One Nation Under TELEVISION

The Rise and Decline of Network TV

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for

Leslie W. MacDonald—

whose understanding and support have been indispensable

CHAPTER ONE

Struggle for an Industry

These are confusing times for network television and for an American public that has had a forty-year romance with "the tube." Through cable TV and satellite dishes, many new channels have appeared, and further advances in delivery promise even greater selection. Whereas once television was synonymous with ABC, CBS, and NBC, plus a few rerun-filled independent stations, there are now dozens of national and regional cable networks, and they are offering a broad variety of programs and formats, including first-run series and feature films. Viewers are even making their own TV shows, using portable home camcorders to turn backyard shenanigans, birthday parties, family vacations, and the like into memorable video fare.

Once the stolid, overweight centerpiece of the family living room, the mighty television set has been liberated. Transistorized, miniaturized, and now pocket-sized, portable TV can be found at the beach, on the sidewalk, in the backseat, and at the office. The audience, too, has been unshackled. Thanks to prerecorded cassettes and recordings made directly off the air, viewers who used to enjoy shows as they were being televised, now watch at their own convenience. Automatic timers allow for taping at odd hours of the day and night. And the remote-control device has given even greater control to viewers, enabling them to zip from station to station, especially when the advertisements begin, or zap through those hated commercial breaks on off-the-air tapes.

But the video revolution is costing a lot of money. Americans are spending billions of dollars on recorders, camcorders, blank and prerecorded tapes, cable service, pay channels, and pay-per-view programming.

Once trumpeted as "The Greatest 'Free' Show on Earth,"[1] American television in all its glory is no longer affordable to a sizable part of the citizenry. The egalitarian implications of a medium that was mass and free have been subverted by expensive monthly cable bills and costly electronic paraphernalia. As the television experience is denied increasingly to those with insufficient cash, the United States is fast becoming a nation of TV-haves and TV-have-nots.

It was so simple when once there was only a handful of stations in any market area. Local outlets were recognizable by the network reruns and low-budget commercials they ran for community merchants. Above it all towered ABC-CBS-NBC, the trinity that was national television, beguiling the populace with the miracles and mysteries of early TV.

Although network programs were formulaic, there was security in such simplicity. In this orderly past, prepossessing national concern focused on which of the three networks would outrate the others, and what new programming trends might be coming next: comedies? Westerns? detective stories? anthology dramas? The United States may have been a country of great diversity, but cultural pluralism gained little attention from national programmers. This was mass culture, a search for the largest possible audience at any one time, an appeal to commonalities that bound together, a denial of the differences that individualized. Those with tastes not shared by enough millions had little chance of seeing their preferences on television.

Moreover, this was an industry with a commercial imperative. The networks that created this one nation under television were in business to make money. Programs were meant to be profitable. Those that failed to deliver high ratings and audience shares were dispatched, replaced by others that promised success where there had just been failure. It may have been the public's air waves in theory, but it was the networks' financial bottom line in practice.

By the 1990s, however, American TV has changed. Old media empires are in disarray, while new ones are rising. Audience numbers are tumbling. And companies known for their newspapers, magazines, movies, telephones, and traveler's checks are now operating their own networks. Whereas profanity and nudity had been chronic taboos, television now communicates the entire lexicon of expletives undeleted, and bare bodies frolic and sometimes writhe in prime time. After decades of predictable sameness on national TV, there is relative diversity in the narrower focus made possible in this new video order.

In the last decade of this century of electronic marvels, television is in a state of metamorphosis, rearranging itself under the influence of cable

and satellite technology and the lure of great profits. And more change is projected for the future, everything from regularized international programming to interactive TV, with its promise of two-way communication for a medium used to dishing it out to an audience used to taking it. But innovation, actual and promised, has bred industry discontent. Fiber-optic wiring installed with home telephone lines is recommended to offset the high cost of cable and to improve picture quality; but many in the broadcast and cable industries are fearful that their early investments might be rendered worthless. The Japanese and the Europeans each have developed high-definition TV with upward of 1,000 lines of resolution (the U.S. standard is 525 lines), guaranteeing crisp, perfect TV imagery; but in the name of economics and patriotism U.S. television interests demand billions of dollars from government to produce an American HDTV alternative.

The business specifics of television are similarly uncertain. While Viacom/Showtime sues its rival Time/Home Box Office for allegedly unfair business practices, Warner Communications couples with Time, Inc., but only after a nasty public challenge by a rival suitor, Paramount Communications. Whereas domestically made receivers by RCA, Zenith, Philco, Emerson, Capehart, Hoffman, Packard-Bell, Sylvania, Admiral, and other U.S. manufacturers satisfied the first television consumers, the modern audience has Japanese- and Korean-made equipment: sets, cassette recorders, and camcorders by Sony, Panasonic, Toshiba, Mitsubishi, Sharp, GoldStar, and the like. Even if such hardware bears an RCA or General Electric (GE) name, the items are either foreign-owned or manufactured abroad. Today, only Zenith survives as a TV manufacturer within the United States—although Zenith sets are assembled in Mexico.

This is perplexing enough, but most of the programs on American television are transmitted from studios filled with technical equipment from abroad. Meanwhile, Asians, Europeans, and Australians are buying up the most familiar institutions in American entertainment—from movie studios to record companies—many with linkages to television, while U.S. companies are busy overseas investing heavily in entertaining foreigners.

While corporations battle for the video future, their struggle is over an instrument that has influenced the American public for more than half a century. No matter how it is viewed, television has been a powerful reality in modern life. In terms of technology alone, the ability to transmit and receive pictures and sound is among the greatest human achievements of the century. But to make such an instrument universally available, to fill its multiplicity of channels twenty-four hours a day, to charge no direct cost to the consumer, and to do all this within a generation constitutes one

of the outstanding developments in the history of human communication.

What promise television held. This was the ultimate medium, the democratic forum that would uplift and enlighten the masses. Some anticipated that it would forge a more perfect national consensus, spreading over regional, ethnic, religious, linguistic, and cultural differences, creating a common "language" rooted in shared tastes and a popular desire to understand the world. Others saw its implications more broadly, envisioning TV as a force for amalgamating the peoples of the world. In this perspective, television would link the nationalities of the planet into one audience, never disrespectful of historic differences but always stressing the characteristics that linked humankind.

But there were mitigating realities: the prejudices and greed that adversely shaped TV; the politics, both national and global, that stifled its full flowering; monopolistic network practices that placed standardization above diversity. There were other operational shortcomings, some inherent in network broadcasting, others emanating from foibles in those creating, operating, and viewing the medium.

Certainly, American television realized much that it promised. But with endemic weaknesses it has been unable to withstand the challenges of technological innovation and enhanced competition. If there is disarray in the industry, it is due to the way it has operated since its inception. If viewers are deserting "free" TV, it is because they were never fully served by broadcasting. To comprehend the forces clashing in contemporary U.S. video, it is necessary to understand the evolution of TV as it moved from a popular expectation in the 1920s to a global utility in the 1990s.

The Race for Television

Americans awaited television for almost thirty years. Even before radio was fully accepted as a medium of popular appeal, video was hailed as the inevitable next step in the technological triumph that was broadcasting.

During the 1920s, there was frequent speculation about the emergence of "sight radio," "radio optics," "radiovisor receivers," and in a bow to the silver screen, "radio moving pictures" and "home theaters." Newspapers and magazines regularly reported on the technical progress of TV as the competition for practical video transmission focused on two technical processes: a mechanical system that employed a rotating scanning disc to transmit images; and the eventually triumphant technology, an electronic scanning system that used the principles of the cathode ray tube to produce a picture of high definition and reliability.

In the quest for viable TV, the names of the great scientists experimenting in the United States became well known. Prominent among them was Vladimir K. Zworykin, who in 1923 developed the electronic TV camera tube ("iconoscope") and six years later a nonmechanical receiver ("kinescope"). Like most important electrical experimenters, Zworykin was employed by large communications corporations, in his case Westinghouse in the early 1920s and the Radio Corporation of America (RCA) by the end of the decade.

Other inventors who applied their talents to the race to produce TV included the Swedish genius Ernst F. W. Alexanderson, who from the General Electric laboratory in Schenectady, New York, transmitted a TV image around the world in 1930; Lee de Forest, an honored pioneer of radio technology; the Puerto Rican-American U. A Sanabria, who experimented with mechanical systems in Chicago; C. F. Jenkins of Washington, D.C., who helped perfect the TV receiver; and Allen B. DuMont, the celebrated engineer whose facility in Passaic, New Jersey, was a leader in video research and development in the 1930s and 1940s.

Of particular significance was the engineering genius Philo T. Farnsworth, whose research in the 1920s and 1930s carried him from Salt Lake City to Los Angeles, San Francisco, and Philadelphia. In 1928 he was the first inventor to present a public demonstration of all-electronic TV. However, unlike most of his formally educated rivals with their strong corporate financing, Farnsworth was relatively self-taught, and his finances came modestly from a small group of investors. Still, as Joseph H. Udelson has pointed out, Farnsworth produced components that proved crucial to the final video product. According to Udelson, "disadvantages did not prevent Farnsworth from developing the only pickup tube to present serious competition to Zworykin's iconoscope and . . . to pose a challenge to RCA. . . . If RCA was to introduce a commercially viable television system in America it could not avoid, despite all its efforts, a reckoning with Farnsworth."[2]

With such brainpower dedicated to perfecting television, Americans anticipated the educational and entertainment values the new medium soon would bring to the nation. One journalist, impressed that the inauguration of Calvin Coolidge in 1925 had been heard nationally over an ad hoc network of forty radio stations, felt confident in predicting that the next inaugural ceremony would be telecast from coast to coast, perhaps even beamed to Europe.[3] Even more exciting were the predictions of Samuel L. "Roxy" Rothafel, a noted impresario of theater and radio. In his insightful book *Broadcasting: Its New Day*, Roxy in 1925 described the breathtaking programming to be available soon:

> The entire program that we see in a theater will come to us. . . . The ether will vibrate with the likenesses of our favorite stars, which we will receive faithfully. . . . When the [transmission] problem is finally solved the world will indeed become a very small place to live in. The living spectacle of Niagara, with its rush and roar, or the vast abyss of the Colorado Canyon can be brought to the easy-chair at home. Our baseball players, instead of performing before a group of spectators, will perform before a radio transmitter and we shall hear the whack of the bat and the call of the umpire, and see the dust raised by the sliding player's feet. Radio vision is not an idle dream.[4]

When a research scientist declared in 1925 that all U.S. households would have TV sets by the end of the decade, there was reason to be excited.[5] It was promising, too, when David Sarnoff, the driving force energizing the Radio Corporation of America—and on his way to the presidency of RCA in 1930—predicted in 1928 that it would take about five years for TV to become "as much a part of our life" as radio.[6] It was not even discouraging when the chairman of the board of Westinghouse sought to diminish public enthusiasm by announcing in early 1930 that television would not be commercially possible for at least two years.[7]

Even the Great Depression failed to lessen enthusiasm for television. Convinced of a brilliant future for TV, *Radio Retailing* magazine in early 1932 editorialized, "Then there is the promise of television. Who knows how great will be the ultimate development of this new science—its possibilities awes [*sic*] the imagination."[8] Comedian Eddie Cantor, too, was excited in 1936 when he envisioned TV as an irresistible theater of popular diversion—a dazzling theater that would offer viewers "such entertainment as the world has never dreamed of."[9]

As early as May 1930, one optimistic consumer had queried a newspaper columnist about whether he should buy a new radio now or wait a few months to purchase a video receiver:

> Our radio set was built in 1925. It's high time that it be replaced by a new set. . . . But now we are up in the air. We read of television images entertaining on a theater screen in Schenectady, and the prediction that thousands of playhouses will probably book television acts. Now, the question is, should we cling to the old faithful six-tube outfit, or go ahead and buy a receiver that is improved in tone more than our 1925 product? Why should we get a new set now and have a television set make it obsolete in September?[10]

Fueling public interest were those scientific breakthroughs produced periodically by leading electrical corporations such as RCA and Westinghouse. Such developments were always spectacular and, importantly, well publicized. Typically, in September 1928 the General Electric experimental station, W2XAD in Schenectady, aired the first television drama, *The Queen's Messenger*—although technological limitations necessitated a simulcast of the sound portion of the program over radio station WGY. In another GE coup, in February 1930 the image of a familiar cartoon character, Felix the Cat, was transmitted instantaneously by television over twenty thousand miles: round trip from Schenectady to Sydney, Australia, and back. Later that year a theater audience in Schenectady marveled at a live television program as it was transmitted from the GE laboratory across town.

With the imminent availability of television as entertainer and educator, public leaders foretold its future impact on varied aspects of American life. The editor of *The New Republic* expected TV to replace newspapers, as details of the daily news could be telecast to every home.[11] Police officials felt video would help in the apprehension of criminals by facilitating the exchange of information among law enforcement agencies. Some expected the medium to improve domestic politics; others felt it would enhance international relations. There were those who felt video would be a valuable tool in waging future wars, while others argued that it could render war obsolete.

Observers predicted that even business and commerce would be affected by TV. At Pennsylvania State University, the emerging medium was quickly understood in terms of the new jobs it would create; as early as 1930 that university offered home-study courses on television engineering. A scientist in Cleveland suggested that businesses soon would be able via TV to convene meetings of executives from throughout the country. This would not only save time, he suggested, but as a collateral benefit it would "make harmless the odors from four cigars."[12] And in 1930 inventor Lee de Forest, looking fifty years into the future, foresaw a profitable relationship between video and existing technology when he predicted that for a fee long-distance telephone operators by 1980 would be able to plug TV viewers into films and plays taking place throughout the United States—all with no interruptions for commercials.[13]

Confidence in widespread, dramatic change should not have been surprising in this era of technological revolution. It must be remembered that at the beginning of the nineteenth century Napoleon had available to him essentially the same methods of communication and transportation that Julius Caesar utilized two thousand years earlier. During the first half of the nineteenth century, however, the miracle of the telegraph rendered

the Pony Express obsolete, while armies came to be moved by steam-powered locomotives. And by the early twentieth century, communications were profoundly affected by the emergence of the telephone, the first flickering motion pictures, and wireless radio, while innovations in transportation included the automobile and the airplane.

For a society in which many could remember word-of-mouth and print as the primary forms of communication, this was an electrifying time in which to live. By the 1930s it was possible not only to telephone or telegraph but also to view sound motion pictures; play electronically enhanced phonograph records; and hear radio shows broadcast from network and local stations—indeed, from transmitters around the world. Also part of this age of miracles were the refrigerator, washing machine, and electric lights—all convenient, available, and affordable.

Television was only one part of a cornucopia of entertaining merchandise expected for the American consumer. This situation was well appreciated by an official of the Stromberg-Carlson electronics company, who proclaimed in 1937 that "television is only one of seven electronic devices which someday we may have in our homes." He envisioned the home of the future as a rich audiovisual experience equipped with a "radio, phonograph, sound film projector, sound movie camera, electric organ or electric piano, wire-recording machine, and television."[14] Interestingly, of this future inventory of home electronic gadgets, the two that are less popular today than twenty years ago—the movie camera and projector—have been subsumed in the American home by two offshoots of television—the video camera and the videocassette recorder.

The entry into early television by the major radio networks and electrical manufacturers only intensified popular expectations. Experimental TV stations were opened by the National Broadcasting Company (W2XBS in New York City in 1928; and, in Chicago, W9XAP, purchased in 1931 from the *Chicago Daily News*); the Columbia Broadcasting System (W2XAB in New York City in 1931); and the Don Lee Broadcasting System (W6XS and W6XAO in Los Angeles in 1931). As well as the involvement of RCA through its National Broadcasting Company, other electrical corporations operating experimental stations were General Electric (1928); Westinghouse, in East Pittsburgh (1928); Philco, in Philadelphia (1931); and the Zenith Radio Corporation in Chicago (1938). Several leading developers of the medium—Farnsworth in Philadelphia, Jenkins in New York City, and DuMont in Passaic—also operated early stations. There also were creditable experimental stations in Kansas City (1932); Minneapolis (1934); Boston (1934); and at Purdue University in West Lafayette, Indiana (1932); the University of Iowa (1933); and Kansas State College (1932).[15]

Significantly, the scramble to develop television was not solely an American phenomenon. Interest in developing TV was manifest in the 1920s and 1930s in Poland, Sweden, France, Japan, the Soviet Union, Czechoslovakia, and the Netherlands. In many ways, moreover, scientists and engineers in Great Britain and Germany were ahead of those working in the United States.

