

Public Television and New Technologies

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The argument of this chapter can be put simply: for *public broadcasting* to flourish, for new technologies to provide opportunities for substantial growth in impact, it may be necessary to transform *public broadcasters*. Institutions and entities of the industry have to change in ways that do not seem likely to occur. Indeed, the entire structure of public broadcasting, its history, its relationship to government, renders it relatively impervious to change. In antitrust policy, laws or decisions are often criticized because what they do is protect competitors not competition. Something similar is being argued here: the machinery and system in place, as we know it, is designed to protect the existing players rather than the function that is to be performed in American society. This chapter seeks to describe why this is the case and to recommend a dramatic way to alter the nature of the debate over public broadcasting's future.

1. The problem and aspiration

For much of the history of public television in the United States, the aspiration, indeed, the longing, for many has been for an entity that would look more like its European counterparts, especially the BBC. The dream (or envy) was for a public television that would become more of a force in society, that would have a larger audience, that would be capable of making a greater difference in terms of the specific goals that it has always articulated for itself. Instead, the reality of American public television has been turbulent and beset by structural problems, instability and insufficient funding. Its birthright, in fact, was a second-class technology. Now, however, technology has appeared as a possible lever for the accomplishment of submerged and all-but-forgotten goals.

For the reasons discussed in this chapter it is doubtful whether any of these opportunities for leverage will be used effectively to force those changes necessary to make public broadcasting more capable of using new technologies. Public broadcasters – like their commercial counterparts – want to preserve their present competi-

tive position in the name of substantial change. They want to preserve most elements of the current structure but gain secure funding and more spectrum. It is like taking an old bungalow and pouring millions of dollars into it so that there is a more permanent, fixed and high-tech bungalow. The alternatives facing decisionmakers are to maintain the current mode of public broadcasting (with little or no change) or create or allow to be created greater conditions for internal readjustment. A third alternative, actively ending public broadcasting, has had some adherents, but is not considered an option here.

1.1 Alternatives

Maintaining the current mode is, with its modest changes, the most likely outcome even in the face of new technology. In this category belong the continuing debates over broadening or narrowing public broadcasting's ambit, activation of proposals to increase advertising, continued siphoning of major productions to new satellite-delivered channels, continued fights over federal funding, and the prospects for an endowment or guaranteed funding. Changes at the margin, by definition, mean preserving the existing institutions of public broadcasting but slowly diminishing its extended potential for contribution to the American public sphere.

The second alternative is creating or encouraging greater conditions for internal readjustment. Technology is already forcing this to some extent, but more is required for the rapid overhauling of institutional arrangements to assure that agreed-upon (if that is possible) goals of public broadcasting can be achieved. In large part, this means providing the legal and financial openness that would allow bidding and reward for further development of the assets of public broadcasting. These assets include the existing terrestrial distribution system including, in some markets, duplicative terrestrial distribution, existing contracts for satellite distribution, and potential spectrum rights. The premise of this alternative is that the kind of change necessary to maximize the value of new technologies cannot take place without major structural modification.

1.2 Leverage

There is a little leverage for change, namely, a desire of Congress to get out of the business of annual funding, and perhaps get out of the business of funding public broadcasting at all. Further, there is the leverage of the extraordinary need of public broadcasting for capital for transition to digital, almost \$800 million in federal funds and \$1.7 billion overall. There is the leverage at the FCC and at Congress finally to determine the rules that will govern access to and use of digital spectrum. In addition, issues such as the way in which direct satellite broadcasters can satisfy their 4–7 percent requirement for informational and noncommercial programming can be used as leverage for change.

Without the careful marshalling of this leverage and more, technology will not lead to the kinds of changes necessary to substantially increase the role of public television in the United States. It would be a separate study to demonstrate that in broadcasting (and other industries) modes of adaptation to technology are a function, in large part, of industry structure. Aside from the initial flash of genius, the intuition of the founder, technological progress, so the hypothesis goes, is related to the risk-taking, decisionmaking capacity of a company. The capacity to take advantage of opportunities, to deploy capital, to innovate, all these are related to structure. A more modest hypothesis – and perhaps a sufficient one in the case of public broadcasting – is that certain forms of organization and internal decisionmaking are costly barriers to innovation. An organization that is conflicted between innovation and the protection of entities that are justifiable largely because of a particular status quo would be an example of a counter-technology environment. That does not mean that technology would not be implemented, but the pace and pattern of implementation would be unavoidably skewed.

The structure of U.S. public television – as described in the companion contributions to this volume of Mr. Somerset-Ward and Professor Rowland – retards substantially, the likelihood that it can take advantage of technological opportunities. As in the past with respect to other technologies, PBS and public broadcasting stations will take steps induced by technological opportunities, and that will lead to

some systemic improvement, and perhaps that is all that can be anticipated. But the needs for change are so great and the opportunities presented so substantial, that more attention must be paid to bringing vision and possibilities into harmony.

2. Technology, vision, and structure

Technology, of course, is a key determinant of the moments and modes of transition. After all, public television, as it now exists in the United States, was, in its infancy, itself a social response to the availability of the new technology of television. Indeed, the history of public television could be written, in part, as the intersection of new media technology and government response. Upon the development of a Table of Allocations – the designation of spectrum for certain television users or licensees, the federal government reserved a portion (in some ways an orphan-like grab bag) of frequency opportunities for instructional and educational purposes. At that point, in the early 1950s, the essence of the reservation was the desire – at some point – to encourage entities that would adapt the then-new and potent technology of television to a specialized version of the public weal. The choice of colleges and universities, for the most part, as recipients of these licenses established and embedded a particular view of how public service television in the United States should proceed. From the very start, public policy involved a combination of engineering and organizational structure; and from the very beginning, this organizational structure had a substantial impact on the way in which the technology could be used. Public-service broadcasting would mirror, with a vengeance, the localism of its commercial counterpart.

