

The Three Stages of
Television

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Introduction

As electronic media evolve technologically, they face cultural, political and economic resistance. Established institutions fear the change accompanying new forms of communication. This is as true today as it was in the past. Yet the openness of the media is an excellent measure for the openness of a society, both politically and economically. When movies were invented, they did not show Shakespeare's plays, but instead exhibited vaudeville dancers and even bare ankles. Traditionalists were outraged and sought a ban. Later, when sound was introduced into motion pictures, musicians' unions agitated that "sound movies are economic and cultural murder." When the radio arrived, researchers noted that "Parents have become aware of a puzzling change in the behavior of their children" ¹ In Britain, the headmaster of the elite Rugby School complained that ". . . people listen in to what was said to millions of people, which could not be the best thing." ²

The telephone was no exception to the dismissal of a new medium as frivolous at best. Soon after its introduction, it was accused by a noted psychiatrist of driving people permanently insane. Some religious groups urged their members not to use the telephone,

¹ Eisenberg, A.L. *Children and Radio Programs*. New York: Columbia University Press. 1936

² *Daily Telegraph*, Oct. 23, 1926. in Briggs, Asa. *The Birth of Broadcasting*. London: Oxford University Press. 1961, p. 14.

which they believed was a device of Satan to make people lazy.³ As for computers, in the 1950s and 1960s, many believed that they would surely create a 1984-like state. But when the real 1984 rolled around, the fear had become that 12-year-olds would use computers to start a nuclear war on their own.

When TV emerged in the late '40s, it affected the dominant media negatively. Film attendance dropped sharply from 3.4 billion in 1948 to less than 1 billion in 1968. The total number of theatrical features produced declined from about 488 in 1947 to 253 in 1954. Hollywood went to war against TV. It's us or them, they said. Ronald Reagan went to work for TV and never made a movie again. He had to look for another line of work.

Later, when cable TV emerged, it was the same story. Hollywood repeated virtually the same mistakes with cable television, like the Bourbons in France, who were said after their restoration to the throne, to have learned nothing and forgotten nothing. First, Hollywood ignored cable television and let others take the lead in program distribution. When it finally realized the importance of the new medium, it went on a counter-offensive which was ineffective. Meanwhile, the TV broadcasters, now the new media establishment, fought cable TV tooth and nail. It enlisted the government, as others have traditionally done, to control the new medium. But this strategy could not contain cable television.

³ Pool, Ithiel de Sola. *Forecasting the Telephone: A Retrospective Technology Assessment of the Telephone*. Norwood, NJ: Ablex. 1983, p. 125.

So where will the future of electronic take us? It helps to understand that television evolves in several stages. The first two are well-understood, the third is rarely recognized. The first stage is **limited TV**, followed by the second stage, **multi-channel TV**. This is the presently emerging system, but it is not the end of evolution. The third stage is **distributed television**, the TV of the future. Most governments, and most established media industries, are still resisting the emergence of the second stage, when they should already be focusing on the third.

Stage I: Limited Television

The stage of limited TV is itself composed of four distinct phases. In Europe, as in many other countries, a very brief period of *early private radio* was followed by *state broadcasting* in the 1920s and early 1930s. Radio was a tool of government. It is easy to see this for the various dictatorships of the era, but even in pre-war Britain, Winston Churchill was never allowed to raise his warnings against the policy of appeasement over the BBC.

Radio was used effectively by strong political leaders, and it made them stronger still—Hitler's exhortations to expansion, de Gaulle's calls for resistance, Churchill's mobilization of Britain's spirit, FDR's fireside chats to regenerate America's optimism. Radio's auditory appeal was powerful (witness the mass hysteria following Orson Welles' "War of the Worlds" broadcast). It was a perfect tool for influencing the public. In the political age of

the Masses, the radio provided the link and the control. It was an excellent and cheap means of one-way exhortation, and it even paid for itself. Governments could not afford to let it be in the wrong hands, and they did not.