Since the mid–1920s John Logie Baird had been a driving force in perfecting and popularizing British television. Important, too, was Electric and Musical Industries (EMI), a corporation created in 1931 through the merger of two sound recording companies, the Columbia Gramophone Company and the Gramophone Company. Since the latter was controlled by an American company, the Victor Talking Machine Company, and Victor in turn had been merged with RCA since 1929, the arrangement afforded EMI access to research conducted by RCA. And through a merger in 1934 with a Marconi company developing transmitters and aerials, EMI became the world leader in video technology. When the British Broadcasting Corporation inaugurated regularly scheduled TV in November 1936, it quickly settled upon the EMI version as the standard.

In Germany in the 1920s scientists such as Manfred von Ardenne and Denes von Mihaly labored to develop television. Through support for sound and image experimentation from the German Post Office, a TV picture had been produced as early as March 1930. The coming to power of National Socialism in January 1933 only intensified the German efforts. Although Nazi efforts were marked by rivalries among the German Post Office; the Ministry of Propaganda, headed by Dr. Paul Joseph Goebbels; and Hermann Goering's Air Ministry, in March 1935 the Germans inaugurated the first regularly scheduled television programming in the world.

Clearly, the British effort was superior. By August 1939 there were an estimated 20,000 to 25,000 sets in use in London, and the electronic scanning system adopted by the BBC offered praise-worthy picture quality. The effort in Germany—with its inferior mechanical camera system, its lack of financial backing, and its limited availability—was stunted. By 1939 video remained limited to the Berlin area; there were only about 350 receivers in private hands, and most citizens came to public viewing rooms to see the propaganda films and newsreels of Nazi television.[16]

In the United States by 1939 there were twenty-two licensed experimental TV stations, but a public-opinion survey that year suggested that optimism rested not only with the experimenters and industrialists. Ac-

cording to a Gallup poll there was "a large potential customer audience awaiting the new television industry." Four million families—that is, one-eighth of all American families—considered themselves good prospects to buy a receiver sometime in the future. That figure was all the more impressive since for many years telecasting would necessarily be restricted to the densely populated areas of the country—the East, including New England; the Chicago-Detroit axis; and a few spots on the West Coast—where video experimentation was centered.[17]

The Gallup figures, however, were not totally positive. This remained a troubled decade. The United States was still gripped by the uncertainties of economic and social dislocation created by the Great Depression. To this was added the disquietude generated by international politics as Europe and Asia were on the verge of another world war. Furthermore, video was still in its technical infancy, and there was public apprehension that a set purchased today would become obsolete tomorrow. While Americans generally wanted television, only 13 percent of those polled in 1939 were interested in purchasing a receiver at that time.[18]

Consumer television equipment had been sold in New York City as early as April 1938. This included regular TV sets as well as small, less expensive attachments for converting radios into TV receivers. By the end of the following year, however, customers had a wider choice: more than three dozen models from several manufacturers, with screens from three to twelve inches diagonally and costing $150 to $1,000.[19]

The reason for this increased availability was the decision by RCA to launch a major TV sales effort in the New York City area. RCA bought advertising space in New York newspapers to promise the public the complete video package: programs, receivers, and a network.

> It is now possible for the RCA to announce the extension of its plans to provide, first, a regular television program service in the New York area; second, the offering to the public of receiving sets at moderate prices within the reach of the average family; and, third, the initial step in the construction of a television relay system as a means of interconnecting television transmitters for simultaneous service to and from other communities.[20]

The drive was started in conjunction with the opening of the World's Fair in New York City in the spring of 1939. Regularly scheduled television programming was born on April 30 when NBC cameras televised President Franklin D. Roosevelt officially opening the fair, and Sarnoff announcing "the birth in this country of a new art so important in its implications that it is bound to affect all society."[21] Until this date telecasting had been confined to a few experimental hours per week. But RCA, through its ownership of NBC, now upgraded and expanded its offerings. Although it was still noncommercial and experimental TV, station W2XBS aired live studio productions as well as films and remote transmissions from the station's mobile units.

In its first prime-time show, on May 3, 1939, NBC indicated that the future of the medium would be an admixture of live and film presentation. That premier extravaganza included a remote pickup of interviews conducted by Ed Herlihy at the fairgrounds; and from Radio City in midtown Manhattan, a ninety-minute variety show featuring music by Fred Waring and his Pennsylvanians, composer Richard Rodgers playing piano for Broadway singer Marcy Wescott, newsman Lowell Thomas with the first made-for-TV film, a newsreel called *Teletopics*, plus a juggling act, a one-act dramatic sketch, and short films that included a Walt Disney cartoon featuring Donald Duck.[22]

During its first year the NBC station—called WNBT beginning in July 1941—was on the air for an average of two hours per day, televising more than a thousand programs totaling six hundred hours. The CBS station W2XAB—called WCBW after July 1941—offered a comparable amount of airtime. Less auspicious, but telecasting regularly since the spring of 1939, was DuMont station W2XWV.

The Battle of the Titans

The mass marketing of home receivers in conjunction with the inauguration of regularized programming was a bold business gesture precipitated for the most part by RCA and its president, David Sarnoff. The move was typical of Sarnoff and his tough business technique. An impoverished Russian immigrant who in his youth had been a telegraph messenger boy and a wireless operator, he battled to leadership of U.S. telecommunications by stressing refinement of the engineering fundamentals—"the pipes," he called them—of radio and television. He blended the scientist's understanding of wireless technology with a determined, austere management style that made his employer, the Radio Corporation of America, the most formidable electronics operation in the United States. It was Sarnoff who attracted experimenters such as Zworykin to the RCA research laboratory. It was Sarnoff who made the hard deals—usually through purchase, but, in the case of vital components controlled by Philo T. Farnsworth, through licensing arrangements—that brought to RCA technical patents strategic

for transmitting and receiving TV signals. It was Sarnoff, too, who still found time to serve in the armed forces, entering World War II as a colonel and ending up a brigadier general in the U.S. Army Signal Corps.

In producing American television he had rivals in Philco, Zenith, and others, but through corporate ties to NBC only Sarnoff could combine formidable technical and financial power with the programming richness necessary for national broadcasting. As his recent biographer Kenneth Bilby has described him, Sarnoff "was perhaps the last of that remarkable strain of individualistic entrepreneurs—Rockefeller, Ford, Carnegie, Frick, Harriman were among them—whose autocratic governance of industrial oligarchies bruised the precepts of free competitive enterprise but spurred the tumultuous growth of the late nineteenth and early twentieth centuries in America."[23]

For Sarnoff the launching of television in 1939 was a double-edged business enterprise intended to sell TV sets to the public and impose RCA technical standards on the industry. If RCA/NBC could develop, produce, and market receivers as well as programs, the corporation could establish itself as the technological, manufacturing, commercial, and programming giant of television. With such advantage, it could monopolize the emerging industry from the outset.

Although many in the business felt that Sarnoff was technologically premature in offering regular home TV service, if enough consumers in the New York City area bought into RCA video at this date it would be difficult for the regulatory Federal Communications Commission (FCC) to render tens of thousands of sets obsolete by revising transmission and reception standards. Then, by extending its broadcast signal through cable and electrical relays, RCA could move on to conquer other U.S. cities. In *Television*, a ten-minute promotional film created in conjunction with its marketing campaign and the New York World's Fair, RCA alluringly tied its product to public anticipation of television:

> And so a new American industry has been born. Television is taking its place as another important and vital contribution to our daily lives. It is a modern miracle, a new public service produced by combining RCA laboratory science with manufacturing skill. The research problem of yesterday is the radio marvel of today. Another milestone of progress has been passed, and science has made a reality of the age-old dream of pictures from the sky.

But optimism at RCA proved ill-founded. During the first six months of the sales push consumers purchased fewer than five hundred

units. Where company executives had envisioned the dissemination of a hundred thousand sets by Christmas 1939, total sales for all manufacturers during the first full year were about three thousand sets. One observer wrote in 1940 that "Television during the past year suffered as stormy a fate as ever beset a branch of the radio industry." In this failure RCA had spent an estimated $10 million.[24]

There were several reasons for the fiasco. Technically, with no relay facilities television transmissions could only reach the horizon. This limited reception of TV signals—transmitted by W2XBS from atop the Empire State Building and by W2XAB from the Chrysler Building—to customers residing within a radius of about fifty miles of the point of transmissions. Further, the price of receivers was high, some costing as much as a moderately priced automobile. And by the fall of 1939 economic and political uncertainties in the United States were exacerbated by the outbreak in Europe of World War II.

RCA also met technical and programming opposition from business competitors and from the FCC. Eugene McDonald, the president of Zenith, a company that felt itself long abused by RCA's monopolization of radio, deeply distrusted Sarnoff and felt that the majordomo of RCA was about to snatch the TV industry from its cradle. McDonald even purchased newspaper advertising space to publicize Zenith's claim—and to sow seeds of doubt in the public being asked to buy TV—that the move to regularly scheduled programming was "premature both for economic and technical reasons."

At Philco, President Lawrence E. Gubb was also tenacious competition for Sarnoff. In the mid–1930s, when Philco radios were the best-selling units on the market, the company sued RCA for stealing confidential information by exploiting several Philco female employees, "intoxicating them with liquors at hotels, restaurants, and nightclubs," and seeking to involve the women in "compromising situations." RCA denied the charges, and the suit was later dropped. However, it revealed the bitterness inherent in these corporate battles.[25] By 1940 Philco was engaged in open warfare against RCA television, accusing Sarnoff of business skulduggery and arguing that nothing less than the future of the video was at stake.

These were bitter rivalries that exploded beyond simple capitalistic competition. As Sarnoff's biographer has sketched it, "To McDonald, Sarnoff was a monopolistic predator who played scheming 'Russian tricks' to enforce RCA's illegal clutch on the industry. To Sarnoff, McDonald was a bloated 'parasite' who feasted on the products of RCA research to build a huge consumer business and a personal fortune."[26] *Fortune* maga-

zine concluded at the time that television was "a prima donna industry, as full of feuds and temperament as an opera troupe."[27]

Sarnoff's toughest and most successful rival in the programming aspect of broadcasting was William S. Paley, president of the Columbia Broadcasting System. In his memoirs, Paley graciously referred to Sarnoff as a venerable uncle; it was sentimentality missing in their actual rivalry. "The general and I had a long, continuing avuncular relationship down through the years," recalled Paley. "From the earliest days of radio, when he was the 'grand old man' and I was 'that bright young kid,' we were friends, confidants, and fierce competitors all at the same time, and we understood each other and our relative positions."[28]

Personally, Paley was much that Sarnoff was not. Paley was American-born, handsome, gregarious, and charming. He was "Bill"; Sarnoff was "the General" or "Mr. Sarnoff." Paley also was wealthy from the beginning, the son of a millionaire Philadelphia family that owned the Congress Cigar Company, manufacturers of La Palina (a Spanish neologism based on the Paley family name) cigars. Moreover, reflecting the fact that CBS was born as a programming enterprise while NBC sprung from the technical prowess of RCA, Paley was an impresario more concerned with the show than with the equipment used to transmit and receive it.

To embark on his long and successful career as a broadcaster, Paley and his family paid $503,000 in 1928 for controlling interest in the failing United Independent Broadcasters and its fledgling radio network, the Columbia Phonograph Broadcasting Company. The following day—two days short of his twenty-seventh birthday—young Paley became president of UIB and the network, which he soon renamed the Columbia Broadcasting System. A decade later he and his family still owned about one-third of the CBS public stock, and for more than six decades he remained a decisive force in the direction of the network and American broadcasting.

By 1936 Paley had learned that one way to better NBC radio was to raid its pool of talented performers, expending large amounts of money and great personal charm to woo to CBS established crowd-pleasers such as Al Jolson, Eddie Cantor, and Major Edward Bowes. Paley also purchased NBC's prestigious *Lux Radio Theater*—with its hour-long dramatizations of great plays and movies, usually featuring the original stars, and produced by the influential film director Cecil B. DeMille—moving it from New York City to Hollywood, where it remained a popular favorite for twenty years. Such bold actions catapulted CBS to programming supremacy during the 1936–37 radio season and established a pattern Paley would repeat for CBS-TV in the late 1940s.

While Sarnoff had long disliked the advertising aspects of commercial broadcasting, Paley was a businessman who sought the most popular entertainment because it would produce the largest and most profitable audiences. As he wrote in 1940, "Advertising may not be the best method, but no one has evolved a better one, or indeed any alternative which does not entail either government control or indirect but effective government influence on what goes on the air."[29]

CBS, like Philco, Zenith, and other companies, refused to allow RCA technology, and therefore NBC programming, to define American television. These companies argued effectively that the engineering standards advocated by Sarnoff—30 frames and 441 scanning lines per second, with AM radio sound and black-and-white capability only—were inferior to their own. Philco felt the standard should be 24 frames and 605 lines, and Allen B. DuMont of DuMont Laboratories called for 15 frames and 625 lines. Others felt that FM transmission would provide improved sound and that Americans should be offered color TV. All agreed, moreover, that mass acceptance of RCA products would lock U.S. television into a position of technical mediocrity from the outset.

For its part, the FCC refused to act precipitously in setting broadcast standards for television. Instead it vacillated, serving to confuse the matter further and prompting *Variety* in mid–1940 to describe the situation as "such a muddle . . . that no predictions of coming progress may safely be ventured."[30] The commission wavered between reluctant support for the bullying enterprise of Sarnoff and RCA, the desire to keep the new industry open to competition, and the wish to protect consumers from buying TV sets that would become obsolete quickly. While NBC and CBS had been broadcasting on a regular schedule for almost a year, and RCA and others had been manufacturing and marketing home receivers, the FCC acted and then reacted.

On February 29, 1940 the commission agreed to partial commercialization that would allow stations "to make charges against program sponsors . . . but without charge for transmission." Although the decision was to become effective in six months, it still did not allow profit-making. Stations would be allowed to charge advertisers only the production costs of the show and commercials. Still, it was considered a cautious first step toward completely commercial TV.

For David Sarnoff, however, partial commercialization was greeted as an opening through which to ram the RCA juggernaut. On March 12, less than two weeks after the FCC decision, Sarnoff was ready with a full-scale assault on consumers and the industry. NBC promised an elabo-

rate improvement in the programming already being aired on W2XBS. RCA announced a renewed sales drive spurred by reductions of set prices by 33 percent. Then, looking beyond the fifty-mile horizon, NBC announced that a series of TV relay stations would soon link New York City and Philadelphia. NBC also filed applications to operate television commercial stations in Philadelphia; Washington, D.C.; and Chicago.

Clearly distressed over the power grab orchestrated by RCA/NBC, the FCC quickly scuttled Sarnoff's plans by announcing on March 23 that it was suspending partial commercialization: television was returning to its experimental stage for further refinement. The commission blasted RCA's aggressive tactics and reiterated its intention not to saddle the public or the industry with receivers that many felt were inferior.

Not until the following year—after the full industry, under the auspices of the newly created National Television System Committee (NTSC), agreed on improved standards of black-and-white transmission at 30 frames and 525 lines of resolution (still inferior to the 625-line standard of European television) plus improved FM radio sound—did the FCC alter its position. It accepted an NTSC recommendation to allow commercial TV to begin July 1, 1941. Significantly, the engineering standards approved on the eve of World War II have remained operative. Only the challenge of high-definition television in the last decade of the century has threatened to force a reformulation of the technical specifications of American television.

RCA had little trouble adopting the NTSC standards. The company even offered to adjust at no charge RCA sets purchased earlier by the public. Sarnoff also bought advertising space to proclaim that the new specifications were really the same as those at RCA. On July 1, WNBT inaugurated the first commercial TV operation in the nation.

It was a day NBC had been anticipating. Unlike the early 1920s, when there had been strenuous debate over whether radio should remain free of commercial messages or become a self-supporting electronic billboard, there was no doubt that U.S. television would eventually be advertiser-supported. In August 1939 NBC produced the first experimental commercials when announcer Red Barber, during the telecast from Ebbets Field of a baseball game between the Brooklyn Dodgers and the visiting Cincinnati Reds, delivered live pitches for Procter & Gamble soap products, Socony oil, and General Mills. For the latter, Barber even prepared a bowl of Wheaties breakfast cereal on camera, adding cream, sugar, and a banana for the edification of those watching on about five hundred TV sets in the New York area.[31]

When the FCC granted telecasters the right to charge fees for commercials, again NBC was the first to act. On July 1, WNBT aired a "Bulova time check" in which the face of a Bulova watch appeared on-screen, its second hand ticking, while an off-camera announcer told viewers what time it was. Time charges to Bulova were $9.

