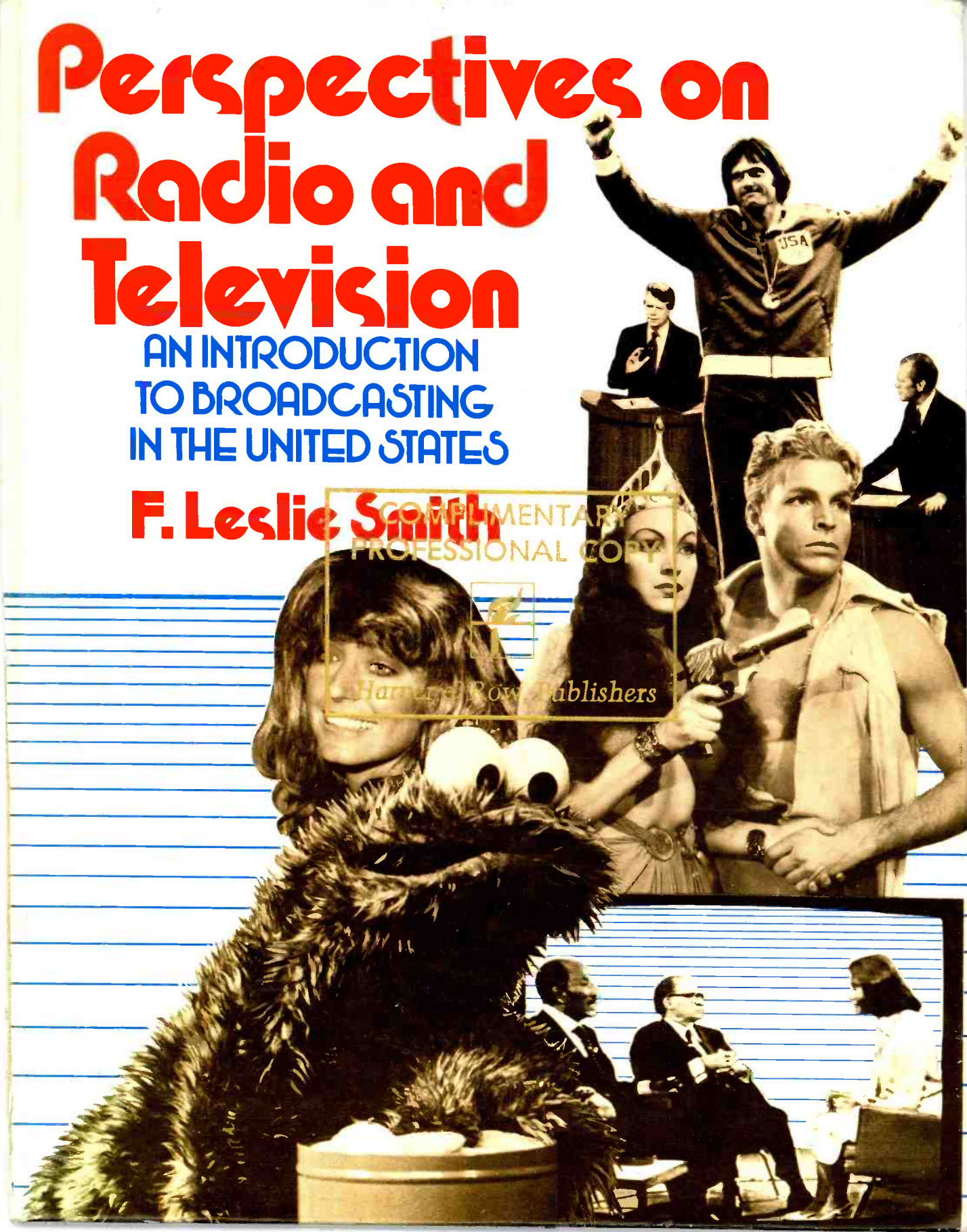
Perspectives on Radio and Television

AN INTRODUCTION TO BROADCASTING IN THE UNITED STATES

F. Leslie Smith



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Preface

I wrote this book with three primary aims: (1) to describe the field of broadcasting in the United States (2) in a manner the reader could grasp (and, hopefully, enjoy!) and (3) in a form the classroom teacher could use. In working toward the first aim, I found that the scope of the book would have to be broad. After all, broadcasting is a field that covers areas as diverse as show business and physics, sales and social psychology. And if the reader were to get a complete picture of the field, it seemed to me the book would have to include not only the usual main areas, but also information on subjects such as ethics in broadcasting, careers in broadcasting, and present and potential rivals to broadcasting—print, film, CB radio, home video recorders, video games, and so on.

As to the second aim, both the beginning radio-television major and the nonmajor elective student should find content easy to understand at first reading. Terms are defined as they occur in the text, and footnotes in each chapter refer to other chapters that contain additional information on the subject under discussion. A short, selective, annotated bibliography follows most chapters.

Finally, the book was written to adapt to most teaching situations. It is an integrated whole, and an instructor teaching a survey of broadcasting course for the first time may wish to rely on the text heavily and to use it straight through, as written. On the other hand, the book is divided into logical chapter divisions by subject matter. Each chapter stands by itself. An experienced instructor will probably tailor use of the book and should be able to do so by assigning (or not assigning) whole chapters.

I solicit comments from you, the reader—student, instructor, broadcaster, interested member of the public. Please write directly to me or the publisher and describe what you like or do not like about the book, what you think its strong and weak points are, what errors you find, what you had trouble understanding, and—most importantly—what you think could be done to improve future editions.

Acknowledgments

A good portion of the credit for this book belongs to my students. I know it is a cliché, but it is true: My students have taught me a great deal. Two individuals who also share credit are Cindy Smith and Jan Parten. Cindy proofread

copy; made suggestions for additions, deletions, and rewrites; and prepared rough drafts for illustrations. Without her help and encouragement, you would not be holding this volume in your hand today. Jan Parten converted my illegible, neurotic handwritten scrawl into a typed rough draft, so that I could read what I had written. She also typed the final draft that went to the publisher. And she did it so well and for so little money that I am forever spoiled for manuscript typing. I must thank Bill Jacquot for reducing my teaching load and for keeping me off faculty committees; Sharon Evans for performing time-consuming, but necessary research; and Lee Ann McChristian for typing many, many letters.

Finally, thanks to my colleagues in radio/television/film (especially Ed Glick) and my other friends at North Texas State, in the Denton community, and elsewhere who have encouraged me and endured my even more irascible-than-usual behavior over the last two years while this book was in preparation. Responsibility for any problems, weaknesses, or inadequacies herein fall, of course, solely on the author.

F. Leslie Smith

1 Preview

Why study broadcasting?

One reason is that we spend so much of our lives with it.

> Based on A. C. Nielsen Company statistics, Americans viewed enough television in 1977 to average 6 hours and 10 minutes per day for each home in the United States. That time represents 38.5 percent, nearly 2 out of every 5 minutes, of a family's waking hours.
>
> There are an estimated 425 million radio sets in this country, nearly two for each man, woman, and child. Over 75 percent of all adults listen to radio every day, over 96 percent every week.

Surely any two media with which so many people spend so many hours deserve serious and close examination. They are major factors in our lives because, if for no other reason, they take up so much of our time.

But if television viewing time and radio ownership figures are not enough to justify study, the advertising costs should be.

> A 30-second commercial on prime-time network television costs an advertiser, on the average, $50,000, the highest rate is at least $130,000. This is just for air time. It does not include the cost of making the commercial.
>
> About 102 million people watched the 1978 Super Bowl game on television; one minute of air time cost advertisers up to $344,000 or $5,733.34 per second.

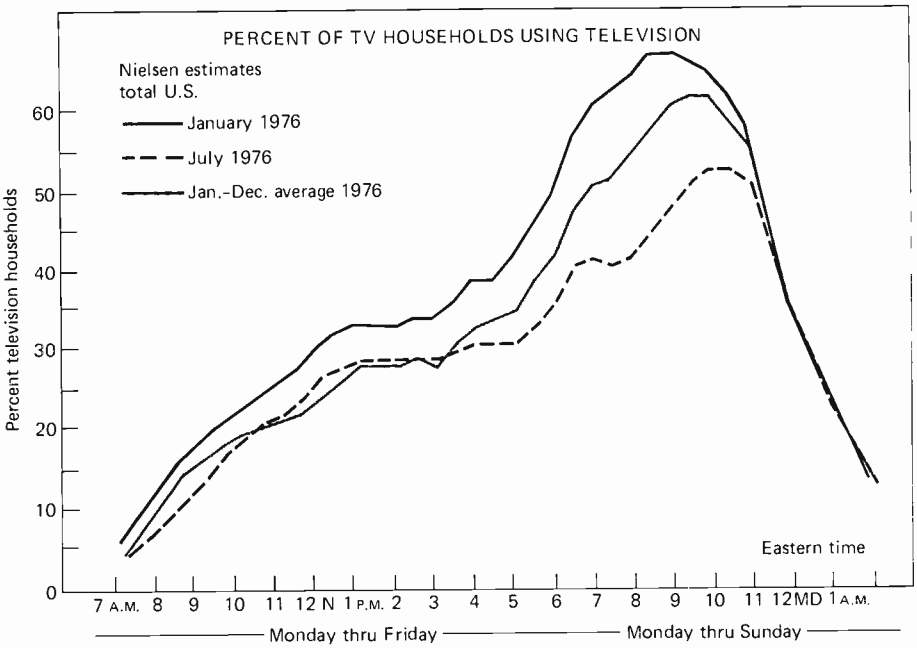

Figure 1-1. Average Daily Home Television Viewing. Television viewing levels increase gradually through the day. They climb sharply starting about 5:00 P.M. as people arrive home from work, peak between 8:00 and 10:00 P.M., then drop rapidly at bedtime. During the winter, when many people stay indoors a good part of the time, viewing levels are high. In summer, more persons go out and viewing levels are lower, particularly in late afternoon and early evening.

SOURCE: Nielsen Television 1977 (Northbrook, Ill., A. C. Nielsen Co., 1977), p. 7. Used by permission.

> In 1977 one company alone, Procter and Gamble, put $349,875,900 into network and spot television* advertising. This figure, of course, does not include the money Procter and Gamble may have spent for radio advertising.

There is still much discussion about the exact nature and extent of broadcasting's persuasiveness. But the above figures represent calculated judgments in dollars-and-cents terms that broadcasting can be used persuasively—persuasively enough so that the returns justify the high costs of broadcast advertising.

And then there is news—information about the world around us, on the basis of which we vote, buy, sell, eat, play, work.

---

* *Spot television* means commercials placed by national and regional advertisers on local stations.

Based on a study by the Roper Organization for the Television Information Office, 64 percent of the U.S. public gets most of its news from television, 19 percent from radio, either alone or along with other sources.

Based on the same study, 51 percent say television is the most believable source of news.

While some people may not like it, may even try to ignore it physically and intellectually, the facts are there: broadcasting *is,* and it is a great deal for a great many. Its size, its nature, its pervasiveness, its ubiquity—all indicate the necessity for studying broadcasting. The important question then is *What is broadcasting?* And that is where this book fits in.

What is broadcasting? The question is not only important, it is also complex, even for a book with 27 chapters in 492 pages. Thus this question—What is broadcasting?—has been broken down into a number of smaller questions—How did radio and television come about? What are their messages; how are these messages formed? How do they send the messages? Within what kind of legal and ethical framework do they operate? How do they generate the revenues that allow them to exist? How do they compare with other media of mass communication? What relationships exist among broadcasting, individuals, groups, and society? Each of these smaller ques-

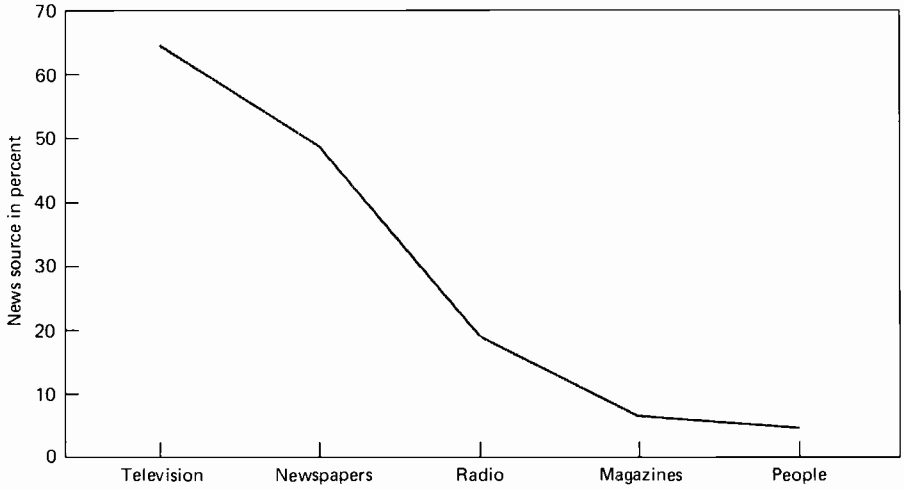

Figure 1-2. Source of Most News. In a late 1976 nationwide survey of persons aged 18 and older, 64 percent of the sample (2000 persons) mentioned television as a source of most news—a full 15 percentage points higher than the next most frequently mentioned source, newspapers. Television has led all other media in these biennial surveys since 1963.

SOURCE: The Roper Organization, *Changing Public Attitudes Toward Television and Other Mass Media* (New York: Television Information Office, 1977), p. 3. Used by permission.

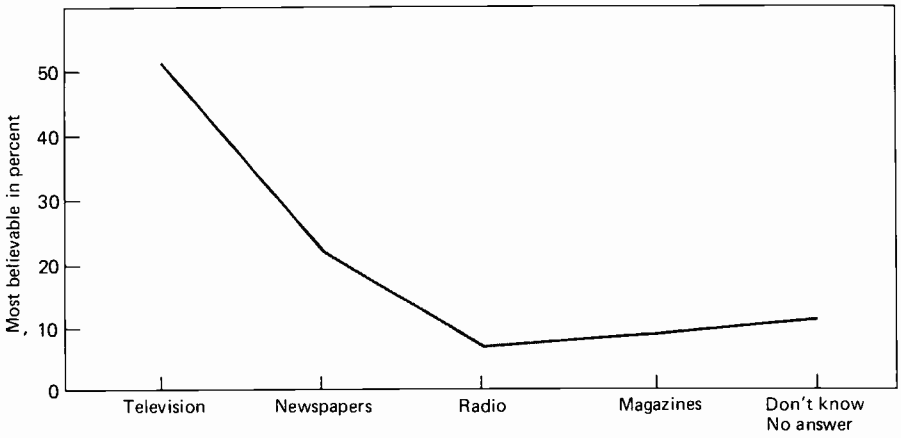

Figure 1-3. The Relative Credibility of Media, Nov. 1976. Television has led as the most believable news medium since 1961. By 1974, television led newspapers by a margin of over 2.5 to 1. This 1976 survey showed almost the same margin.

SOURCE: The Roper Organization, *Changing Public Attitudes Toward Television and Other Mass Media* (New York: Television Information Office, 1977), p. 4. Used by permission.

tions represents a different way of looking at, or perspective on, broadcasting.

This book is written to answer these questions and thus the title, *Perspectives on Radio and Television.* The seven main sections each reflect a different perspective: historical, creative/informational, physical, legal/ethical, economic, competitive, and sociopsychological. Each perspective is further broken down into a number of different major topics, the chapters within each section.

The purpose of this book is to survey the complex and interesting field of radio and television. It aims at breadth and includes as many of the varied aspects of the field as possible. Additionally, the content is descriptive and theoretical; for example, it describes the broadcast production process but does not tell how to produce, direct, announce, and write copy.

Used in a one-semester freshman or sophomore level college course, the book can be easily divided into seven main units of study, with about two chapters per week. Yet, within the confines of one volume, breadth is achieved at the expense of depth. In the college curriculum, depth will come from succeeding courses in radio and television—law and regulation, production, sociology of mass communication, and so on. But for the general reader, for the student from another field taking "survey of broadcasting" as an elective course, and for the intellectually curious broadcasting student, a short bibliography has been placed at the end of each chapter. The bibliography lists books and articles that discuss in depth the topics covered in the chapters.

Finally, a word concerning writing style. Most of us have probably experienced the disappointment of beginning to read a book, only to find that an

abstruse, formal, and thoroughly tedious writing style prevented us from enjoying or even grasping the subject. In *Perspectives on Radio and Television,* the attempt is made to avoid this barrier. The style is informal, and its function is primarily to describe and explain as completely and simply as possible. Broadcasting is an intrinsically interesting subject; hopefully, it will emerge that way from the pages of this book.

Bibliography

The periodical of record for the trade aspects of radio and television is, without doubt, *Broadcasting,* a weekly magazine from Broadcasting Publications, Inc., 1735 DeSales Street, N.W., Washington, D.C. 20036. The same publisher issues the *Broadcasting Yearbook,* annually. This catalog contains a wealth of information: a short history and status report on broadcasting, important FCC broadcasting rules, state-by-state listings of each broadcast station, its description and its staff, and dozens of other directories of various people and organizations involved in radio and television. Compare the *Yearbook* to *Television Factbook* (Washington, D.C.: Television Digest, annual), and *Spot Radio Small Markets Edition, Spot Radio Rates and Data,* and *Spot Television Rates and Data* (Skokie, Ill.: Standard Rates and Data, semiannual, bimonthly, monthly). U.S. population figures, spot television advertising figures, radio and television set ownership, and much more information is also available in U.S. Department of Commerce, *Statistical Abstracts of the United States* (Washington, D.C.: GPO, annual). An influential report of a biennial survey of what people think of television, especially as a medium of information dissemination, is The Roper Organization, *Changing Public Attitudes toward Television and Other Media: 1959–1976* (New York: Television Information Office, 1977).