Vision or purpose is inextricably tied to structure since all rational structures begin and end with the question of role and direction. For the emerging instructional sector, it would be another decade to fifteen years before the energy of major foundations, linked with high-level governmental concern, would lead to the Carnegie Commis-

sion report and a purposeful and comprehensive approach to the use of technology. The resulting system – the Corporation for Public Broadcasting, the Public Broadcasting Service and the ubiquitous local stations – have, since the mid-1960s adjusted or sought to adjust to additional new technologies. These have included the shift to color television, the mandate for improved reception of UHF signals, the use of the vertical blanking interval for closed captioning, the adjustment to cable television and the use of the satellite as a networking tool. Now, a complex, more comprehensive, more overwhelming set of technologies appear: the Internet, High-Definition Television, advanced television services, direct broadcasting services. Under federal legislation, all commercial and non stations will get a channel on which to broadcast DTV, consisting of either one HDTV program (and some datacasting) or multiple streams of standard definition programs and datacasting or other services. As was true in each earlier instance of engineering opportunity, the question is how the existing system adapts or alters as a result of a new technology and whether the system is organized so as best to use these new technologies.

Despite all the love and effort that went into its creation, from before the days of the first Carnegie Commission and up until the present day, the public broadcasting sector has been pressed into conflicting directions in terms of its mission and this is reflected in its structure. It is true that PBS and its member stations, and newer players like the American Programming Service, distribute a rich variety of educational programming to the public and to educational institutions using several means of distribution. It is true that PBS's National Program Service was gloriously a pioneer in distributing by satellite its programming for broadcast by PBS member stations and that it has been in the forefront in sending signals directly by direct broadcast satellite (DBS) services to areas unserved by local broadcast stations. The National Program Service is, as Somerset-Ward puts it, "the jewel in the crown" of PBS. Supplementing these are such offerings as PBS's Ready to Learn Service, an educational service offered in day care centers across the country that helps prepare preschoolers to enter kindergarten.

2.1 Structural obstacles

Yet, despite this overall positive face, there are deep problems, both horizontally and vertically, and these, too, are surveyed elsewhere in this volume. Horizontally, the confusion has been whether the system is driven by a social need for education and instruction – a need fired by the great demands of a huge, overburdened collection of elementary and high schools throughout the country – or whether it is an instrument for cultural programming, to bring the riches of the metropolis to the entire nation and to bring the diverse cultures of the American people to each other. There has been, at times, a division over whether public-service broadcasting is an instrument primarily for the broad center and the major cultural institutions that serve it or, in addition, one specifically designed to redress lacunae by programming for the cultural needs of underserved groups in society. Finally, in recent years (and reflecting a debate in public-service broadcasting systems globally) an additional question has arisen if competitive entertainment programming ought to be part of a diet that makes cultural offerings more palatable, improving overall ratings. Of course, it can be all of these: opera and symphonies, foreign language programming, programming that helps the diverse groups in society understand their own needs better and programming that informs and enriches all by increasing knowledge generally. But all – doing everything – is costly, in terms of resources, and in terms of fashioning strategy.

This horizontal problem is compounded by the competitive environment in which public broadcasting finds itself. What was formerly a niche which PBS held exclusively is now chipped away by competing cable programming services and this may be far more the case in a digital future. Cultural channels, however imperfect at the moment, dilute an audience for classical music and adventurous films. Internet providers and competing cable educational services challenge PBS' dominance in classroom instruction. And, as PBS changes programming to capture and retain an audience, it becomes slightly more like the commercial channels from which it seeks to differentiate itself. Finally new technologies, multicast channels resulting from expanded spectrum availability and digital compres-

sion, abundant channels promised by cable and telephone competitors, and even the Internet, present competition for that most valuable of commodities, viewer time.

Vertically, the American system is also structurally riven. There is, most famously, the ancient division over whether the system is national, with local nodes, or local with national coordination. Here the structural flaws have the greatest consequences. Nationally, there is the complexity created by the existence of both the Corporation and Public Broadcasting Service. Within PBS, there are conflicts between the large and powerful stations and others over who should control decisions and how to use new technologies. *Quality Time* argued that structural flaws meant that scarce funds that are expended on maintaining a complex system of local stations and station managements could better be spent on a national programming service with greater production and more elaborate marketing. Inter-sector competition intensifies the problems inherent in structure. A divided PBS, with conflicts between center and stations, must compete with cable programming services, commercial networks and international providers (like the BBC) that are highly integrated. These fault lines have been widening, and with debilitating consequences, for three decades.

2.2 Technological possibilities

New technology becomes an occasion, in most healthy organizations, to rethink opportunities, and the same has been the case for public broadcasting. Take, for example, the expansion of spectrum made available in the 1996 Telecommunications Act to commercial broadcasters. Vice-President Gore, in an October, 1997 ceremony announcing an Advisory Committee on Public-Interest Obligations for Digital TV renewed a possibility for using technology to benefit the public broadcasters. Speaking of the commercial television system that controls the bulk of the audience, he said that “[The] tradition of trusteeship must continue, even as television goes through the greatest transformation in its history, one that is truly bigger than the shift from black and white to color – the move from analogue to

digital broadcasting.” But a subtext was that “public-interest” obligations could be satisfied in part by payment to public broadcasters from their commercial counterparts.

“We also know,” Vice-President Gore continued, “that digital broadcasting will be more dynamic and more flexible; more competitive and more interactive – and potentially much more responsive to the needs and interests of the American people, if we prepare for it in the right way ... [T]he fact that [the new technology] is so limitless – the fact that so many of our present rules and expectations will not apply – makes digital broadcasting the wild west of the television age. If we don’t map out some of that terrain for public purposes – if we don’t carve out meaningful public space on our newest public airwaves – we could lose the opportunity for good.”