The emergence of television after World War II strengthened state broadcasting still further. TV is expensive to produce and requires much more spectrum than radio. This kept the number of television channels to a number even more limited than radio. To put them into the hands of private interests after two decades of ideological conflicts and wars seemed unwise.

In the late 1950s, European societies began to become less polarized. Transfers of power and even coalitions among moderate left and moderate right parties became fairly normal. As democracies stabilized, government controlled television became less acceptable, and shared control was introduced. Thus, the governmental control of broadcasting was relaxed through much of Europe in the 1960s in favor of a more independent status. State broadcasting moved into the phase of *independent television*, the golden age of public broadcasting characterized by programs of high quality, but still within a limited channel choice, and part of institutions that were often politicized along party lines.

The creation of these institutions created a barrier to entry by commercial interests. A nonpartisan institution could command broad political support. A partisan one, on the other hand, opened itself to political retaliation in the form of an opening of entry barriers.

Those broadcast institutions that disregarded this danger lost their status of exclusivity when the opposition gained power.

But this system of independent TV did not last. Many viewers did not feel their program preferences were met; others were turned off by political wrangling over broadcasting jobs, or by a perceived bias in reporting. This dissatisfaction was the background to the emergence of pressures that moved the broadcast system into a *limited private television* based on a mixed system of public and privileged commercial television.

Viewers became more selective in their program choice. Subjected to increasing information flows, they had to resort to screening those flows on which they most wanted to spend their limited time and attention. When a TV set in the living room was still a novelty, viewers would accept almost anything (even the test pattern), but over time they became more discriminating. Furthermore, as incomes rose, the value of time increased, and with it the reluctance to waste it on a program that was only mildly desired. Similarly, increasing education played a role by encouraging a more active attitude toward program choice.

These factors contributed to a greater differentiation of viewer tastes than in the past and to a greater unwillingness to fit into a mass audience. In some instances viewers did not necessarily want programs different from those already provided by the public broadcasters. But they wanted them at the time of their choosing. In other instances, the programs offered were not aimed at the center of the taste distribution and left audience segments unserved. In

consequence, when VCRs made time shift viewing and video rentals possible, their sales rose rapidly.

Change began with radio, where the stakes and the entry barriers were lower than those for television. Indeed, the restrictions had become porous, and pirates were embarrassing the official system by defying persistent efforts to close them down and by their popularity with audiences. In many instances, radio liberalization became merely the ratification of reality. It created a legal and organized model for the new broadcast environment, and it changed attitudes by demonstrating the vitality of entry and the absence of one-sided political control.

Spectrum allocation became less of a limiting factor because of the emergence of a key new distribution medium, cable television. Once these distribution pipes reached into many households, they were filled with additional programs of other public stations, often from adjoining countries, because those were the only ones readily available. But soon, commercial offerors presented themselves. Once these commercial offerors were ready to serve, the basic question of admissibility of commercial programs could no longer be postponed. The old justifications for limited television had become irrelevant; physical scarcity of channel capacity was not the problem. Even though early cable systems had only five to fifteen channels, it was well understood that the number could be much larger. If anything, the problem became how to fill the channels with attractive programs.

As the availability and cost of channels dropped, the traditional system became dependent on law and politics rather than on physics and economics to protect itself. Although it seems acceptable to have a state monopoly on providing the only two or three channels, it is a different matter when it comes to fifteen or more. At the same time, generalized opposition to commercialism in media was not easy in societies where newspapers, magazines, books, videocassettes, and films were mostly commercially produced and distributed and where public broadcasters themselves often carried advertising.