One

Historical Perspective

To understand broadcasting as it is today, we have to look back to see just how we got from there to here—the chain of haphazard events that brought us from Hertz to *Hawaii Five-O*, from Fessenden to the Fonz. Our perspective in this section is historical, and the three chapters answer the question, "How did it all happen?"

2

Rise of Radio: To 1928

In an age of scientifically preplanned, computer-assisted, systems-oriented marketing strategies, it is easy to lose sight of the fact that broadcasting was not developed to meet the needs of a consumer audience. No one sat down one evening to design radio broadcasting. Radio's history and prehistory unfolded in at least seven major stages before all parts of the foundation on which American commercial broadcasting is built were in place: radiotelephonic communication; industrial firms with interests in communications; broadcast stations; the audience; advertising as financial support; the networks; and comprehensive federal regulation. All these developed over a period of time through trial and error, often by sheer accident.

The appropriate model for development of broadcasting, then, is not Athena who sprang full grown from the head of Zeus, but Topsy who just "grow'd." In this chapter we shall study the story of this electronic waif, now middle-aged and wealthy, by examining each of the seven stages in her development. Then we shall look at her as she existed in 1928, on the verge of becoming rich, famous, and glamorous at nine years old.

Stage 1: Radiotelephonic Communication

The first stage in the development of broadcasting was achievement of **radiotelephony**—transmission and reception of sound via radio waves. Like broadcasting itself, radiotelephony is not one device, unique unto itself, but rather

the combination of a series of discoveries and inventions. Electricity, telegraphy, telephony, wireless telegraphy—all these had to evolve before sound could travel by radio waves.

Scientific interest and research in electricity began in earnest during the Renaissance and reached its peak in the eighteenth and early nineteenth centuries. Priestly, Volta, Ampere, Ohm, Faraday, Henry, and others made vital contributions in defining, explaining, and harnessing electric power. In the 1880s, Thomas Edison began to wire New York City, the first step in what would become the electrification of America.

The idea of **telegraphy**—relaying messages from one point to another—had been around since before the birth of Christ. Various forms of visual signaling devices had been used down through the years. But all these methods were cumbersome, time-consuming, and subject to problems from fog and human error. In the nineteenth century, however, a number of persons worked on a totally different idea—development of an *electrical* telegraph. It was an American, Samuel F. B. Morse, who first succeeded. Morse had worked on his electromagnetic telegraph system for more than a decade when he finally patented it on October 13, 1843. Basically a simple device, it used electrical wire with electromagnetic-equipped clicking keys* at both ends and two electrical signals: current and no-current. The length of these two signals was varied to produce either dot clicks or dash clicks, and combinations of these dots and dashes represented letters of the alphabet. Even today this is called the Morse Code. Congress appropriated $30,000 to Morse to construct an experimental electrical telegraph line between Washington, D.C. and Baltimore. In May 1844, the words, "What hath God wrought!" were transmitted as the first message. The experiment was successful; a message had been sent via electricity.

Thirty-two years later electricity was used to send voice communication by wire. Alexander Graham Bell filed formal application to patent his telephone on March 7, 1876. Three days later, Bell operated his telephone successfully for the first time.

In the meantime, a series of scientific discoveries had begun that would lead eventually to **wireless** telegraphy. Beginning in 1864, James Clerk Maxwell wrote a series of theoretical papers showing that energy passed through space in the form of waves traveling at the speed of light. He said that light waves were electromagnetic, but there were probably other electromagnetic waves, too, differing in length from those of light and hence not visible. In other words, Clerk Maxwell was predicting the existence of something that could not be seen, felt, heard, or smelled, something that we call today **radio waves.** In 1887, the young German scientist Henrich Hertz, demonstrated

* The original Morse telegraph printed code on paper tape. As the U.S. telegraph system began developing, however, the industry adopted the hand-operated key, requiring the operator to transmit by hand and to receive by ear, simultaneously listening to and interpreting the click code.

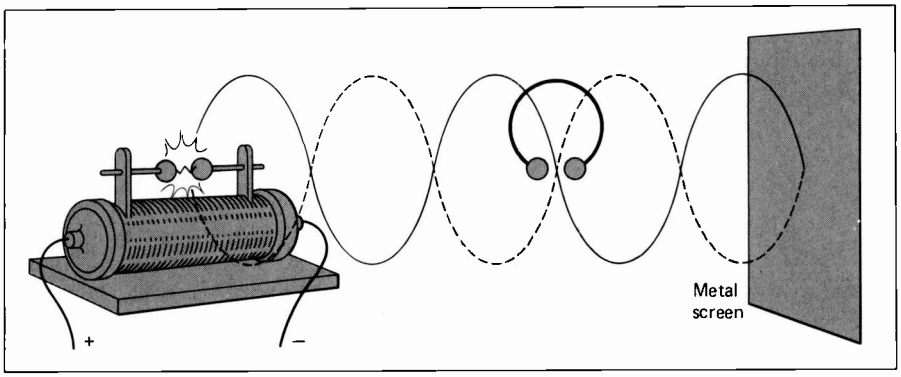

Figure 2-1. Hertz's Device. The wires led to a power source. The power source caused electrical sparks to oscillate between the two metal balls. These sparks sent out waves of high frequency alternating current. The waves hit a metal screen which reflected them. When properly positioned between the spark gap and the metal screen, an open copper wire loop would spark in resonance with the metal balls.

their existence. He constructed a crude device consisting of two coils or hoops of wire, one of which was an oscillator—that is, a device that produced radio waves (see Chapter 10). He found that the oscillating coil excited electrical current in the other coil. He moved the two coils farther and farther apart; his results were the same. This was the first transmission and reception of radio waves. Hertz had proved Clerk Maxwell correct. Others began experimenting with **Hertzian waves** as they came to be called.

Scientists had predicted wireless telegraphy for years, and in the 1880s a number of American and English scientists actually developed some crude devices to that end. Most, however, were based on electrical induction* and thus limited in range. Interestingly, no one had thought of using Hertzian waves to carry intelligence, and thus transmission and reception of these waves remained a laboratory stunt, pure science. It took a nonscientist to bring all the elements together. Guglielmo Marconi, son of a wealthy Italian father and an Irish mother, put together Hertz's oscillating coil, a Morse telegraph key, a coherer (a radio wave detection device), and grounded transmitting and receiving antennae of his own design. In 1895, at the age of 21, Marconi succeeded in sending a message over a distance of one and a quarter miles via electricity, *without* wires.

The final step, of course, was to combine wireless transmission and reception with voice. Reginald Fessenden, an American, felt that a high frequency generator was needed to transmit speech, and so he contracted with General

* When a conductor (a substance capable of carrying current, such as copper wire) carries voltage (i.e., a current), a magnetic field is built up around it. When a second conductor is moved through this field, a voltage is induced in it. This is known as "induction."

Photograph courtesy of GEC-Marconi Electronics Inc. Used by permission.

Figure 2-2. The young Marconi photographed shortly after his arrival in England in 1896, with his apparatus for "telegraphy without wires."

Electric (GE) to have one designed and built. GE turned the job over to a new employee, a recent Swedish emigrant, Ernst F. W. Alexanderson. Alexanderson built the great 50,000-cycle machine, and it was shipped to Fessenden's wireless station at Brant Rock on the Massachusetts coast. Combining the generator with a telephone and his recently patented high frequency arc, Fessenden made the first wireless voice transmission on Christmas Eve, 1906.

Momentous as Fessenden's achievement was, his *technology* was eclipsed just one week later. On December 31, 1908, another American scientist transmitted and received code via radio waves from one side of his laboratory to the other. The scientist was Dr. Lee De Forest, and his method of reception was based on his invention, the **Audion**—immediate forerunner of the triode vacuum tube, ancestor of the transistor. The Audion's pedigree actually dated from 1879 when Edison invented the electric light bulb. Four years later, Edison noted that if a metallic plate were put in a bulb along with the light filament, current would flow from the filament to the plate. No immediate practical application was seen for this "Edison effect," although later James A. Fleming, a fellow worker of Marconi, used it to develop the two-element Fleming valve (tube) in improving wireless communication. What De Forest did, however, was to insert in the bulb, between the filament and the plate, a

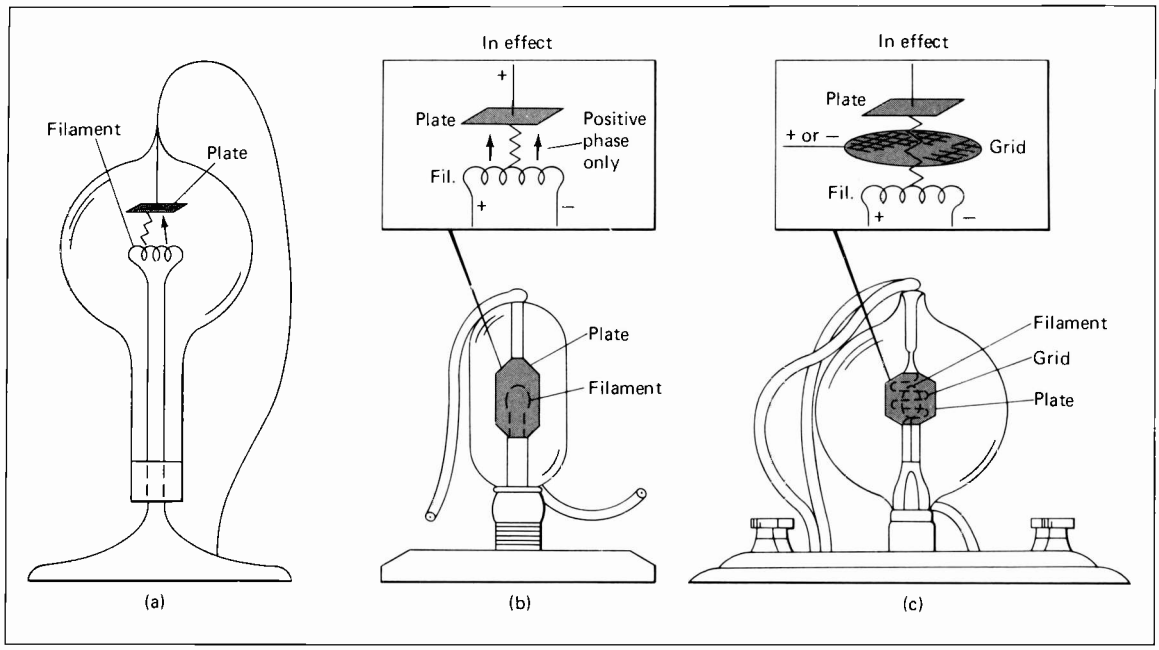

Figure 2-3. Development of the Audion. (a) In 1883, Edison noted that current flowed from the hot filament to a plate inside the bulb. (b) Fleming connected the plate to an antenna, and the incoming waves made the plate alternate rapidly from positive to negative. Thus it alternately attracted and repelled current from the filament and reproduced the incoming radio signals as DC current in the earphones. (c) De Forest introduced a grid between the plate and filament. The weak current from the antenna went to the grid and controlled the higher voltage that passed from the filament to plate.

third element, a tiny gridwork of fine wire. The grid carried a weak electric current. By varying the minute charge on the grid, he also varied the higher voltage current that flowed through it from the filament, or positive element, to the plate, or negative element. In other words, the Audion could take a weak electrical signal and magnify it. Put multiple Audions in tandem and you got increased amplification.*

The invention of the Audion launched the electronic age, the second industrial revolution, and thus the full implication of the Audion extends far beyond the realm of wireless transmission. But for our purposes, in one stroke De Forest had developed a device that would eventually perform all four basic operations of radiotelephony—generation, modulation, detection, and ampli-

* De Forest's 1906 experiment utilized the Audion for detection, but early Audions failed to amplify. In 1912, De Forest connected three Audions in cascade and obtained amplification. Soon after he discovered the Audion could also act as an oscillator to generate radio waves.

fication. There would be further refinements in equipment and circuitry for transmission and reception, but at this point, all the basic devices necessary for broadcasting had been developed.

Stage 2: Industrial Developments

In addition to their importance from a technological standpoint, the devices and discoveries described above also led to the formation of certain corporate entities. American Telephone and Telegraph, General Electric, Westinghouse Electric and Manufacturing Company, Marconi Telegraph Company of America, and Radio Corporation of America—these were the companies that would play significant roles in the development of broadcasting.

In July 1877, Alexander Graham Bell and six close associates formed the Bell Telephone Company. Hard pressed for money, Bell and his partners appealed to certain Boston merchants and financiers. These men supplied the money, but by March 1879, they had also gained control of the Bell patents. The company name changed to National Bell Telephone Company, then to American Bell Telephone Company, however, it was no longer Bell's company. By 1881, there were some 71,000 telephones in the United States. The next year American Bell purchased one of its manufacturing rivals, the Western Electric Company. In 1885, the company formed a subsidiary, the **American Telephone and Telegraph Company** (AT&T), to build and operate its increasingly important long distance telephone lines. In 1900, AT&T became the parent company.

In October 1878, Thomas A. Edison was well on his way to development of the incandescent light. He persuaded a syndicate of financiers to underwrite his research. They formed the Edison Electric Light Company. In 1888, the growing company was reorganized as the Edison General Electric Company, and in 1892 it combined with the Thomson-Houston companies to become the **General Electric Company** (GE). The new company dropped most of the Edison management people, and Edison himself sold his stock and resigned as a director. During World War I, GE did wireless research and development work for the United States and the Allies.

In 1869, George Westinghouse received the first of more than 100 patents on a railway air brake and formed the Westinghouse Air Brake Company. Eventually, his interests led him to the problem of electrical power. Largely through Westinghouse's efforts, the United States adopted alternating current (AC) as its primary home power source, rather than direct current (DC). In 1886, he founded the Westinghouse Electric Company. Three years later the company's name was changed to **Westinghouse Electric and Manufacturing Company.** In 1907, a financial panic caused George Westinghouse to lose control of the company, and by 1911 he had severed all connections with the company that bore his name.

The Westinghouse Company got involved in radio early in World War I when the British government contracted with Westinghouse to do research in wireless transmission. After the United States entered the war, Westinghouse began manufacturing wireless equipment for the armed services.

Guglielmo Marconi offered the wireless telegraph to the government of his native Italy. The Italian government, however, had no wish to take up his offer, so in 1896, Marconi went to England and patented his device. In 1897, the Wireless Telegraph and Signal Company was formed to promote the Marconi wireless apparatus. Three years later the name was changed to Marconi's Wireless Telegraph Company. The **Marconi Wireless Telegraph Company of America,** also called American Marconi, was formed to further Marconi interests in the United States. The British Marconi firm owned controlling interest in American Marconi.

PATENT PROBLEMS

After De Forest developed the Audion and conducted its first successful laboratory tests in wireless voice transmission, he formed the De Forest Radio Telephone Company. De Forest began conducting more tests over wider distances: he equipped a fleet of 24 ships in the U.S. Navy for its cruise around the world; he transmitted phonograph records of music from the Eiffel Tower in Paris and was heard all over Europe; he transmitted performances from the stage of the Metropolitan Opera.

Meanwhile, it had become apparent to AT&T that coast-to-coast long distance telephony would not be possible without a "repeater"—telephone terminology for an amplifier. Repeaters used three-element tubes. Irving Langmuir, a GE scientist, had greatly improved the Audion by expelling all gases from the bulb, thus creating the vacuum tube. Harold D. Arnold of AT&T had also made improvements. However, it was De Forest's patent—first to involve the third element—that was essential. But De Forest was fighting a court battle. He had been arrested in 1912 on a charge of using the mails to defraud by selling stock in his company. He was acquitted in December 1913; however, the previous summer, needing money, he had sold his patent rights on the Audion to AT&T for $50,000. With this patent, the telephone company was able to stretch its long distance reach to the West Coast in 1914 and, soon after, overseas.

At this point a number of different companies owned a number of different patents that collectively were vital to further development of wireless transmission, but individually these companies were blocking this same development. Almost any attempt to build or use equipment for commercial purposes was an infringement on a number of different patents. For example, suppose a vacuum tube were used: the vacuum tube involved patents on devices and improvements developed by Fleming for Marconi; by De Forest, but now owned by AT&T; by Arnold for AT&T; by Langmuir for GE; and by others. The United Wireless Company, for a time the most extensive American company in wireless telegraphy, was caught in the patent bind. Found

guilty in the courts of infringing on Marconi patents, United was so weakened that American Marconi was able to absorb United, thus attaining a monopoly on radio communications in the United States.

When the United States entered World War I, the government closed down all civilian wireless stations and ordered patents to be pooled. This allowed war contractors—including Westinghouse, GE, and Western Electric—to manufacture tubes and circuits for military radios without regard to patent infringement. As a result, vast improvements were made in wireless equipment. But when the war ended, so did the government-enforced patent pool. No one company could manufacture and market the improved equipment because it would infringe on the patents of others. The termination of war contracts also caused problems. Westinghouse, for example, had made great progress in the development of wireless transmitters and receivers and had geared up for their production to supply military needs. Now there was no stable market for this equipment. GE had been turning out expensive equipment such as the Alexanderson alternator; without government contracts GE would be obliged to dismiss many skilled employees.