Here the tones of the past are reiterated: the notion of reservations, the idea that a portion of spectrum should be set aside and provided to those who have been the guardians of public broadcasting in the past. This, too, seems to be a hallmark of the existing U.S. approach. Advanced television service should be and will be brought to us by those who brought its analogue predecessors. Vice-President Gore employed a theme which suggests the relationship between technology, structure and opportunity: “At the same time, the digital spectrum is a valuable asset, one that will bring an explosion of opportunities for broadcasters. What we have asked for in return – what we must get in return – is a significant commitment to the public-interest. We all know what the critical needs are: the need to educate and inform our children; the need to give parents the tools to protect their children from what they consider to be harmful influences; the need for free and open political debate, driven not by dollars and soundbites, but by issues and ideas. The challenge we now face is meeting those needs, protecting our oldest values, in the face of new and changing technology ...”

This statement involves a special opportunity – related to structure – in American broadcasting. The question, embedded in Gore’s political rhetoric, is whether commercial broadcasters, provided with extremely valuable spectrum, can be required to disgorge some of the benefits which they will gain and (this being the part relating to the structure of public broadcasting) whether this dividend – if it

comes to pass – will be assigned to or seized by the public television system. The issue is not only the internal capacity of public television to develop a strategy, but also the relationship of structure to politics, and the capacity of PBS and the lobbying arm of the local stations to make their power felt.

In terms of vision, or official understanding of purpose, the Federal Communications Commission, in its Fourth Report on advanced television services and digital spectrum, put it the following way in terms of the role that public broadcasting plays and the regulatory steps that are necessary in a time of new technology to allow it to expand its role:

We note our commitment to noncommercial educational television service and our recognition of the high-quality programming service noncommercial stations have provided to American viewers over the years. We also acknowledge the financial difficulties faced by noncommercial stations and reiterate our view that noncommercial stations will need and warrant special relief measures to assist them in the transition to DTV [digital television]. Accordingly, we intend to grant such special treatment to noncommercial broadcasters to afford them every opportunity to participate in the transition to digital television, and we will deal with them in a lenient manner ... [W]e wish to note that public broadcasting service was the first to establish a digital satellite transmission system and that public broadcasting licensees are in the forefront of experimenting with digital television.

The indications are that public television will be in the forefront in terms of using additional capacity to experiment with High-Definition Television, perhaps being more experimental and more in advance than the commercial stations. But this could mean that public broadcasting will be the undercompensated stalking horse for commercial television. Public television could provide, through HDTV, an inducement for the purchase of advanced sets at a time when it is not economic to do so for the commercial stations, but not receive any substantial benefit for its pioneering role.

2.3 Redefinition of functions

One anticipation is that technology will aid in resolving the problem of what PBS is, what functions it best serves. To be sure, some redefinition will occur: technology requires it because of the way adaptation to technology means taking structures apart and putting them back again. But technology does not obviate choice: the new technology has the appearance of abundance but it will certainly be the case that public television cannot do all things or perform best by trying to continue and intensify all of its prior goals.

Because, notwithstanding dreams, not everything can be done, it is necessary to look at the variety of possible definitions for public television. Among these are the following:

Lifeline

Under this definition, public service television takes on the residue of public-interest obligations from commercial broadcasting, whatever they are. Under some proposals, and the Children's Television Act of 1990 can serve as a model, commercial broadcasters, in the new technology future, could shed public-interest responsibilities if they were willing to pay noncommercial broadcasters to assume them in their stead. The President has established a National Advisory Committee for Public-Interest and the Digital Spectrum that has fifteen members – taken from industry, the public and politics – that will report by June, 1998 what standards ought to be imposed or transferred.

National treasure, national identity

This definition is a reminder of the BBC and European public television in its origins, in which the institution is, in terms of a cultural role, overarching, like the monarchy, a secular version of the Church of England, bearer and reflector of identity and charged with a conscious strategic role in changing culture. This social role is, more than the merely attaining viewers, enough to justify a license fee. This model is rarely the one that is used to express public television in the United States, and public broadcasting has not evolved a sufficient audience share to perform this role.

Minority satisfaction or empowerment model

The best example of this, outside Channel 4 in the United Kingdom, is SBS in Australia. In Australia, the network is dedicated to Vietnamese, Indian, and other minority culture films and similar, conscious counter-programming with the intent that diverse groups deem themselves more meaningfully included in the Australian whole. The U.S. public broadcasting service performs this function to some extent, but when it does it in too notorious a way, it becomes charged with ignoring its mainstream acculturating or reinforcing responsibility.

Public sphere

Another way of looking at purpose is to say the public service broadcasting is an instrument of civil society, part of the creation of a public sphere. It increasingly takes on this function as the commercial entities in American television abandon that role more and more. Perhaps it will have a ceded monopoly on certain public events – like political conventions and presidential and regional and local television debates.

The collection of activities called public broadcasting

A reasonable alternative is not to wax philosophical, but to recognize that there is an existing structure with existing practices and existing institutional neuroses and goals. What that existing structure is, and how it marginally extends itself is what constitutes public broadcasting in the United States.

3. New technologies and their relationship to structure

The principal new technology, the technology that is forcing decisions, involves providing additional spectrum for advanced television services. This technology alone is causing important planning shifts within PBS. But other new technologies and PBS' attitude towards them include the Internet and the new patterns in global dis-

tribution of television signals. In this section, the attitude toward new technologies and the steps being taken or under consideration are evaluated in terms of the existing problems of structure. PBS and local stations are doing much to adjust to new technologies, in terms of using on-line services, developing revenue streams from the sale of video-cassettes, aggressively entering the world of High-Definition Television and planning multiple channels made possible through digitalization and compression of signals. These wholly laudable emblems of an emboldened PBS must be put in context.

3.1 New technology as solution

New technology can be perceived – and this is sometimes a great danger – as a providential way out of an entity’s historic conceptual difficulties. This is a particular danger for PBS. New technologies are thought to be a way of solving old horizontal and vertical problems. Take the horizontal problems discussed above. Digitalization and compression mean that newly available spectrum can be used for multicasting. Because of newly abundant capacity, it is thought, the system can transcend its functional ambivalences by encompassing everything. It can be both a great cultural broadcaster and a targeted provider of educational and instructional programming. It can be a channel for the mainstream and for the edges. It can be politically centrist and politically daring. That is the dream. Technology relieves scarcity; and scarcity, not the complexity of defining purpose, can be deemed the source for prior dilemmas.