Technology played a function in this change, but it would be inaccurate to ascribe to it a central role and to hide basic societal decisions behind the alleged relentlessness of technology. Technology was enabling but not determinative. Terrestrial broadcasting required licensing, not new technology. Italy is full of stations using venerable broadcast technology. Other countries use cable television, which at its core is not an especially innovative technology and which was available in the 1950s and 1960s, though with fewer channels (but certainly much more than the two or three over-the-air broadcasts). Satellites were more of a technological advancement, and their role as a direct-broadcast medium made national restrictions difficult. Satellites were also important as a wholesale medium for cable retail distribution, but this also could have been accomplished by more traditional means. VCRs' impact was more indirect, by making consumers used to control over their viewing and by strengthening a low-cost production sector.

Despite strenuous internal resistance by governments, the political left, conservative

traditionalists, and established media institutions, within the 1980s almost all European countries opened up in a tidal wave: Germany, in 1984; France and Iceland, in 1986; Belgium, in 1987; Denmark and Ireland, in 1988; Spain, in 1989; Israel, Netherlands, Greece, and Norway, in 1990; and Portugal and Sweden, in 1991.

With these liberalizations, the European countries moved towards the system that existed in the U. S. for several decades. This system should not be confused with an open system. *Limited private TV* was merely a partial opening. It was privileged in the sense that entry was still highly restrictive, and allocated by governments for reasons of politics and favoritism, without clear criteria and explanation.

In France, for example, the Socialists awarded control over private channels to their allies Rousset, Seydoux, and Ribaud. The conservatives added their own favorites, Hersant and Bouygues. Even when direct political connections were not rewarded, allocations went to influential media firms.

The tendency of limited private television is toward oligopolistic behavior. In the United Kingdom, the ITV companies established a cartel system among themselves, and a cooperative arrangement with their rival BBC. They did not compete in the acquisition of programs instances, and opposed further opening. There was a broad-based opposition to further opening. In Finland, the private MTV similarly resisted new commercial entrants. And in the United States, broadcasters generally obstructed in the 1970s an expansion of

cable television's ability to provide additional programs. It is easy for all incumbents to agree on the undesirability of further entry and to oppose it. A further opening of television was contested by a formidable coalition of the public broadcasters, private broadcasters, and influential parts of the publishing industry that have obtained the few television licenses.

In the United States, the first three decades of commercial television, the stage of limited TV, were characterized by the an oligopoly of three national programs CBS, NBC, and a fairly weak ABC. Public broadcasting was merely a footnote. The three networks, physically located in close proximity in New York and continuously interacting, were at once fiercely competitive with each other for audiences and talent, but cooperating with each other on issues of mutual self-interest such as barriers to additional entrants.

The system was highly profitable to the handful of broadcasters nationally and in each local market. But it had one vulnerability: it rested on a government-awarded license, which could, at least in theory, be withdrawn for misbehavior or inadequate performance.

The original TV license were awarded after hearings comparing the various applicants merits, and with some ex-party political interventions. One alternative, lotteries, was later used for low-power TV and for microwave broadcasting (MMDS). The third alternative -- auctions -- has recently been introduced in America for some new mobile services but not for broadcasting.

In a very real sense, the foundation of a media enterprise is a piece of paper issued by the government and denied to others. A television of privilege is a television of limited independence. The absence of independence does not mean that these television channels will extol the government in power. But it implies caution in being identified as oppositional. The television of privilege tries to make no political waves.

Given the major financial value of a license, broadcasters protected it by consciously cultivating community goodwill through various forms of service, and by avoiding controversy and by imbalance in programs. All this led to cautious, middle-of-the-road programs and behavior.

Guarding the system is the Federal Communications Commission, set up as an independent commission not subject to direct political directive. This worked sometimes, but at other times the agency was excessively close the industry and saw its role as a protector of broadcasting. The lesson is that the legal status of independence of an agency is a necessary but not sufficient condition for actual independent behavior. For that, the nature of the appointments, an agency's internal culture, the transparency of its process, a set of policy principles, and a non-partisan nature of its leadership are essential. One of the strengths of the FCC in America was that it covered the main forms of electronic media rather than concentrate separately on telephone, cable, or broadcasting, as other countries have been doing. As media technology and businesses converge, the regulatory agencies must converge too, or else they become protectors of "their" industry. The FCC also stayed largely (though

not totally) out of the regulation of content.