The sudden end of World War I in 1918 left the U.S. government still in control of the nation's wireless communications facilities. The Alexander Bill, introduced in Congress in November, would have perpetuated government monopoly of radio. The U.S. Navy favored the bill, but it was bitterly opposed by civilian wireless interests and was voted down in committee, reaffirming the principle of private ownership of electronic communications facilities.

RADIO CORPORATION OF AMERICA

It was about this time that British Marconi tried to buy exclusive rights to the Alexanderson alternator from GE. Supposedly the firm's offer touched off two trains of thought in the administration of President Woodrow Wilson: first, if British Marconi possessed the alternator, Great Britain would be able to establish a worldwide monopoly in wireless communications; second, national security demanded that no foreign-controlled corporation be permitted to dominate U.S. wireless communications. Therefore two ranking U.S. Navy officers visited GE and requested that the company not sell its alternator patents to British Marconi. It was also suggested that GE sponsor organization of a powerful American wireless communications organization.

Owen D. Young, general counsel of GE, proceeded to set up the new firm, **Radio Corporation of America** (RCA). American Marconi stock was purchased from the British firm, and in November 1919, all assets, patents, and good will of American Marconi were transferred to RCA. Individuals who held stock in American Marconi received shares of RCA. Young became chairman of the board; Edward J. Nally of American Marconi became president. But the formation of RCA was only part of the plan. The major corporations holding patents in wireless devices began to enter into a series of agreements, with RCA serving as the enabling vehicle. Some of these agree-

TABLE 2.1
Outstanding or Authorized Stock of RCA—Spring 1921

Shareholders	PREFERRED STOCK		COMMON STOCK		TOTAL STOCK	
	Shares	(%)	Shares	(%)	Shares	(%)
General Electric	620,800	15.7	2,364,826	41.3	2,985,626	30.8
Westinghouse and The International Radio Telegraph Company	1,000,000[a]	25.3	1,000,000	17.5	2,000,000	20.1
American Telephone & Telegraph Co.	500,000	12.7	500,000	8.7	1,000,000	10.3
United Fruit Company	200,000	5.1	200,000	3.5	400,000	4.1
Others	1,635,174	41.3	1,667,174	29.1	3,302,348	34.1
Totals	3,955,974	100.0[b]	5,732,000	100.0[b]	9,687,974	100.0[b]

SOURCE: Gleason L. Archer, *Big Business and Radio* (New York: American Historical Co., 1939), p. 8.
[a] To be issued.
[b] Totals may not add up to exactly 100.0 percent because the figures are rounded out.

ments involved cross-licensing or patent pooling, GE, RCA, AT&T, and Western Electric pooled their various wireless patents. In return, GE and AT&T received stock in RCA. Later, Westinghouse acquired the Armstrong and Fessenden patents; these were put into the pool, and Westinghouse received RCA stock. Finally, the United Fruit Company, the Wireless Specialty Apparatus Company, and the Tropical Radio Telegraph Company put their wireless assets in the pool, for which United Fruit received RCA stock.

These agreements were not limited to patents alone. Under agreement provisions, GE and Westinghouse had the exclusive rights to use the pool patents to manufacture receivers and RCA would sell large percentages of them. AT&T was to control all toll radiotelephonic communication including the exclusive rights to manufacture radio transmitters for sale or lease to others. Also AT&T and Western Electric could now use pool patents in telephone equipment. GE and Westinghouse could make transmitters for themselves but not for others. This series of agreements linked the corporations into two groups—the Telephone Group, consisting of AT&T and Western Electric; and the Radio Group, consisting of all other parties.

Thus the great corporations had pooled their patents and divided the communications world among themselves. All eventualities had been foreseen and provided for—except one. It arose even as the agreements were being drawn up, and it rendered them all but worthless. It was called "broadcasting."

Stage 3: Stations

Frank Conrad worked as a chief technician at the East Pittsburgh Westinghouse plant. Conrad was also an amateur radio enthusiast and had a receiver and transmitter, licensed as 8XK, in the garage of his Wilkinsburg, Pennsyl-

vania, home. In spring 1920, Conrad began playing phonograph records while transmitting. He soon started receiving mail requests to play specific records at specific times.

Conrad tried to comply with the requests, but the mail became so heavy that he finally announced he would transmit music for two hours, each Wednesday and Saturday evening at 7:30. His two sons added live vocal and instrumental talent. As the summer wore on, the Conrads began transmitting every evening, and the popularity of their concerts continued to grow. Several local newspaper articles mentioned the concerts. On September 29, 1920, the *Pittsburgh Sun* carried an advertisement for a local department store, noting that receiving sets for those who wished to listen to the Conrad radio concerts were available for purchase in the store's west basement.

This advertisement came to the attention of Harry P. Davis, a Westinghouse vice-president. The audience for Conrad's transmissions had been people who had the technical knowledge to put together their own receivers. But, reasoned Davis, the concerts would probably be popular with almost everyone, if there were simple-to-operate receivers, complete in one unit. Westinghouse had developed and manufactured just such receivers during the war. The company could probably develop a civilian market for these receivers, concluded Davis, if it were to operate a radio station that would supply programs on a regular schedule announced in advance.

The very next day Davis called in Conrad and a few others, told them his idea, and said he wanted a Westinghouse radio station ready for the November 2 presidential election. Conrad and his crew began installing a transmitter in a shack on top of the East Pittsburgh Westinghouse plant. They strung a wire antenna between a steel pole on the roof and a nearby smokestack. The U.S. Department of Commerce licensed* the station to operate on 360 meters (about 833.3 kHz†) and awarded it the call letters KDKA. On the night of the election, returns were telephoned to the station from offices of the *Pittsburgh Post.* A recruit from the plant's public information office read them over the air. Between returns, the microphone was pushed up to the horn of a hand-wound phonograph. Conrad was in his garage in Wilkinsburg, ready to assume transmission duties with 8XK in case of problems with the hastily installed KDKA transmitter. But KDKA stayed on the air. Warren G. Harding won the election over James M. Cox, and broadcasting was on its way.

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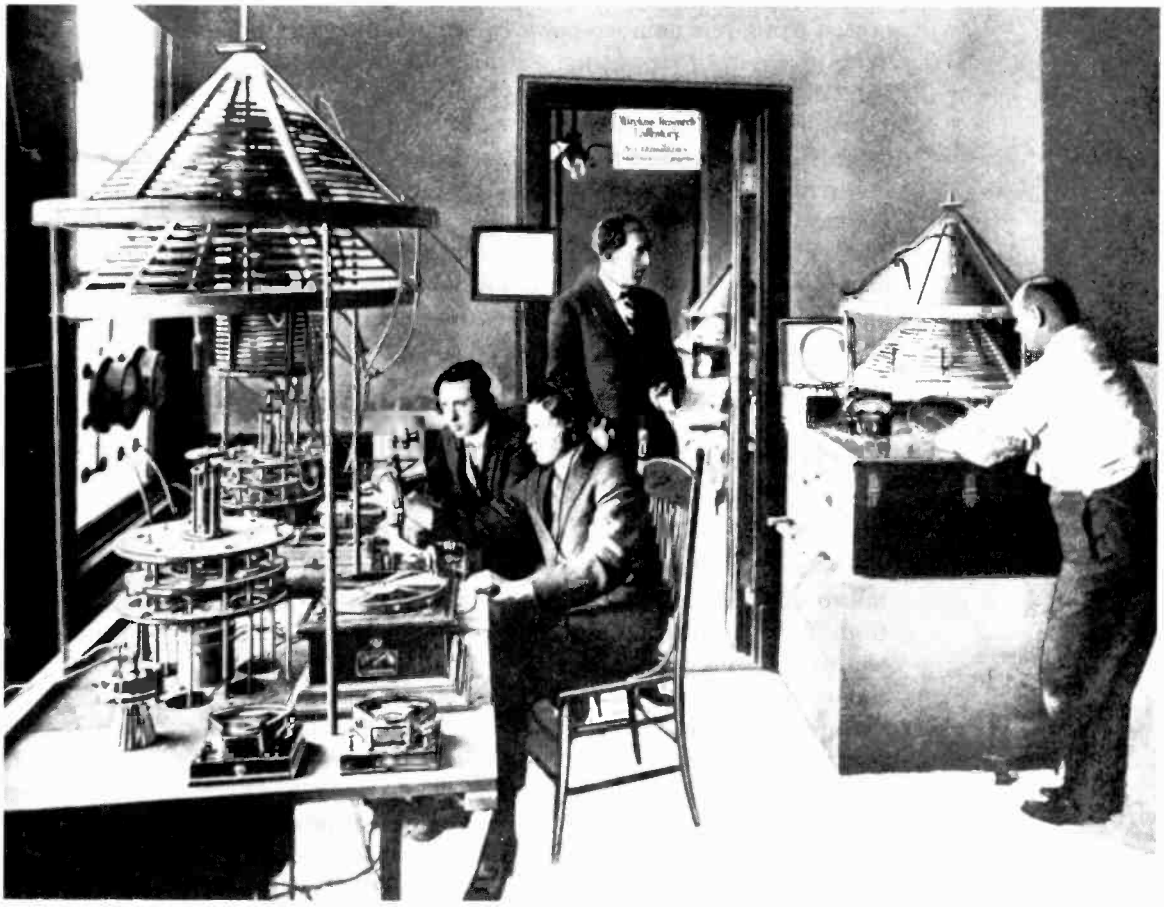
* The Westinghouse transmitter was licensed as a "limited commercial station." The Commerce Department began licensing broadcast stations on a regular basis in 1921.

† See Chapter 9 for an explanation of wavelength and frequency. The letters **kHz** are an abbreviation for **kilohertz,** meaning "thousand cycles per second"; **MHz** for **megahertz,** "million cycles per second."

Stage 4: Audience—Who Invented Broadcasting?

KDKA was not necessarily the first broadcasting station. KCBS, San Francisco (formerly KQW, San Jose, California), WHA, Madison, Wisconsin, WWJ, Detroit, and probably others—all have some claim to being the first. But KDKA was certainly *one* of the first. And its story typifies what happened elsewhere around the country: technically minded tinkerers built transmitters and found themselves programming on a regular basis. To whom were they programming? Certainly their audience consisted in part of others like them-



Photograph courtesy of KCBS. Used by permission.

Figure 2-4. KQW in about 1913. KQW, San Jose, California, was the forerunner of KCBS, San Francisco. In the doorway is KQW founder and operator, Charles Herrold. Others pictured are (left to right) Kenneth Saunders, E. A. Portal, and Frank Schmidt.

selves—people engaged in amateur radio transmission. But another type of radio hobbiest was also in the audience. This hobbiest, the spiritual ancestor of today's short wave listener, was interested in *reception*—how many stations could be received, from how far away could stations he received, and so on. For the most part, these hobbiests had to be content with listening in on the conversations of others, often in Morse Code. Naturally, these early listeners responded enthusiastically when Conrad and others began transmitting voice and music. The content seemed aimed at the listeners, elevating their status from eavesdroppers to audience. As mail came in from listeners, the pioneer radio station operators responded by setting up regular schedules of transmissions, programming for a general audience. It was at this point that radio ceased being just point-to-point communication and broadcasting was born. Who invented broadcasting? As much as anyone could be said to have "invented" it, the audience did.

As the months passed, the early stations experimented with program types. They broadcast the first sports play-by-play, the first radio plays, the first religious services, and so on. The number of broadcast stations began to increase. The Department of Commerce had issued 30 licenses by the end of 1920. In 1921, the department issued 28 more licenses. But in 1922 the rush began, and by the end of July, 430 more licenses were issued. On the other hand, a high percentage of these stations were short-lived; they had no means of self-support.

Stage 5: Advertising—Who Invented Commercial Broadcasting?

The more successful stations increased the power of their transmitters and improved their facilities. They added studios—rooms for performers, separate from the transmitters. These studios usually had heavy drapes on ceilings and walls to cut down reverberation. They were sometimes furnished as living rooms, complete with potted palms, pianos, and bird cages. Announcers and performers were often employees from other departments of the company that operated the station. The programs were primarily musical, with some recitations, some talks for children, and a sprinkling of "remotes" from church services, sports events, ballrooms where dance bands were playing, and so on. Occasionally, a star from another medium, anxious to experience the novelty of radio broadcasting, would perform gratis before the microphone of a station. Much of the programming still came from phonograph records. Programs, as such, were rare.

But then the novelty began to wear off, and it was more difficult to get volunteers. Some stations even began to pay performers. This created a problem. The stations cost money to operate but did not bring in direct revenue. They

were serious financial drains on their owners—primarily radio manufacturers and dealers, newspapers, educational institutions, and department stores. Various methods were suggested to pay for broadcasting: wealthy individuals should endow stations; cities and states should operate stations out of tax revenues; a common fund should be established to receive contributions that would then be distributed to the stations; receivers or tubes should be taxed or licensed, and so on. None of these was the answer.

In 1922, AT&T opened radio station WEAF in New York based on a novel concept: **toll broadcasting.** AT&T saw WEAF's service as parallel to telephone service. The company would provide no programs, only facilities. Whoever wished to address a message to the radio audience would pay a toll or fee to use the station. It was to be a kind of telephone booth of the air. Of course, the telephone company soon found that it had to provide programming on a sustaining (nonpaid) basis when there were no toll messages. A regular schedule of programming was needed to create and hold an audience if people were expected to pay tolls for messages. On August 28, 1922, at 5:00 P.M., WEAF aired its first toll broadcast. A Mr. Blackwell of the Queensboro Corporation spoke for ten minutes on Hawthorne Court, a condominium in the Jackson Heights section of Long Island, New York. The toll was $50. The first commercial had been broadcast.

It was not long before WEAF did away with talks such as the one for Hawthorne Court. Radio came into people's homes, and the station felt the public would not accept the intrusion of direct advertising. Instead, the advertiser was allowed to buy or sponsor a program, elements of which would reflect that sponsorship. For example, Browning King, Inc., would sponsor a program but could not mention that the firm sold clothing. Instead, the program featured the "Browning King Orchestra," which was frequently mentioned. Similar programs were the *Eveready Hour* for a battery company, the *Cliquot Club Eskimos* for a ginger ale, the *Ipana Troubadors* for a toothpaste, the *Gold Dust Twins* for a cleanser, the *Silvertown Cord Orchestra* and its "Silver Masked Tenor" for Goodrich tires, the *Lucky Strike Orchestra* for a tobacco company, the *A & P Gypsies* for a food store chain, the *Happiness Boys* for a candy store chain, and so on. Most were musical programs, which were primitive and corny by today's standards, but nonetheless, significant in at least two respects: (1) they were **programs**—individually presented units of the broadcast schedule—and (2) they were deemed **suitable for sponsoring** by advertisers.

The *Eveready Hour* was one of the best. The sponsor's advertising agency took an active hand in production. Scripted and rehearsed—rarities in those days—the *Eveready Hour* went on one of AT&T's ad hoc network hookups in 1924, making it one of the first successful network series.

As the 1920s wore on, direct advertising messages—commercials—began to creep back into programming, but with a number of restrictions. For example, in 1923 WEAF decreed that a commercial must mention only the sponsor and product and must avoid direct selling and mention of price. Al-

though a few stations continued to refuse local advertising until the early 1930s, for the most part, radio was commercial by the end of the 1920s. In 1929, the first code of the National Association of Broadcasters contained provisions for the airing of advertising (but banned it during the 7–11 P.M. period—business was for daylight hours only!). Mass advertising had also grown into an institution during the 1920s, and in the process, worries about intrusions into the home were forgotten.

Stage 6: Networks

Under the intraindustry cross-licensing agreements, AT&T had been granted all rights for toll radiotelephonic communication. In AT&T's opinion, toll broadcasting was just another form of toll radiotelephonic communication, and only AT&T-licensed stations could charge tolls or fees for announcements by advertisers. Committed to toll broadcasting, AT&T sold its stock in RCA and removed its directors from the RCA board in 1923.

Westinghouse had put WJZ on the air in 1921. Licensed to Newark, New Jersey, WJZ had studios in New York City. RCA bought WJZ in mid-1923 and made it the main rival to AT&T's WEAF. WJZ epitomized the broadcasting philosophy of the Radio Group—operation of a station **by one company** to stimulate sales or good will for that company. WEAF epitomized the philosophy of the Telephone Group—operation of a station as a service paid for **by many different companies** who wished to present messages designed to stimulate sales. WJZ was prohibited by AT&T's interpretation of the cross-licensing agreements from toll broadcasting. Unable to sell advertising, it began to persuade other companies to share the cost of programming expenses in exchange for free time and publicity. Still, WJZ lost money. Additionally, by having other companies underwrite programs, WJZ was giving away what WEAF was trying to sell. Naturally, this upset AT&T.

THE AT&T "NETWORK"

AT&T's master plan for toll broadcasting included live interconnection of stations. A small number of transmitters across the country would be leased to local corporations. These local stations could sell advertising and run local programs, but they would also be tied into AT&T's long lines for occasional live interconnection when an advertiser wished to reach a multicity audience. AT&T ran the first permanent network line from New York to WMAF, South Dartmouth, Massachusetts, in June 1923. Stations had been linked previously for simultaneous broadcasts, but no permanent hookups had been made. The special line to WMAF ran through Providence, Rhode Island, so that by late summer, WJAR, Providence, became the third station on the network. Network technology and programming improved, and by the end of 1923, six stations were on the chain. By the end of 1924 the number was 26, and the network was coast to coast.