A similar approach is possible to the “vertical” problems. Because of the technology of national direct broadcasting, the tortured structural past can have a happy “both/and” solution as well. Technology, here forces, or is thought to force a solution, though here it is technology linked, as always, with legislation or regulation. The 1992 Cable Act requires direct broadcast services to set aside 4–7 percent of their capacity for programming akin to that of public television. If PBS and the local stations want to gain this opportunity, they have to fashion a national feed that is unmediated by local and regional outlets and it appears that this will occur.

Both of these hopes – solutions to the vertical and horizontal problems, the problems of vision and purpose and the internal crippling issues of structure – are not, however, automatically resolved by the existence of technology. Both solutions, and this is their weakness, are linked to funding. This is true especially of the horizontal questions of niche programming versus comprehensive appeal. But it is true of the second, as well, since legislative provisions that have structural implications come bound in budget packages. How funds are obtained, both in amount or in process, will determine what impact technology has on public television.

3.2 New technology and financing

This is, of course, the well-rehearsed problem of scope of funding and reliability of funding. Multicasting means a great call on production. Transition to advanced television services, including HDTV, requires new equipment. PBS has just emerged, as the Rowland chapter painstakingly describes, from conflict in federal funding and problems in subscriber and underwriter support. The result is that new technology is being invoked to resolve this third and encompassing problem of the system: the political pull of annual funding as opposed to the relative comfort of a sustained source of revenue, either through a license fee or endowment or predetermined annual payment.

Increasingly, new technology is positioned as a lever to solve this problem. Income streams rising from digital spectrum might be tapped for public broadcasting or assets sold to create an endowment. The important thing is that, here too, unresolved issues, deeply and historically divisive, can be overcome by the arrival of expanded technical capabilities. Thus, the most important part of a tentative, sketchy but powerful suggestion of Vice-President Gore is that funds from commercial broadcasters, possibly relieved of other public-interest obligations, might be made available for public service broadcasters. This is also, as will be seen below, the direction urged by Congressman Billy Tauzin, chair of the Congressional committee most concerned with these issues.

3.3 New technology and instruction

Before these structural issues are discussed further, it is useful to indicate how new technologies could be used conventionally to assist in the performance of the system's function. Public broadcasting is, of course, the nation's primary source of classroom programming, reaching 30 million students in kindergarten through 12th grade and 2 million teachers in 70,000 schools. It claims to be the world's leader in college telecourses because over 2.6 million adults have earned college credit through the PBS Adult Learning Service. PBS claims a distance learning program in which several technologies are used: broadcast, cable, satellite and video-cassette and disc, and through the PBS ONLINE Website. PBS is proud of its history of being the first, in the United States, to use technology to develop closed captioning for the hearing impaired, descriptive video services for the visually impaired, and stereo television services; and to transmit television programming by satellite. As indicated above, technology, particularly the technology of multicasting, is to be used to increase greatly the service's commitment to instruction and education. The president of PBS, Ervin Duggan, has promised that a return to education and instruction seems a clearly important part of a multicasting future as well as a politically acceptable use of some significant aspect of the abundance made possible through new technology.

3.4 New technology and national signal distribution

A key element of the "both/and" solution is the enhancement of a PBS-controlled national broadcasting service. A direct to home service that would bypass intermediate stations seems to be a significant symbolic part of such a solution. After its fall 1997 annual meeting, PBS announced it would provide a direct feed to DBS operators for transmission to all DBS subscribers, not only those unserved by a local PBS signal. This was a major step by PBS since the signal would be national in origin and distribution. Furthermore, the announcement was significant in indicating some progress in

terms of internal structure. The membership, composed of local stations, voted to proceed with this approach despite reluctance and in contrast to blocking efforts by stations in previous years. The possibility of such a national signal meant that PBS simultaneously sought a Congressional amendment to the Satellite Home Viewer Act to facilitate the automatic clearance of copyright restrictions to be delivered through a national signal.

3.5 New technology and the cultural function

One of the most significant challenges to PBS is how to maintain its franchise as cultural consciousness, or at least the television custodian of that consciousness. Ever since CBS sought – unsuccessfully and too early – to develop a high cultural alternative to PBS, this aspect of the programming strategy has been at risk. Now with planned pay channels like Horizon, with the History Channel and Arts & Entertainment, with Bravo on the arts cinema front, the unrealized threat of CBS may be partly accomplished. It is possible that competition has increased the viewership of such programming, but not significantly, especially given data that viewership in general has remained static despite the jump in the number of choices.

PBS is trying to address this in part through multicasting and the new technology. It would repackage its cultural programming, possibly seeking to do more to differentiate itself from the competition. Under its announced plan for a digital future PBS would show many of the network's prime-time shows, such as "Nova," and "Great Performances," or "Masterpiece Theater," in wide screen and high definition with accompanying six-channel enhanced digital sound. During other day-parts, PBS stations would divide their digital channel, splitting it into four channels, offering, as an example, children's programming on one channel, an adult-education show on another, a nature show on a third and elementary-school course work on the fourth. Using the multichannel option, PBS stations would have the ability to offer children's programming and adult cultural programming simultaneously.

In a digital multichannel future, PBS is considering that viewers might first negotiate a menu screen with small windows – one for each available channel, so they could then select which to watch. In addition, the expanded technology would mean that a portion of the spectrum would be used to send data to viewers, such as teacher guides for teachers.

