ever since it went on the air in April 1979. The local cable systems pay about 10 to 15 cents per month per subscriber and the profit squeeze is on both the local outlets as well as Warner-Amex, the owner of Nickelodian. Warner-Amex currently has drawn down nearly a billion dollars on its credit lines and is therefore under severe pressure to make shows like Nickelodian profitable. One result of this profit squeeze is that, recently, Nickelodian announced that it would begin accepting commercials, just like broadcast television, from the same kinds of commercial forces that have given Saturday morning headaches in many American households. As you might imagine, the usual cast of advertisers have shown up on Nickelodian: the frosted breakfast makers, the candy makers, video and board game makers, and, of course, bubble gum manufacturers. (15)

Perhaps the most disappointing aspect to the cable promise of programming diversity is the behavior of cable viewers themselves. Presumably people who sign up for cable television

are more enthusiastic than those who don't about the potential for cable. Yet the recent research by the cable industry itself, and in particular by Warner-Amex cable, indicates that cable television subscribers are willing to view only a relatively small number of channels. A recent study by Warner found that in cable systems offering 40 or more channels, most of the channels go unused.(16) In the average cable household, only 9 channels are used in a week, and 30 channels accounted for 95 percent of the viewing. During the wave of optimism about cable television in the early 1970s, the promise that 80 to 100 channels would offer viewers a great variety of specialized entertainment failed to take into account the fact of limitations of time-- there simply isn't time in the lives of many Americans, perhaps even most Americans, to watch 40 cable channels. A different study completed for the National Cable Television Association, an industry trade group, concluded that, "It is ludicrous to have 100 channels of programming." The Director of the study found that 90 percent of subscribers in new cable systems are willing to pay for one premium cable service, such as Home Box Office, but only 50 percent are willing to pay for a second premium service, and only 25 percent are willing to pay for a third one. (17) In a different study released in November of 1983 by Television Audience Assessment, Inc., a research company in Cambridge, Massachusetts, it was found that cable subscribers watched "two more channels than non-subscribers, but this falls

far short of the total number of channels available to them". (18) Major cable companies are now using this latest research indicating the indifference of the cable public to numbers of channels to support their arguments in Milwaukee and other towns to change existing contracts from 100 channel systems down to 40 and 50 channel systems.(19)

On programming diversity, therefore, it would appear several things are apparent: the cable television public is uninterested in watching more than a handful of stations, the cable television industry is unable to provide high-quality programming on more than a handful of channels, the audiences are too small and too segmented for the cable industry to reach economically, and last, the only way new high-quality programming can develop on cable is when large mass audiences can be identified and reached with high-quality programming. This suggests a logic very similar to ordinary broadcast television. Hence, rather than providing us with programming diversity, cable television seems locked into the creation of homogenized programming delivered to vast, mass audiences as the only economic alternative.

6. Interactive Television

One of the promised features of cable television that attracted many liberals, including myself, in the mid-1970s, was the potential for developing interactive two-way cable television systems in which the viewer could respond to messages sent from

the head end and potentially where the viewer would obtain a computer terminal to store and receive messages and to interact fully with other participants. I felt, at the time, that the development of interactive cable television could potentially replace the telephone conference call for providing an electronic form in which citizens could organize opposition to a politicians and vested interest groups. I called this the potential for "citizen technology."

The technical capability of cable to handle messages going both ways from the broadcast studio to the home and vica versa from the home to the studio was heralded in the mid-70s as the future of television and the transformation of passive viewing into active involvement. It created headlines and in particular helped one of the major cable companeis, Warner-Amex Cable Communications, to secure exclusive cable television franchises in major cities around the country on the basis of its promise to develop sophisticated two-way interactive cable television services. This system was called the "Qube" system by Warner-Amex. This system used a special box attached to the television set which allowed viewers to talk back to the screen at the touch of a button. Admittedly, the black box was not a computer terminal, there was no distributed local intelligence with these devices, but perhaps this could follow. With Qube, it became possible to register opinions, participate in game shows, ask questions on talk shows, order movies, college courses and

other programs, and even do shopping. Indeed, two-way cable was the technological foundation for teleshopping over cable and in many other respects was the technical foundation for the future of a host of other services from home banking to alarm systems to medical assistance programs.