Denied use of AT&T telephone lines, General Electric and RCA attempted to put together a network fed by WJZ and connected by Western Union and Postal Telegraph lines. Even though the telegraph wires were technically unsuited for broadcast-quality voice transmission, the WJZ network built up to some 14 stations by the end of 1925. There was also some thought and experimentation on the use of short wave radio for networking. A program could be broadcast by shortwave and picked up for rebroadcast by a local station. RCA also proposed to beat the AT&T monopoly on networking by setting up a small number of "super power" stations whose signals would blanket the country. The many small, low power stations opposed this plan bitterly.

In line with the telephone company's plan for toll broadcasting, and in spite of numerous requests for transmitters, AT&T restricted sale and lease of their transmitters. But stations signed on the air with transmitters from other sources—building them, importing them, and so on. AT&T entered suit against one such station in 1924. The station settled out of court, and AT&T decided to license all stations that applied, regardless of the origins of their transmitters. An AT&T license would also allow a station to charge fees for use of its time. Thus hundreds of stations began paying the license fees.

AT&T also wanted to market radio receivers. The Radio Group argued this would violate the cross-licensing agreements. A referee appointed by the two sides to hear the dispute agreed with the Radio Group. Then, AT&T produced an influential, convincing legal opinion that said the agreements were probably unlawful in the first place, a violation of antitrust laws. It was time to renegotiate.

DAVID SARNOFF AND THE NATIONAL BROADCASTING COMPANY

Owen Young, RCA board chairman, opened negotiations with AT&T, but key discussions involved RCA's vice-president and resident expert on broadcasting, David Sarnoff. Sarnoff, born in Russia, had emigrated to the United States in 1900 at the age of 9. At 15 he went to work for American Marconi; at 17 the company made him a wireless telegraphy operator. In 1912, when he was 21, Sarnoff made headlines as the operator in contact with the sinking *S.S. Titanic,* not leaving his station for 72 hours. He began rising in company ranks, and in 1916, he wrote a memo to his superiors suggesting development of what he called a Radio Music Box, describing in essence the system of broadcasting that would not develop for another five years. American Marconi seems to have ignored the idea. When RCA was formed, Sarnoff moved to the new company as commercial manager and renewed his Radio Music Box idea, passing it on to Owen Young. The idea was almost ignored again, but by this time KDKA had made its debut, and RCA radio receivers began moving into stores. Sarnoff's star was ascending. He became RCA general manager in 1921. The next year, Sarnoff wrote a letter to an RCA board member suggesting formation of an RCA-controlled company to specialize in broadcasting. RCA took no immediate action on Sarnoff's letter, but now that

negotiations with AT&T were underway, his idea began to seem attractive. In January 1926, it was decided that a new company would be formed, owned by RCA, GE, and Westinghouse—a company that would specialize in broadcasting. Nine months later this company went into business as the National Broadcasting Company (NBC).

After intricate negotiation, representatives from the Telephone and Radio groups reached an agreement. AT&T would get out of broadcasting entirely. RCA would carry on all commercial networking activity, using AT&T long lines. AT&T and Western Electric would not market receivers. AT&T would not manufacture and market transmitters, but Western Electric and RCA could. AT&T sold its broadcasting activities, including WEAF, to RCA. On September 9, 1926, NBC was formed and shortly thereafter voted to buy out RCA's broadcasting assets. Merlin H. Aylesworth left the position of managing director of the National Electric Light Association to become NBC's first president. The word "toll" was quietly dropped, but the idea of radio advertising as means of support was retained.

NBC inaugurated network service on November 15, 1926, with a four and one-half hour special program, aired coast to coast on 25 stations. On January 1, 1927, NBC set up two separate national networks—the Red network with 25 stations based on WEAF, and the Blue network with six stations based on WJZ. The colors supposedly came from the red and blue pencils used by engineers to draw in the stations and connections of the two networks on their maps. On April 11, 1927, NBC formed a Pacific Coast regional network. That same year NBC adopted the familiar three-tone chime as its audio identification signal. On December 23, 1928, NBC began regular, coast-to-coast service with 58 affiliates. Eventually, NBC would sell off its Blue network, which would then become the American Broadcasting Company (ABC).

COLUMBIA BROADCASTING SYSTEM

Even before NBC had gotten well underway, a rival network was developing. George A. Coats and Arthur Judson formed the Judson Radio Program Corporation in September 1926, as an organization to provide performers for radio programs. They asked David Sarnoff for help, and upon refusal, Judson swore that he and Coats would set up their own network. They formed the United Independent Broadcasters network in January 1927 and signed up 12 stations beginning with WCAU, Philadelphia. However, they found that station compensation and AT&T line charges would cost so much that they would need greater financial resources. Judson and Coats convinced the Columbia Phonograph Company to invest in the venture. The network now became the Columbia Phonograph Broadcasting System. On September 19, 1927, the Columbia Phonograph Broadcasting System aired its first program, the *King's Henchman,* performed by artists from the Metropolitan Opera. The Columbia Phonograph Company, losing heavily in the new network, withdrew from the venture. Oddly, the infant chain was allowed to keep "Colum-

bia" in its name. Coats and Judson persuaded some Philadelphia residents to invest in the network. In the process, the name was changed to the Columbia Broadcasting System (CBS). But the money continued to drain away with no signs of any return, and soon the new stockholders also wanted out.

Meanwhile, William S. Paley, who, at the age of 27, was production and advertising director for his family's Congress Cigar Company, Philadelphia, had sponsored a program on the new network and had been impressed with the results. When he learned that CBS was for sale, he persuaded his family to join him in buying controlling interest and took over the network in September 1928. Paley purchased a station in New York and brought Paramount Pictures in as a partner. The network lost over one-third of a million dollars in 1928 but began showing a profit in 1929. Within a few years, CBS became a serious rival to NBC.

We have now seen the origins of three major networks: ABC, CBS, NBC. While they had been developing, the whole legal structure of broadcasting was changing.

Stage 7: Regulation

The first U.S. law dealing with radio was the Mann-Elkins Act of 1910, extending the Interstate Commerce Act to cover interstate wire and wireless communications. Congress also passed the Wireless Ship Act in 1910. This law required certain classes of ocean vessels to carry wireless apparatus and an operator. Two years later, and as a direct result of the *Titanic* disaster, Congress passed the Radio Act of 1912, spelling out exactly how and why radio would be used on ships. It specified that the secretary of Commerce and Labor would assign wavelengths and issue licenses and that it was illegal to operate without a license. These laws all pertained, of course, to radio as point-to-point communication.

Then, broadcasting was born. Unlike point-to-point stations that operated only intermittently and for brief periods of time, broadcasting stations operated continuously, thereby enormously increasing the potential for interference. At first the Commerce Department assigned all broadcast stations to one wavelength. As the number of stations increased, a second channel was opened. But more and more broadcast stations signed on. The transmitters in use then were often unstable, causing them to drift off assigned wavelengths. The result was interference, and the Commerce Department seemed unable to solve the problem. Some broadcasters took matters in their own hands. If station A's signal interfered with that of station B, B changed frequency, time of operation, power, or even location to overcome the interference, without, of course, consent of the Commerce Department. Inevitably, the result was that B now interfered with stations C, D, and E, which then proceeded to take the

same action that B had taken. The overall result was interference raised to intolerable levels. Finally, the Commerce Department opened a whole band of wavelengths.*

Both the public and the broadcasters complained. Secretary of Commerce Herbert Hoover called a series of conferences of leaders of the radio industry, one each in 1922, 1923, 1924, and 1925. Conferees recommended that Congress pass legislation to regulate broadcasting and that Hoover take interim action to straighten out the problems. But Congress would not act, and Hoover found that he could not act. The Radio Act of 1912, enacted some eight years before KDKA signed on the air, had been written in order to leave no room for discretionary action in carrying it out. In a series of legal decisions—*Hoover v. Intercity Radio Co.* (1923),[1] *United States v. Zenith Radio* (1926),[2] and an Attorney General's Opinion of 1926[3]—the Commerce secretary found that under existing law he *had* to issue a license when application was made, he *had* to assign a frequency to a station, and he could make *no* regulations or restrictions concerning operation of broadcast stations. In other words, Hoover had no power to straighten out the mess.

To complicate matters, there were the characters and the charlatans who owned and used radio stations. "Doctor" John Brinkley—the goat gland man—used KFKB, Milford, Kansas, to peddle patent medicines and to advertise sexual rejuvenation operations. Norman Baker used KTNT, Muscatine, Iowa, to attack what he called the "radio trust"—chain broadcasting—and later to advertise a cancer clinic. Reverend Robert "Fighting Bob" Shuler used KGEF, Los Angeles, to muckrake, to battle corruption in Los Angeles officialdom. Evangelist Aimee Semple McPherson used KFSG, also in Los Angeles, to propagate her brand of the gospel. Her station constantly deviated from assigned frequency, causing interference. When Commerce Secretary Herbert Hoover ordered an inspector to close down KFSG, she wired Hoover to call off his "minions of Satan," because he should not "expect the Almighty to abide by your wavelength nonsense." She said she had to "fit into His wave reception" when she prayed. There were other such broadcasters.

With the Radio Act of 1912 useless for broadcast regulation and with the public clamoring over the interference problem, Congress finally acted. It passed the Radio Act of 1927, creating a five-member Federal Radio Commission (FRC) and giving it appropriate discretionary powers to carry out its duties. The FRC was to regulate all radio, including point-to-point, but a large part of its time was spent straightening out broadcasting. First, the FRC got the interference matter under control, then, it turned its attention to programming—the Brinkleys, the Shulers, and all the rest.

Seven years later, Congress passed the Communications Act of 1934. This superseded, but included most of the provisions of, the 1927 law. The Com-

* 545–200 meters or 550–1500 kHz, basically the same as the present AM radio band, 550–1600 kHz.

munications Act increased the commission to seven members, renamed it the Federal Communications Commission, and gave it interstate wire communication to regulate, along with radio.

Radio on the Verge

Nine years is a relatively short time. But during the period of 1920–1928 broadcasting had begun and had passed successfully through a critical formative stage. What was the status of broadcasting in 1928? How close had it come to what we now call "American commercial broadcasting"?

If we conceive of commercial broadcasting in terms of its being primarily a medium of mass advertising, then, by the end of 1928 all parts of its basic form were in place. Broadcast historian John W. Spalding suggests four requirements had to be satisfied for radio to serve national advertisers effectively: adequate technical facilities; large listening audiences; advertising as means to underwrite programming expenses; and program formats suitable for sponsorship. Radio seems to have met each of these requirements by the end of 1928. First, development of networks and improvements in regulation and reception meant that broadcasts could be transmitted dependably and received in the home with reasonable fidelity. Second, the first comprehensive audience research on radio was being completed; it would show that radio had an audience of considerable size. Third, radio had accepted advertising as means for underwriting program production. And finally, radio had started dividing its time into *programs*—programs that were not yet in the formats that would eventually become popular in radio and would be passed on to television, but, nonetheless, programs that advertisers would sponsor.

Radio broadcasting at nine years old was now ready to enter her "Golden Age."

Notes

1 286 F. 1003 (D.C. Cir.), Feb. 5, 1923.
2 12 F. 2d 614 (N.D. Ill.), Apr. 16, 1926.
3 35 Ops. Att'y Gen. 126, July 8, 1926.

Bibliography

Two volumes by Gleason L. Archer—*History of Radio to 1926* (New York: American Historical Society, 1938) and *Big Business and Radio* (New York: American Historical Society, 1939)—contain a great deal of information on the archaeology of radio, the development of RCA, and the RCA/NBC influence on broadcasting. In 1966 the first book in Erik Barnouw's three-volume *A History of Broadcasting in the United States* was published. Comprehensive, well written, easy to read, Barnouw's *A Tower in Babel* (New York: Oxford University Press, 1966), traces broadcasting from its beginnings to 1933. Christopher H. Sterling and John M. Kittross have written a one-

volume history—*Stay Tuned: A Concise History of American Broadcasting* (Belmont, Cal.: Wadsworth, 1978). Chapters 1–4 deal with the rise of radio. Lawrence W. Lichty and Malachi C. Topping are the editors of *American Broadcasting: A Source Book on the History of Radio and Television* (New York: Hastings House, 1975), a collection of articles, some by historians, others from, and of, the periods described. *Broadcasting,* Nov. 2, 1970, pp. 65–100, contains a "Special Report," a whole section to commemorate broadcasting's 50th anniversary. Included are articles on AT&T's role in networking, an extensive chronology of developments from 1875 through 1970, and capsule histories of 108 pioneer television stations.

STAGE 1: RADIOTELEPHONIC COMMUNICATION

Just as *Broadcasting* is the periodical of record for radio and television, so the *Journal of Broadcasting* is the primary scholarly publication in the field. The *Journal* has published a number of excellent historical articles over the years, including these two on the technical origins of broadcasting: Elliot N. Sivowitch, "A Technological Survey of Broadcasting's 'Pre-History,' 1876–1920," 15 (winter 1970–1971), 1–20; and Thomas W. Hoffer, "Nathan B. Stubblefield and His Wireless Telephone," 15 (summer 1971), 317–329. One of a number of biographies on Marconi is W. P. Jolly, *Marconi* (New York: Stein & Day, 1972). Helen Fessenden wrote *Fessenden: Builder of Tomorrow* (New York: Coward, McCann & Geoghegan, 1940); she was Reginald's wife. Lee De Forest wrote his own story, *Father of Radio: The Autobiography of Lee De Forest* (Chicago: Wilcox & Follett, 1950). There are also a number of biographies available on Thomas Edison, Samuel Morse, George Westinghouse, and Alexander Graham Bell.

STAGE 2: INDUSTRIAL DEVELOPMENTS

Alvin F. Harlow, *Old Wires and New Waves: The History of the Telegraph, Telephone, and Wireless* (New York: Appleton-Century-Crofts, 1936), concentrates on telegraphy. AT&T plays such a large role in the formation of broadcasting that it is interesting to see how it got to be and why. N. R. Danielian, *AT&T: The Story of Conquest* (New York: Vanguard Press, 1939) is no telephone company puff piece, but it does put AT&T's radio activities into context of the company's overall efforts. The corporate arrangements and relationships among the various companies that were involved in early radio are related in W. Rupert Maclaurin, *Invention and Innovation in the Radio Industry* (New York: Macmillan, 1949). Maclaurin's book is a good general history of the industrial and technological development of broadcasting.

STAGE 3: STATIONS

The *Journal of Broadcasting* has published a number of articles on the "first" station: Gordon B. Greb, "The Golden Anniversary of Broadcasting," 3 (winter 1958–1959), 3–13 (on KCBS/KQW); R. Franklin Smith, " 'Oldest Station in the Nation'?" 4 (winter 1959–1960), 40–55 (based on WHA); David L. Woods, "Semantics versus the 'First' Broadcasting Station," 11 (summer 1967), 199–207 (on wired radio); and Joseph E. Baudino and John M. Kittross, "Broadcasting's Oldest Station: An Examination of Four Claimants," 21 (winter 1977), 61–83 (comparing KDKA, KCBS, WWJ, and WHA).

STAGE 5: WHO INVENTED COMMERCIAL BROADCASTING?

William Peck Banning, *Commercial Broadcasting Pioneer: The WEAF Experiment 1922–1926* (Cambridge, Mass.: Harvard University Press, 1946) describes the birth and growth of toll broadcasting.

STAGE 6: NETWORKS

"The First 50 Years of NBC," *Broadcasting,* June 21, 1976, pp. 24–42, is a history of the network on the occasion of its 50th anniversary. Robert Campbell's *The Golden Years of Broadcasting: A Celebration of the First 50 Years of Radio and TV on NBC* (New York: Scribner, 1976) contains a little bit on the 1920s but concentrates mainly on television in the 1960s and 1970s. See Eugene Lyons, *David Sarnoff* (New York: Harper & Row, 1966) for the story of the man who envisioned radio broadcasting, built RCA, and midwifed the birth of NBC. Robert Metz has written a critical history in *CBS: Reflections in a Bloodshot Eye* (Chicago: Playboy, 1975). The first chapter is on the shaky beginnings of the network.

STAGE 7: REGULATION

Marvin R. Bensman, "The Zenith-WJAZ Case and the Chaos of 1926–1927," *Journal of Broadcasting,* 14 (fall 1970), 423–440, describes the events surrounding and the results of the final legal blow to Commerce Secretary Hoover's efforts to regulate broadcasting under the Radio Act of 1912. Frank J. Kahn, ed., *Documents of American Broadcasting;* 3rd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1978) contains most of the important legal instruments in the development of broadcast regulation. Gerald Carson, *The Roguish World of Dr. Brinkley* (New York: Holt, Rinehart and Winston, 1960) recounts the career of the goat gland man, including the encounter with the FRC. Charley Orbison describes the incidents involved in the landmark Shuler case in " 'Fighting Bob' Shuler: Early Radio Crusader," *Journal of Broadcasting,* 21 (fall 1977), 460–473.

RADIO ON THE VERGE

See John W. Spalding, "1928: Radio Becomes a Mass Advertising Medium," *Journal of Broadcasting,* 8 (winter 1963–1964), 31–44. See also, Leslie J. Page, Jr., "The Nature of the Broadcast Receiver and Its Market in the United States from 1922 to 1927," *Journal of Broadcasting,* 4 (spring 1960), 174–182.

3

Radio's Golden Age: 1929-1947

Why "golden age?"