One of the tenets of the American regulatory system is the principle of regulatory independence. On both the state and the federal levels of government, the main institution of regulation has been the independent commission, a hybrid creature with extensive powers located in the no-man's land between legislative, executive, and judiciary, encroaching on all three but reporting to none. In contrast, many other regulatory agencies do not follow the model of independence and are instead comfortably a part of the federal or state executive branches. Clearly there are advantages to having a consistent regulatory policy which is determined and coordinated by the executive, as it is in most other countries. Why then having that peculiar institution, the "headless fourth branch of government" which muddies the elegance of Montesquieuan separation of powers? The historical explanation lies in the beliefs of the Progressive Era in America whose godchild the independent commission is. The progressive movement, a reaction to the corrupt machine politics of its time, sought to take as much public decision making as possible out of the hands of politicians. But has this system worked as intended? Many observers of the regulatory system have pointed to the flaws in independence, for example that commissioners are beholden to the official who appointed them. Yet such observations, even if true, are only meaningful when there is a difference in policy flowing from "true" independence. Ultimately this is not a question of political theory but of empirical fact: does independence matter?

I investigated the question in another context, that of building departments in 2000

American cities, some of which are independent, others report to the mayor's office. The answer: yes, at least for the type of regulatory activities that was investigated, independence does matter to the agency, though the policy outcomes are not very different.⁴

Within many other countries, the form of state control has also been changing. Under state television, governments operated all broadcasting, either directly or through a fully owned and controlled corporation. In the phase of independent television, supervision was based on appointees. Only a very limited regulatory mechanism was necessary (e.g., for the supervision of fundamental political matters and the setting of the license fee).

However, liberalization, with its private and community stations and cable distribution, required a different approach. Licenses had to be awarded; operating conditions set; and their fulfillment enforced in light of new developments. A regulatory structure became necessary. One response was to lodge regulation in an independent or semi-independent agency. This was the model in the United Kingdom of the IBA, the Cable Authority, the telecommunications agency Oftel, and the new Independent Television Commission (ITC). In France, the state Ministry of Information eventually gave way in the 1980s to the Haute Autorité, the CNCL, and then the Conseil Supérieur de l'Audiovisuel, with each step providing additional independent powers. In Germany, the various states created semi-independent Medienanstalten. In Ireland it was the IRTC, and in Israel, the Independent Broadcast Authority. This trend resembles the creation, in the United States, of

⁴ "Does Independence Matter? An Analysis of Regulatory Behavior," *Quarterly Review of Economics and Business*, Vol. 22, No. 4 (Winter 1982), pp. 51-60.

the Federal Communications Commission in 1934 and of the state public utility commissions decades earlier. In many European countries, such independent bodies, often with executive, judicial, and quasi-legislative power, were not usual, and their creation is a change in the administrative process with significance beyond television.

Stage II: Multichannel TV

Is the system of limited private television stable? After all, the monopoly system has already broken down. Would the oligopoly system prove more resilient? The answer is no. For all the efforts that they expend, governments as regulators are subject to the same forces that led to the demise of the entrenched state monopoly--entrepreneurial innovation, audience demand, producer dissatisfaction, multichannel delivery on cable and DBS, imported channels, and so on. But it will take time for those forces to lead to the next phase of television, the multi-channel open television system.

Perhaps the best one can say about privileged entry is that it permits society and other parts of the media system to adjust gradually to a more open system. Another positive aspect to privileged entry is that it is generally more palatable to opponents of openness in television, who tend to believe that the less there is of it, the better. But actually the opposite is the case: The most questionable system is a highly profitable medium under the protection of the government and run by its private-sector beneficiaries.