3.6 Technology and facilities

Already, small steps are being taken toward the digital and multicasting future. In October 1997, the Public Broadcasting Service dedicated its new all-digital technical operations center (TOC). It had been the decision of Ervin Duggan, president of PBS, to demonstrate the Service's dedication to technology by being on the "bleeding edge" of transition to digital broadcasting. PBS had begun digital transmissions on a limited basis in 1994, providing dual analogue and digital feed for months, and switched to all-digital path to air in the fall of 1996. At the ceremony establishing the center, Duggan and other PBS officials said that the switch to digital "positions PBS for the next step" to High-Definition Television and that it helped PBS "double or triple the number of our feeds, [the signals provided to local stations] probably at lower cost than 5 years ago." The early switch was consistent with PBS' history "of getting there first" and "our desire to be on the cutting edge." He said PBS was able to add new technology quicker than commercial broadcasters because "we are not so driven by commercial imperatives" and because manufacturers were willing to provide discounts to get their equipment placed in a high-profile public-service operation.

4. Federal policy

4.1 New technology and funding

As mentioned, given the existing structure (and even without it), a vital element of any solution is more reliable, less politicized federal funding. Without such funding, technology alternatives do not provide the possibility of break through solutions. The technology of abundance without a strategy to program for it and without annual, politically-sensitive funding efforts is but a chimera. Representative W. J. “Billy” Tauzin, chairman of the House Commerce telecommunications subcommittee, has been advancing a plan, announced in September 1997, in which commercial broadcasters might establish a fund or provide annual payments for public television uses in exchange for burden-free licenses to develop High-Definition Television (HDTV). This solution, often bruited about in the past, would provide a benefit even over license fee models. The plan has many advocates, but it is so ambitious, it so removes from Congress the blood sport of punching at PBS annually, that its chances for success are only fair.

Under the plan, the argument could be made – and has been by Congressman Tauzin – that “taxpayers would no longer have to help pay their [public television’s] bills.” The Congressman has also stated plans to form a commission – paralleling one established by the White House – that would study other new ways to fund public broadcasting. Under the plan, commercial broadcasters would have the option to subsidize public television further rather than air required children’s programming or offer free political air time, mirroring options included in the 1990 children’s television legislation. A forerunner of the Tauzin proposal¹, sponsored by former Senator

1 In early October, 1997, CPB forwarded to the White House an implementation proposal which underscored the importance of a financing plan. At issue was the question of how much it would cost public television stations to make the transition to advance services, digitalization and HDTV. CPB requested \$771 million in federal funds – over and above the usual operating budget – to help pay for the change. This \$771, and \$1 billion more that would be raised by local stations, would be in addition to the endowment for operations that would be the subject of the Tauzin fund.

Larry Pressler, sought to establish a trust endowment for public broadcasting in 1995 that would have been funded in part by auctioning off HDTV airwaves. The bill died after Congress decided to give broadcasters the HDTV spectrum for free.

4.2 New technology and flexibility of use

For public broadcasting – as for its commercial counterpart – one of the most pressing immediate strategic questions is how the new spectrum resource will be used. While High-Definition Television was the promise that induced much Congressional interest in providing spectrum to existing broadcasters, incumbents, both public and private, want flexibility so that they can maximize the benefit of what is obtained. The FCC has, however, begun to constrain, slightly, those available alternatives. In the Fourth Further Notice/Third Inquiry on Advanced Television Services, the FCC outlined its policy goals both for noncommercial and commercial television: they included “1) preserving a free, universal broadcasting service; 2) fostering an expeditious and orderly transition to digital technology that will allow the public to receive the benefits of digital television while taking account of consumer investment in NTSC television sets; 3) managing the spectrum to permit the recovery of contiguous blocks of spectrum, so as to promote spectrum efficiency and to allow the public the full benefit of its spectrum; and 4) ensuring that the spectrum – both ATV channels and recovered channels – will be used in a manner that best serves the public-interest.” Put more simply, the FCC has as a primary goal the promotion and preservation of a free, universally available, local broadcast television in a digital world.

Just as it used the “must-carry” rule to strengthen broadcasting at a time of severe competition from cable, it now seeks to ensure a smooth transition by providing existing licensees with additional spectrum and imposing certain simulcasting requirements. Simultaneously, by setting limits for the transition, or providing, in other ways, some idea of transition, the Commission was seeking “to promote spectrum efficiency and rapid recovery of spectrum.”

4.3 Ancillary use

Public broadcasters might have taken the position – consistent with FCC goals – that all new spectrum they obtained would be used for educational, cultural and informational uses and that such uses would be free to viewers. Instead, the primary associations of public broadcasters told the FCC that they favor something that gives them the opportunity to raise funds from this new spectrum. They would be free to provide ancillary broadcast and nonbroadcast use of the DTV channel, supporting the Commission’s position that “flexible use will serve the public-interest by helping to spur development of new technologies and to provide greater opportunities for noncommercial stations to enhance their public service to their respective communities.”

Under the public television position, these services could serve noncommercial and revenue producing purposes. Obviously, “a noncommercial station could ... utilize digital transmission to distribute program-related course materials, textbooks, student and teacher guides, computer software and content areas of the World Wide Web as part of the station’s instructional programming.” But it would also be true that “noncommercial stations could use ancillary and supplementary services, without regard to the educational content, as a revenue source to support nonprofit services and operations and the transition to DTV.”² Public stations could launch a pay service or otherwise use some portion of their new capacity to raise revenues for the remainder of their efforts. PBS and the Association of America’s Public Television Stations (AAPTS), the licensees lobbying group, also opposed a requirement of a minimum time or capacity commitment to High-Definition Television, rather leaving that determination to the marketplace. AAPTS and PBS, in joint comments, opposed a minimum HDTV requirement, noting that the Commission “can rely on broadcasters and public television’s commitment to HDTV.” They argued that if the Commission adopts an

2 In the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service; MM Docket No. 87-268; 62 FR 26966; Federal Communications Commission; 1997 FCC Lexis 4007; 7 Comm. Reg. (P & F) 863; Release-Number: FCC 97-116; April 21, 1997 Released; Adopted April 3, 1997.

HDTV requirement, it should be “liberally waived” for noncommercial stations (particularly those analogue stations that may share a DTV channel in the transition).