Although the public had not rushed to buy TV sets in New York City, at least the nation remained intrigued with the medium. From the opening days of the World's Fair, the exhibits of television at the RCA, Westinghouse, and GE pavilions were so popular that police had to be hired to control the long lines of those wishing to see the new electrical marvel. TV also went on tour. During the period 1939–40 the Farnsworth Television Company traveled the country promoting the medium. In department stores in eighty-eight cities—from Frederick & Nelson in Seattle to Leavitt's in Manchester, New Hampshire—more than three million Americans saw television for the first time.[32]

Philco and RCA conducted similar tours, introducing their receivers to retailers and future customers. Typically, in Chicago RCA constructed a TV studio in Marshall Field's department store and for two weeks presented public demonstrations for as many as ten thousand daily visitors. The excitement of the event was epitomized by a local radio announcer broadcasting from the site on June 12, 1939. Greeting television "with unmitigated enthusiasm," he hailed the new technology as "the greatest achievement of the twentieth century" and claimed that TV was proof that "we're certainly living in an advanced mechanical age."

Although the FCC permitted several stations to become fully licensed commercial operations, the weight of world events thwarted further progress. Expectations within the industry were dampened when President Roosevelt in May 1941 declared an unlimited national emergency. This austerity step, plus federal actions following U.S. entry into World War II in December, effectively froze the technical development and marketing of television. Now scientific and engineering skills—as well as the vital materials needed in TV manufacturing—were placed at the disposal of a government waging war on two fronts.

Television and Public Interest

American broadcasting was inherently contradictory. In a society espousing capitalistic free enterprise, commercial radio and television in the United States were regulated by the government. The few networks that quickly monopolized national radio operated with tacit government

approval, were allowed to exploit scarce public resources for private profit. Federal actions actually shaped the monopolistic character of U.S. broadcasting.

Until World War I radio had been in the hands of the experimenters and hobbyists. The patents and related technology necessary to create a viable wireless industry were held by a number of private, often uncooperative individuals and corporations. During the Great War, however, the U.S. Navy spearheaded the rationalization of the radio business. In other countries where it was already a government monopoly, radio had proven vital to military communications. Now the U.S. Navy used wartime laws to assume complete control of existing American radio. It compensated patent holders for their losses, and actually initiated new research intended to improve the technology. This pooling of patents and processes not only modernized American radio, it also brought the nation abreast of radio developments abroad.

With the coming of peace, the Navy proposed to maintain its monopoly controls. When this plan prompted charges that the federal government was becoming the same type of autocracy as that just defeated in imperial Germany, the Navy changed course. As an alternative, it suggested that a private American company be allowed to exercise monopoly control over radio. No matter that antitrust laws would have to be relaxed to create such an arrangement, the military wanted a powerful telecommunications force, a streamlined and vertically integrated corporation that could perfect radio transmission for national defense while competing successfully with European rivals. As Secretary of the Navy Josephus Daniels explained to a congressional committee in December 1918, "It is my profound conviction, as it is the conviction of every person I have talked with in this country and abroad who has studied the question, that it [radio] must be a monopoly."[33]

The Radio Corporation of America was created in October 1919 to be the communications monopoly envisioned by the military. Private it might have been, but RCA was monitored by the government. By its rules of incorporation, all company officials had to be U.S. citizens. No more than 20 percent of RCA stock could be owned by foreign elements. The U.S. Navy even received a place on the RCA board of directors.

Formed as a subsidiary of General Electric, RCA focused initially on international radio. The fact that GE had acquired the powerful Marconi Wireless Telephone Company of America—more commonly known as American Marconi—and melded its patents and personnel into RCA gave the fledgling monopoly a powerful start. But there were other uses for

radio than sending cablegrams and codified military communications. Experimenters and electrical engineers alike had dabbled with radio as a medium of entertainment and information. As early as 1910, inventor Lee de Forest had transmitted a live opera; and in 1916 he operated a primitive radio station, playing recorded music and reporting news events for the enjoyment of those few with receiving equipment.

As a young employee of American Marconi in 1916, David Sarnoff synthesized these informal developments into a business plan. He wrote to his employer proposing to wire the homes of America to receive music via radio. "I have in mind a plan of development which would make radio a 'household utility' in the same sense as the piano or phonograph," he noted in November 1916. "The idea is to bring music into the house by wireless. . . . The 'Radio Music Box' can be supplied with amplifying tubes and a loudspeaking telephone, all of which can be neatly mounted in one box."

Through the acquisition of American Marconi by GE, Sarnoff came to RCA as commercial manager. But to enter the field of domestic radiotelephony, as he had suggested years earlier, RCA needed additional technology that was already controlled by competitors. To acquire these supplementary patents, RCA in 1921 had to cede much of its common and preferred stock to other electronic giants: Westinghouse (20.6 percent), a major developer of radio patents; American Telephone and Telegraph (10.3 percent), not only "the telephone company," but also, through its long-lines system, the common carrier needed to tie local stations into a national network; and United Fruit (4.1 percent), a major radio user experienced in linking together its Central American banana empire via radio, and holder of several key patents desired by RCA.[34] General Electric (30.1 percent), however, retained the largest block of RCA stock.

With these electronic powerhouses combining their radio technologies under a single control, the new corporation became an industrial giant more impressive than the Navy had originally envisioned. RCA had prepossessing leverage that stifled competition. From the bottom up, RCA controlled radio: from the manufacture of equipment to the technology of transmission and reception. Yet few in government seemed to worry that RCA's operations flaunted the Clayton and Sherman antitrust acts and forged a massive combine that would control even broader aspects of radio telecommunications in the United States.

RCA entered the entertainment business, turning the radio receiver into a consumer device and broadcasting into a national utility. When RCA formed the National Broadcasting Company with its two net-

works—NBC Red in September 1926 and NBC Blue in January 1927—it brought enormous technical and financial power to programming and station ownership just as commercial radio was becoming a reality. With government blessing NBC quickly dominated the air, offering attractive shows and exploitive contractual arrangements with its affiliated radio stations. RCA would continue to have manufacturing rivals such as Philco and Zenith, and programming competition from CBS. But RCA controlled most patents, employed many of the leading researchers, and from vacuum tubes to *Amos 'n' Andy* it produced and marketed the total broadcast package.

Importantly, because television was a function of broadcasting and the natural outgrowth of radio, decisions that structured the industry in the 1920s and 1930s necessarily shaped emerging TV. Nowhere was this more obvious than in the creation of a federal regulatory agency, the Federal Radio Commission, in 1927, and its more comprehensive successor, the Federal Communications Commission in 1934.

The FCC was another in a series of regulatory agencies created by Congress to oversee critical areas of American economic life. The first such unit, the Interstate Commerce Commission (ICC), was organized in 1887. Others in this mold included the Federal Trade Commission (FTC), the Securities and Exchange Commission (SEC), the United States Tariff Commission, and the Federal Reserve Board. These entities operated as miniature independent governments, narrowly focused and outside the direct influence of Congress, president, or court. In fact, federal commissions and boards were allotted legislative, executive, and judicial powers on matters within their jurisdictions; some referred to them, collectively, as the fourth branch of government.

The FCC was created to regulate interstate and foreign commerce in electrical communication by wire and radio. Wire communication covered writing, signs, signals, pictures, and sounds of all kinds transmitted by aid of wire, cable, or other like connection. Radiocommunication was defined by the act as transmission by radio of writing, signs, signals, pictures, and sounds of all kinds. In essence, the FCC mandate was to oversee the development of modern "telecommunications," a comprehensive term that emerged about this time to cover radio and wire electrical transmissions.[35]

Like other commissions, the FCC may have exercised legislative, executive, and judicial prerogatives when assessing license applications, but this hardly made the commission a threat to the broadcast industry. Except to revoke or refuse renewal of a broadcaster's license, the FCC could do little to ensure that station owners abided by its rules. In 1952 Congress expanded the FCC's powers by enabling it to issue "cease and desist" orders, and in 1960 the commission was allowed to impose fines ranging from $1,000 to $10,000 for violations. Still, licenses rarely were retracted or denied renewal; and use of the newer powers has been confined largely to violations of transmission technicalities.

Federal regulation of the airwaves was a new concept in the 1920s and 1930s. There was no precedent to follow in managing broadcasting as it materialized in the United States. Unlike the print medium, where someone with something to say needed only a publisher—or his or her own press if a publisher were not at hand—stations were expensive to own and operate. Further, they were scarce, since there was a finite number of frequencies on the broadcast spectrum.

FCC regulatory power raised questions dear to the hearts of the political left and right. To those concerned with protecting civil liberties from the infringements of the state, the commission represented potential governmental censorship, curtailment of free speech, and undermining of precious constitutional guarantees. To those dedicated to laissez-faire economic practices, government regulation of business constituted a first step toward state control of capitalistic commerce and creation of a centralized, planned economy.

With such inherent limitations, the commission from the outset was torn between regulating loosely enough to allow private enterprise to flourish, but closely enough to guarantee that broadcasters respected, as the Communications Act stipulated, "the public interest, convenience, or necessity." The first half of the charge was obvious: by processing applications and licensing stations; overseeing transmitter construction; enforcing laws prohibiting profane or indecent language; and settling disputes over signal interference, static, and the like, the FCC implemented specifically defined, noncontroversial rules.

On the matter of the public interest, however, the FCC's prerogatives were ambiguous. Although it was mandated to consider if the public interest, convenience, or necessity would be served by a specific action, no clear definition of that interest, convenience, or necessity was forthcoming from Congress. While the clause was usually interpreted to mean that whatever profits the industry profits the public, its ambiguity created the potential for an aggressive FCC to demand broadcast reform—from set manufacturing to program content—in the name of the public weal.

There were factors mitigating against aggressive demands for service to the public. The seven commissioners overseeing U.S. broadcasting

were political appointees of the president of the United States, designated to fill seven-year terms—or unfilled portions of those terms when an appointee prematurely left the FCC. They tended to come from radio and television and its ancillary businesses; and they usually returned to the communications industry once their terms lapsed or they retired. This made for a reluctance to regulate and a desire to please potential employers.

Furthermore, FCC commissioners were not politicians. Unlike the president and congressmen, they did not have to placate constituents, raise campaign funds, or run for reelection. Thus, whatever they might propose to do outside a narrow, self-evident area of agreement was closely watched by the White House and Congress. To be effective, the FCC needed not only an internal majority voting for action but also support in the elected government—with anticipated concordance in the federal judiciary.

According to the leading historian of the early FCC, "only for a brief period, 1941–46, did the Federal Communications Commission take its tasks seriously." In reaching this conclusion, James L. Baughman has traced the FCC from the "ill-led and badly managed" 1930s to "the whorehouse era" of the 1950s when, mired in scandal and criminality, "the Commission lost its virginity, and liked it so much it turned pro." In his assessment, however, there was little hope that the FCC would ever perform as its supporters had hoped, for it was a weak agency, crippled from the start. "Congress and the president could not abide a strong FCC, not when its wards, local and network television, could deliver more votes than the TV editor of an opinion-leading newspaper or magazine. The commission was a small, toothless dog kept on a very short leash."[36]

To another critical student of the FCC, its members have always been "reluctant regulators."[37] But a Senate committee report in 1976 was harsher. It asserted that the FCC has always been plagued by unqualified commissioners, since presidents historically have used FCC appointments as "useful runner-up awards for persons who ricochet into the appointment as a result of a strong yet unsuccessful campaign for another position; appropriate resting berths for those who have labored long and hard in the party vineyards; and a convenient dumping ground for people who have performed unsatisfactorily in other, more important government posts."[38]

Of course, there were exceptions to the party hacks or utility executives and lawyers named to the FCC with neither expertise in American telecommunications nor sensitivity to consumer interests. As appointees of President Harry S. Truman, for example, Wayne Coy and Frieda B. Hennock—the first woman to serve on the commission—challenged

network preoccupation with profits by championing the woefully neglected educational potentials of radio and television.

Of the early FCC leaders, James Lawrence Fly and Paul G. Porter stand out for the activist leadership they exerted. Taking the FCC in directions that had always been possible if not probable Fly and Porter enlarged the practical boundaries of FCC jurisdiction.

The most successful of the early regulatory mavericks, Fly became chairman of the FCC in 1939 and headed the commission with a stern demeanor and a reluctance to mollycoddle industry leaders. He openly assailed the motives of Sarnoff and Paley and once compared the National Association of Broadcasters, the chief lobbying arm of station owners and network officials, to a dead mackerel: "In the night it shines and it stinks."[39]

For Fly, broadcasting was a "great public instrument" licensed "under mandate to serve the public interest." As he explained it, the relationship between public interest and licensed broadcasters was sacred. "While the duty to operate broadly in the public interest may lack something of definition," he wrote in late 1940, "it is clear beyond peradventure that possession—indeed, trusteeship—of the frequency involves more of duty than of right." With the pluck of a New Deal trustbuster, Fly asserted that "The right is that claimed by one person, the duty is owed to millions. The essential function of this publicly owned facility cannot be appraised without primary regard for the rights of the listening public."[40]

Unlike most commissioners, Fly was uncomfortable with broadcast monopolies. Directing the FCC toward the regulation of the quantitative aspects of the industry, he moved vigorously against the domination of radio by the two major networks. During Fly's chairmanship the FCC thwarted Sarnoff's plan to saturate the market with television receivers built to then-existing RCA standards. Fly also ordered sweeping reforms in the coercive contractual relationships between affiliated outlets and the networks that gave the latter the right to force its shows onto local stations. His commission demanded that NBC weaken its stranglehold on broadcasting by selling one of its two radio networks.

Fly met formidable resistance. At CBS Paley used his political friendships and company lawyers to resist an FCC order giving local stations greater freedom in their contractual relationship with the national networks; Paley lost. Sarnoff went all the way to the U.S. Supreme Court in seeking to vacate the commission order that NBC sell part of its operation; he also failed. As a result, corporate ties with affiliates were made more equitable, and in 1943 NBC Blue was sold. Within two years the divested network became the American Broadcasting Company.

Paul A. Porter, who became FCC chairman in December 1944, was another New Dealer with experience as a lawyer and publicist that included the Department of Agriculture, the War Food Administration, and the Democratic National Committee. He was once the Washington, D.C., counsel for CBS. Porter led where no man had gone before. He took the FCC in the direction of regulating the quality of broadcast programming, drawing inspiration from the ruling by U.S. Supreme Court Justice Felix Frankfurter in the case brought against the FCC by NBC. In the decision upholding the forced divestiture of NBC Blue, Frankfurter wrote that the Communications Act of 1934 "does not restrict the Commission merely to the supervision of traffic" but that "it puts on the Commission the burden of determining the composition of that traffic."

Porter led the FCC to the issuance in 1946 of a landmark report, *Public Service Responsibilities of Broadcast Licensees*, the controversial "Blue Book." The report resulted from an FCC investigation headed by another New Deal commissioner, Clifford J. Durr, which found widespread abuse of the air, including excessive commercialism and an insufficiency of public service. As its title suggests, the report emphasized the civic responsibility that must be exercised by a licensee. It named four areas in which the FCC would look for a record of responsible accomplishment when assessing license renewal applications: (1) local and network shows carried on a noncommercial basis, (2) local live programs, (3) programs featuring discussion of public issues, and (4) efforts to limit the time devoted to commercials. The commission also ordered that stations annually submit statements and other evidence of their cooperation in providing public service programming.

For regulators such as Fly and Porter, the FCC needed to do more than review license applications and assess broadcast technical standards. To them the commission was a guardian of the public trust, and as such it was to be concerned with maintaining honest competition and quality programming. But such attention could only go so far. To channel American broadcasting toward the service of the public, a public that required more than mass entertainment and escapism, the FCC needed strong chairmen and committed commissioners plus a supportive president, Congress, and court system. When any of these ingredients was deficient—and with few exceptions, such was the case since its inception—the FCC was relegated to chronic ineffectiveness, broken only occasionally by the rhetorical outburst of an idealistic member.

Even if a particular FCC session were successful, there was no guarantee that a later session would not reverse its accomplishments. For example, Chairman Porter left his position shortly after issuance of the "Blue Book," but successive sessions of the commission did not seriously apply public service criteria when evaluating license renewals. For various reasons, including decreased FCC budgets, a postwar economic boom that dampened a regulatory climate born in the Great Depression, and new personnel appointed by Harry S. Truman and then Dwight D. Eisenhower, the commission slipped back to the narrower interests that had occupied most of its first decade. Failing egregiously bad conduct, license ownership practically guaranteed license renewal.

For their part, however, American broadcasters were neither government agents serving the public good nor philanthropists willing to lose money to enlighten the masses. Although pledged to serve the local audience, the typical station owner eagerly affiliated with one or more of the national networks, filled his station for the most part with programs produced in New York or Hollywood, and then—most importantly—invited merchandisers to rent from him the public's air to advertise their products and services. The broadcaster promised the advertiser large audiences—and to get this, he relied excessively on entertainment to attract them. And the larger the audience, the more he charged the advertiser. Without a doubt such an arrangement brought wonderful diversions to the citizenry, the biggest names in show business, and all free of direct charge to the audience. No doubt, too, such programming was approved by a majority of the population. But the surrender of the U.S. radio and television to mass marketing and mass communication limited program diversity and audience experience, this in an industry severely restricted by a scarcity of stations.