The point of an open media system is only partly to provide more entertainment. The other important part is to provide diversity and choice. And this can be accomplished structurally only to a minor extent in a limited private system. Economic logic leads the television of privilege to be limited in terms of cultural standards and of choice.

It is true that some of Britain's ITV program are of high quality, and it is therefore tempting to conclude that the profits of the limited system are required for high-quality productions. But that assumes that artistic creativity is based on a patron system: The crumbs from the table of privilege pay for its hymns, as under feudalism. But creativity is just as much, if not more, derived from the interplay of lively minds, and an absence of powerful organizations' ability to constrain a restless spirit. These are all more likely to flourish in an environment of many avenues of production and distribution, although such a system is not a sufficient condition. The logic of the argument that monopoly profits are required to support artistic endeavors could equally justify, say, a single monopoly oil company in the United States on the theory that its monopoly profits could lead to greater donations to the arts. Or it would justify a single national newspaper, because by cutting duplicative commentators one could best support the remaining ones and select only the greatest talent. It is likely that under a more open system certain prestige projects will not be funded. (Even that is arguable; after all, each new channel would have to invest in creating positive audience identification.) But overall, the greater number of possibilities for video talent is likely to lead to greater program originality. The television of privilege restricts avenues of creativity.

Perhaps most significant, there is no principled argument on behalf of the television of privilege. A public broadcast monopoly has certain arguments in its favor. Some, like spectrum scarcity, are weak; others entail value judgments one must respect, such as the unwillingness to leave media power in private control. But there is little to justify giving valuable television licenses to only a few entities and to exclude the rest of society from broadcasting. It may be argued that

1. "Too much" television will not survive. (In that case, no entrants will be forthcoming, or they will fail.)
2. High profits are needed for quality programs. (That argument has been dealt with earlier.)
3. One could, after all, buy up a license from an existing holder. (But the purchase price would include the capitalized monopoly rents, thus creating a barrier to entry that is very expensive to pass; and the new participant would have to pass muster with the government.)
4. Open entry will lead to a chaotic structure. (It need not be more orderly than in print publishing.)
5. It will lead to a quasi-monopoly, similar to Berlusconi's in Italy. (Obviously, general anti-monopoly rules should not be suspended for television.)
6. It will lead to the entry of foreign interests. (This too can be dealt with through structural rules.)

Many people believe that the evolution to an open multichannel TV leads to "more of

the same," simply to a multiplication of the old type of programming. But this is incorrect in terms of economic logic as well as empiricism, at least for the United States.

Commercial television frequently disappoints those seeking the standards of public service television. But this cannot be simply because the medium is commercial. After all, most print publishers and film producers are also profit-oriented, and they turn out many works of high cultural standards (as well as of low ones). But the traditional commercial TV system was limited to an incredibly small number of channels, and it therefore served mainly the broad center of the "taste distribution". The guiding program philosophy was frequently but incorrectly described as "lowest common denominator" programming. In fact, it did not aim at the lowest level of audiences, but at the most prevalent one -- the popular culture of the middle and lower middle classes.

Those who observe such a culturally disappointing performance of the limited commercial system often tend to believe that the less there is of it, the better. Actually the opposite is the case: the most problematic TV system is a commercial system that is limited and that depends on government to protect its scarce licenses from competitors, and which due to its scarcity serves only the center of the taste distribution. Others believe that high profits of the limited system are required for high-quality productions. But that assumes that artistic creativity is based on a patronage system in which rich institutions can pass on some of their resources to the artistic community. Genuine creativity, however, is most likely to flourish in an environment of many avenues of production and distribution serving numerous

tastes.

With open entry, the development of TV programming increased dramatically. The number of satellite-delivered channels has increased from 4 in 1976, 43 in 1983, to 99 in 1994. New program channels emerged. They took on a different format than the broadcast programming. Whereas the broadcast channels had a "full-service" program philosophy, based on economic logic as well as regulation requiring the service to the community at large, the new channels were format-based. They provide all-sports, all-news, all-movies, all-religion, all- cartoons, all- science fiction, all- comedy, etc., around the clock. The audiences for each channel are still small, but they add up.