5. Structural obstacles to change

These responses and adaptations to the availability of spectrum for advanced television services are examples of how public television, like every other institution in American society, is affected profoundly by the existence of new technologies. The central idea here, however, is that new technologies are a relatively small variable in terms of the future of public television in the United States. Of course, public television will change – and will have to change. But technological change will not, and certainly not alone, materially alter the market share or impact or global status of the American service. It will alter public television – no doubt – but it cannot provide the miraculous cure that seems to be anticipated as the PBS system looks to new technology to help resolve the problem of definition of function, to resolve long-standing disputes about the national versus local nature of the system and, as well, to open the door to more secure funding. Let me examine each of these in turn:

5.1 Barriers to structural change

The remainder of this chapter will focus on what was called the second alternative at the beginning of this chapter: creating the conditions for change, adaptation and major shifts in institutional structures to permit better use of new technologies. In the absence of such change, there is slow decay and death as PBS program niches get picked away, or marketplace adaptation by which PBS becomes more like another cable programming service with a respectable narrowcasting share.

To look at structural obstacles to change, we must look at elements of the status quo and their effect on innovation. For example, PBS has obtained, through the must-carry rule, a Congressional guarantee of shelf space on cable (and, to a much shakier extent, on DBS), shielding it from certain of the competitive pressures of that new technology. While other services, like Discovery and Bravo, were pressured to determine their role in a multichannel environment, public broadcasting could maintain the status quo. Thus cable guaranteed it an expanded market, for a time, rather than merely creating a multichannel environment in which it would do worse. Even the initiation of C-Span by the cable industry had its soporific effect on public broadcasting: while this entity can be viewed as a competitor to public broadcasting, it can also be perceived as an entity that relieved PBS of some public sphere obligations.

In short, public broadcasting has been protected from market pressures felt elsewhere that might have forced greater internal structural changes and led to greater transformation of its programming strategy. It has not had to change to keep cable channel position and to convince cable operators to carry the signal. By the same token, the protection of existing broadcast stations meant that the system did not, at an early stage, build a cable programming channel, as ABC and NBC did.

Similarly, in a period of intense jockeying for position in a global market, the existing clumsy internal organizational structure, coupled with the history of public broadcasting, has meant that U.S. public broadcasting will not be a major player, as a national entity, in transnational services. This does not mean that WNET or WGBH will not make deals and money. Here the focus is whether there is a market for an internationalized American public television as an entity. Technology makes such a market possible, but not for the U.S. system. The major commercial competitors in the global marketplace are American, but U.S. public broadcasting has no significant role. It is the BBC that is trying to stake out a global identity or increase its global trademark for the Anglophone market.

There are several reasons for this: public broadcasting in the U.S. was never strong in news, and competition in news seems to be one of the most important areas for global competition. The BBC effort

which at first was a mixture of news and entertainment, seems now to be wholly news and information. One can ask, as well, whether the internal and public pressure on PBS, particularly in news and public affairs, has been toward the local and, therefore, the parochially domestic, while the BBC has always had a product which was more transnational and regional or global. Second, PBS never really developed an international consumer brand name recognition that could compete with the BBC. The internal organization of PBS means that it is not nearly so equipped to have an external strategy as is the BBC. Besides, within the great tent of the BBC, an external voice was always a vital and distinguished part. In the U.S., the Voice of America was always kept away from public broadcasting. The British way was not necessarily preferable, only that it was far more natural for the BBC to have an international agenda – and to know the territory – than for PBS, despite its international marketing and co-production deals.

It is possible, as one model for the future, that there will be a global public service (or one Anglophone, one Francophone) with national affiliates. The question is whether there is a global alliance to make this happen and whether the national or local entities are so public-sphere driven that such a model would be hard to create. Related is the idea that there could be a kind of global arts and cultural television production alliance, with a national focus on public sphere activities. One interesting aspect has been the development of a strategic arrangement between the BBC and Discovery Channel for certain global programming (and domestic production) rather than extending a more exclusive relationship with the U.S. public broadcasting system.

These are then two big areas where technology affects public broadcasting: the impact of cable television and the direct broadcast satellite (DBS) in terms of fashioning the domestic market, and the role of satellites in developing a global market.

PBS' own history provides impediments to vital change. There is no library to speak of since the independent producers retain library rights, no effective international alliance, no dominating history that public broadcasting has a central role in national identity building, no tradition of a license, and a creaky structure which pro-

protects itself from innovation by buffering itself against job loss and extinction.

Some of the changes necessary to alter the capacity of the public system to take advantage of new technologies have been implemented, and new technologies have been used to produce these changes. A New Technologies Working Group (NTWG) has been established and converted to a PBS board committee. President Duggan told his board that the effort was to ensure that the NTWG formed under his direction in 1994 would be “more secure” as it pursued its mission on DBS and other issues, such as digital TV. It was precisely such governance reforms which seemed to make technology-positive decisions easier to adopt. For example, the vote on direct feeds occurred after PBS’s first-ever membership meeting, a result of February 1997 reforms. The vote arose on the resolution of a coalition of stations urging that PBS be “position[ed] to take advantage of DBS channels set aside,” referring to the proposed 4–7 percent set aside for noncommercial educational programming on DBS services in the 1992 Cable Act.

Prior to this vote, and the governance reforms, PBS stations consistently voiced concern that a national feed would in fact compete against them. They argued that a national-feed DBS channel would have unfair advantages over local stations. The national feed might have a superior picture to that of the local station. By making DBS more acceptable, by contributing to its appeal to subscribers, PBS would be enhancing a system where switch-back to terrestrial uses might be hindered and local stations impaired. As an example of this station-based reluctance, one member station sought to have the future DBS feed be “distinct” from National Program Service (NPS) programming. Assurances had to be given that the feed be differentiated and, as a consequence, harm to local stations would be minimized. Furthermore, if there were fundraising on the national feed, the proceeds would be returned to stations in the donor’s zip code.