There never was a great public debate about the control of broadcasting by the networks and their affiliates. The audience simply went along with the exciting fare to be heard and then seen on NBC and CBS—and to a lesser degree on the Mutual Broadcasting System and the ABC and DuMont networks. Local programming wilted before the alluring competition of big-name entertainment. When a station or network offered educational programming, it was no match for the glamour and glitz on rival network outlets. In a medium commercially dedicated to serving a national audience, the perspectives of cultural, social, political, and racial minorities seldom appeared in counterdistinction to the common fare accepted by most listeners and viewers.

Emergent television was entering an environment in which the battle between public service and mass-taste programming had been al-

ready resolved in favor of the latter. That American radio and TV would be dominated by pop culture was determined in the struggle in 1934 surrounding passage of the new Communications Act and the failure of passage of the Wagner-Hatfield amendment to the act.

Educators saw debate over the Communications Act as an opportunity to demand a greater educational purpose for broadcasting. The proposed Wagner-Hatfield amendment, led by Senators Robert F. Wagner of New York and Henry D. Hatfield of West Virginia, would have nullified all existing radio licenses, then reassigned them, with one-quarter reserved for educational, religious, agricultural, labor, cooperative, and similar not-for-profit associations. The amendment would have permitted educational broadcasters to accept advertising to cover operating expenses. With the defeat of the Wagner-Hatfield amendment, the question of educational radio and TV was dispatched to the new FCC for further discussion.

Nothing less than the future of American broadcasting was at stake in this debate over the educational role of telecommunication. Critics were blunt in their dislike of what radio had already become. As early as 1931 *The New Republic* magazine reported on a leading broadcaster from Great Britain—where an autonomous public agency, the British Broadcasting Corporation, ran national radio without resort to advertiser revenue—who was "astonished that Americans should be willing to turn over their marvelous instrument for communication so completely to the semi-sweet uses of advertisement."[41] In 1934 theatrical impresario Eddie Dowling described commercial broadcasting as already a cultural disaster, for radio had "sold its front page, sold its editorial page, sold anything and everything without reservation to keep that rich income coming in."[42] Surveys made throughout the early 1930s suggested, as one educator summarized them, that while listeners around the world "all find something of interest in the programs" they hear, "In no country except the United States have the press, educational groups, religious groups, and consumers' organizations expressed so much or such bitter criticism of their national broadcasting systems and programs."[43]

The networks were understandably defensive in arguing against educational stations and defending their own performance in enlightening the public. William S. Paley claimed that Americans were too good for broadcasting as envisioned by educational reformers out to undermine mass culture. "We cannot hand the critical and often restive American audience some brand of bright encyclopedic facts and expect it to listen enthralled as might an astonished European peasant who had grown up without benefit of school or newspaper," he wrote in late

1934. "If in the American audience we have perhaps the highest common denominator of cultural appreciation in the world—thanks to our democratic school system—we also have perhaps the most critical audience, and one of the most independent in establishing its own standards of appreciation and judgment."[44]

The president of NBC, Merlin H. Aylesworth, defended glamorous network diversion, asking, "What kind of radio fare would you present to an audience wishing primarily to be entertained and at the same time informed and therefore enlightened?" With justifiable pride he mentioned NBC accomplishments such as news programs, the airing of lectures by distinguished academicians, and its entertaining of a nation trapped in the despair of the Great Depression. But Aylesworth may have exaggerated NBC's divine function when he claimed that radio "has given a spiritual message to millions in the dark days of economic stress, now happily passing, and a means of worship to hundreds of thousands in remote places who have no opportunity to go to the churches of their persuasion."

The NBC president also stretched his credibility when he suggested that *Amos 'n' Andy*—the serialized comedy based on minstrel-show stereotypes of African-American life—was a praiseworthy model of the educational values inherent in network entertainment. "Who would care to miss a thrilling adventure with 'Amos 'n' Andy,' " he wondered, "where life may be lived vicariously, with those great comedians of the American scene pointing out to us our human aspirations, our petty foibles, our frequent mistakes in judgment, and, as well, the live-and-let-live attitude of fairness in human relations, so characteristic of America?"[45]

This is not to say that network radio did not offer important educational shows. Beginning in the first half of the 1930s, public discussion shows such as *The University of Chicago Roundtable* and *America's Town Meeting of the Air* were broadcast without sponsors. They endured for decades as sustaining programs. A great dramatic program, *The Columbia Workshop*, was another sustaining network series, and for many years it employed talented people such as Orson Welles, Bernard Herrmann, Archibald MacLeish, and Norman Corwin to produce imaginative, intelligent radio plays designed for "the theater of the mind." CBS broadcast performances of the Minneapolis Orchestra and the Philadelphia Symphony Orchestra, but NBC went farther by organizing its own NBC Symphony, headed by Arturo Toscanini. CBS even went into American classrooms via *The American School of the Air*, an educational supplement aired throughout the Great Depression years.

Nevertheless, by the end of the 1930s American radio and television were dominated more firmly than ever by mass tastes and commercial enterprise. The celebrated critic Gilbert Seldes—who at the time was director of programs for CBS-TV—offered a realist's credo, praising television for delivering mundane entertainment in which there was satisfying art only occasionally. "We must accept the two functions as equally legitimate; and more than that," he remarked in late 1940, "we must recognize the brutal practical circumstances that the arts live by daily bread, and only occasionally bring us honeydew and the milk of Paradise."[46]

At the same time, however, David Sarnoff offered a less equivocal assessment of TV. He announced that experiments had proven that video would be effective as an advertising medium. During the first eight months of regular programming, he declared, NBC had worked closely with advertising agencies—"at no cost to the sponsors during this experimental period"—to develop shows with advertising values. This resulted in 148 programs developed in conjunction with 67 advertisers representing 16 major industries. The RCA leader was pleased to conclude that "the audience response to these experimental programs has been excellent."[47] Sarnoff then took time to congratulate those who had nurtured the medium to this point—and to predict its wondrous future:

> Thus, the ultimate contribution of television will be its service toward unification of the life of the nation, and, at the same time, the greater development of the life of the individual. We who have labored in the creation of this promising new instrumentality are proud to have this opportunity to aid in the progress of mankind. It is our earnest hope that television will help to strengthen the United States as a nation of free people and high ideals.[48]

CHAPTER TWO

The Arrival of TV

World War II dramatically slowed the developmental strategies of Sarnoff and others in the video industry. With the nation waging war in the Pacific, Asia, Europe, and North Africa, the perfecting of television ceased to be a public or a private priority. Many manufacturers abandoned their regular products to make equipment vital to the military effort. With the retooling of the electronics industry, new radios and televisions—as well as replacement parts for receivers already in use—were practically unavailable. Construction of TV stations was also halted, and many existing outlets went off the air. In fact, of the ten commercial stations still telecasting in mid-1942, only six remained on the air throughout the war—but with severely curtailed transmission hours.

By 1945 seven stations were actively programming in the United States: the network operations of NBC (WNBT, which eventually became WNBC), CBS (WCBW, which became WCBS), and DuMont (WABD) in New York City; the General Electric outlet (WRGB) in Schenectady; the Philco station (WPTZ) in Philadelphia; the Balaban & Katz facility (WBKB) in Chicago; and the Don Lee operation in Los Angeles (W6XAO). Although these stations averaged about two hours of airtime daily, much of it was filled with test patterns.

Typical of the outlets continuing to telecast during the war was W9XBK in Chicago, owned by the Balaban & Katz theatrical corporation and affiliated with Paramount Pictures. In March 1941 this experimental station began broadcasting for two and one-half hours weekly. With American involvement in the conflict, however, it left the air to become a radio and radar training facility for U.S. Navy enlisted men. Station personnel became the teaching staff of the new school.

The Chicago outlet resumed public broadcasting in October 1942, when it was licensed commercially as WBKB. With male technicians leaving for duty in the armed forces, the station was soon staffed with an all-female crew. Still, wartime experimental TV was minimal. In August 1944 WBKB provided only 25 hours of programming per week—and much of this time was spent with military recruitment, appeals for War Bonds and the March of Dimes, boating education, and other public service matters. During the first five years of its existence WBKB offered only 2,659 individual shows totaling little more than 700 hours.[1]

Importantly, by early 1945 the station had attracted three commercial sponsors. The electric utility Commonwealth Edison financed a weekly afternoon cooking series, a quiz show, and a household-hints program; Marshall Field's sponsored an afternoon feature highlighting its different departments by means of variety acts and dramatic and comedic skits; and Admiral Radio presented *Young Chicago*, a weekly educational show produced in cooperation with the Chicago Board of Education and featuring local high-school students.[2]

Whatever the quality of the programs, the audience for wartime TV was small. Even after the war ended, viewership remained low. As late as October 1947, there were only 7,514 television receivers operating in Chicago: 4,139 in private homes; 2,295 in bars and grills; and 1,080 in other public places. The average daily audience for video in Chicago in the fall of 1947 was estimated at less than 96,000 viewers.[3]

World War II may have blunted the development of television, but it did not stop experimentation in programming at those stations remaining on the air. In 1943 WABD revitalized television in the New York City area when it installed a new transmitter and antenna at its studios on Madison Avenue and commenced program service. By 1944 the DuMont station had attracted enough advertisers to offer the first full schedule of commercial shows. No doubt, the DuMont achievement was partly responsible for the revival of interest in production that occurred at CBS and NBC stations in the summer of 1944.

One of the most energetic efforts in the development of programs occurred at WRGB. Seeking to discover the types of shows most practical for television, the GE station staged a wide variety of experimental shows. Among the productions at WRGB in the latter half of 1943 were the following:

July 16: *Hoe-Down Night*, a musical barn dance with square dancing and instructors to teach viewers how to square dance.

July 23: *A Day at the Circus*, an actual circus with a clown, band, ringmaster, peanut vendor, and performers emanating from the Schenectady studios.

August 6: Experimental commercial shows requiring twelve sets and sponsored by the Hamilton Watch, Goodrich Tire, and Vimms. The Vimms effort included a short comedy sketch, and the Goodrich portion consisted of an in-studio demonstration of the making of synthetic rubber plus displays of the new rubber derivative, latex.

August 19: An African-American religious revival made possible when station personnel convinced the organizers of an actual camp meeting to move their gathering inside the Schenectady studios.

August 26: An abbreviated presentation of the Tchaikovsky opera *Pique Dame* performed in Russian by a professional troupe.

September 9: In cooperation with the J. Walter Thompson advertising agency, a stark presentation on blood plasma that included an actual blood donation made by a WRGB foreman, a lecture and demonstration explaining plasma, and a dramatization of a blood transfusion on the battlefield.

September 13: First of two experimental episodes of a soap opera using a fictitious sponsor for the commercial announcements.

October 7: *Bridge on Television* offered two expert card teams and a commentator. The players used oversized cards to make their hands visible to the camera.

October 22: A production mounted by WRGB's own light opera company.

October 28: *Calling All Hunters*, produced by the Batten, Barton, Durstine & Osborne ad agency and the Remington Arms Company and using a hunting lodge set to promote the advertiser's products and to offer safety tips to sportsmen.

November 11: A complete presentation of Shakespeare's *The Taming of the Shrew*.

December 16: First of four weekly hour-long programs devoted exclusively to discovering successful ways to televise news, art, music, and commercials, respectively.

December 23: As a special Christmas offering, a full-length mounting of the opera *Hansel and Gretel*.[4]

Although the war blunted the development of TV, its lure was not diminished. In early 1942 Chairman James Lawrence Fly of the FCC demonstrated his unflagging enthusiasm when he predicted that "demobilization day will find television a fully explored but wholly unexploited field" and that "during the postwar period television will be one of the

first industries arising to serve as a cushion against unemployment and depression. . . . There is no reason now apparent why we should not aim at a 50,000,000-set television industry mirroring the present 50,000,000-set standard broadcast [radio] industry."[5]

Two years later Paul G. Hoffman, president of Studebaker Automobile, was similarly enthusiastic about postwar video. He predicted that within a decade television would become a $1 billion industry employing 4.6 million people and that the $100 billion saved by Americans through the purchase of War Bonds would be a strong force in this development.[6]

TV also retained its popular attractiveness because the eventual availability of television sets and quality programming was an important factor in maintaining domestic morale during the war. One of the most familiar projections of peacetime life was that of a private home equipped with electrical devices that would be labor-saving and entertaining. Manufacturers of refrigerators, washing machines, electric ovens, electric mixers, and the like stressed in their advertising that once peace returned the average home would be filled with their electrical wares. Clothes dryers, outboard motors, and garage-door openers as well as automatic irons, vacuum cleaners, and even personal helicopters were part of a predicted cornucopia. Video was one of the most glamorous dimensions of this bountiful consumerist future.

RCA was a leading herald of postwar TV. Throughout the country in the fall of 1944 it advertised the new medium as "Television, the 'Baby' that will *start* with the step of a Giant!" RCA looked to the future, proclaiming that "America's 'Next Great Industry' awaits only the green light of Victory to open up undreamed-of horizons in Education . . . Entertainment . . . Employment." Again there was the familiar pledge, assuring future set owners they soon would "tour the world via television," that the industry would provide jobs for returning soldiers and spur economic growth, that education would be enhanced in the home and in "the little red schoolhouse," and that soon "American manufacturers will produce sets within the means of millions."[7]

It was a rosy picture of postwar TV. However, such advertising masked the intense struggle behind the scenes between contending corporate forces. On the one side was RCA, with support from other manufacturers such as Philco, General Electric, and DuMont. The principal spokesman for this alliance was RCA's chairman, David Sarnoff, who during the mid- and late-1940s became a public cheerleader for the coming of TV. He could be mercenary, as in 1945 when he predicted that video would be a $1 billion business within a decade. And he could be

poetic, as in 1947 when he rhapsodized on the American future in national TV. "The East will see the West, and the West will see the East," he mused. "Television will project pictures across the prairies, over the mountains, and into the valleys."[8] But above all, Sarnoff was determined that TV would be marketed in its present form and that RCA would continue to set the standards for American communications.

The challenge to the RCA group came from programmers such as CBS and the American Broadcasting Company. CBS, however, was primarily a broadcast network, not a great electronic research laboratory or even a manufacturer. William Paley was reluctant to enter the technological field because, as he freely admitted, he knew nothing about the inner workings of the apparatus through which radio or television programs were transmitted. CBS had dragged its feet in the development of black-and-white TV because it could not compete against RCA's prepossessing control of patents on existing technology. But through the technical and persuasive acumen of its chief researcher, Peter C. Goldmark, Paley became convinced by the late 1930s that CBS could overtake RCA technologically through the development of color television.

As early as 1941 CBS had approached the FCC—albeit unsuccessfully—to have its color transmission system accepted as the national standard. The fact that CBS color employed a mechanical rotating disk, a throwback to the early debate between mechanical and electronic mechanisms, failed to diminish CBS's determination. Although existing television was solidly committed to electronic receivers, CBS was so sure of its colorful mechanical future that WCBW began its daily black-and-white wartime telecasts with the following proviso:

> Good evening. We hope you will enjoy our programs. The Columbia Broadcasting System, however, is not engaged in the manufacture of television sets and does not want you to consider these broadcasts as inducements to purchase televisions sets at this time. Because of a number of conditions which are not within our control, we cannot foresee how long this television broadcasting schedule will continue.[9]

Most of the blows in the RCA-CBS competition were landed in arguments before the FCC. In a crucial series of hearings in 1944 and 1945, CBS urged the commission to follow a slower schedule in making television available after the war. CBS asked for further research to improve reception, and it sought authorization to open the UHF (ultrahigh frequency) transmission spectrum because it had greater channel capacity

(up to seventy channels) and better picture and sound quality than the VHF (very high frequency) band approved earlier. Also, because it still saw color technology as the means supplanting RCA as the industry leader, CBS urged the FCC to wait until color was perfected: why market monochromatic receivers when color was just around the corner?

With its technical and business advantages, however, RCA pressed the commission to allow immediate exploitation of existing video technology—meaning the NTSC standards set in 1941. These hearings were so crucial for set manufacturers that ancient enmities faded: Zenith did nothing overt to assist CBS, and Philco lined up in support of RCA's "television now" position. As a Philco executive explained, "There is no good reason why the public should not enjoy our present television while . . . research is going on."[10]

Three decades later, broadcast historians Christopher H. Sterling and John M. Kittross would argue, "It would be hard to overemphasize the importance of the 1945 decisions that stemmed from these hearings. Much of their structure remains, and they are the source of many of today's problems."[11] Indeed, CBS lost on all accounts. In a series of seminal rulings, the FCC accepted the RCA position. It made little difference that commission chairman Charles Denny resigned six months later to become a vice president at NBC, fueling speculation that RCA had worked improperly behind the scenes to secure a victory. The FCC gave the go-ahead to those wishing to produce commercial television with existing black-and-white capabilities.