Unfortunately, the belle of the cable fable -- interactive cable -- after years of experience, is being cut back or eliminated. The Qube system has lost more than $30 million dollars since it first came into existance in Columbus, Ohio and further developed in Cincinnati, Pittsburgh, Dallas, Houston and the suburbs of St. Louis. Last January, Warner-Amex folded the Qube network which provided 90 minutes of special interactive programming each night to more than 350,000 viewers in these cities. Local two-way Qube programs have also been scaled back by as much as 75 percent. Planned systems in Milwaukee, Brooklyn, and Queens, New York will receive few if any interactive programs. In the future, according to Warner-Amex, Qube will be used primarily for its most lucrative feature -- "pay per view" films -- that subscribers can order on impulse. (20) Participatory programming will appear only if it can pay for itself with subscriber fees or commercial sponsorship. Although people do like to sit in front of their television sets and push buttons and see something happen on the screen as video games have demonstrated, Warner-Amex found that offering Qube failed to attract the expected 10 to 15 percent additional viewers to cable

systems. In fact, Qube has no discernible affect on increasing the number of cable subscribers for Warner-Amex. Only about 2 percent of Qube's 350,000 subscribers watched the most popular of the interactive offerings, the game shows. In the course of a month, cumulatively about a quarter of Qube's subscribers choose to participate in some form of two-way programming. In other words, three-quarters of those viewers given the opportunity to watch Qube do not. Next to the game shows, interestingly, public policy shows in which people could directly record and indicate their political preferences produced the second highest level of participation.(21) In any event, the promise of interactive cable television has largely been dashed because of broad disinterest on the part of the public. Poor programming can explain some but not all of this lack of interest.

7. Political Participation

A last hope of the supporters of cable television was that the development of this new technology would lead to a vast expansion in levels of political participation in the United States. The hope was that acting in a broadcast mode cable television would be able to deliver more political information and political news to American homes, would permit politicians more opportunities to explain their positions in programs to the public. And, operating in an interactive mode, it was hoped that cable would permit citizens to register their views and to

influence the political process by organizing amongst like-minded people political caucusses to influence the political process. I shared this hope for the poliical impact of of cable television in an ideal world.

But it isn't an ideal world. There were limitations of time which mean that citizens have a limited amount of time to pay attention to politics. There are limitations of size: everybody can not participate at once even with cable television or any foreseeable technology, and it's difficult to electronically stage the participation of citizens in a meaningful way when the number of citizens involved is in the hundreds of millions. And last , there are limitations of social and political inequality: politically-active citizens would potentially dominate the new participatory channels offered by cable, and social inequalities would largely be unaddressed by cable television, meaning that those who had less education and less income would likely be unable to participate in cable political programs. A realistic view of the 1970s was that insofar as cable television was used as a part of political programming, it would face some severe difficulties and challenges. (22)

As it turned out, these worries were unfounded simply because cable television has had such a limited impact on politics and political participation of citizens. Consider, for instance, the channel which reports on a 24-hour basis on the proceedings going on in Congress, the C-Span Network. C-Span is one of the basic

services provided to more than 16 million cable homes. A recent study by an Annenburg graduate student, Janet Boakes, parallels the findings of an earlier Arbitron study which found that even though C-Span gets into 16 million homes, a very small number of people actually watch it. The Boakes study found that only 27 percent of cable subscribers had seen C-Span once, 8 percent watched it more than 30 minutes a week, and 1 percent watched it daily.(23) As it turns out, broadcasting the activities and programs and speeches of politicians is pretty boring stuff. On the interactive side of the cable fable, as we pointed out above, political participation is largely unavailable now because of the cut-backs in the Qube system. It is interesting to consider, however, that there must have been some demand for political participation insofar as public issue programming on the Qube system was the second most popular kind of interactive programming next to television game shows.

Conclusion

I started this talk with three questions. First of all, which cable fable was true -- the optimistic cable fable which predicted a technological cornucopia, or the pessimistic cable fable which predicted a more negotiated, much more slower-moving and potentially disappointing outcome for cable television? The second question was whether or not my book was essentially correct in its assessment of the prospects for cable television

being used to enhance the operation of a democracy. Third, I wanted to explore some of the reasons why I disconnected cable twice in the last decade.