Some of the new channels took up traditional but more marginal program categories and gave them visibility and presence. Religious programming is an example. The Discovery Channel offers nature documentaries. The Weather Channel provides significantly more detailed information to specialized users such as farmers, boaters, or pilots. The Travel Channel informs about tourist destinations. CNBC provides business information and talk shows.

This trend continues unabated. In 1992, 20 new program channels were offered to cable operators and in the first half of 1994 alone, over 70. They include: antique auctions; automobiles; arts performances; bingo; books; business; catalogues; computers; cowboys; classic arts; classic sports (old highlights); crime; dating; deaf and disabled; environment;

fashion; games; gambling; gardening; golf; healing; health; history; home buying; "how-to"; human development; independent films; inspiration; international business; jazz; lectures; military; museums and exhibitions; mothers of newborns; movies; multi-culture; new age; outdoor; pets; public affairs; real estate; recovery for alcoholics; romance; self-help; shopping; short movies; singles; soap opera; and Spanish.

Thus, there will be quality channels each night, far more than a person can watch. But to find them will take some navigating past the World Wrestling Federation, romance, gambling, and shopping channels.

What is missing? Specialized instructional programs; programs in languages without a concentrated U.S. base of speakers; foreign channels. Nor is there yet an interactive channel of merit yet. The beginnings of interactivity are in shopping and games and, in the future, probably in adult programs. There are no controversial political channels of extreme left or right wing programs. (Some of these are available through local non-profit public access channels.) There are no channels for native Americans (Indians). But in particular, there are no new channels for children. There is no "Fairy Tale Channel" or "Elementary School Channel". Thus, market forces will supply much but not everything. There is room for non-profit public and educational broadcasting.

This trend toward more channels will continue. The major bottleneck is the limited channel capacity which now averages between 35 and 55 channels, but is being overcome.

In New York, one cable system carries 150 channels. New technologies such as fiber compression are being used, and an experiment in Orlando, Florida offers 500 channels. Other channels are offered by direct telephone wires (experimentally), and microwave "wireless cable," and direct satellite broadcasting.

Stage III: Distributed TV

It is tempting to believe that, as this trend continues, we will move to the mega-channel television. But this would be an incorrect extrapolation. Actually, the opposite will happen: We will move into the third stage of TV: *distributed television*. The key technologies here are video servers, broadband switching, and navigational agents. Fiber lines are important but not essential. The technology can rely on upgraded copper wire, using encoding and noise-reduction techniques that permit the use of a telephone line as a video conduit. Although fiber helps, it is the switching that is important. Video servers are large computer-like storage devices, storing thousands of films, documentaries, and other kinds of programs. Many companies will operate these video servers, charging a varying mix of usage fees, subscription charges, transaction fees, advertising charges, and sales commissions. There will be customized ads, based on customer demographics and on customer transaction data.

These servers will be interconnected through phone and cable in the way that the Internet today links computers and their databases. Together, they form a "distributed" form

of television program availability.

This means an extraordinary choice of program options. When given an abundance of choices, how do people react? They seek simplification and convenience. In the U.S., for example, few people go through the trouble of ordering films by pay-per-view. In the future, they will simplify the selection task by "navigators" and personalized menus. In that world, channels will disappear, or rather become "virtual" channels. This leads to the emergence of an individualized "me channel" ("canal moi", "Kanal Ich") based on a viewer's expressed interest, his past viewing habits, recommendations from critics he trusts, of delegated selection agents, a bit of built-in randomness. This is why the future will not be one of 50, 500 or 5000 channels. Much worse. It will be a future of only *one* channel, a personalized channel for each individual. The simultaneous mass medium experience will be replaced by individualized experience. This is not narrow-casting. It is custom-casting.