Although there was agreement on both sides that for adequate TV coverage the United States would require about twenty-five to fifty channels, the commission ruled that TV transmission would be limited to thirteen channels in the VHF spectrum. Moreover, because the VHF band had to be shared with existing government and nongovernment fixed and mobile services—and since channel 1 in 1947 was reserved nationally for FM radio transmission—this restrictive FCC ruling meant that no more than seven commercial stations could transmit in a single metropolitan area—and far fewer when transmission interference between stations in nearby cities further prevented use of potential outlets.

It is difficult, however, to see how the FCC could have ruled otherwise. To arrest the demand for television when the war ended would have been to thwart a public led to expect TV as soon as possible. Postponement also would have hurt manufacturers already able to produce television according to prewar standards, and eager to make consumer products now that most military contracts were canceled. Further, the United States

escaped its worst economic depression only because of World War II; and now, with wartime factories closing while millions of servicemen and servicewomen returning to civilian life were looking for jobs, the possibility of national economic disaster was obvious.

The FCC decisions affected the structure of TV in the United States. To make channels so scarce effectively guaranteed that U.S. television would be broadcast TV, dominated by those few corporations able to afford stations in the largest cities, provide attractive programs, attract national advertisers, and quickly build a chain of affiliates eager to appeal to the mass audience. Small networks would face impossible odds competing against the established order. Independent stations would survive only in the largest markets where there existed sufficient advertiser support. In its rush to make video available, the FCC inhibited competition and made monopoly inevitable.

For most Americans this would mean creation of one nation under television, network television. TV would be for broad, indiscriminate tastes. As had been the case with commercial radio, less popular interests such as educational TV, minority entertainment, and even locally oriented programming would be stunted by a few networks able to assemble large numbers of viewers and deliver them regularly to advertisers. Soon commercial video would be developing shows appealing to the common denominator. As one programmer explained in 1957, TV stations in this context would seem simultaneously to satisfy "the intelligentsia, the illiterate, the idiotic, the imbecile, the young, the old, the boy, the girl, the preacher, the teacher, the urbanite, the suburbanite and the farmer, the musician, the physician, the plumber . . . the baker. . . ."[12]

Postwar Television

By its promulgations in 1945 the FCC effectively set U.S. commercial television in a mold that would endure until the flowering of cable TV in the 1980s. By opting for VHF stations the commission effectively destroyed UHF and its greater ability to serve a nation of diverse tastes. When the commission finally opened UHF channels in 1953, it was already too late for meaningful exploitation of the spectrum. The networks were committed by now to VHF transmission, and the networks controlled U.S. television.

In accordance with FCC regulations, each network could own as many as five VHF stations; by 1953 these owned and operated outlets were lucrative operations situated in the largest U.S. markets. For example,

ABC owned stations in New York City (WABC-TV), Los Angeles (KECA-TV), Chicago (WBKB), San Francisco (KGO-TV), and Detroit (WXYZ-TV). Furthermore, by 1953 almost all stations operating in the United States were network affiliates, and these were all VHF channels.

There was little advertiser interest in UHF. Sponsors shied away from the newer channels, in part because their messages traveled greater distances on the older stations. VHF signals could spread in a radius of sixty to seventy miles from the transmitter, while UHF transmission reached no more than thirty to forty miles. Although UHF outlets came quickly to most cities in the mid-1950s, it remained almost impossible to receive their transmissions, since most TV sets—many of them manufactured by RCA—could not receive such signals. By 1960 only 7 percent of American TV sets could receive UHF. Not until 1963 did the FCC require manufacturers to add UHF channel selectors as standard equipment on new television receivers.

Left with small audiences and little capital for developing or purchasing attractive shows, most UHF operations became small operations surviving on reruns of old network series. The networks avoided UHF even as an investment. Although the FCC allowed them to own two UHF stations each, ABC never bought into UHF, and by 1960 CBS and NBC had sold their meager UHF operations.

While the effects of the VHF decision would not be felt for years, the most immediately contentious FCC decision in 1945 was its deferral of the color TV question. This allowed CBS and NBC to wage war against each other for another expensive decade. Under Chairman Denny's replacement, Wayne Coy—an official of the Washington Post Company, which owned CBS-affiliated stations—the commission in November 1950 finally established standards for color transmission. After CBS and NBC demonstrated their color capabilities, the FCC endorsed, in part because of Coy's intense lobbying of his colleagues, the CBS mechanical system.

Confident that they owned the future, CBS officials inaugurated public demonstrations of color television five times a day at the Tiffany Building in New York City. After one screening, critic Harriet Van Horne beamed, "It's beautiful beyond words. It's impossible not to marvel at it. And not to feel disappointed when the show ends and the screen goes dark."[13] On June 21, 1951, CBS broadcast the first network color program. Unfortunately for CBS, however, color telecasts were incompatible with the twelve million existing black-and-white sets; those set owners saw only a blank screen during the time the network's color premiere was on

the air. Moreover, only twenty-five receivers in the United States could receive mechanical color.

The CBS product may have been wonderful to the critics, but it was an anachronism from the outset. Implementing CBS color by this date would have rendered existing sets obsolete—unless owners purchased an adapter costing about $100—since they had been built to the electronic specifications of monochromatic television.

Arguing that the FCC had been hasty in choosing CBS technology, Sarnoff in 1950 had turned to the federal courts for redress. He sought to enjoin the commission and force a reevaluation of RCA color. In the meantime, his engineers labored to upgrade the electronic color that had lost to CBS. RCA gained time by spending eight months in litigation before the U.S. Supreme Court upheld the legality of the FCC decision.

A loser in the courts, Sarnoff still refused to concede. The RCA cause was aided when manufacturers such as Zenith and Philco balked at building color sets that were incompatible with the black-and-white models they were already producing. This move compelled CBS to invest millions to acquire its own manufacturing facilities. For $17.7 million in CBS stock, the network purchased the Hytron Radio and Electronics Corporation and its subsidiary Air King, a TV set manufacturer. Paley would produce his own CBS-brand receivers.

The RCA cause was assisted, however, by world events. With the outbreak of warfare in Korea, the federal government banned commercial production of color TV because the cobalt for the CBS system was now a military priority. There was no strategic reason, however, to halt production of black-and-white sets. During the Korean War millions of new receivers with RCA specifications were reaching American consumers while CBS sat neutralized with enormous expenses mounting daily.

By the time Washington in 1952 lifted its ban on color TV production, Sarnoff and his technicians had developed electronic color that was satisfactory and compatible. Before CBS could began mass production, Paley was ready to surrender. The network's president, Frank Stanton, told a congressional committee in March 1953 that the CBS effort in noncompatible color was "economically foolish."[14] Indeed, CBS costs were astronomical: when Paley finally sold Hydron in 1961, the network's losses on the enterprise had reached about $100 million. In December 1953 the FCC finally reversed itself. It accepted the RCA standard for electronic compatible color.

Although NBC and ABC soon introduced regularly scheduled color transmissions, CBS continued to avoid total capitulation by refusing to

broadcast in color. However, in 1965, with 95 percent of the NBC schedule slated to be in color, CBS took the inevitable step, announcing that half its nighttime shows that fall would be in color. The victory of RCA in defining American television was complete. Paley was bitter about his loss, but critic Jack Gould of the *New York Times* gushed, "The hero of color TV and the indefatigable champion is Brigadier General David Sarnoff. Almost alone he has brought the medium to what it is today."[15]

Color TV was not rapidly embraced by consumers. Sets were expensive, and there was popular concern about the obsolescence of the technology. Not until 1972 would half the TV homes have color receivers. Nonetheless, because they were electronic and compatible, all color telecasts could be received in black and white on tens of millions of monochromatic sets in American homes.

Despite their intensity, the business maneuverings of U.S. communications giants did not diminish the hopes most Americans held for television. Chairman Paul A. Porter of the FCC articulated the intellectual view that saw TV as the great instrumentality for bringing together the postwar nation. Speaking a few months before the end of hostilities in the Far East in 1945, he predicted that "television's illuminating light will go far, we hope, to drive out the ghosts that haunt the dark corners of our minds—ignorance, bigotry, fear. It will be able to inform, educate, and entertain an entire nation with a magical speed and vividness. . . . It can be democracy's handmaiden by bringing the whole picture of our political, social, economic, and cultural life to the eyes as well as the ears."[16]

Although average Americans may not have conceptualized as well as Chairman Porter, they knew of television, and they, too, expected great benefits from it. A Gallup poll in late 1945 illustrated that years of publicity had been effective: while only 19 percent of the respondents had ever seen TV in operation, 85 percent knew what it was.[17] Moreover, if the public attitude was accurately reflected in the opinions sampled by *Televiser* magazine in New York City in the summer of 1945, an eager peacetime public thought in terms of popular entertainment the medium would provide. "I'd like to see all the baseball games and sports events there are," declared a messenger boy. "I would expect television to lift the cultural level of the country," contended an interior decorator. An unemployed man remarked, "It will be a rather wonderful thing. A little theater in every home. It will be a new industry."

Those polled spoke of TV as amusement, offering films, music, and Broadway plays—plus daytime programs for women and inspiring messages for children. They also mentioned video in terms of news and commentary, of special-events coverage, and of a general educational influence that would "bring the world into the home." There were a few skeptics, such as an information clerk at Grand Central Station who remarked, "I think it's one of the promises like helicopters and such. I'll think about it when I see it!" But the general tenor of the man and woman on the street was upbeat. There was exuberance in the comments of three bobby soxers who declared, "If television will bring us stuff that is solid, jive that jumps, with Frankie and Perry Como, we are all for television."

More reasoned but no less positive was the newspaperman who placed it in historical perspective. "After the war, and I think that is when television will really go ahead, people will be hungry for escapism. If television can give us real entertainment, the kind of programs everyone will enjoy, it will do its job. Television has a great opportunity to influence the life and thought of America."[18]

Such anticipation was all the more striking given the paucity of wartime programming. Yet by June 1945 the FCC had 116 applications for new licenses, 86 of the requests coming from companies that already owned radio stations. Importantly, video was about to become a geographically broader phenomenon, for these applications affected 50 cities in 27 states.

Ahead were several years in which to convert factories for mass production of video equipment, to erect transmitters, develop and implement marketing strategies, and enhance the quantity and quality of scheduled programming. Ahead, too, were national economic adjustments.

While wartime price controls had counteracted inflationary pressures, removal of such controls quickly triggered inflation. As this was occurring, moreover, millions of demobilized servicemen and servicewomen and jobless war workers glutted the domestic work force and created high levels of unemployment. Long-postponed strikes by labor unions disrupted existing production. And consumers, frustrated by years of wartime saving, austerity, and the unavailability of certain products, created a demand for products from housing to hosiery that outstripped the capabilities of U.S. industry. In this time of economic reorientation, TV came to the American people.

Embracing the New Medium

Television became an acceptable, attractive, and affordable national utility in 1948–49. Whereas in January 1948 there had been 18 operating stations in 12 cities, 12 months later there were 49 stations in 28 market areas. A

year later that figure doubled, to 98 stations in 58 market areas. The output of receivers in 1948 exceeded 975,000 units, more than a fivefold increase over the combined production for 1946 (6,476 units) and 1947 (178,571 units). Production surged even higher in 1949, topping 1.7 million units.

Advertisers also accepted the medium. During the experimental years of World War II, television was a buyer's dream. Stations such as WABD, WRGB, and WBKB, eager to refine video commercials, actually offered airtime free; sponsors were required only to pay talent and production costs, which ranged from $100 to several thousand dollars. During 1948, however, 933 sponsors bought television time (production costs included), a rise of 515 percent over figures for the previous year.

TV sponsorship, however, was an increasingly expensive proposition. Production costs for a network offering such as *Toast of the Town* were approximately $7,000; a week of *CBS Evening News with Douglas Edwards* totaled $4,000; and the Friday night boxing match on *The Gillette Cavalcade of Sports* cost $2,500. No longer willing to give away airtime, stations and networks began charging for use of the airwaves. By mid-1949 an hour of prime time at WNBT cost $1,500; the same time on the 19 interconnected stations of the NBC network cost $7,000; and appearance on all NBC affiliates—live on the interconnected stations and via film or kinescope on those not yet connected—totaled $10,000.

Neither the networks nor the local stations were fully booked by advertisers. In March 1949, commercial programs on the network flagship stations in New York City ranged from one-quarter of available airtime at WJZ-TV to one-third at WABD and WCBS-TV (formerly WCBW) and about one-half at WNBT. At smaller local stations rates were considerably lower, but the commitment of advertisers was not overwhelming. At KFI-TV in Los Angeles, where the hourly rate was $150 and a single one-minute commercial spot cost $25, only 20 percent of the airtime was sold; at KSD-TV in St. Louis, where the same hourly rate applied and the spot rate was $40, two-thirds of station airtime was sold. Local sales figures ranged from 82 percent in WTMJ-TV in Milwaukee (spot rate, $50) to 10 percent at KOB-TV in Albuquerque (spot rate, $12).[19]

But even at this early date it became clear that a trend toward national programming and advertising was diminishing local initiatives and leading clearly toward national television dominated by a few networks. From May 1948 to May 1949 the airing of network fare jumped from 21 percent to 44 percent of the current operating schedules of 38 stations. By the end of 1949 network TV was attracting half of all advertising revenues and local programmers were complaining that there was a dearth of locally

available talent and imagination, that network shows were more attractive than anything they could produce, and that sponsors were expecting too much from television advertising.

Merrill Panitt, TV columnist of the *Philadelphia Inquirer* and later editor of *TV Guide*, touched on the dilemma in local TV when he wrote in mid-1949 of the greater funding available to develop network programs, and the fact that good local shows should end up on the networks. Although Panitt felt "there are good and bad shows from NBC, CBS, and ABC," he seemed less hopeful about local fare when he explained that "some Philadelphia programs smell to high heaven, others just smell, and a few are well worth watching."[20]

Whatever the internal machinations of the industry, consumers by the fall of 1949 demonstrated their acceptance of the medium: 22 percent of all families in New York City already owned a TV set, other figures were 19 percent for Philadelphia, 15.5 percent for Los Angeles, and 13.6 percent in Chicago.[21] A trade journal that year captured the excitement of the times:

> Throughout the nation there is a rustle of renewed activities—rehearsal halls are being dusted and vaudeville acts are being rejuvenated. Visual entertainment in all its forms is again coming into its own. Vaudeville, operettas, and the musical revue will be brought to the masses and no longer limited to Broadway or the Rialtos of the few larger cities. . . . With the combination of motion picture film and the television camera, coupled with the television receiver in the American home, John Q. America is about to receive the greatest treasury of enlightenment and education that has ever before been given to a free man.[22]

As far as most citizens were concerned, TV meant entertainment. And the ability of the medium to entertain expanded greatly in the late 1940s as the Bell System, a subsidiary of American Telephone & Telegraph, linked the major U.S. cities through an elaborate system of cables and radio relay stations. Via a coaxial cable buried in the ground and running through subterranean conduits, the image and sound from a single TV program could be transmitted instantaneously from one distant site to another. The radio relay method transmitted sharply focused microwave signals along a chain of relay towers.

One of the significant early achievements of this technology occurred in 1949 when the Bell System completed the coaxial cable linkage between Cleveland and Pittsburgh. This was the final span required to connect existing eastern and midwestern TV linkages. Moreover, through radio relay, outlying cities such as Milwaukee and Detroit also received

network productions directly. Now productions originating in New York City, Chicago, or anywhere along the cable could be seen simultaneously from Boston to St. Louis. Although the four networks—CBS, NBC, ABC, and DuMont—had to share the single cable until more lines were laid and supplementary radio relays increased transmission capabilities, the connection tied together thirty-three stations in sixteen cities.[23]

What viewers saw emerging at the time was an unprecedented blossoming of exciting diversion and information. One January 11, 1949, a special program inaugurating East-Midwest coaxial operations—hailed by *Television Forecast* magazine in Chicago as "a history-making television show," another product of "the miracle of electronics"[24]—aptly summarized the condition of the medium. It featured short speeches by Chairman Coy of the FCC and by the mayors of New York City and Chicago, followed by a short film produced for the Bell System, *Stepping Along with Television*, which entertainingly explained the operations of the cable and radio relay technology.