The term **golden age** means *the period of greatest progress, prosperity, and cultural achievement.* Certainly there was prosperity and economic progress for radio broadcasting during the decades of the 1930s and 1940s. In that brief period, because of the growth of radio audiences, stations, and networks, broadcasting changed from an uncertain financial adventure into a highly profitable big business. There was also cultural achievement—or at least successful development in popular culture. Broadcasting found the program formats, the programs, and even the personalities that would make it almost a family member in thousands and thousands of homes. Broadcast news from rough beginnings sharpened into a distinguished news service—its nightly reports during World War II, a vital link between Americans at home and at war. There were also problems for broadcasters during the golden age—the press-radio war, the era of "Jeannie with the Light Brown Hair," the Mayflower doctrine, the network case, the blue book. And this period was certainly not golden for FM broadcasting. Nonetheless, for most of radio broadcasting, these years were indeed an age of progress, prosperity, and achievement, right through World War II and even for several years thereafter.

Growth

During the 1930s, the decade of the great economic depression, many businesses suffered, lost money, or even dissolved. One outstanding exception was the business of broadcasting. Although profits dropped briefly and a few stations gave up licenses, generally speaking, radio broadcasting emerged from the 1930s strong and stable. The 1940s were pure profit, up to a point.

AUDIENCE

In 1925, only 10 percent of the homes in the United States had radio. But even then, radio was fast leaving the hobby stage. Radio receivers were undergoing changes for the better: commercially manufactured sets were available for those who did not wish to build their own; loudspeakers were replacing earphones; superheterodyne circuitry had improved the clarity of the audio signal; and AC current operation made it possible to "plug in" radio receivers to household electrical outlets, thus eliminating messy, short-lived batteries. Just five years later the percentage of radio-equipped homes had jumped to 46. By

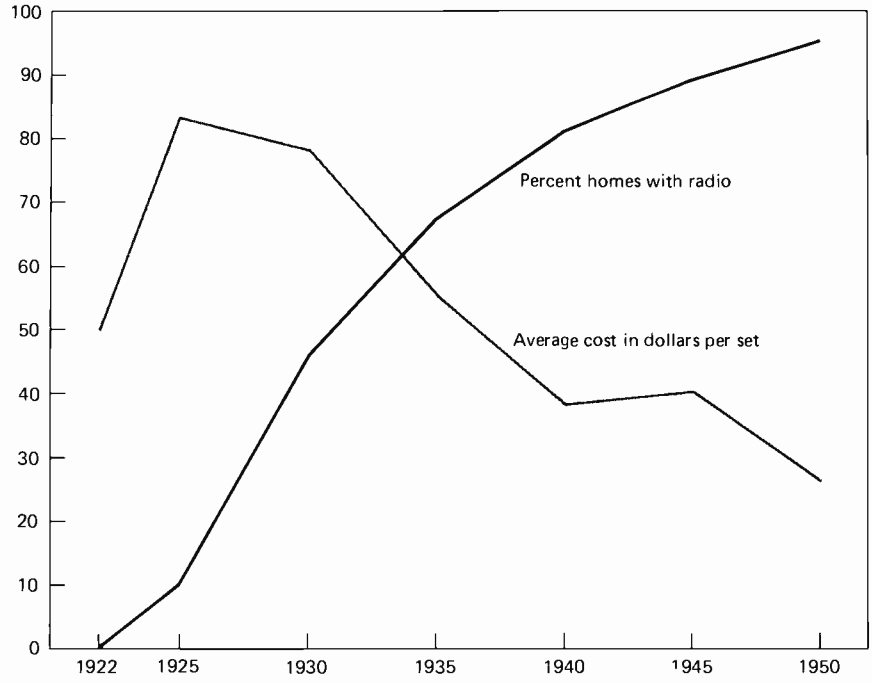


Figure 3-1. Radio Set Saturation and Cost per Set, 1922–1950. Generally, as prices dropped, more and more people bought radios.

SOURCES: U.S. Department of Commerce, *Statistical Abstracts of the United States* (Washington, D.C.: GPO, annual); *Broadcasting Yearbook 1977* (Washington, D.C.: Broadcasting Publications, 1977), pp. C-310–C-311.

this time the economic depression had set in, following the stock market crash of 1929. Most families had very little money, and what money they did have went for food, clothing, and shelter, with little left for entertainment. But radio, after an initial investment for the receiver, would bring hours of entertainment into the home at little cost. People saved their extra pennies to buy radios and to keep them in repair. At the same time, the average cost of receivers had begun to drop. While production of radio receivers fell in 1930, 1931, and 1932, sales increased again in 1933, especially sales of small, relatively inexpensive table models. By the middle of the depression decade, radio penetration had increased to 67 percent of all homes. People also began to put radios in their cars.

As the nation's economy recovered, ominous events were taking place in Europe, events that would lead eventually to World War II. Radio reported these events, often with on-the-spot coverage. The public listened to and relied on radio for the latest news, and the percentage of radio-equipped homes continued to climb. War production priorities halted manufacture of radio receivers, but after the war the public went on a buying spree, and by 1950, 95 percent of all homes in the United States had at least one working radio receiver.

STATIONS

At first the U.S. Department of Commerce had managed to keep the number of broadcast stations down. In 1926, however, the Radio Act of 1912 finally broke down as means to regulate broadcasting (see Chapter 2), and the Commerce Department found it had to grant licenses to all applicants. In one year, the number of stations increased from 528 to 733, nearly 39 percent. The Federal Radio Commission took over, and the number of stations authorized dropped to 618 in 1929, showing a slight, slow decline during the economic depression to a low of 591 in 1934. After that, the total number of stations grew steadily, leveling off somewhat during World War II, to reach 956 in 1945.

But stations grew more impressively in other ways. Most increased transmitter power and thus coverage. One station, WLW, Cincinnati, received special Federal Communications Commission (FCC) permission to use superpower—500,000 watts—during the period 1934–1939. The number of stations having to share time on a single frequency decreased.

During the 1930s, broadcasting stations began to earn money. By 1930, about 90 percent of the stations sold time, but most did not make enough to meet expenses. As radio listenership shot up, more and more advertisers put more and more money into the new medium. From 1935 to 1940, radio advertising billings jumped 96 percent. While about half of this was in network advertising, local and national spot advertising (national advertising placed with individual stations) accounted for increasing shares. Still, about one-third of the stations operated at a loss.

Then came World War II. Raw materials and assembly lines were di-

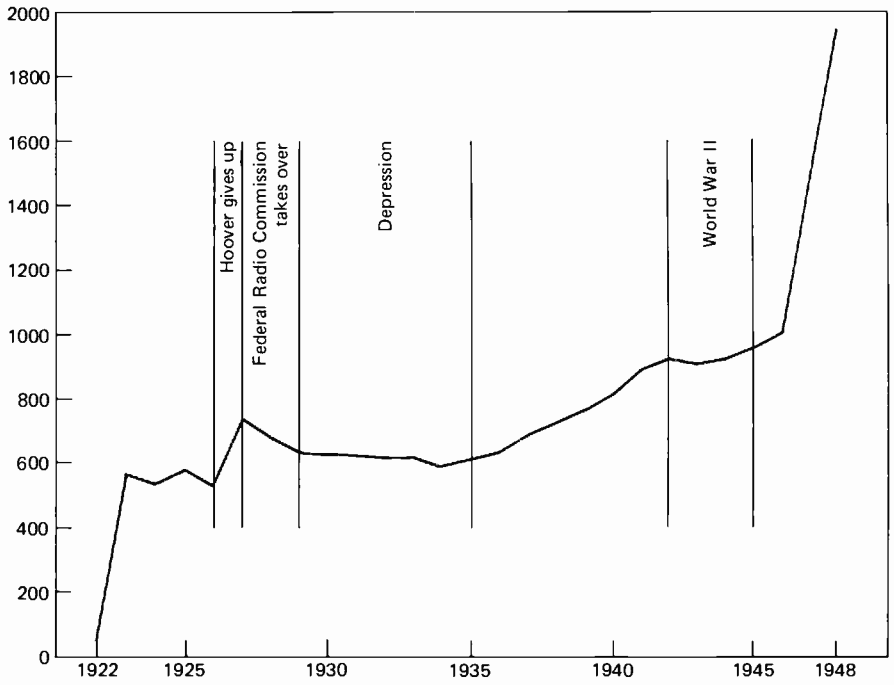


Figure 3-2. Total AM Stations Authorized, 1922–1948.

SOURCES: Federal Radio Commission and Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual); and Department of Commerce data.

verted to the war effort. Many manufacturers ceased production of consumer goods and had little or nothing to sell to the public. But they did have defense contracts, did earn profits, and did have plans to return to the manufacture and marketing of consumer goods after the war. The federal excess profits tax took a huge bite out of corporate earnings, but the tax could be reduced by deducting for legitimate business expenditures, such as advertising. Institutional advertising would keep the names of these companies before the public. The war had caused a shortage of paper, so that the amount of advertising these companies could place in newspapers and magazines was limited. Therefore, they turned to broadcasting. From 1940 through 1945, radio advertising billings increased by 99.4 percent. At the same time, the number of stations had increased by only 17.4 percent. A few more stations shared a lot more money, and over 95 percent earned profits.

NETWORKS

The networks, of course, took a large share of this prosperity. Even during the economic depression, they earned profits, dipping to their lowest point in 1933, but recovering well, thereafter. The National Broadcasting Company

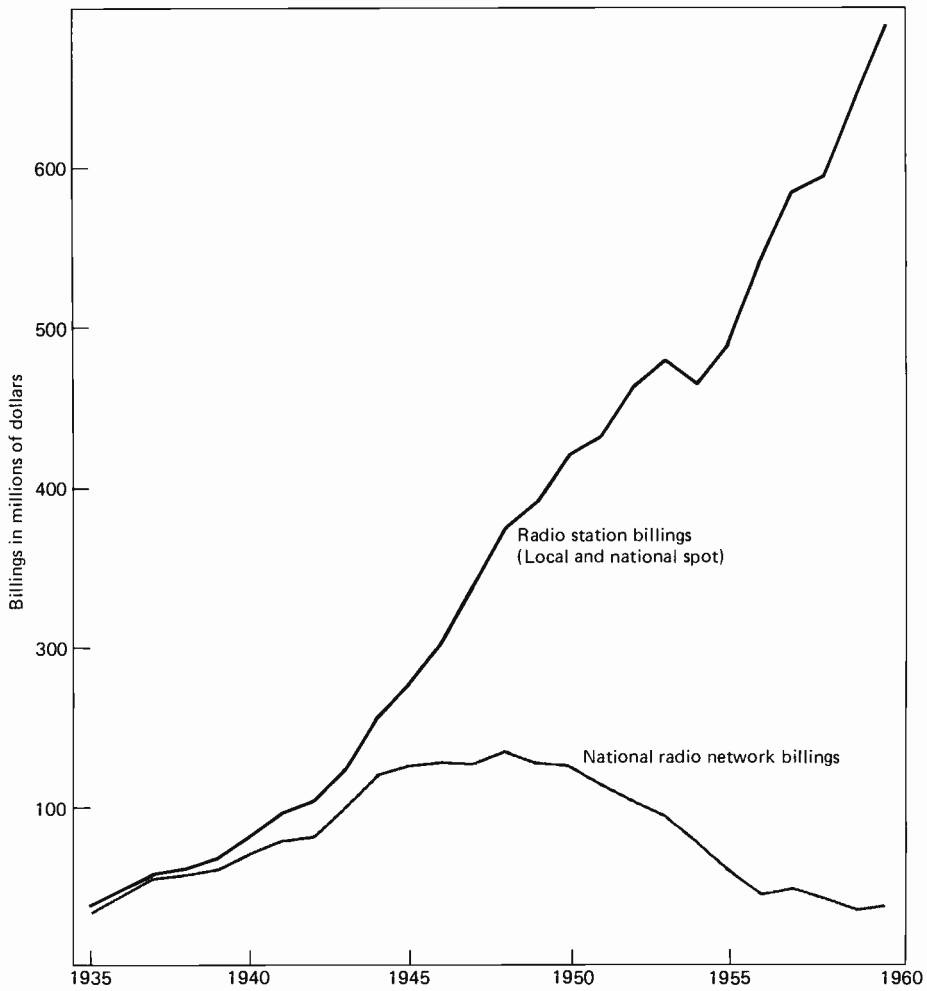


Figure 3-3. Radio Station and Network Gross Advertising Revenues. Both station and network revenues grew at a healthy rate until 1945. At that point, network billings leveled off and in 1949 began a long decline. Station revenues continued to climb except for one dip in 1954.

SOURCE: Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual).

(NBC) had a slight head start on the Columbia Broadcasting System (CBS), had actually two network operations (which meant two affiliates in many cities), and had the corporate reassurance of the Radio Corporation of America (RCA) behind it. Therefore NBC was the network that got the largest audiences, the best programs and the established performers. Yet, the

shrewd management of William Paley, CBS president and majority stockholder, usually earned CBS a healthy profit as well.

Paley bettered the position of CBS through development of the **network option.** An affiliate (a station that contracted to carry the network's programs) could carry any or all network sustaining (nonsponsored) programs for free (NBC charged for sustaining programs), in return for which the affiliate gave CBS an option on all its nonnetwork time during the broadcast day. When CBS began a new sponsored program series, the network could order the affiliate to clear time for it, that is, cancel existing local programming and broadcast the network series. The network paid the affiliate for carrying the program, usually about 30 percent of the station's normal national advertising rate. Under the option plan, written into each affiliation contract between network and station, the station received revenue and programming with no effort, while the network could guarantee station clearance to an advertiser. CBS began adding affiliates. From 16 in 1927, CBS went to 112 in 1940, versus 53 for NBC Red and 60 for NBC Blue. In 1935, NBC adopted its own version of the network option. NBC affiliate contracts specified certain nonnetwork hours as **option time,** with the remainder of nonnetwork time under station control as **station time.**

The networks had expanded in other ways. Both had formed artist management bureaus and concert booking companies. This guaranteed them a ready reserve of performers for their programs and income from the personal appearance tours of the talent they represented. Both networks were affiliated with phonograph record companies. RCA had bought the Victor Talking Machine Company in 1929, and CBS had purchased its former owner, Columbia Records, in 1938. In addition, of course, NBC and CBS each owned and operated profitable broadcast stations in a number of large cities.

David Sarnoff became president of RCA in 1930 and continued to build the communications empire Owen D. Young had designed in 1919. (Young, in the meantime, had become chairman of the board of General Electric [GE].) Sarnoff also became board chairman of NBC in 1934, the year after the network had moved into its new Radio City home in Rockefeller Center, New York City. GE and Westinghouse had withdrawn from ownership of both RCA and NBC in 1932 after the threat of an antitrust suit, leaving RCA a separate corporate entity and NBC its wholly owned subsidiary. Also, in 1932, William Paley had bought out Paramount's 49 percent share of CBS. Lenox Lohr became NBC's second president in 1936 and was replaced by Niles Trammel in 1940.

On September 15, 1934, the Mutual Broadcasting System (MBS) was formed. Two weeks later Mutual's first programs were fed to the network. The idea behind MBS was that member stations pool their resources, each station contributing program material. This would eliminate the expense of a network program department. The network, of course, would own no stations; it was to be a mutual venture. Initially, the network consisted of four stations:

WOR, Newark; WGN, Chicago; WLW, Cincinnati; and WXYZ, Detroit. MBS eventually did acquire a staff needed to coordinate the cooperative programming activities of member stations. Most of the powerful, large city stations had already affiliated with CBS or one of the NBC networks, so that Mutual became the network of small town and lower powered stations. MBS attempted to make up in numbers of network stations the coverage it lacked from its affiliates' low power. By 1940, MBS had 140 affiliates; in 1945, 384.

The American Broadcasting Company (ABC) grew out of NBC Blue. NBC had purposely made the Red network the stronger of its two chains. The Blue network had less popular programs, smaller audiences, fewer sponsors. When NBC was forced to divest one of its two chains, the Blue Network was formed as a separate corporation and sold in 1943. The buyer was Edward J. Noble, Lifesavers candy manufacturer. In 1945, the network became ABC and immediately became the third strongest, since its affiliated stations had more power than Mutual's.

Programming

During the 1930s, radio presented reformers and rogues, messiahs and mad people, saints and sinners. A new president was inaugurated in 1932, who promised a "new deal" to a citizenry burdened with economic depression. Franklin D. Roosevelt used radio to help the nation find its courage and its bearings. From his nomination speech to his inaugural address to his fireside chats, Roosevelt used radio to talk directly to the American people. Two other, entirely different American political leaders used radio effectively as well—Huey Long and Father Charles Coughlin, each with his own idea of how to save the nation. Dr. Brinkley was still peddling his goat gland operation and his patent medicines by radio, this time from Mexico.

But when most people speak of "old time radio," they mean the mainstream, network entertainment programs. Radio developed its program formats in the 1930s, and they stayed popular through the 40s and even into the 50s. Most of these same program types were transferred successfully to television.

Radio could report news, and the foundations for broadcast news were laid in—again—the 1930s. After a few false starts, the radio networks assembled personnel and techniques that would be needed to report the biggest story yet, World War II.

PROGRAMS AND PERFORMERS

National advertisers first began to invest heavily in radio in the 1930s. Advertising and radio were both becoming big business. In 1931, for example, the American Tobacco Company alone spent 19 million depression dollars to advertise Lucky Strike cigarettes. A sponsor paid up to $500,000 per year for production costs alone on a program series; air time might cost another $4,000

per week. The sponsor controlled programming, every element of it. The sponsor's advertising agency produced the program; the network was all but a common carrier, renting facilities and selling air time.