At the same time, in a development perhaps linked to issues of technology, the chair of PBS, Gerald Baliles, publicly stated that PBS’s governance structure needed to be changed “to outfit ourselves for that new future.” He said “we don’t have time to waste,”

and since the launch of the governance review process last fall, PBS has heard from “many” within the system who are pro-change. He recognized that those favoring a stronger, more efficient PBS consistently complained that the existing board structure and complicated decisionmaking process made it impossible. Even those who favored a tighter arrangement had expressed doubt about whether PBS was the entity that ought to be the carrier of renewed leadership. Reflecting the ambivalence toward the issue, Baliles was later quoted as saying to a closed governance panel that structural change might not be necessary, and suggesting a go-slow approach.

6. Changing structure and maximizing benefits from technology

Looking at all this from another angle, one can ask what impact the new technologies have had on existing broadcasting entities and how they have positioned themselves to exploit these opportunities. That would provide some suggestion of whether public television is properly organized (on the assumption that other, more commercial entities have behaved in a rational manner). New technologies have, of course, facilitated the creation of a completely different environment worldwide. Quite obviously, and this became true with cable and satellite and now with digital spectrum, the transformation has been from few channels to an abundance of them. It has moreover meant a substantial shift from a television system that was all free (advertising supported or public) to one in which payments by the viewer to a distributor (or direct to a programmer) has become prevalent. From this, a new industry organization of gatekeepers and distribution patterns has emerged. New technologies have meant the possibility, and then the inevitability, of cheaper cross-border distribution and therefore the possibility of global markets. This, too, has meant redefinitions of strategies by programmers and by distributors of programming. And the final new technology, the Internet and World Wide Web, has altered – and continues to alter – the amount,

method and form of information coming from broadcaster to consumer.

The creation of a greater number of channels and the fundamental change in the distribution systems in the United States has had a sharply differentiated impact on commercial and noncommercial television in the United States. For much of commercial broadcasting, this technology-driven fact has led to strategies of consolidation and vertical integration, neither of which has characterized the public television sector. There is no PBS equivalent of the Disney acquisition of ABC or of the Time Warner merger with Turner. The multichannel opportunities of cable have meant that existing commercial players have developed new products, like CNBC, MSNBC, ESPN, and A & E. Public television has not developed similar products during the last twenty years. It has mainly maintained its niche in a time of economic, political and cultural assault. This is not a point of chastisement, just description. Given all the political turmoil that public television has faced, maintaining and slightly improving the status quo is more than could have been expected.

As to the altered global landscape, because of the never-ending need of the commercial networks to extend and expand markets, coupled with a library of programs to which they own rights and the desire to develop brand name recognition, large, relatively untapped, potentially consumer-oriented markets have been increasingly attractive. Not only NBC, Murdoch, Sony and others have been willing to take large risks to establish audiences using new satellite technology coupled with new multichannel terrestrial distribution systems (or DTH). The BBC has been aggressive as well. Its strategy explicitly has been to become more secure at home and more competitive worldwide. Public television has not had the leisure or the resources or the organization to engage such a dual strategy. In the current political environment, it had to focus on domestic issues and there was not the Congressional support for investment in PBS to take great overseas risks. For the BBC (and a few other state-supported public broadcasting services), the government has seen it as in its interest to make investments that will either help the national policy cause abroad or pay off and mean less reliance on the domestic license fee.

7. A carefully constructed auction

In this environment of great technological opportunity and dogged structural and political impediments, a number of more radical approaches have been suggested. Lawrence Grossman's proposal for a high-powered second public network, utilizing prime time in a portion of the week, with advertising support, is discussed in Dean Rowland's chapter. Somerset-Ward, in his chapter, suggests a variety of steps that would lead to more consolidation, greater investment in programming production, and more rational use of existing assets. The enterprising PBS president, Ervin Duggan, has his own publicly stated agenda for progress in streamlining within the existing framework of public television.

One more aggressive approach is for there to be an auction of the national service, along the lines of the British ITV auctions, where there is a described set of functions to be performed. Bidders offer to perform the required functions or bid up the functions to be performed. Bids would contain – depending on the nature of the functions described or the proposal of the contenders – either a payment to the government or the guarantee of the services promised for a contracted government contribution. The full design of such an auction – too ambitious for this chapter – can serve as a mental exercise in subjecting public television to carefully selected market pressures, not the accidental ones that now affect program policies adversely.

Public service television – or more likely some part of it – would be spun off into a private or semi-private corporation, much like the privatization of airports or highways or the operation of prisons or schools. This technique is used as a means of forcing a definition of purpose and trying to obtain a more efficient way of accomplishing national goals. The technique is also used as a way of limiting or defining the government contribution to a public enterprise. Looking at the evolution of public television globally, no system has used exactly this approach. On the other hand, public television globally seems to be moving from state control to a more public-private partnership or towards entities more capable of competing in a multi-

channel and globally defined environment. In surprising ways, the former evolution of the state broadcasters in Central and Eastern Europe and in Russia have hallmarks of such a redefinition.

To help understand this auction approach, one could ask who the bidders might be. Looking at counterpart commercial restructurings, candidates might include those who are central to the existing system or an entity with a library and production capability that could use a public distribution system. An auction would increase the likelihood of vertical or horizontal integration in the various markets of which public television is a part. It is unclear who all the bidders might be, but some possibilities include the Children's Television Workshop or PBS itself or a BBC-Discovery consortium or an alliance of major PBS local stations, alone or with the BBC. A commercial network like CBS seeking to redefine itself, might participate in such an auction, or Disney-ABC.

It is impossible, in this chapter, to indicate exactly how such an auction would be structured to render technological opportunities more productive, in terms of the goals of a public service, but some indication is possible. One idea would be to establish a bidding process for prime-time public broadcasting – the National Programming Service – but leave the remainder to local affiliates. Extremely important would be whether the bidder would have some portion of the multicasting opportunities available as a result of spectrum expansion and digital compression and under what conditions. As an example, the bidder would be committed to providing an “as is or better” public broadcast system to close to 100 percent of U.S. households with some right to do limited advertising on PBS stations and some obligation to provide a new public broadcasting channel on cable to something like the SBS or Channel 4 model. The bidder could also bid by providing funds for the use by affiliates during day programs. The bidder would provide a plan for the use of digital spectrum and local broadcasting stations would be required to clear prime time. The bid would be similar to the British system for the award of Channel 5 licenses and the award being for a period of years with a new bid at the end (as opposed to a license renewal process). Congress could still participate by creating additional program development funds, or by funding major cul-

tural institutions to produce programming with the successor organization.