The highlight of the inaugural broadcast was a one-hour sampler of how the networks intended henceforth to amuse the nation. For fifteen minutes each, the four networks displayed their best: Arthur Godfrey for CBS, Ted Steele with a musical revue for DuMont, Milton Berle and Harry Richman representing NBC, and for ABC an example of a Chicago-originated mystery show, *Stand By for Crime*. The *Chicago Tribune* reported that this linkage signified that "The end of dull, sustaining filler on television screens appears to be in sight."[25]

Indeed, the end of dullness was in sight across the nation. By the end of 1950 the spread of AT&T cable and relay stations tied together viewers from Charlotte, Atlanta, Jacksonville, and Memphis, to Indianapolis, Minneapolis, Kansas City, and Omaha, all anxious to receive network TV fare originating primarily in New York City. On the West Coast the achievement was more modest, as only San Diego, Los Angeles, and San Francisco were tied together via radio relay. Conspicuously missing from the national web was a transcontinental linkage between the Midwest and the West Coast. This situation was rectified in September 1951, when a system of interconnecting radio relay sites between Omaha and San Francisco became operational.[26]

If commercial network TV had promised a variety of popular diversion, it delivered television stars such as Ed Sullivan, Milton Berle, and Jackie Gleason as early as 1948–49. Although live dramas and films had appeared on experimental television since the early 1930s,[27] by 1948 TV offered a wide schedule of dramatic programs, ranging from live network

offerings such as *The Kraft Television Theater* on NBC and *Studio One* on CBS to commercial feature films shown on local TV, and filmed series and kinescoped network fare distributed nationally.

If television had promised live sports coverage, from the beginning there was diversity. In 1948–49, for example, TV covered events as varied as boxing, baseball, basketball, football, women's softball, stock car racing, track and field, speedboat racing, tennis, golf, horse racing, bowling, roller derby, and hockey. However, no sport better exploited the visual capabilities of TV than professional wrestling, which generated an enormous following in the first years of the medium.

Aired live as a local event or on film from arenas across the nation, wrestling offered movement, spectacle, combat, and frequently, the captivating melodrama of moral conflict as good, "clean" wrestlers such as Antonio Rocca, an Argentine grappler who wrestled in his bare feet, were pitted against evil, "dirty" wrestlers such as Gorgeous George, a California showman who splashed himself with Chanel No. 5 perfume and gave ringsiders the hairpins used to hold his well-coiffed blond tresses.

There were wrestlers of comic-book presence with names such as Hombre Montana, Chief Don Eagle, The Swedish Angel, and Yukon Eric. There were women wrestlers, midget wrestlers, and massive sumo competitors imported from Japan. Popular political feelings were even exploited as remaining anti-Axis emotions were taunted by wrestlers such as Baron Michele Leone, Hans Schnabel, Mr. Moto, and The Great Togo, who were among the most provocative "dirty" wrestlers; and Cold War attitudes helped make Ivan Rasputin a hated competitor.

As well as adult-oriented diversion, early commercial TV offered attractive children's shows. Especially prevalent were programs featuring hand puppets and marionettes. On *Howdy Doody* (NBC) Buffalo Bob Smith, with a cast of marionettes and costumed adults, entertained an energetic audience. *Kukla, Fran, and Ollie* (NBC) mixed the puppetry of Burr Tillstrom—with his little man Kukla, the gentle-hearted dragon Oliver J. Dragon, and a supporting cast of odd characters—to interact with real-life Fran Allison. On the West Coast, *Time for Beany* (distributed nationally through KTLA, Los Angeles) was a live hand-puppet serial that employed the vocal, puppetry, and comedic skills of Bob Clampett, Stan Freberg, and Daws Butler to relate the adventures of young Beany: the crew of the little boat *Leakin' Lena*; the black-caped villain Dishonest John forever exclaiming "Curses, foiled again!"; and a friendly sea serpent named Cecil, who for a long time was visible to no one except his pal Beany and those in the TV audience.

Ironically, many of these juvenile programs were greatly appreciated by adults. The sensitive demeanor displayed on *Kukla, Fran, and Ollie* and the sophisticated wit of *Time for Beany* transcended age. Such a program, too, was *Lucky Pup* (CBS), which featured Foodini the evil magician and Pinhead, his none-too-bright assistant. In 1949 the distinguished writer William Saroyan lauded the warmth and universality captured by these puppets of Morey and Hope Bunin. Foodini, according to Saroyan, "is the attractive fake which all authority is: confident, loud, rude, self-centered, proud and yet a delight to behold in action because his pose is so easy to see through." And as for gentle Pinhead, Saroyan found him "irresistible" because

> he is so much like so much that is true about everybody, including children. He is dominated, he is pushed around, he is patient, he means well, but he makes one mistake after another, for which he is punished by a clunk on the head. He is slight, odd-looking, has no vanity, and yet has the dimensions of a hero. His basic remark, "Yes, Boss," is a variant on any child's feeling about his relation to the world; or anybody's at all, for that matter.[28]

If another promise of television was informational programming, by 1948–49 there was already a wide variety of news and public-service offerings. The networks televised filmed newsreels, live evening news programs, and talk shows such as *Meet the Press* (NBC). There also was remarkable live network coverage of important events such as debates at the United Nations in Lake Success, New York, and high points in the presidential election of 1948, ranging from the Democratic and Republican national conventions held in Philadelphia, to election eve results and the inauguration of Harry S. Truman in January 1949.

Individual stations also demonstrated their ability to inform viewers of crucial local developments. A five-alarm fire raging in a Philadelphia high school was televised live on WFIL in January 1948. Several times in early 1948, WBKB in Chicago showed its skills in covering news "on the spot" by transmitting live from the scene of major fires in the city. And many stations soon began producing their own local news shows. These usually employed a broadcaster reading from a script while newsreel footage (often generic stock footage) was used to visualize the story.

More elaborate, however, was the well-edited local newsreel. Typical of this, in September 1948 WBAP-TV in Dallas–Fort Worth inaugurated *Texas News*, a nightly newsreel that was filmed, processed, edited, written, and narrated by station personnel. The station soon began supplying NBC with footage of local stories—spring floods, a hurricane, or an airplane crash—having national interest. After a year on the air, *Texas News* was cited as "the outstanding station newsreel" in 1949 by the National Association of Radio News Directors.[29]

The importance of the news function of local stations was evidenced most dramatically at KTLA. In April 1949 that independent station in Los Angeles stayed on the air for more than twenty-seven consecutive hours while telecasting rescue operations from a field where three-year-old Kathy Fiscus had fallen into an abandoned well shaft. Before her dead body was eventually brought to the surface, a community of millions had been forged, witnessing as might the residents of a small town an event of tragic proportions. *Variety* called the performance by KTLA "the greatest broadcast for the development, progress, and advancement of television."[30]

Clearly, video had finally arrived. This was the theme of *Television Today*, a CBS sales movie issued in May 1949 to attract advertisers. The half-hour production presented a seductive definition of TV. "Television is a party in the home," declared the announcer as happy adults and children watched attentively on household receivers. TV, he continued, is "sports right in the home." It also meant "seeing the news right in the home" because "every event of major significance is now caught by television."

In *Television Today* video was hailed as the ultimate medium, combining the power of the human voice, the drama of theater, the persuasiveness of movies, and the immediacy of electronic broadcasting. As for its effect on family life, TV was praised for the intimate way in which it "involves the family at home in what is happening on the screen." More specifically for children, it was credited with creating a "whole new world . . . of wholesome, highly acceptable entertainment."

Yet for all the enthusiasm generated by its visual potentialities, the nascent medium was heavily indebted to older, sightless radio for its popularity. It was those networks responsible for the success of radio that now nurtured television through its infancy. When NBC, CBS, and ABC first staffed their video operations, they drew on executives with radio experience. Many of the production personnel from radio found themselves working in front of and behind the cameras of early TV. Television was affected, too, by the business philosophy that shaped radio for more than two decades.

For most Americans, however, the similarity between radio and video was most obvious in programming. Many successful radio shows

quickly made the transition to the new medium. Situation comedies such as *The Life of Riley* and *My Friend Irma* and comedy-variety performers such as Jack Benny, Eddie Cantor, and Red Skelton entered TV early. The popular quiz shows *Break the Bank* and *Stop the Music!* crossed over to video, as did radio personalities such as Arthur Godfrey, Don McNeill, Kate Smith, and Garry Moore. *The Lone Ranger*, a radio Western popular since 1933, appeared on ABC-TV in 1949. From *The Goldbergs*, *We, the People*, and *Studio One* to *The Aldrich Family*, *Twenty Questions*, and *One Man's Family*, radio helped shape the identity of television. According to TV chroniclers Tim Brooks and Earle Marsh, 216 network programs appeared in both media. Most of these programs appeared in the late 1940s and early 1950s, and almost always they were radio series that gravitated to television.[31]

In other ways, too, TV evidenced from the beginning its indebtedness to radio. By the 1950s series such as *Dragnet*, *Amos 'n' Andy*, and *Gunsmoke* created TV programs by recycling scripts already used on their radio versions. Well into the decade, several soap operas—among them *The Guiding Light* and *The Brighter Day* used the same scripts on radio and television. And programs such as *We, the People*, *Queen for a Day*, *Arthur Godfrey's Talent Scouts*, and later *The $64,000 Question* were broadcast simultaneously on both media.

Many early TV shows had the aesthetics of radio. Wordy comedy on *The George Burns and Gracie Allen Show*, for example, tied video to the aural traditions of radio. Crime series such as *Dragnet*—which began on radio in 1949 and came to television in 1952—utilized an unseen narrator to introduce and resolve each story, while story lines were carried along by a running commentary delivered as a voice-over by Jack Webb in the role of Sergeant Joe Friday.

Through their plot structures, reliance on unseen announcers to propel the action, and prerecorded soliloquies, early television soap operas recapitulated the essence of daytime radio serials. In the years before widespread use of TelePrompTers and off-camera cue cards, TV news seated journalists behind a desk, where they read scripts—interrupted only by visual inserts of maps, still pictures, and filmed material—much as they would do in delivering a radio newscast.

If the first TV programs borrowed significantly from radio, even more striking was the migration of advertisers from audio to video. In no small way, the national acceptance of TV was assured when American corporations discovered they could profit from using TV as an advertising medium, despite the expensive rates of the new medium. William S. Paley might remind sponsors of their primal debt to radio—noting, as he did in 1949, that "Television is accepted by advertisers and merchandisers because of its inherent effectiveness, but the acceptance was materially hastened by the long and satisfactory experiences of radio advertising"[32]—but to a great degree the success of TV was built on the grave of network radio as it then existed.

Advertisers and the Rush to Video

In its most popular years, network radio was dominated by a handful of corporate clients who paid millions of dollars annually to deliver commercial messages on nationally transmitted shows. By the late 1940s, for example, Procter & Gamble was spending $20 million per year to advertise on a variety of daytime and evening radio shows. According to Dr. Charles A. Siepmann, in 1948 P&G "bought enough time (19,812 station-hours) on the air to fill the entire annual program schedule of more than three stations." He noted further that almost 36 percent of one network's annual ad revenues came from only six sponsors—and that of the $400 million spent in 1949 for all radio advertising, 18.5 percent was derived from only ten corporations.[33]

In opting to buy time on television, sponsors for the most part were following the suggestion of advertising agencies that seemed convinced video would soon become a major sales medium. As early as July 1948, Sylvester "Pat" Weaver, then a vice president at the Young & Rubicam agency—and soon to become vice-president for television at NBC—sounded the charge, announcing, "In my seventeen years of advertising, in all media, and with personal experience and influence in helping to forge the radio pattern in its early days, I can truthfully say that there has been nothing like television in the opportunity to convince, to demonstrate, to sell."[34] Weaver's excitement was shared by talent agent William Morris, who wrote in June 1949 that "Television has the impact of an atomic bomb. It is increasing the people's intellect in proportion to a bomb's destructive power for blowing them to pieces. And it's a foregone conclusion that national advertisers will go into TV or go out of business."[35]

The U.S. Department of Commerce confirmed such speculation, reporting its certainty in mid-1949 that TV soon would become the nation's leading sales tool. The department emphasized that the effectiveness of "television's combination of moving pictures, sound, and immediacy produces an impact that extends television as an advertising medium into the

realm of personal sales solicitation. Television makes the home the location of the point-of-sales presentation and reduces follow-up personal selling to a minimum." In predicting a glowing future for TV advertising, the Department of Commerce urged agencies to prepare for the boom. Although profitability was not yet high, the report suggested that "this appears to be an opportune time for agencies to engage more strenuously in television activities, to obtain experience, and to create a reputation."[36]

While such endorsements may have been encouraging to potential advertisers, the most persuasive argument was that wherever transmitters were made operational and video was available, listeners were abandoning their radio programs in favor of TV. Television came first and most plentifully to urban centers such as Los Angeles, Chicago, New York City, Philadelphia, and Baltimore. By 1950 more people viewed TV than listened to the radio. Surveys indicated that once more TV stations were available, radio was finished. As CBS vice president Hubbell Robinson, Jr., had written in 1948, this was a situation analogous to Custer's Last Stand, for "Television is about to do to radio what the Sioux did to Custer. There's going to be a massacre."[37]

When Lever Brothers, General Foods, Ford, American Tobacco, Procter & Gamble, and other major sponsors began buying television time, they were escaping the massacre. By the spring of 1949, as advertisers rushed into video, there were sixty-three sponsored shows on network TV, and advertisers were spending upward of $12 million annually.[38] By late 1950 *Variety* described this exodus of national sponsors from radio as "the greatest exhibition of 'mass hysteria' in show biz annals."[39] During the last six months of 1951 expenditures for TV advertising rose 195 percent above figures for the previous year; during the same time radio advertising totals dropped more than 5 percent.[40] A list of the top ten advertisers in 1951, as seen in Table 2.1, illustrates clearly that television was attracting the bankrollers principally responsible for the success of network radio.

Video advertising burgeoned, reaching more than $336 million in 1952 (a jump of 43 percent over the previous year). Relentlessly, the television share of broadcast advertising dollars in major markets rose from 32.7 percent in 1950 to 49.3 percent the following year and to 54.2 percent in 1952. By early 1953 TV in Los Angeles was attracting as much as 63.5 percent of all broadcast advertising billings there. FCC statistics indicated, moreover, that as new stations were made operational, particularly in metropolitan areas served by only one or two outlets, television continued to attract an increasing share of advertising revenues.[41]

Table 2.1
Top Ten Television Advertisers in 1951[42]

Amount (Millions)	Company
$12.2	Procter & Gamble
$12.1	General Foods
$ 7.6	R.J. Reynolds
$ 6.8	Colgate-Palmolive Peet
$ 6.7	Ford Motor
$ 6.4	American Tobacco
$ 5.9	Liggett & Meyers
$ 4.9	Lever Brothers
$ 4.8	P. Lorillard
$ 4.1	General Mills

Such rapid and complete acceptance of video resulted in the nearly complete destruction of its "sister" medium, network radio. Whereas the top radio program had a rating of 32.2 in April 1943—and 26.3 five years later—by April 1953 the leading show had a rating of 8.5, this despite the fact that almost every person in the nation had access to radio.[43] Conversely, the leading television show during the 1952–53 season had an average rating of 67.3. By December 1955 there was not one evening program among the top ten radio shows. And although there were 46.6 million homes with radio that year, the average prime-time radio broadcast was heard in only 786,000 households.[44]

More than simply underwriting the costs of TV programs, advertisers and their agencies were fleshing out U.S. television. Unlike European nations, which developed a few noncommercial national stations that were regulated by the state and financed through taxes or licensing fees imposed on set owners, video in the United States was shaped by private businesses. In a nation that historically distrusted governmental involvement in social life, there was never a doubt of such an outcome.

But there were glaring shortcomings in a national TV system that was based on advertiser support. None was more glaring than the failure of television to become the purposefully educational medium many had anticipated. Hearkening back to the debate over the Wagner-Hatfield amendment to the Communications Act of 1934, idealists who envisioned television as a vital instrument for social enlightenment found little commitment to education in commercial video. They argued, as did General Telford Taylor on ABC radio in February 1951, that to serve the diverse tastes of the pluralistic American audience there must be a system of

economic support different from advertiser-based programming for part of the television spectrum.