One of the new program types that developed in the early 1930s was comedy-variety. A comedian would act as master of ceremonies to introduce and bridge the various acts and guests on the program. Often the comedians had come out of vaudeville. This program type initiated the radio careers of Eddie Cantor, Al Jolson, George Burns and Gracie Allen, Ed Wynn, Fred Allen, Jack Pearl, and Jack Benny.

Radio drama became popular. During the 1920s some efforts had been made to broadcast drama by putting microphones on the stage of Broadway plays. There had also been some attempts to write and perform drama especially for radio. However, the real birth of radio drama came in the 1930s. Writers and performers learned to create for the ear, for a "blind" audience. Radio drama's sound effects staff came into its own. Sound effects technicians used various odds and ends that—when rubbed, tinked, opened, closed, crumpled, or clopped near a microphone—sounded like what the script called for. It helped, of course, that dramatic dialogue usually provided verbal definition of the sound effect—"Listen to that rain!"; "Wasn't that a shot?"; "Here come two men on horses!" Through sound effects and dialogue, the listener's imagination created settings and characters. It was a theater of the mind.

One of the first network strictly dramatic radio series was *First Nighter,* begun in 1930. *Lux Radio Theater* began in 1934; Cecil B. DeMille, famous Hollywood film director, began hosting it in 1935, and it ran for a total of 21 years. These were anthology series—different stories and different characters each week— and included *Grand Central Station, On Broadway, Curtain Time, Silver Theatre, Screen Guild Theatre,* and *Hollywood Hotel.* Some dramas had different stories each week with continuing main characters. *Dr. Christian,* based on the life of a physician in a small town, *Mayor of the Town,* featuring the mayor and his housekeeper, and *Halls of Ivy,* centered on a college professor. Then, there were the mystery and adventure dramas, many using characters developed in other media: *The Lone Ranger* (originally a local production of WXYZ, Detroit, and one of the motivating factors for formation of MBS), *Jack Armstrong, Tom Mix, Mr. Keen—Tracer of Lost Persons* (whose theme song was "Some Day I'll Find You"), *The Fat Man, Sherlock Holmes, Gangbusters, Superman, Sam Spade, Suspense, Inner Sanctum, The Green Hornet, The Shadow, I Love a Mystery, Terry and the Pirates, Lights Out,* and many others.

There were also experimental dramatic series. These programs tapped the talents of young writers and directors who raised the level of radio drama to an art form. *Words Without Music* featured plays by Norman Corwin. *Columbia Workshop* introduced poet Archibald MacLeish to radio drama. Arch Oboler had his own series, *Arch Oboler's Plays. Mercury Theatre of the Air* was the Orson Welles vehicle that produced the scariest radio drama of all, the Halloween

1938 production of H. G. Wells' *War of the Worlds* that panicked thousands into believing Martians had invaded the Earth.

Some of the longest-lived radio dramas were serialized into 15-minute segments presented each day, Monday through Friday. Aimed primarily at a housewife audience and often sponsored by soap companies, this dramatic genre acquired the name **soap opera.** The first was *Clara, Lu 'n' Em,* a WGN, Chicago, creation transferred to NBC in 1932. By the end of 1938, 38 sponsored daytime soap operas were broadcast daily, and the number was growing. These serials appealed to millions, and social scientists began to explore the relationship between the audience and these slow-moving, emotionally charged, humorless dramas.

Frank and Ann Hummert, a husband and wife team, ran what amounted to a soap opera factory. The Hummerts would rough in the outlines of a serial, then hire others to fill in the dialogue. They kept tight rein on their operations—writers, directors, and actors—and at any one time might have a dozen serials on the air and others in development. Among others, they produced the following popular, long-running serials: *Backstage Wife, John's Other Wife, Just Plain Bill, Lorenzo Jones, Our Gal Sunday, The Romance of Helen Trent, Stella Dallas,* and *Young Widder Brown.* Some long-lived serials produced by others included: *Big Sister, Life Can Be Beautiful, Ma Perkins* (which, after 28 years on the air, was one of the last seven radio soap operas to go off CBS in 1960), *Myrt and Marge, Pepper Young's Family, Road of Life,* and *Vic and Sade.*

In the early 1930s, radio brought together a mixture of drama and news. News events from the preceding week were put into script form and reenacted before network microphones. The result was the *March of Time.* First broadcast on CBS in 1931, the *March of Time* went to NBC Blue in 1937, to the Red network in 1942, to ABC in 1944, and off the air in 1945. Although the dramatized news genre does not exist today, there were several programs that imitated and were contemporary with the *March of Time.*

There were contests and games: *The Original Amateur Hour, Hobby Lobby, Information Please, Kay Kyser's College of Musical Knowledge, True or False, Professor Quiz, Quiz Kids, Pot O'Gold, Truth or Consequences.* There were children's programs: *No School Today, Let's Pretend, Uncle Don, Horn and Hardart Children's Amateur Hour.* There were public interest programs: *American Forum of the Air, The University of Chicago Round Table, Town Meeting of the Air.* There were classical music programs: the Metropolitan Opera broadcasts, the *Music Appreciation Hour,* Sunday afternoon concerts of the New York Philharmonic Orchestra.* There were programs of light classical music: *The Voice of Firestone, Ford Sunday Evening Hour.* There were popular music programs: *Your Hit Parade,* Kate Smith, Bing Crosby, Rudy Vallee. There were special interest programs: *The Old Dirt Dauber* (gardening), *Mary Lee Taylor* (cooking), *Band of America*

* The Metropolitan Opera and New York Philharmonic concerts are still heard on a few radio stations.

(march music). There were sports broadcasts, religious programs, country music programs, disc jockey programs, and every kind of dramatic and music program you could think of.

National ratings of programs by audience surveys were developed. The Cooperative Analysis of Broadcasting (CAB), begun in 1930, was developed by the Archibald M. Crossley research firm and supported by the advertising industry. CAB used telephone recall for data collection: an adult in each home in the sample of the audience was telephoned and asked what *programs* the family *had* listened to. CAB ratings were called **the Crossley.** In 1935, Clark-Hooper, Inc. (C. E. Hooper, Inc., since 1938), began offering monthly program ratings based on telephone coincidental survey methods: each sample home was called, and the respondent was asked what *one program was being listened to at that time.* The **Hooperatings** replaced CAB. The A. C. Nielsen Co. used an Audimeter, a mechanical film device that was installed in the radio and made a minute-by-minute photographic record of tuning of the radio set. The sample family would mail an exposed Audimeter film to Nielsen every two weeks. Nielsen entered the radio research field in 1940 and had replaced Hooper five years later.

And what did these ratings show were the public's favorite radio programs? The public definitely preferred comedy. During the decade of the 1930s the favorite evening programs were *Amos 'n' Andy,* Eddie Cantor, Rudy Vallee, *Maxwell House Showboat,* Burns and Allen, Fred Allen, Major Bowes' *Original Amateur Hour,* and Bing Crosby. In 1950, preferences had not changed much. Comedians were still the favorites: Jack Benny, Edgar Bergen, Bob Hope, Burns and Allen. Bing Crosby hosted the favorite variety hour. Arthur Godfrey had replaced Major Bowes for the best-liked amateur-hour host. *Lux Radio Theater* was the favorite dramatic series. And, of course, *Amos 'n' Andy* was among the top ten rated programs. Many radio series were very long lived. In 1950, the networks were running 108 series that had been on the air ten years or more; 12 had been on for 20 years.

NEWS

News reporting has been a part of broadcasting from the birth of radio. KDKA's first broadcast reported the results of the Harding-Cox election. Individual stations were broadcasting news reports on a daily basis in the early 1920s.

One of the first radio commentators was H. V. Kaltenborn, an associate editor of the Brooklyn *Daily Eagle,* who began broadcasting daily analyses of the world situation for WEAF in the fall of 1923. In 1924, Kaltenborn criticized Secretary of State Charles Evans Hughes, who contacted AT&T and had Kaltenborn taken off the air. But other New York area stations began to carry Kaltenborn, and when the *Eagle,* facing a financial crisis, had to let Kaltenborn go, CBS hired him. In 1936, Kaltenborn reported on the spot during a battle of the Spanish Civil War. The battle swept toward him. He and his equipment took refuge in a haystack, and from there Kaltenborn de-

scribed the battle to his audience. In 1938, the machinations of German dictator Adolph Hitler led to what became known as the "Munich crisis." Kaltenborn, now back in the United States, stayed before the microphone almost constantly for a period of 18 days while European leaders bargained away the freedom of Czechoslovakia. Kaltenborn moved to NBC in 1940.

In 1932, the baby son of Colonel and Mrs. Charles A. Lindbergh was kidnapped from their home in Hopewell, New Jersey. Some five years before, Lindbergh had been first to pilot an airplane solo across the Atlantic. He had become the popular national hero of the United States. Radio first broke news of the kidnapping and radio continued to follow the case. CBS and WOR, New York, devoted almost their entire schedules to coverage of the case. Radio was also on hand when Bruno Richard Hauptmann was tried and found guilty of the kidnapping and death of the Lindbergh infant. In the process of reporting the Lindbergh case, Boake Carter and Gabriel Heatter both established national reputations as radio commentators.

Other well-known commentators of the early 1930s included Edwin C. Hill, Floyd Gibbons, and Lowell Thomas. Thomas was a young author and lecturer in 1930 when he made his radio debut as a substitute for Gibbons. Thomas stayed with network news for 46 years, retiring from his CBS Radio commentary program in 1976.

Radio began to establish a reputation for on-the-spot coverage. A number of broadcasts originated directly from Admiral Byrd's Antarctic Expedition, 1933–1935. The burning of the cruise ship, *Morro Castle,* just off the Asbury Park, New Jersey, coast was described to the radio audience. King Edward VIII announced abdication of the British throne for "the woman I love" over radio, and radio covered the coronation of his successor, King Georve VI, in 1937. That same year, radio carried dramatic on-the-spot coverage of serious flooding in the Ohio River Valley. On May 7, 1937, Herbert Morrison of WLS, Chicago, was in Lakehurst, New Jersey, recording a description of the arrival of the passenger dirigible, *Hindenburg.* Suddenly the ship burst into flames, and the horrified Morrison described the scene as his engineer continued to record. That night, NBC broke its rigid rule against the broadcast of recordings to use Morrison's description.

Newspaper publishers, suffering a decline in revenues, blamed radio. Through control of the major wire services, the publishers were able to force NBC and CBS in 1933 to agree to severely curtail news operations. By mid-1935, however, the restrictions began to loosen. And when Hitler started to shove the world toward war, radio was able to cover it in detail.

RADIO COVERS THE WAR

As the decade of the 1930s wore on, political events in Europe were stirring worldwide interest. Radio increased its news activities. Kaltenborn reported the Munich crisis. NBC's Max Jordan broadcast an eyewitness account of Hitler's march into Austria. Commentators included Dorothy Thompson, Raymond Swing, Quincy Howe, Elmer Davis, and Fulton Lewis, Jr. From

Montevideo, James Bowen of NBC reported the sinking of the *Graf Spee,* a German pocket battleship. William L. Shirer of CBS and William C. Keirker of NBC broadcast direct from outside the historic wagon-lit in Campiegne Forest as Hitler accepted the surrender of France. Radio audiences heard the voices of Hitler, Mussolini, Chamberlain, and other European political leaders.

CBS had sent Edward R. Murrow to Europe in 1937 to arrange for broadcasts of special events and to report news. But as Hitler began marching, Murrow devoted all efforts toward news reporting. At 8:00 P.M. E.S.T., March 3, 1938, he broadcast his first report from Vienna as that beautiful, historic city awaited Hitler's arrival. The same broadcast included reports from correspondents in London, Paris, Berlin, Rome, and New York. This was the first world news roundup. The world groaned closer and closer to war, and Paul White, head of CBS news, organized a team that would become the model for broadcast reportage. Each member combined objective reporting with compassion and an eye for the telling detail. Their names became legend in radio news: William L. Shirer, Eric Sevareid, Larry Lesueur, Howard K. Smith, Charles Collingwood, Robert Trout, Richard C. Hottelet, Bill Downs, Winston Burdett, Ned Calmer, Cecil Brown, John Daly. But perhaps more than anyone else, it was Ed Murrow on whom the American public relied to explain the whys and the hows of a distant and ominous war. Based in England, Murrow opened broadcasts with the words, "This—is London," and Americans heard him report from a rooftop in that blacked-out city while bombs fell, from an Air Corps C-47 headed toward Holland, from London streets smashed by German bombs in the Battle of Britain, from the North African front.

On December 7, 1941, radio reported that the Japanese had attacked Pearl Harbor, Hawaii. The next day, 79 percent of all homes in the United States listened to radio as President Roosevelt asked Congress for a declaration of war. Radio stepped up its already heavy reporting activities, and news was reported every hour.

As other industries were mobilized for the war effort, so was radio. Unlike World War I, radio stations were left in operation in civilian hands. The government created the Office of War Information (OWI) to coordinate wartime propaganda and information services. The advertising industry created the War Advertising Council to work with the OWI in creating and scheduling war-related public service campaigns: war bond purchase appeals, "careless talk costs lives," forest fire prevention, promotion of victory gardens, and a hundred others. One of the most spectacular successes in war bond appeals involved the radio singer, Kate Smith. In a marathon drive, February 1944, she urged listeners to buy war bonds. They did—$108,000,000 worth.

Entertainment programming continued more or less unchanged. The same stars and same programs were popular. Most programs promoted the win-the-war theme in some way. A number of government-created propa-

ganda and meet-your-armed-services programs were broadcast. Some programs began to originate from armed forces bases and hospitals; Bob Hope, well-known radio and film comedian, was a leader in this. Care was taken to ensure that broadcasts did not contain information that the enemy could use.

Overseas, Tokyo Rose broadcast popular music, propaganda, and sweet talk from Japan to American soldiers in the Pacific. Axis Sally was her German counterpart. Inspired by an unauthorized, servicemen-built-and-operated radio station in Alaska, the War Department created the Armed Forces Radio Service, a network of stations in the Pacific and European war theaters that provided entertainment and information for American troops.

Commercial radio's greatest achievements during World War II, however, were in the field of news and public affairs. Reporters began to use voice recording machines to record actual events for broadcast at a later time. Special radio series, like CBS's *An American in England,* combined journalism and drama—the first step toward development of the radio documentary. Eyewitness accounts were broadcast as events occurred: Murrow's description of the London air raids; the Japanese attack of Manila; the Allied invasion of Normandy on D-Day; American troop landings on Japanese-held islands in the Pacific; the surrender of Germany; the Japanese signing of surrender documents aboard the *U.S.S. Missouri* in Tokyo Bay.

Problems

The golden age of radio was not without flaw. One problem, mentioned above, was newspaper publishers' efforts to curtail radio news. Unlike newspapers, radio did not have editions, but could air an important story as a bulletin as soon as it came over the news wire services. The newspaper extra, a special edition published to rush late, important news to the public, had been doomed by the end of the 1920s. The publishers, seeing revenues dwindle as readers and advertisers turned to radio, decided to take action. In spring 1933, all three major news services—Associated Press (AP), United Press (UP), and International News Service (INS)—announced they would no longer provide news service to networks. Up to this time, the networks had no formal news-gathering operations. Now, if they wished to continue to broadcast news, they would have to gather their own. NBC's effort was small, based on the long distance telephoning efforts of A. A. Schechter. Each day Schechter managed to gather enough news for the Lowell Thomas program, now on NBC's Blue network. CBS, on the other hand, organized a full-fledged news department. Paul W. White headed it and established correspondents around the country and exchange arrangements with several overseas news agencies. The **press-radio war** had begun.

The newspaper publishers forced a showdown. In December 1933, they met with representatives of CBS and NBC at New York's Hotel Biltmore. The

two sides agreed to the creation of a Press-Radio Bureau. Beginning March 1, 1934, the Press-Radio Bureau was to provide a restricted diet of news to broadcasters for restricted use on the air. The net result of all restrictions was that radio was not supposed to be able to scoop newspapers with a fast-breaking story. CBS was to disband its news service; NBC was not to build one.

There were ways around the restrictions, however. Radio could offer all the "comment" and "interpretation" it wanted; so radio's newscasters became "commentators" or "analysts." The majority of radio stations did not even join the Press-Radio Bureau and did not feel bound by the Biltmore agreements. By mid-1935 the restrictions were falling apart. First, rival news services were formed to provide news to radio stations. Then UP and INS began to offer news to stations. Finally, by the end of the decade, even AP was selling news to stations. In 1940 the Press-Radio Bureau went out of business.

Another spot of tarnish on the golden age involved **music.** Music had been a mainstay of radio programming from the very beginning. Problems with music started early, too. Under the 1909 copyright law, a piece of copyrighted music could not be performed in public for profit without permission of the copyright holder. The American Society of Composers, Authors and Publishers (ASCAP) was formed to grant permission to music users and to collect and pay royalty fees to member music copyright holders. In 1922, ASCAP demanded that station owners pay royalties. The radio broadcasters were outraged. A test suit was brought against WOR, New York, and the court ruled[1] that since a large department store ran WOR for publicity, the station's use of music was "for profit." Stations began paying ASCAP annual fees starting at $250. The broadcasters were still angry, however, and formed an anti-ASCAP organization that eventually became the National Association of Broadcasters (NAB), the broadcasters' trade group. By 1936, the license fee had become 2⅓ percent of a station's income from advertising.