I think there's no doubt that the optimistic cable fable turned out to be essentially incorrect. The cable industry over promised, and ultimately was unable to deliver. Second, the cable industry failed to take into account in both its investment decisions and in its public pronouncements the presence of other competitive technologies such as the existing telephone system, video games used on regular television sets, personal computers which can provide many services that are competitive with cable services, satellite transmission, microwave transmission, and even the video recorder which permits viewers to rent precisely those movies they wish, rather than relying on the tastes of a cable television programming executive. In 1984, 8 million video cassette recorders will be sold, and they will be in 20 million homes.(24) More and more of these viewers rent the movies they want to see, displacing an important role of cable. So, in my opinion, the optimistic view was essentially inaccurate.

On the other hand, I believe the pessimistic view of cable is perhaps premature and that it underestimates the potential of cable television in the future. It may very well be that cable is undergoing some growing pains at the present moment. 32 million homes have cable and this is a respectable measure of commercial success. Growth will slow in the future, but this is

entirely natural as saturation of the market approaches. But the real future for cable is as an alternative full service interactive telecommunications network capable of replacing the telephone system which is approaching, in concept, one hundred years in age. It's about time we had a telecommunications network which is economical, high-capacity, fully networked and interactive, capable of handling video, voice, and digital communications. Without such a common switched network in the United States, the prospect is that we'll be setting up hundreds of thousands of local area networks and office systems unconnected to one another when it would be so much more economical and rational to develop a highly-integrated, interactive cable network system. Unfortunately, this view of the real potential of cable television is a long, long time in the future. The telephone system is in place and is currently more than adequate for handling low-speed digital communications. Although it cannot handle pictures adequately, it can be a powerful tool for telemarketing and for commercial enterprises that require an interactive capability.

The last question concerns why I disconnected cable from my home twice in the last decade. I think this goes to the heart of the disconnect problem of cable television across the United States. Disconnects are a rapidly-growing phenomenon which is threatening the pay services as well as the basic services. I disconnected because I became convinced that cable television is

probably a technical and perhaps even a commercial success, but a cultural flop. I found that there was basically nothing on the cable that was superior to ordinary broadcast television except perhaps a clearer picture. I found the programming to be basically dull and uninteresting. I found very little diversity. The cultural offerings were weak, if non-existent. And that left me with sports and pornography which is readily available over the regular broadcasting networks. In addition to these problems, cable television failed to provide me with movies that I enjoyed, and as a result I purchased a video recorder which supplies me with precisely those movies I want to watch. Cable can probably never improve on videocassettes. Moreover, through my personal computer at home and the ordinary telephone, I can contact any one of a number of large databases as well as my own university mail system. Therefore, with a computer and a telephone, I have virtually all of the digital service that I require. Moreover, given the demands of the kinds of life that most of us lead, there simply isn't time in my life or my family's life to watch much television. If the cable television industry hopes to increase its penetration of American homes much above 65 or 70 percent where it could easily plateau, then it will have to address some of the cultural shortcomings of its current offerings. Unfortunately, the current economics of the cable industry do not look encouraging: the industry is currently wiring up some very high-cost urban areas which is rapidly

increasing its debt load to dangerous levels, while at the same time, it is locked into fixed-rate increases for the foreseeable future unless the current federal legislation alters that. Moreover the prospect of near term higher interest rates is especially ominous. Even if it is allowed to raise its rates as new federal legislation removes local regulation, nobody really knows the price sensitivity of cable television. It could be that a 10 percent rise in the price of cable could lead to horendous levels of disconnects and people withdrawing from the system. The only way to overcome this is for cable to offer more programming diversity and more services that are useful to a wider variety of small sub-groups. The alternative to this route is for cable to follow the path of broadcast television which is to rely upon mass audiences, low programming diversity, and high levels of economic and institutional concentration. Unfortuantely, this is probably the safest path for cable and the path likely to be followed.

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5. New York Times, February 16, 1984.

6. New York Times, April 26, 1984.

7. Ibid.

8. New York Times, April 23, 1984.

9. Ibid.

10. New York Times, March 4, 1984 and November 14, 1984.

11. Ibid.

12. New York Times, May 15, 1984.

13. New York Times, February 23, 1984.

14. New York Times, February 14, 1984.

15. Ibid., and New York Times, January 8, 1984.

16. New York Times, January 12, 1984.

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18. Ibid.

19. Ibid.

20. New York Times, March 28, 1984.

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22. Laudon, Ibid.

23. New York Times, February 8, 1984.

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