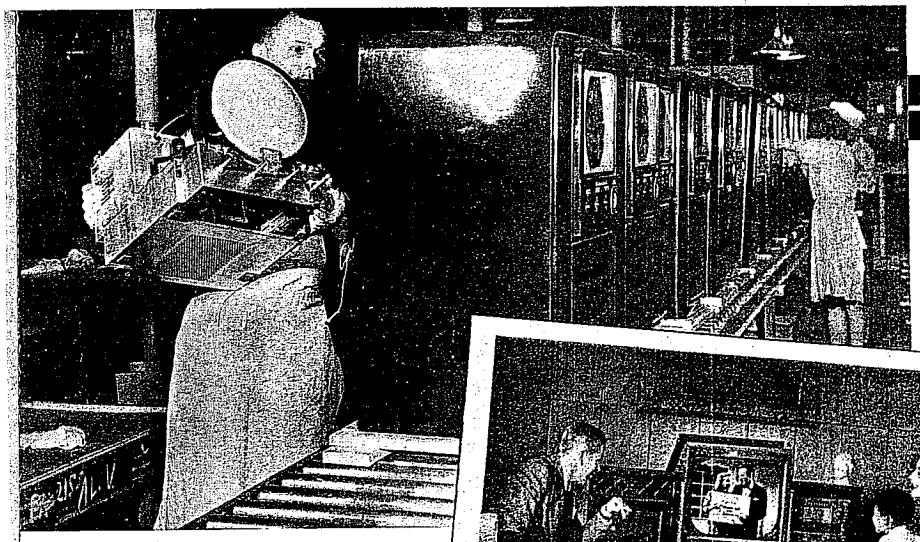
But Professor Charles A. Siepmann on the same broadcast was convinced already that TV had become "a liability" to the public. "Basically because of its costs of operation," he saw TV developing "as almost exclusively a medium of mass entertainment, with the accent on mass. It will, in other words, compound all of radio's many felonies, eschew the long-term cultural view in the interest of quick returns on sponsors' money, measure quality by the quantity of audience response, sell cultural minorities short, and give art, intelligence, and excellence the silent treatment." Abandoning his frontal attack, Siepmann turned then to cynicism to berate the new medium:

> Left to itself, commercial television is likely to turn us all into a race physically distinguished by a hyperthyroid look about the eyes, and fannies flattened by excessive hours in easy chairs. A nation of passive gapers, instead of active intelligences, credulous instead of critical, mass-minded instead of individual, more and more dependent upon outside stimulus, and progressively devoid of inward resources. And we shall continue to see our children graduate prematurely to the immaturity of their elders.[45]

Opposing such learned cynicism, Pat Weaver by mid-1952 remained as hopeful and philosophically engaged as ever about the future of broadcasting. After three years at NBC, he still anticipated wondrous results from the medium—nothing less than "a new era in human history . . . a most dramatic change in the environment of our country, a change almost wholly for good, in my opinion . . . witness the problems, attend the conferences, participate in the tragedies, watch the riots, see the misery, thrill to the inspiring deeds." Weaver enthusiastically maintained the liberal perspective in which TV would educate and uplift, and in the process offset destructive narrowness and ignorance. And the future, for him, was with the children of TV, "a generation of informed youngsters whose great point of difference from us will be that they accept diversity, individuality, differences in belief, custom, language, et cetera, as wholly natural and desirable."

At the base of this social metamorphosis was network broadcasting, corporate telecommunications in the service of the common good. As Weaver explained it:

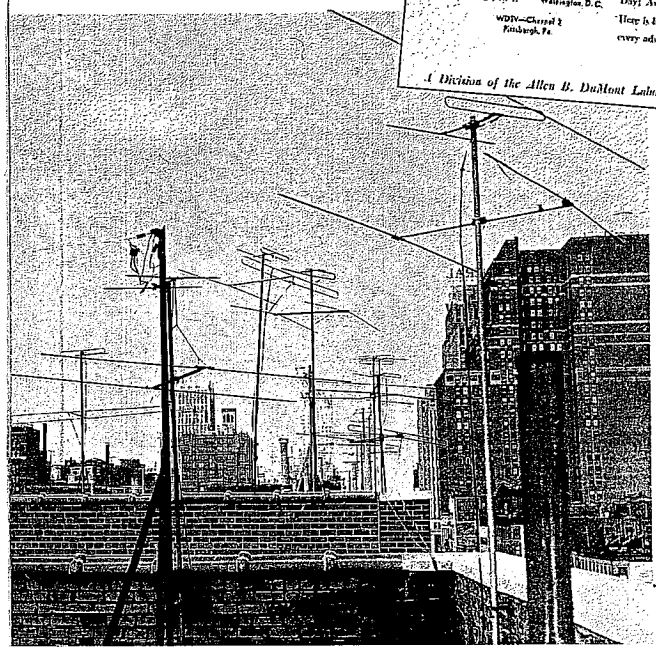
> It is because having the all-family, all-home circulation through a planned radio-television schedule, we can create a new stature in our citizens. The miracles of attending every event of importance, meeting every personality



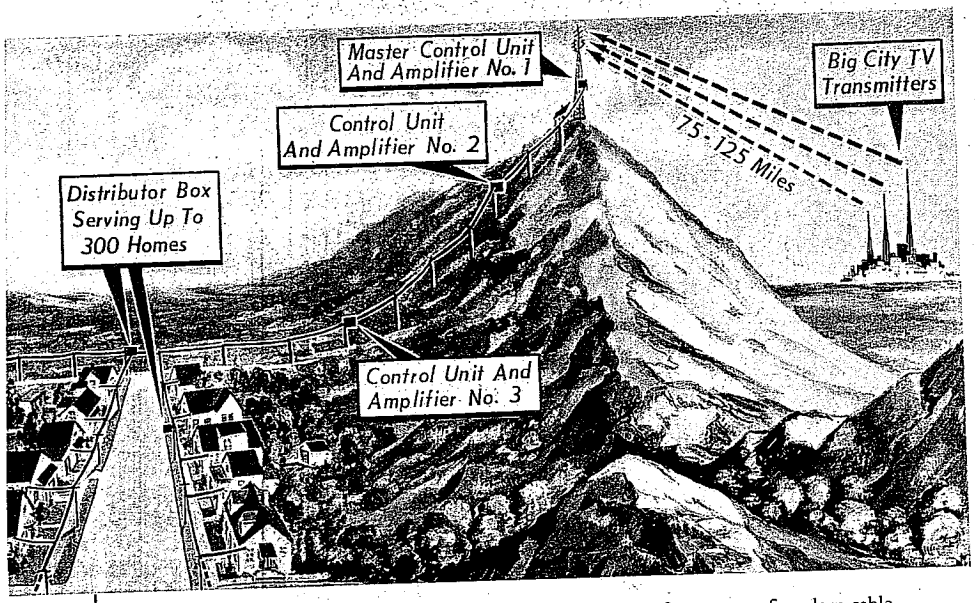
Postwar consumer demand created a booming new industry, television. Here, at the Admiral Corporation in Chicago, TV receivers are assembled in 1949. *(author's collection)*

Postwar consumer demand created a booming new industry, television. Here, at the Admiral Corporation in Chicago, TV receivers are assembled in 1949. *(author's collection)*

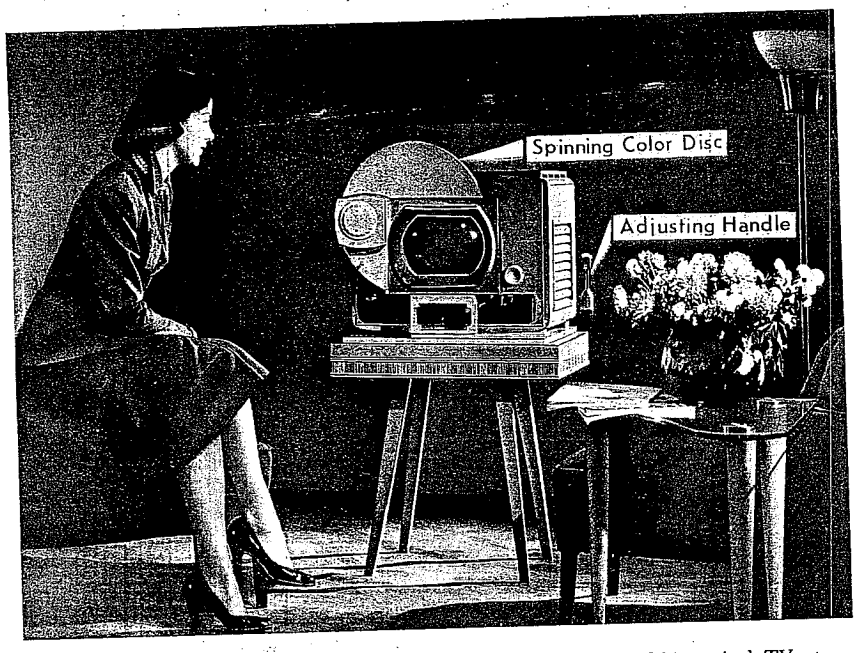
As this advertisement from 1948 indicates, the DuMont television network already understood that because of TV in the home, "there's a revolution taking place in American family life." *(author's collection)*



The early popularity of television was noticeable in the forest of antennas that appeared in the skylines of U.S. cities and towns, as for example in New York City in early 1952. *(author's collection)*



As early as 1949 Community Access Television (CATV)—the forerunner of modern cable TV—offered video to communities cut off from broadcast signals by hills or mountains. Capturing and amplifying distance transmissions, a well-placed Master Control Unit could deliver excellent television pictures via cables strung to individual homes and businesses. (*author's collection*)

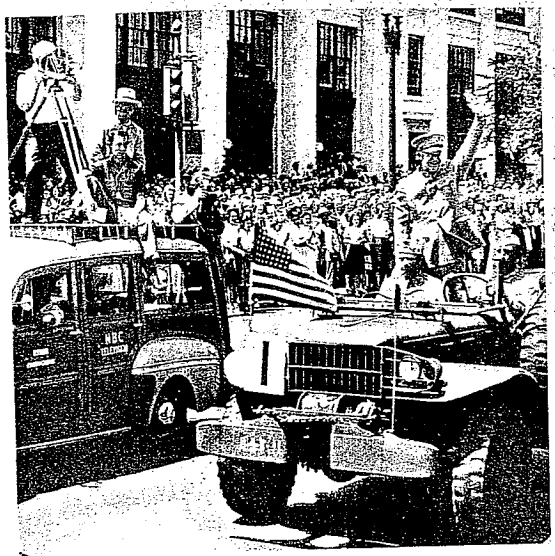


The impracticality of CBS color television is evident in the awkwardness of this ten inch TV set that has been adapted in 1950 to receive color. Short of buying separate receivers for mechanical color and electronic black-and-white programs, TV sets required a spinning color disk as well as a handle to switch between color and black-and-white transmissions. (*author's collection*)

The preeminent driving force in all aspects of the development of television was David Sarnoff. As president and chairman of the board of the Radio Corporation of America, Sarnoff influenced all aspects of broadcasting—from transmission standards and TV set manufacturing at RCA, to the philosophy of national programming at RCA's subsidiary, the National Broadcasting Company. (*author's collection*)

CBS board chairman William S. Paley was the greatest impressario in broadcasting history. No network executive before or since has matched Paley's accomplishments in pleasing the American public with the biggest names in entertainment, and the most distinguished reporters in broadcast journalism. (*author's collection*)

Red Barber not only gained distinction in August 1939 for calling the first professional baseball game on TV, but on that telecast he delivered the first TV commercials—one of them for Procter & Gamble's Ivory Soap. (*Procter & Gamble Archive*)



A newsreel cameraman and a sound engineer from NBC television cover the triumphant return of General Dwight D. Eisenhower to the United States in the spring of 1945. (*author's collection*)

In late 1946 station WGN was among the first to own an RCA mobile television unit—although the Chicago outlet would not begin commercial telecasting until 1948. (*author's collection*)

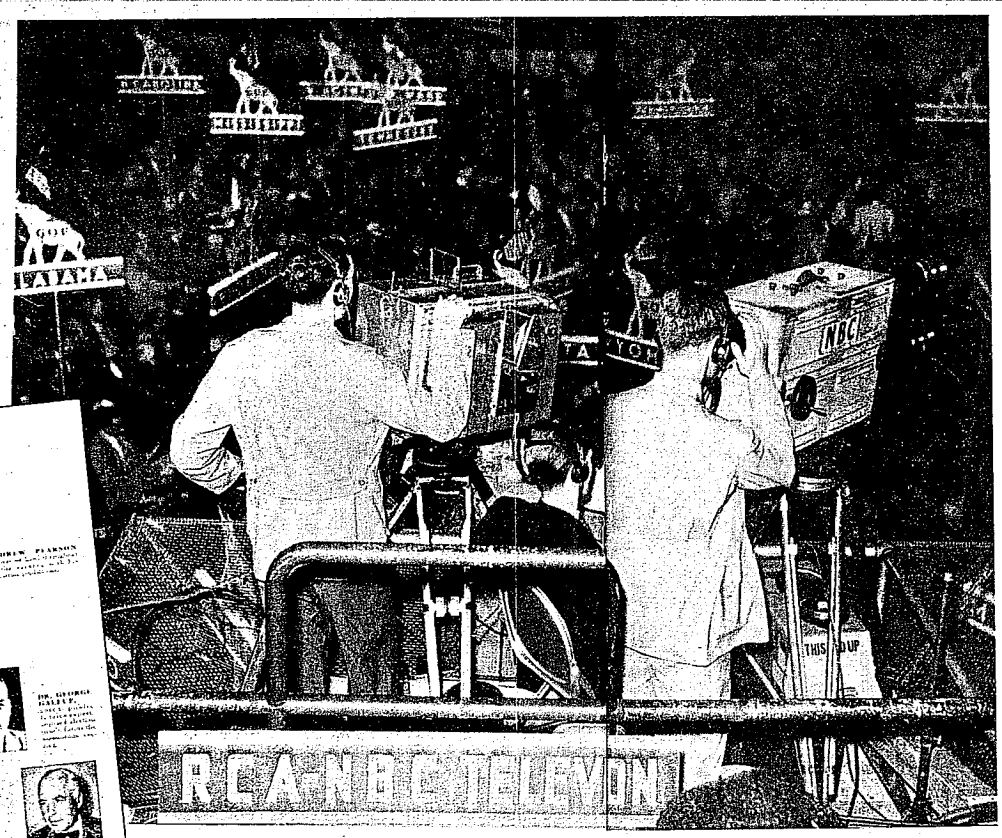
The early promise of TV news delivered directly to the living room was reiterated in this advertisement from the fall of 1946. Here, RCA predicted development of a "walkie lookie" through which a "reporter might cover a story by television as readily as a news photographer does now with a camera." (*author's collection*)

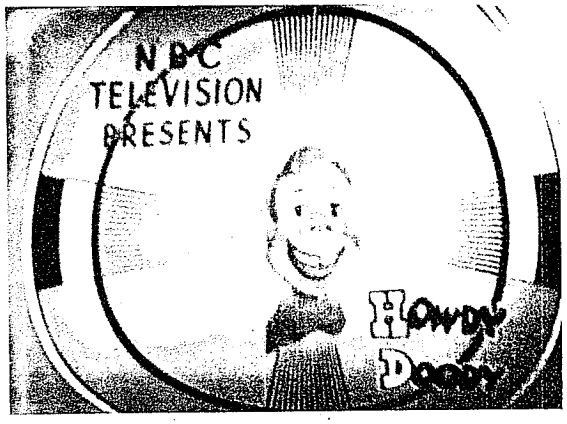
Another promise of early television—and an attractive selling point in mid-1947 as well as nowadays—was the ability to broadcast live sports events from the arenas and playing fields throughout the nation. (*author's collection*)

Bill Stern was a premier sports broadcaster on radio and a pioneer of the remote sports telecast on NBC-TV in the late 1930s and early 1940s. (*author's collection*)

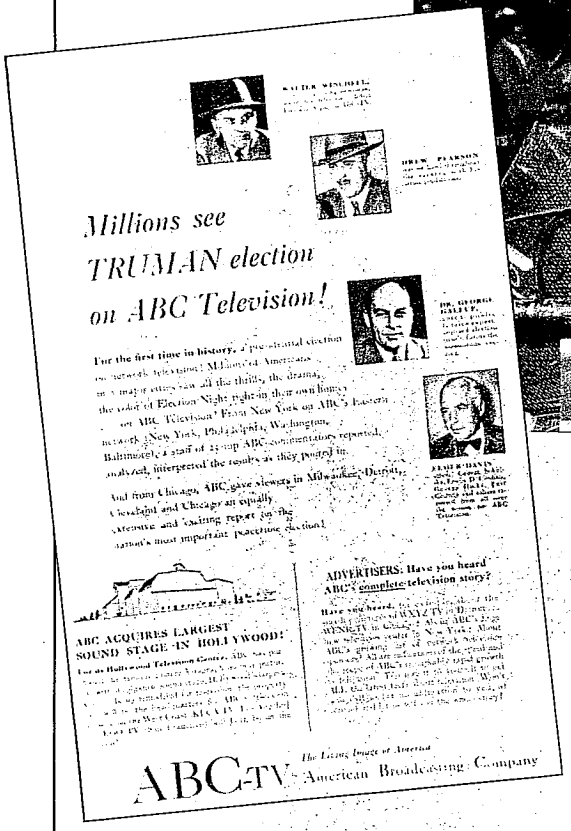
In restaurants, taverns, and other public places TV quickly became a popular attraction. Here, restaurant patrons in Kansas City eat lunch while they view the 1950 World Series on live TV. (*author's collection*)

Politics has always been a compelling aspect of U.S. television. In 1948 network cameras brought the Republican National Convention live to viewers within a 180-mile radius of the Convention site in Philadelphia. (*author's collection*)





Puppetry experienced unprecedented popularity in early TV. The leading marionette of the era was Howdy Doody, who premiered on NBC in 1947 and lasted until 1960. (*author's collection*)



Television and politics were a natural combination. In late 1948 a magazine advertisement hailed ABC-TV and its history-making coverage of the election night in which Harry S. Truman defeated Thomas Dewey for the presidency of the United States. (*author's collection*)

In launching the first successful TV soap opera, *The First Hundred Years*, Procter & Gamble in 1950 started the trend of filling daytime network hours with a dramatic genre long popular in network radio. (*Procter & Gamble Archive*)

Sometimes called "Uncle Miltie," other times referred to as "Mr. Television," comedian Milton Berle was the first hit star of the new medium. Berle's popularity on *The Texaco Star Theater* beginning in 1948 helped to sell television to the American people. (*NBC Photo*)

> of importance in your world, getting to observe members of every group, racial, national, sectional, cultural, religious; recognizing every city, every country, every river and mountain on sight; having full contact with the explanations of every mystery of physics, mechanics and the sciences; sitting at the feet of the most brilliant teachers, and being exposed to the whole range of diversity of mankind's past, present, and the aspirations for mankind's future—these and many other miracles are not assessed yet. But I believe that we vastly underestimate what will happen.[46]

It was naive to have expected video to develop other than it did. At its core, U.S. television was capitalist enterprise, intent on forming mass audiences to market them to advertisers. Matters such as education and public interest were not of primary importance in network TV. As the distinguished journalist Edward P. Morgan aptly epitomized the performance of commercial TV after its first two decades, "Once upon a time television was supposed to operate in the public interest, but lo and behold, it has captured the public and made it a product—a packaged audience, so to speak, which it sells to advertisers."