In 1937, ASCAP announced a sharp increase to take effect in the early 1940s. Radio broadcasters resolved to fight the move. They contributed to a fund that was used to form a rival music licensing organization, Broadcast Music, Incorporated (BMI). Finally, the showdown came. ASCAP raised its rates; broadcasters refused to pay and relied on music from BMI and the public domain. This period during 1941 became known as the **era of "Jeannie with the Light Brown Hair,"** since that song, no longer under copyright, was used on the air so often. The broadcasters won the battle when ASCAP reduced its demands. But then musicians stopped making records. James C. Petrillo, president of the American Federation of Musicians (AFM). said that sound films, juke boxes, and the use of records on radio stations had put musicians out of work. At its 1942 convention, AFM decided to stop making recordings. The major record companies finally met AFM demands in 1943 and 1944.

A third problem did not really bother broadcasters as much as it should have. It involved a right of which they had made little or no use: the right to

express editorial opinion on the air. The license of radio station WAAB, Boston, operating on 1410 kHz, was up for renewal. The Mayflower Broadcasting Corporation filed an application with the Federal Communications Commission (FCC) to build a new station in Boston to operate on 1410 kHz. The FCC held hearings on the matter in 1939. Mayflower's application was denied, and WAAB's license was renewed.[2] But during the proceedings, it was revealed that WAAB had editorialized during 1937 and 1938. In its decision the FCC said "the broadcaster cannot be an advocate," and this **Mayflower doctrine** as it was known, effectively discouraged broadcast editorials until the FCC reversed itself in 1949.[3] Leaders of the radio industry denounced the Mayflower doctrine, but to most stations it made little difference since they had no desire to air editorials.

The **network case,** on the other hand, made a great deal of difference, particularly to the networks. In 1938 the FCC had begun an investigation of the networks' relationship to their affiliates. In 1941, the commission issued its findings as the *Report on Chain Broadcasting.* At the same time, it adopted a number of regulations to deal with matters described in the report. Basically, the report said that through their affiliation contracts, NBC and CBS controlled the programming of their affiliated stations, stations that accounted for 85 percent of the total nighttime broadcast transmitter power of all stations in the country. Network control seemed to violate the intent of federal law which put responsibility for programming on the station licensee. Such control also smacked of monopoly. The new regulations aimed at breaking this control.

Among other things, the new FCC regulations did away with CBS's network option plan and required NBC to divest itself of one of its two networks. There were also regulations limiting the term of affiliate contracts to three years, giving affiliates the right to reject programs, giving networks the right to offer rejected programs to nonaffiliated stations, limiting network station ownership to one per city, and prohibiting networks from controlling affiliate advertising rates. The report had also mentioned the networks' artist bureaus—how could a network represent the best economic interests of both performers, as their agent, and the network, as their employer?

CBS and NBC got rid of their artist bureaus immediately. But the rest of the regulations—that, contended the networks, would spell the end of network broadcasting and of commercial broadcasting itself in the United States. The networks and other broadcasters mounted a full-scale attack on the FCC. A committee of the U.S. House of Representatives investigated the commission. NBC and CBS both challenged the regulations in court, and the case wound its way up the judicial ladder to the U.S. Supreme Court. On May 10, 1943, the High Court announced its ruling, affirming the constitutional validity of the Chain Broadcasting Regulations.[4] NBC sold the Blue Network, CBS modified its network option requirements, and, as of this writing, both are still in business.

A fifth problem during the golden age was the **blue book.** Released in March, 1945, the official title was *Public Service Responsibilities of Broadcast Licensees.* It had a blue cover; thus, the blue book. The book was a report of a study of the programming of a group of licensees. According to the report, they had broadcast excessive numbers of commercials, had not carried local public interest programs, had not carried network public affairs programs, and generally had not fulfilled the promises they had made on their license renewal applications. Quoting statements by broadcasting business leaders, the blue book contended stations should observe certain broad guidelines to ensure that their programming met their public service obligations. The guidelines suggested that stations should devote time to sustaining programs, local live programs, and discussion of public issues, and should avoid advertising excesses. That being the case, continued the report, the FCC should begin to examine a station's past record at license renewal time to see how well the station had met these guidelines.

Innocuous as the blue book's suggestions were by today's standards, they still represented a departure from previous commission policy. Station license renewals had been passed routinely as long as all technical requirements were met; now the FCC was proposing to look at past programming. Also, while the FCC and the Federal Radio Commission had removed the charlatans—the Brinkleys, and all the rest—from the air, this was the commission's first general criticism of "mainstream" broadcasters.

The NAB launched an attack, attempting to discredit the blue book. According to the NAB, any FCC decision based on programming would violate the First Amendment and the censorship prohibition section of the Communications Act. The trade press joined the battle on the side of the NAB. Vicious, personal attacks were launched against the seven commissioners and against the FCC consultants and staff members who had prepared the book. They were likened to Communists and Fascists. Members of Congress joined the criticism. Interestingly, amidst all the *ad hominem* attacks, no one argued over the *content* of the blue book.

The FCC, surprised and uneasy over reaction to its publication, did not follow its own new standards. By the end of 1946, it was clear that the blue book was to be an unused document. Although never officially repudiated, neither has it been enforced. Broadcasters took care of the blue book problem permanently.

FM Radio

While standard broadcasting, or AM radio as it is more commonly known, was building audiences and earning money, **frequency modulation** (FM) radio was being shunted back and forth between bureaucratic indecision and corporate hostility. FM radio is almost as old as radio itself. The first patent

on FM was issued in 1902. But it was not until Edwin H. Armstrong's work during the period, 1928–1934, that FM broadcasting became practical. The FCC began issuing licenses for experimental FM broadcast stations. Armstrong continued to promote FM, even in the face of opposition from the giant RCA. He showed that FM had a number of inherent advantages over standard broadcasting. FM was capable of higher fidelity reproduction, was freer of static, and was not as subject to fading and interference from other stations as AM. By March 1940, 22 experimental FM stations were on the air, and the FCC authorized commercial FM operation, establishing 42–50 MHz as the FM band. During the war years the FCC stopped authorizing new FM stations.

In 1945, the FCC moved the FM band to 88–106 MHz.* With this decision, the commission rendered obsolete all transmitters at the existing 46 FM stations and all of the 400,000 or so FM receivers owned by the public. RCA's opposition, the wartime freeze, and now a major frequency shift—this should have killed any chances for development that the new aural medium ever had. In the long run, however, the 1945 frequency shift turned out to be a good move for FM†; it lessened the chances of FM suffering from interference, and it increased the number of FM channels from 40 to 100.

Another positive aspect of the 1945 frequency shift was the reaffirmation of the principle of reserved channels for education. Some of the very first AM broadcast stations had been started by educational institutions, often the physical sciences departments of colleges and universities. Soon, however, the technical novelty of broadcasting wore off, and the financial reality of operational expenses set in. Some educational licensees began selling advertising; many more gave up their licenses. At times it seemed as though the government were conniving with commercial interests to wrest frequencies from educational licensees so that they could be used to sell products. Educational licensees would find their frequencies changed, their power reduced, and their status changed from full-time to share-time operations. During the period, 1921–1936, 202 licenses were issued to educational institutions. Out of this total, only 38 stations were on the air at the beginning of 1937, and some of these operated on a commercial basis. Educators tried to have some AM channels reserved for education when Congress was about to pass the Communications Act of 1934. Commercial broadcasters convinced Congress and the FCC that they were already carrying educational material, and Congress made no educational reservations. Shortly thereafter, the commercial broadcasters' educational programs began to disappear.

The FCC realized that some kind of channel reservations were, indeed, needed if education was to have a broadcast voice. In setting up the 1940 FM

* The frequencies 106–108 MHz were originally reserved for facsimile and were later used by FM broadcasting.

† See Chapter 4.

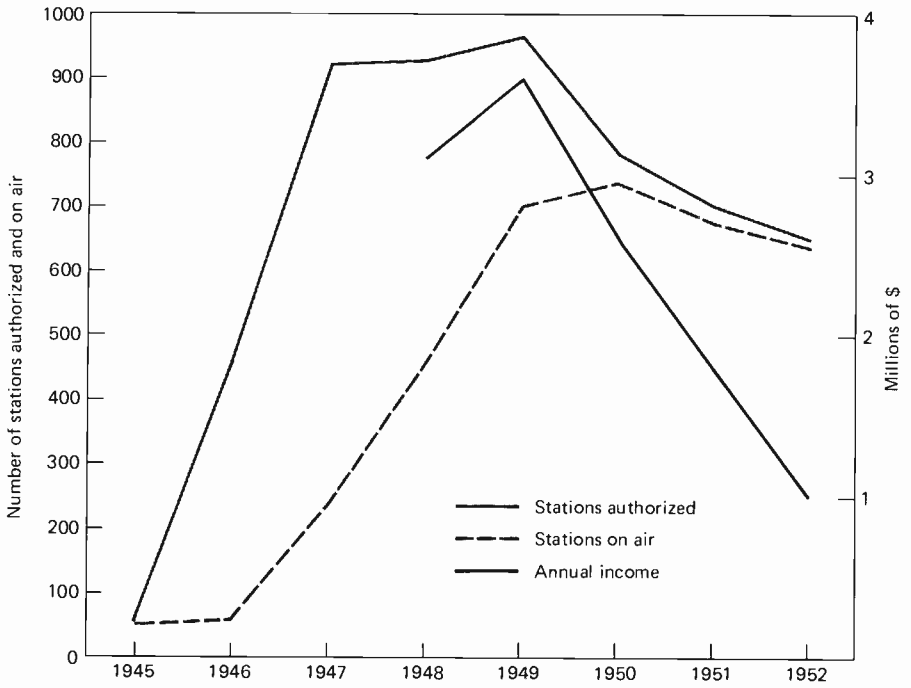


Figure 3-4. FM Stations Authorized, On Air, and Income, 1945–1952.
SOURCE: Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual).

band, the FCC had set aside five of the 40 channels for noncommercial educational use. And now, in 1945, the first 20 (88–92 MHz) of the 100 channels in the new FM band were reserved for noncommercial educational stations. Three years later the FCC authorized low power operation for stations in the reserved band. This way, an educational institution could go on the air with a 10 watt transmitter for little initial investment, gain experience and expertise, and later improve facilities and raise power.

FM radio was being touted as the coming commercial medium, perhaps even replacing AM radio. In spite of the 1945 frequency shift, only three years later the FCC had authorized over 1000 new FM stations. But FM's time had not yet come. Audiences did not find FM very attractive. The receivers were expensive and did not sound much better than AM receivers. In many cases, the programming on FM was exactly the same as AM; AM-FM licensees would duplicate AM programming on the FM station. Audiences were content with AM radio and were also fascinated with a new broadcast medium, television. Advertisers put their money in AM and TV. FM stations lost money, almost without exception. The independently operated FM stations were especially hard hit. Many FM station owners turned their licenses back to the commission, over 350 from 1949 through 1952.

After the War

The profits earned by AM radio stations during World War II had not gone unnoticed. Literally, hundreds of persons were ready to file applications for radio broadcast licenses. The FCC licensed many of the new stations with directional antennas, low power, daylight-only operation, or some combination of these, lessening chances for interference. Such operations allowed more stations to be built, and many communities got their first local radio service during this postwar period. In mid-1945, 933 AM radio stations were on the air. Thirty-six months later the number had nearly doubled to 1621, with an additional 341 authorized.

Total station time sales climbed, too, from over $176.5 million in 1945 to over $275.6 million in 1948. However, the total number of AM and FM radio stations on the air was so large that average per station time sales actually dropped during the same period from nearly $180,000 to under $133,000 per station.

At the same time, national radio network sales had slowed. The yearly increase of network sales billings dropped from a high of 22.5 percent for 1944 to 0.8 percent for 1947. The last good year for network sales was 1948, with a 4.5 percent increase over 1947, but this was followed by 12 years of shrinking

Figure 3-5. Average Radio Station Compensation, 1945–1948. In spite of the fact that total radio station billings continued to climb after the war (see Figure 3-3), the number of radio stations had increased so much (see Figure 3-2) that average compensation actually fell. The figure for 1945 is based on the number of licensed AM and FM stations as of June 30; figures for 1946, 1947, and 1948 are based on the number of licensed AM stations and FM stations on the air as of June 30. Figures for each year based on total national nonnetwork and local radio billings as of the end of calendar year.

SOURCE: Federal Communications Commission, 12th, 13th, 14th, 15th *Annual Reports* (Washington, D.C.: GPO, 1947, 1948, 1949, 1950, respectively).

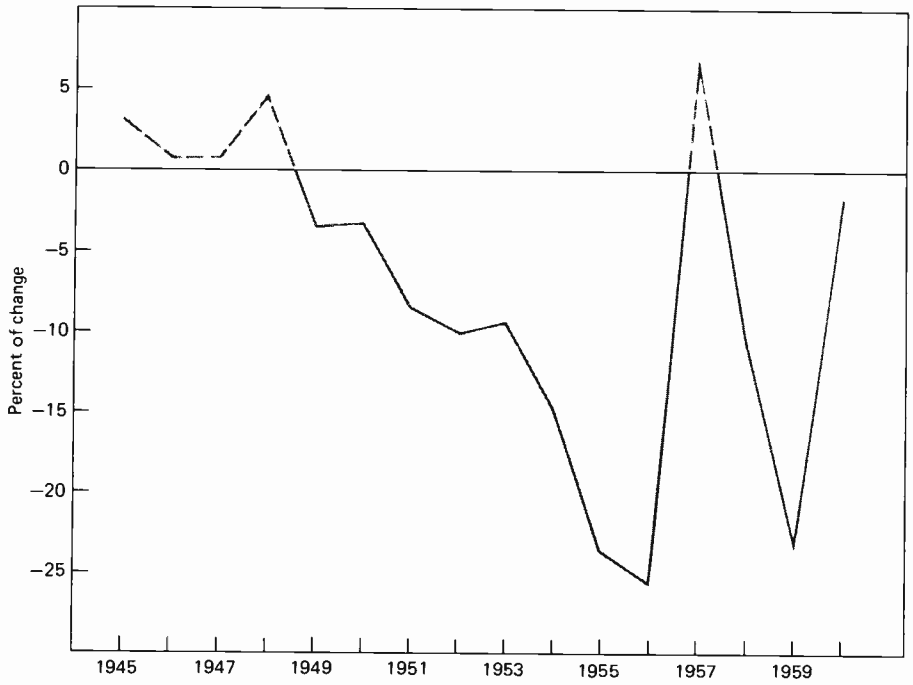


Figure 3-6. Annual Percentage of Change in National Radio Network Gross Advertising Revenues: 1945–1960. From 1949 through 1956, the radio networks not only billed less each year than they had the previous year, they did so by increasing percentages.

SOURCE: Based on Gross Advertising Revenues data in Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual).

sales, with the pattern of yearly decrease interrupted only once. By the time the decade-plus sales slump ended, network billings were down nearly $100 million from their 1948 total.

Average station billings were falling, network audiences were falling, network billings were falling, the nation was entering a period of economic recession—a bad time for radio. Local stations responded in a number of ways. Network affiliateship fast became a hindrance. Stations experimented with new formats, appealing to minority tastes and interests. Stations also encouraged local retail outlets to use radio, and income from local advertising sales climbed. The networks dropped their ban on recordings and even ran a few disc jockey shows. In an effort to keep audiences, radio networks added telephone quizzes such as *Stop the Music* and *Sing It Again,* offering money and prizes to those who were listening and could answer the questions posed by long distance telephone. But audiences continued to drop. In the 1950s, network radio programs of long standing went off the air and were not replaced.

What was the problem? The problem was a horde of loud, vulgar, squat, ugly, one-eyed monsters that invaded America's homes and mesmerized the inhabitants therein for hours at a time. To make matters worse, the public willingly invited these monsters into their living rooms, and they multiplied like rabbits. Far-seeing science fiction writers had been predicting their arrival for years, and now here they were—television receivers.

Notes

1 *Witmark v. Bamberger,* 291 F. 776 (1923).
2 *In the Matter of the Mayflower Broadcasting Corporation and the Yankee Network, Inc. (WAAB),* 8 FCC 333, Jan. 16, 1941.
3 *In the Matter of Editorialization by Broadcast Licensees,* 13 FCC 1246, June 1, 1949.
4 *National Broadcasting Co., Inc., et al. v. United States et al.,* 319 U.S. 190, May 10, 1943.

Bibliography

(Numbers in parentheses refer to chapter bibliographies containing full citations.)

For general accounts of broadcasting during this period, see Erik Barnouw, *The Golden Web,* Vol. II of *A History of Broadcasting in the United States* (New York: Oxford University Press, 1968), and Sterling and Kittross, *Stay Tuned* (2), Chapters 5–7. A shorter and somewhat more industry-oriented view is contained in Curtis Mitchell, *Cavalcade of Broadcasting* (Chicago: Follett, 1970). See also the articles, charts, and summaries that pertain to radio from 1929 through 1948 in Lichty and Topping, *American Broadcasting* (2).

GROWTH AND AFTER THE WAR

Each year, the Federal Communications Commission, *Annual Report* (Washington, D.C.: GPO, annual), contains detailed breakdowns of station growth. *Broadcasting Yearbook* (1) also has figures on radio billings, set sales, and numbers of stations over the years. For a detailed narrative of business developments during the first decade of the golden age, particularly as they pertain to RCA, see Archer, *Big Business and Radio* (2), Chapters 16–20.