While a great temptation and likelihood would arise, it would be highly pragmatic for entities that might seek to enter into such an auction to help define its terms. This determination should be done through hearings before the Federal Communications Commission or before a Congressional subcommittee. An auction or similar transaction might, for example, mean that proceeds from a privatized national service, including use of digital spectrum during prime time, would finance local entities with a redefined function as well as production. Federal budgetary contributions might, in the future, be limited to support for educational or instructional offerings. One bidder might offer to provide a service like SBS in Australia which spoke specifically to under-served language minorities in the United States. Funds from an auction could be used to support local production by local public broadcasting entities during those periods not reserved for those who prevail at auction. There could be an auction for a nationally-based but decentralized distance learning Program (like Ready to Learn), in which the bidder proposed a model for utilizing available digital spectrum, reservations on direct broadcast satellites, and over terrestrial facilities. Such a bid might be contingent on funding, or promise some version of partial self-funding through tuition and other revenue-producing methods. The function of opening up possibilities – of allowing Microsoft or Disney or the BBC or Children’s Television Workshop (or a combination of the major PBS stations) to make a bid would be to allow a reconceptualization to occur which did not depend, for its initial validity, on the protection of existing entities. The British Open University might participate in a bid for post-secondary instructional broadcasting, in conjunction with a consortium of American universities or with the Learning Channel.

The idea, here, is only to sketch the possibilities. It is an understatement to say that there are enormous, probably insurmountable, hurdles. These would include coordinating a carved out role with the continuing existence of local station licensees, the constitutional questions involved in actually determining what a public broadcasting entity should do, the difficult question of who would judge

among bidders and by what criteria. It is only because of some structural approach that might substantially reenergize – even more than is now occurring – and strengthen public broadcasting that such a complex suggestion is put forward.

8. Conclusion

Ervin Duggan is a leader who uses formal opportunities to try to build consensus or the appearance of consensus. In a June 1996 speech, Duggan gave an important view of the relationship between structure and technological development. Instead of reflecting on fracture and dissent, an earlier theme, Duggan announced a “year of victory,” of “solidarity, unity and cohesion.” He wished to dispel concerns of local stations that PBS wished to become independent of them, rather than tied to their continued maintenance. “Let there be no ambiguity,” Duggan exhorted. “We know why we are here. PBS is here to serve you. We cannot reach our audience except through you.” In the speech, Duggan specifically addressed PBS efforts in the area of new technologies. Duggan pointed to the PBS World Wide Web site and the formation of the New Technologies Working Group originally charged with examining the prospects of HDTV, Advanced TV and DBS for programmers and stations.

Many of these are important steps. They will yield improvements in the workings of the public broadcasting services. They do so, however, within a structure that remains hobbled. The emphasis on structure in this chapter is based on the assumption that exploitation of technology in the public-interest depends on a complex of political and structural forces. In a world in which there is intense reorganization so as to maximize the potential gains from technology shifts, the greatest danger to public television could be an inability to react adequately to opportunities provided. It is in this context that a number of suggestions have been made for moderate and radical change as precursors for the benefits of engineering advancement. Of course, *ex ante*, it is difficult to know what changes in

structure will lead to particular social benefits. It may well be that a highly decentralized and almost atomized system can be a greater goad for change than one that is more structured and controlled from above. The early results from the commercial sector are mixed. But it is clear that the investments, the flexibility and the speed necessary for change to take advantage of new technologies require structural change in public television. New technologies are, in a sense, like new playing cards dealt in a high-stakes game. They are opportunities to be sure; but they are deeply embedded in a pre-existing context and a complex competitive environment. Technologies create opportunities, but policymakers, legislators, managers and citizens provide the environment and structures in which those technologies manifest themselves. Technological determinism has its place in the discourse of history; but in the corner of public broadcasting, at this moment in time, it is implementation, not the technology itself, which is most fateful.

At a time when huge commercial networks have been gobbled up, have transformed or virtually disintegrated, where relations between networks and affiliates have been in a state of constant flux, where the relationships among industry components – broadcasters and cable, for example – have gone from prohibited to intimate, public broadcasting should be subject to radical reexamination as well. Yet, public broadcasting – the entities of public broadcasting – are holier cows than their British counterpart. The pressure on the BBC to transform, to act competitively and to alter, substantially, its structure so as to function in the next several decades, has been dramatic and effective. For all the clumsy and culture-laden debate about public-broadcasting in the United States, for all the oaths and cataclysmic predictions from the public broadcasting community or harsh pledges of budget cuts by conservatives in Congress, there has not been anything like the coherent and effective refashioning that has taken place in the UK. To be sure, the British experience has had its critics. The new leadership of the BBC is often portrayed as abandoning the Reithian tradition and playing too facilely to the marketplace and there are those who think that market forces are destroying the institution in order to save it. What is critical here, however, is that the structure for change, not immunity, has been set

in motion and the consequence is that a far more entrepreneurial, far more globally ambitious and more innovative BBC has emerged.

All this being said, technology and even the structural changes that will maximize the impact of new technologies will not turn America's stepchild of public television into a new and glorious BBC. If anything, the future of the world's public-service entities will become more like the present of its American exemplar. The history of American public television – and the future of public-service television around the world – is one of segmentation and narrowcasting and technology may not change that simple fact. It is important to examine demography and market share. Oddly, because PBS always was a sculpted minority, its audience share has remained more stable than that of many other public-service broadcasters around the world. The problems PBS and America's public television stations have traditionally faced will increasingly be found in its more protected equivalents around the world.