Hosting a documentary titled "Tomorrow's Television: Get What You Want or Like What You Get" on the NET series *PBL (Public Broadcasting Laboratory)* on February 16, 1969, Morgan recognized the impact on program diversity that had resulted from the limited monopoly over American broadcasting shared by the national networks. "With rare exceptions," he remarked, "one station or one network is not really an alternative to the others because they are all engaged in similar exercises trying to corral the biggest share of viewers."

Although such criticism was well earned, it is myopic to suggest that television in the United States displeased most Americans. As with most operations in a less-than-ordered world, the performance of commercial video has ranged from wonderful and enriching to banal and even destructive. It has educated and propagandized its audiences on matters social, political, and economic; but it has gained a following whose loyalty continues to make TV popular. Daily, it has bombarded an already materialistic society with countless advertisements urging the purchase of specific products, needed or not, affordable or not; but it has been a crucial vehicle for creating popular demand within an economy greatly dependent on mass consumption.

Relative to what Americans had experienced before television, the new medium was a phenomenal development in civilized living. The United States by the early 1950s had just emerged from twenty years of social dislocation. The Great Depression had destroyed families, cut short

Among the many radio series that came early to television was *The Lone Ranger*, which premiered as a filmed series on ABC-TV in the fall of 1949. (*author's collection*)

In his *Kukla, Fran and Ollie*, puppeteer Burr Tillstrom joined with singer-comedienne Fran Allison to present a spirited children's show that was widely appreciated by juveniles and adults through most of the 1950s. (*Procter & Gamble Archive*)

careers, and generally set the nation on a path of austerity and want. World War II may have alleviated the economic plight, but waging a life-and-death struggle against potential totalitarian conquerors exacerbated social dread throughout the early 1940s. And the economic dislocation of the early postwar years offered little assurance that the nation had escaped its malaise.

Against this backdrop, Americans welcomed television as material proof that their time of troubles had ended. Blending the glamour of the movies with the convenience of radio, a new TV in the house signified success, both national and personal. The wartime promises had come true, one could now watch the biggest names in show business right in the front room. As compensation for years of sacrifices, Americans were being entertained with the most amazing machine produced in this most amazing century. Paying several hundred dollars for a new Admiral or Philco or other brand of receiver was an investment in family security and participation in a national cultural community.

A TV commercial for RCA-Victor television captured the satisfaction associated with set ownership. On *The RCA-Victor Show* telecast December 21, 1951, the advertisement linked the pride of possessing a receiver with sentiments of a family love on Christmas Eve. While a child slept securely in a bed, a young couple—amid a Christmas tree, toys, and holiday decorations—removed the large ribbon adorning their new RCA-Victor television. Here was reward for surviving decades of deprivation and conflict. With melancholy music in the background, an announcer spoke optimistically of the new medium as a source of personal gratification and as the best hope for a civilization seeking only peace and security:

> Christmas Eve. Night of great expectations. Night when children dream of candy canes, and 'lectric trains—of sugar plums, toy drums, and dolls that walk and talk. This is the night when dreams come true. Children's dreams and the dreams of their parents. For on this Christmas Eve into many homes will come a whole new world of entertainment on RCA-Victor television. Super sets like this will bring our nation's finest performers into living rooms in our great cities and many of our smallest country towns. And there's more than entertainment here, for RCA-Victor television will bring to many families opportunity for greater understanding. They will watch great historical events as they take place. They will see people from all parts of this land and others stating their opinions and explaining their ways of life. And perhaps this greater understanding will bring to more and more people the spirit of peace on Earth and good will toward men.

What U.S. television did, it did well, and it pleased most viewers for many years. The case against national TV, however, is more profitably directed against what it did not do, against what was not shown. As Edward P. Morgan concluded on the NET documentary, the dissatisfying reality of commercial TV "does not mean that it should be junked or seized by the government or run by a committee of do-gooders. Heaven forbid! What is needed is more variety to nourish the increasing numbers of people who find the mass audience diet indigestible."

Television was to be a commercial medium serving a mass audience that expected neither cultural uplift nor inventiveness in its diversion. And diversion was what TV would be all about. For most people this was a medium of escape, a dalliance, a relaxing time-passer. Those seeking cultural refinement, program diversity, or educational lessons were quickly disaffected, for television had no intention of becoming a conscious instrument of social improvement.

The disparity between what people viewed, and what many felt they should have viewed, created great consternation. Commissioner Paul A. Walker of the FCC put the blame on broadcasters as well as viewers, noting in February 1952 that "to a large extent the average level of radio and television programs reflects our immature wants and interests as much as it fosters them."[47] Another commissioner, Frieda B. Hennock, was less equivocal when she attacked American educators for the state of broadcasting. "They say that the mentality and tastes of the public are at a pretty low level," she remarked in 1950.

> Well, I am not altogether blaming the commercial broadcasters. I blame you educators tonight. They have to make a living. They turn to the lowest common denominator approach, because that is the intellectual level of the public mind and that is the reason for the mediocre product you get on the air. In commercial broadcasting you have to consider the profit motive. When an advertiser uses the air, he is interested in selling his product. He is interested in reaching as many persons as possible, and that is why you have mediocrity.[48]

Nevertheless, leaders of the broadcast industry—whose tastes were generally more refined than those with which they engaged the nation—justified their performance in terms of the socially important service they were providing. There was no reason for William S. Paley to have changed his mind about the salutary effect of broadcasting. Television was simply an extension of broadcast radio, which he described in 1940 as "exerting a stabilizing influence on the physical distribution of the population." By

this Paley meant that the "radio and the automobile have almost eliminated involuntary isolation in the United States," and wherever one lived, "the radio will bring you a supply of news and entertainment—the same news and the same entertainment available to you if you lived in Times Square, New York."[49]

Mortimer Loewi, the director of the DuMont Television Network, thought in similarly broad social terms. He argued in 1949 that television would meet its mandatory educational role. "In the final analysis, a race raised on a diet of entertainment will shortly display many of the characteristics of a moron," he suggested. To Loewi, TV was the ultimate communications medium, "the greatest instrument for mass dissemination of information and knowledge since the days of Gutenberg" as well as "the logical, inevitable sequel to all [man's] achievements in radio and motion pictures, in printing, photography, and the fine arts." Thus Loewi could predict that American television would solve that chronic scourge of civilization, "the curse of Babel, the confusion of countless tongues." He continued:

> Television will topple the walls of misunderstanding and tolerance—the Tower of Babel of our time. Television will project ideas and ideals across international boundaries and be the greatest frontier-jumper of our day. . . . This great new medium of television makes its chief appeal to the eye, which discerns truth far more quickly than the ear.[50]

In ceding the airwaves to merchandisers who used them to make a living, Americans guaranteed that the utilitarian potential of radio and television would never be fully realized. With transmission initially limited to the few channels possible on the VHF band, competition was stifled and the potential of the medium to serve many audiences was restricted. Allowing a few similarly structured networks to program for such a richly diverse nation ensured the triumph of formula over invention, simplicity over the profound. As impressive as some network fare would be—and, indeed, much network programming was enormously popular with viewers and well received by critics—national broadcasting would always be driven by the propensity to satisfy mass tastes while disappointing the legitimate expectations of audiences with narrower interests.

Given the history of U.S. broadcasting in the twentieth century and the economic and political philosophy guiding American society, this arrangement was inevitable. The eminent dramatist Norman Corwin well understood what was transpiring. Writing in 1945 about the state of

network radio, his appraisal remains applicable to TV and other commercialized media in the United States. Radio "rises no higher and sinks no lower than the society which produces it," Corwin maintained. "I believe people get the kind of radio, or pictures, or theater, or press they deserve. . . . The gist of what I am saying is that the radio of this country cannot be considered [apart] from the general culture and modes of the American people." He continued, "Radio today is neither as good as the program executive will have you believe in his statement to the interviewer; nor as bad as the intellectual guest at the dinner table makes it out to be."[51]

The Freeze

The acceptance of television by the public and by advertisers was all the more impressive since in mid-1950 the United States was a nation once again at war. Little more than five years after the end of World War II, American manpower and industry were geared up for armed conflict in Korea. And just as World War II had arrested video development, so the Korean War raised the possibility of a similar fate for TV in these first years of national popularity. Radio executives even expressed confidence that wartime curbs on television would give their medium a "second chance" for survival.[52]

Although the Korean conflict remained a limited war, thereby making it unnecessary for the federal government to require a retooling of the electronics industry, throughout the 1950–53 period there persisted the chance that expanded hostilities would blunt, if not fully arrest, the television boom. Yet, except for the restrictions placed on the use of cobalt in the production of color TV, Washington did not impede the fledgling industry.

Popular confidence in TV was striking, too, because a "temporary" freeze on licensing new stations severely limited the number of outlets and the availability of the medium. The hiatus was ordered by the FCC in September 1948. Expected to last six months, it was not ended until April 1952. The freeze was the result of poor planning by the FCC. The commission had anticipated neither the sudden popularity of television nor the technical problems it quickly precipitated. Although the commission had issued 108 licenses by the fall of 1948, there were hundreds more applications pending from across the nation.

The commission used the freeze years to negotiate industry agreements on such matters as frequency allocation, signal interference between cities, tropospheric interference with broadcast signals, creation

of standards for color television, establishment of educational television stations, and creation of additional channels through the opening of the UHF spectrum.

In terms of video availability, the freeze affected only the issuance of new construction permits; those companies already holding licenses were allowed to build their stations and begin operations. Television continued to spread across the continent, although at a slower pace. Whereas 37 stations were telecasting in 21 market areas at the beginning of the freeze, 108 stations were telecasting by the time it was lifted. Nonetheless, in fourteen states—New Hampshire, Maine, Vermont, South Carolina, Arkansas, Mississippi, Kansas, North Dakota, South Dakota, Montana, Colorado, Wyoming, Idaho, and Nevada—no transmitters were yet authorized. Although residents in half these states could receive transmissions from adjoining states, there remained seven states in which television was not available.

Moreover, hundreds of important U.S. cities missed the first years of popular TV. Located great distances from functioning TV transmitters, communities such as Denver (330 miles), Wichita (230 miles), and Little Rock (133 miles) had no television in the freeze years. Even in states with operating stations there were important cities too far from a transmitter to receive a signal: El Paso (225 miles); Tampa-St. Petersburg (170 miles); Fresno (152 miles); Spokane (230 miles); and Portland, Oregon (142 miles).[53]

For all the inconvenience it created, the freeze blunted neither the explosive popularity of TV nor the fierce competition being waged by the networks as they maneuvered for power in the industry. Whereas less than one-half of 1 percent of the nation had TV in 1948, by the end of 1952 more than one-third of U.S. homes owned a receiver. By the latter date, too, TV advertising revenues were already 70 percent as large as those for radio. And TV set production increased sixfold between 1948 and 1952.

The freeze years also allowed the networks, specifically NBC and CBS, to extend their dominance over national video. If network success lay in the ability to deliver large audiences, the talent pool and financial strength of NBC and CBS provided leverage absent at ABC and DuMont. In many markets, moreover, this leverage was magnified by the fact that TV was controlled by companies already operating NBC or CBS radio affiliates. And in small markets, where a single station was affiliated with more than one network, NBC and CBS made wide use of coercive "option time" contracts, which gave them first rights to place their shows

on the air ahead of ABC and DuMont programs offered at the same time. As Allen B. DuMont explained the situation, "the freeze reserved to two networks the almost exclusive right to broadcast in all but 12 of the 63 markets which had television service. It meant that the other two networks did not have . . . more than a ghost of an opportunity to get programs into the markets so necessary . . . [to] attract advertisers from whom revenues and profits must come."[54]

Proof of DuMont's lamentation was in the statistics: between 1949 and 1952 network billings for NBC and CBS rose from $9.9 million to $152.3 million, more than 84 percent of all network time sales; figures for ABC and DuMont increased from $2.4 to $28.5 million. Were it not for a windfall of $30 million acquired through its merger with United Paramount Theaters (UPT) in 1953, ABC probably would not have survived the competition. Lacking a similar infusion of capital, however, the DuMont network continued to atrophy until it went out of business in 1955.

Regardless of intense business struggles behind the scenes, Americans wanted television. This was evident in the rapidity with which new outlets were approved and made operational following the lifting of the freeze. Within a year 70 new stations were on the air, and the FCC approved an additional 280 broadcast licenses. By 1955 there were 422 stations in the United States, and 485 by the end of 1958. Popular acceptance of video was obvious, too, in the dissemination of receivers. The number of households with TV, which had risen steadily throughout the freeze—from 3.8 million in 1950 to 15.3 million in 1952—swelled from 26 million (55.7 percent of all U.S. households) in 1955 to 38.9 million (78.6 percent) in 1957 and to 43.9 million (85.9 percent) in 1959.[55] There existed no better indication of the video success than the profit levels of TV stations. After a few years of losses, by 1954 the average station realized profit margins of 35 and 40 percent.[56]

With all its positives and negatives, national television had arrived by the mid-1950s. Now in control of a multibillion-dollar industry, the networks would spend the rest of the decade streamlining their business. By eliminating inefficient practices, maximizing profit potential, narrowing the scope of their operations, and holding close to the ratings as a guide to program life or death, CBS, NBC, and ABC solidified their domination of American video and spent the rest of the decade making money.

When David Sarnoff guided his son Robert to the presidency of NBC in December 1955, Sarnoff the elder observed that the network now possessed "the best and most complete organization we have had

since the advent of television."[57] Indeed, it was a golden time for NBC, and for all broadcasters who had survived the formative years. After absorbing massive financial losses, television began to turn a profit in 1953 and never looked back. The freeze was now history, and the exodus to TV was in high gear.

At the time Sarnoff was anointing his son, there were 39.4 million sets in use in the United States; 70 percent of all U.S. homes had television; and there were 331 VHF and 106 UHF stations operative in the United States. The president of the Radio-Electronic-Television Manufacturers' Association, H. Leslie Hoffman, was ecstatic when he hailed television in 1955 as the greatest retail value of any consumer commodity—costing only three cents an hour to watch, including set depreciation and servicing.[58]

Advertisers that year spent more than $1 billion in TV, and NBC's gross billings topped $140 million. Total profits for the three networks were $68 million—a rate of return of more than 116 percent against the value of depreciated tangible property. Although ABC, CBS, and NBC owned only 25 percent of all industry assets, they earned more than 45 percent of total industry profit.[59]

The euphoria in Sarnoff's words could certainly have been shared by William S. Paley. CBS may have lost the technological competition against RCA, but in 1955 CBS made more money than NBC. Paley and his network moved to the head of the ratings race with America's favorite television programs. He later recalled the events of the years. "Being the most popular network was a nice position to be in," Paley wrote, "and though we could hardly expect to stay there undisturbed forever, we would always try." CBS's preeminence would endure for twenty-one consecutive years.[60]

Even inglorious ABC had reason to gloat. It had avoided bankruptcy and survived the final cut. With DuMont out of the picture and with new management brought to the network through its merger with UPT, it was time for the junior network to makes its bid for industry respect and profitability. Soon, as the most innovative operation in network TV, ABC would be taking the company, the industry, the nation—indeed, the globe—in new directions.

PART

II

ONE NATION UNDER NETWORK TELEVISION: THE 1950s