The Internet computer network system is a forebringer of this trend. It is now becoming commercialized on its way to a mass medium. To be video capable on a large scale, it needs to expand its capacity and it needs to establish a pricing mechanism. These issues are technical and can be readily resolved, by advanced encryption techniques.

Whenever a revolution takes place in countries with state broadcasting, the rebels' first targets include the television station. But in an open system of broadcasting, which station would one occupy to silence the previous regime? In open television, no single media

entity or point is dominant. No country in the world is close to this system. But many are gradually moving in this direction. The process by which governments permit this evolution is liberalization.

There are negative aspects to this trend, too. It leads to the politics of 15-second sound-bites, to everyone being famous for no more than 15 minutes, and to shortened attention spans. It will cost consumers much more in terms of a monthly "video-bill," away from the essentially free system of the past to perhaps more than \$100 in the future. However, viewers will also get a vastly greater choice.

Will video, given such abundance, push print out to a secondary role? Will we experience the age of video culture? Not really. Print works well for abstractions, whereas for images, TV is superior. Thus, each information stream and presentation has some advantages. What we need to do is to try to combine the best of them. This is the logic behind multimedia technology. For me, the medium of the future is the comic strip. Or rather, the 'hyper' comic strip: panels of text with still pictures, some of them moving like film when you touch the screen. There will be sound, and even smell. The text will go into deeper details and connect with other text, like hypertext. One can skim this hyper comic strip or navigate in it. This will be on flat and light display panels one holds like a book, and one could write notes on it, store, and send it to other locations.

This leads to an entirely new form of what a work of art is, what literature is, what

film is. All these creative endeavors are based on a technology. When a new technology emerges, human creativity will have a new tool.

All this in turn limits the ability of government to control, and leads to the question: what is the government's continuing role? The traditional licensing role of the stat becomes irrelevant and virtually impossible. But governments need to assure some basic interconnectivity of networks, and to assure universality of access. The question of how to prevent the emergence of a class of "information-poor," though often raised, is fairly easy to solve because it makes sense for providers to use differentiating pricing, according to their ability-to-pay, and set above marginal cost which is close to zero. All is needed is a technology that makes arbitrage difficult. Access, on the other hand is a more difficult issue, and it raises the question whether gatekeeper powers remain to restrict unpopular types of information. Lastly, government may be needed to assure program supply for educational and children's programs if the market fails. Thus, while a regulatory agency with maximum independence and a clear set of legal principles and procedures is essential for the first two stages of television, it is likely to fade away with the advent of the third stage.

Distributed television will open new and creative uses in distributed television. It will be an entirely different medium. Exciting opportunities lie ahead for both commercial and non-profit program providers. The traditional broadcasters--public and private ones--need to recast themselves, and they cannot do so as long as they are still fighting against the second stage of television--multi-channel TV--instead of focusing on their real problem, the third

stage.

Thus, in the future, the electronic hearth around which entire societies congregated nightly will be no more. But this communal experience of constant information sharing has been only an ephemeral episode in the history of mankind. It clashes with a more individualistic media past and a more information-rich future. It is a system based on scarcity of content production and scarcity of conduits. As these conditions change, the structure of television evolves. In time we shall experience a television of openness, open to the access of new voices—commercial and nonprofit—open across frontiers, and open to viewer choices. It will contain some that is good, much that is bad, and most that is casual.

Most dinosaurs died out a million years ago, but some survived as birds. They are today's eagles, falcons, and wise owls that soar in the sky. For governments and for traditional broadcasters, the challenge is to move from the dinosaur age of the mass audience to the high-horizon age of the individualized "me-channel."

It is time to move away from the nostalgia for a golden age that never was, from an elitist disdain for popular culture, from a political fear of openness of discussion, and from an economic protectionism by established firms, to the future that looks bright to those who have the courage of imagination.