PROGRAMMING

Two books serve as encyclopedic references for radio programs and personalities: Frank Buxton and Bill Owen, *The Big Broadcast: 1920–1950* (New York: Viking Press, 1972), and John Dunning, *Tune in Yesterday: The Ultimate Encyclopedia of Old Time Radio, 1925–1976* (Englewood Cliffs, N.J.: Prentice-Hall, 1976). Howard Koch wrote the radio adaptation of the 1938 broadcast of *War of the Worlds* and a book on the whole incident titled, aptly enough, *The Panic Broadcast* (New York: Avon, 1971), which includes the script for *War.* One of the great comedians of the period, Fred Allen, told about the development of his program and his views on network executives in *Treadmill to Oblivion* (Boston: Little, Brown, 1954); this book includes samples from Allen's scripts. Mary Jane Higby describes acting in the soap operas in *Tune in Tomorrow: Or How I Found the Right to Happiness with Our Gal Sunday, Stella Dallas,*

John's Other Wife, and Other Sudsy Radio Serials (New York: Cowles, 1968). Jack Armstrong, Tom Mix, The Lone Ranger, and all the rest of the greats are in Jim Harmon, *The Great Radio Heroes* (Garden City, N.Y.: Doubleday, 1967). Harmon also wrote *The Great Radio Comedians* (Garden City, N.Y., Doubleday, 1970). Ben Gross gives a critic's eye view of the golden age in *I Looked and I Listened: Informal Recollections of Radio and TV,* rev. ed. (New Rochelle, N.Y.: Arlington House, 1970). Edward R. Murrow's career (and to a large extent the development of network radio news) is the subject of Alexander Kendrick, *Prime Time: The Life of Edward R. Murrow* (New York: Avon Books, 1969). Murrow's boss at CBS, Paul White, relates the history of radio news in *News on the Air* (New York: Harcourt Brace Jovanovich, 1947). Gary Paul Gates tells a somewhat different version in *Air Time: The Inside Story of CBS News* (New York: Harper & Row, 1978). A. A. Schechter, with Edward Anthony, describes NBC news operations in *I Live on Air* (New York: Stokes, 1941).

PROBLEMS

George E. Lott, Jr. has written "The Press-Radio War of the 1930s," *Journal of Broadcasting,* 14 (summer 1970), pp. 275–286. Mary Traud describes Petrillo's ban on recordings in "Petrillo's War," an article in the summer 1978 issue (vol. 11, no. 4) of *Journal of Popular Culture.* The broadcasters' battles with ASCAP and their formation of NAB and BMI are the subjects of David R. Mackey's "The Development of the National Association of Broadcasters," *Journal of Broadcasting* 1 (fall 1957), 305–325. For the Mayflower decision, the Fairness Doctrine, the U.S. Supreme Court decision in the network case, and the blue book, see Kahn, ed. *Documents of American Broadcasting* (2).

FM RADIO

Lawrence Lessing wrote *Man of High Fidelity: Edwin Howard Armstrong* (New York: Lippincott, 1956), a fine biography, even if somewhat biased in favor of its subject.

4

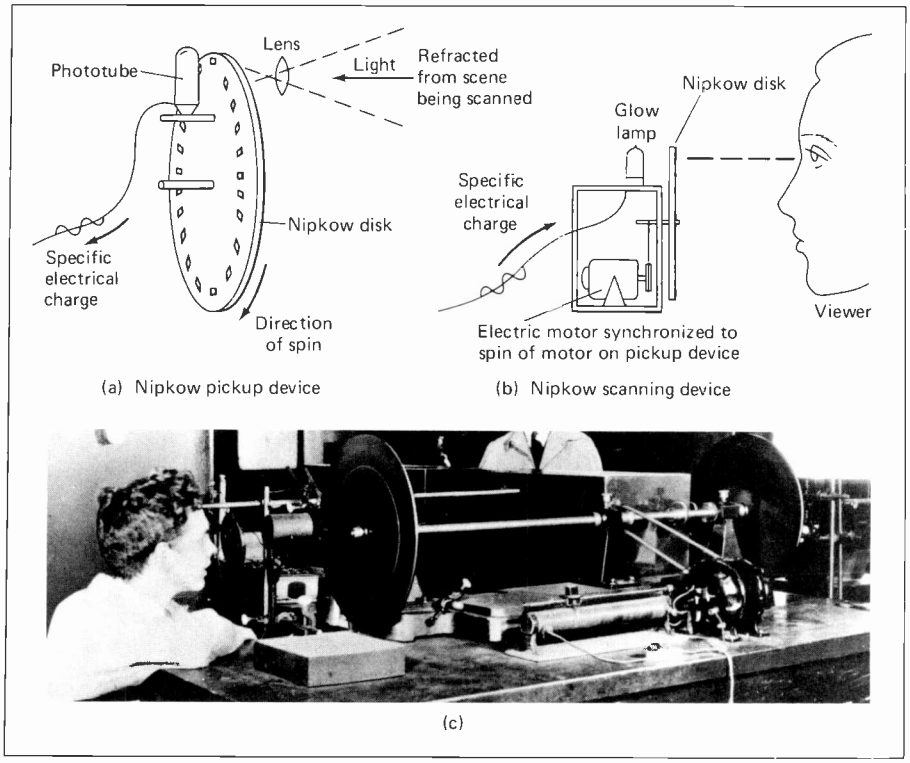
Rise of Television

By 1948, radio had enjoyed the privileged status of an only child for 28 years. But in that year, a smarty pants kid, television, began to emerge as the dominant national medium. Today television, though a little long in the tooth to still qualify as a *Wunderkind,* is entering its fourth decade as the glamour medium. This is the story of television's 30 years—the development of television as a broadcast medium, the evolution of television programming, the adjustments made by radio to exist in the age of television, the fear and corruption that pervaded broadcasting in the decade of the 1950s, and the reaction to that decade in succeeding years.

Development of Television

The crucial technical process on which modern television is founded is **scansion**—the systematic and continuous translation of minute parts of a scene into specific electrical charges suitable for transmission and retranslation into a series of pictures that give the illusion of motion.* In 1884, Paul Nipkow, a German, developed a device that would scan a picture. Nipkow's scanning disc set off a whole line of research based on mechanical scansion—television systems that required spinning discs. Among the experimenters were E. E.

* See Chapter 11.



Photograph courtesy of AT&T Photo Center. Used by permission.

Figure 4-1. Nipkow Scanning Disk. (a) The Nipkow pickup device ("camera") consisted of a flat spinning disk with a ring of small holes at increasing distances from the edge. When the disk was spun, each hole allowed, in its turn, a separate bit of picture information—light reflected from a part of the physical scene being scanned—to reach a phototube. This phototube generated a current that varied with the amount of light falling on it. Thus each bit of picture information was translated by the element into a specific electrical charge. (b) These charges could be fed by wire to another scanning disk that acted as a viewer. The electrical charges illuminated the viewer glow lamp or discharge lamp and the viewer disk spun in synchronization with that of the pickup device. Someone facing the viewer scanning disk at eye level with the glow lamp would then see a rough image of the scene being scanned. (c) The photograph shows an early research apparatus based on the scanning disk. The viewing disk is at left; the pickup disk at right.

Fournier d'Albe, C. F. Jenkins, and John Baird. Fournier d'Albe, a French scientist, conducted experiments in the early 1900s. Jenkins, an American, transmitted motion pictures via radio waves in June 1925. And in England, Baird demonstrated the first true live television picture on January 26, 1926. Jenkins and Baird both started companies based on their systems. In 1929, Baird began broadcasting, and the British Broadcasting Corporation (BBC) took over television transmissions three years later.

Figure 4-2. Dr. Vladimir K. Zworykin. Dr. Zworykin holds an early model of his iconoscope.

But the future of television lay in electronic, not mechanical, scansion. Dr. Vladimir K. Zworykin, a Russian-born American, was a research scientist for Westinghouse in Pittsburgh. In 1923, Zworykin demonstrated a crude, but working all-electronic television system based on a camera tube that he named the **iconoscope.** Three years later he developed a television receiver using a form of cathode ray tube that he called a **kinescope.**

At this point, television was still technically primitive by today's standards. Resolution (amount of picture information) was only 30 horizontal lines, as compared to today's 525 lines. The picture was not very sharp. In 1930, the television research activities of Westinghouse, General Electric (GE), and Radio Corporation of America (RCA) were consolidated in RCA's Electronic Research Laboratory, Camden, New Jersey. This brought together Zworykin and some 40 other engineers. Work proceeded at a quick pace on the iconoscope, the cathode ray receiver, resolution, and other problems of electronic television. In 1936, RCA signed on experimental television station W2XF, New York, and continued developmental work. By 1939, RCA achieved a 441-line resolution, and that year the company inaugurated a limited but regular schedule of programming,* including a live telecast of President Franklin D. Roosevelt opening the New York World's Fair.

Meanwhile, others had been active in television development: American Telephone and Telegraph (AT&T), the Columbia Broadcasting System

* The BBC had begun regularly scheduled telecasts in 1936.

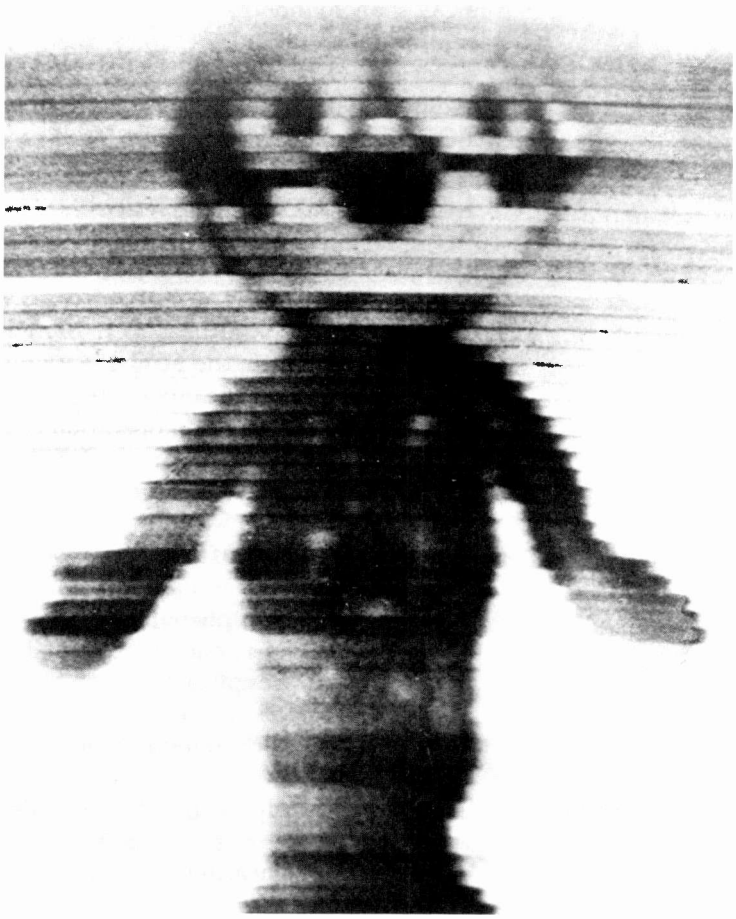


Figure 4-3. 1928 Television Picture. In 1928, RCA-NBC cameras ran experimental transmissions in mid-Manhattan, including this 60-line version of Felix the Cat.

(CBS), Allen B. DuMont Laboratories, Philco Radio and Television Corporation. By 1937, 17 experimental television stations were operating.

One individual who played a major role in television research was Philo Farnsworth. He had outlined a system of all-electronic television as early as 1922 when he was a high school student, had filed patent application for his system in 1927, had demonstrated a working model of his image-dissector camera to financial backers in 1928, and by 1932 had built a strong patent structure in the field of electronic television. Farnsworth did so much vital basic research in the field that he was able to force RCA to break its tradition of never paying royalties. After Farnsworth refused to sell his patents outright, RCA entered into a licensing agreement for their use in 1939.

The development of television transmission standards was a controversial issue. In 1938, the Radio Manufacturers Association (RMA) recommended a set of standards to the Federal Communications Commission (FCC). The

FCC soon found that the broadcasting trade was actually divided on the matter. In 1940, the FCC cooperated with the RMA in forming the National Television System Committee (NTSC) composed of engineers from across the industry. The NTSC drew up standards for black and white television and the FCC adopted them in April 1941. Those standards called for 18 channels located between 50 and 294 MHz in the very high frequency (VHF) band (see Chapter 9). Five years later the commission reduced the number of channels to 13, then to 12 in 1948 by deleting channel 1. Except for the number of channels, those 1941 standards are still in force: each channel, 6 MHz wide; amplitude modulation (AM) of video and frequency modulation (FM) for audio; 525 horizontal lines of resolution; and 30 frames (complete pictures) per second. In 1945, the FCC adopted its first table of assignments, distributing television channels among 140 cities for a total of 500 stations.

Commercial television operation began July 1, 1941. A wartime freeze on station and receiving set construction was imposed in 1942. Of the ten pioneer television stations, only six continued through the war, those broadcasting only four hours per week to the 7000 or so sets in existence. Even after the freeze was lifted in 1945, shortages of materials continued, and station and set construction did not resume for almost two years. In 1947, however, television began growing at a phenomenal rate. Television set sales soared. Television license applications flooded the FCC. It became evident that there were going to be many more applications than channels. In 1948, the commission ordered a **freeze** (i.e., halt) on processing of applications for new television stations to give it time to work something out.

SIXTH REPORT AND ORDER

The freeze was supposed to last only six to nine months. In fact, however, the issues involved were so complex that the freeze lasted a total of 42 months. After a series of hearings, conferences, and negotiations, the FCC issued the *Sixth Report and Order*[1] on April 14, 1952, and on July 1 resumed processing applications for new stations. The freeze was over.

The *Sixth Report and Order* was a new plan for U.S. television. Under the order, existing VHF channels 2–13 (54–216 MHz) were to remain. Seventy additional channels were opened in the ultrahigh frequency (UHF) band, numbered 14–83 (470–890 MHz). The table of assignments was revised to provide for 2053 stations in 1291 communities; 242 of these channel assignments were reserved for noncommercial educational use. Standards were established to reduce the possibility of interference among stations: maximum power outputs were specified, and minimum distances were set separating stations operating on the same or adjacent channels. With some modification and expansion, this is the plan under which the television broadcast service presently operates. In 1977, the Federal Communications Commission initiated proceedings to add one more VHF channel in each of four cities by **short-spacing,** that is, by allowing stations on same or adjacent channels to be built closer together than existing minimum distance standards allow. Commercial television licensees opposed this plan.

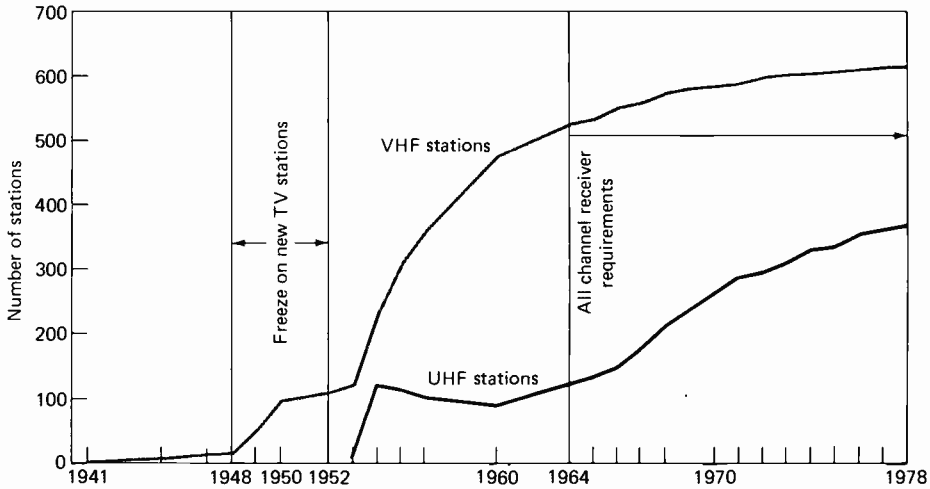


Figure 4–4. Number of VHF and UHF Television Stations Operating: 1941–1978. (However, the FCC *12th Annual Report* commented that "six television stations were on the air during the war.") All figures are as of January 1, except 1978, which is as of March 10.

SOURCES: Federal Communications Commission, *8th Annual Report* (Washington, D.C.: GPO, 1942); *Television Factbook No. 42, 1972–1973 Ed.* (Washington, D.C.: Television Digest, Inc., 1973), p. 67a; *Broadcasting Yearbook 1978* (Washington, D.C.: Broadcasting Publications, 1978), p. A-7; and *Broadcasting*, Apr. 24, 1978, p. 68.

GROWTH

During the 18-month period between July 1, 1952 (the end of the freeze) and January 1, 1955, an astounding total of 308 television stations signed on the air. There were two good reasons for the rush for television licenses: (1) audiences and (2) money. In 1948, there were 190,000 television sets in use in the United States. In 1955, the number was 32,500,000; in just seven years, 65 percent of all homes had acquired at least one television set. In 1948, total television station revenue was $6.2 million; in 1955, station revenue had multiplied over 6000 percent to $372.2 million.

The networks also grew rapidly. The American Broadcasting Company (ABC), the Columbia Broadcasting System (CBS), and the National Broadcasting Company (NBC) began to buy television stations and to sign up affiliates. DuMont also formed a television network and began to look for affiliates.* As the telephone company extended its coaxial cable,† the networks expanded their reach from New York to Washington, D.C. in 1946, to

* The Mutual Broadcasting System did not go into television.

† The number of radio frequencies required for television channels is so great that normal telephone lines do not have the capacity to carry them. Coaxial cable, however, has the potential to carry many television channels, an important requirement for television network relay.

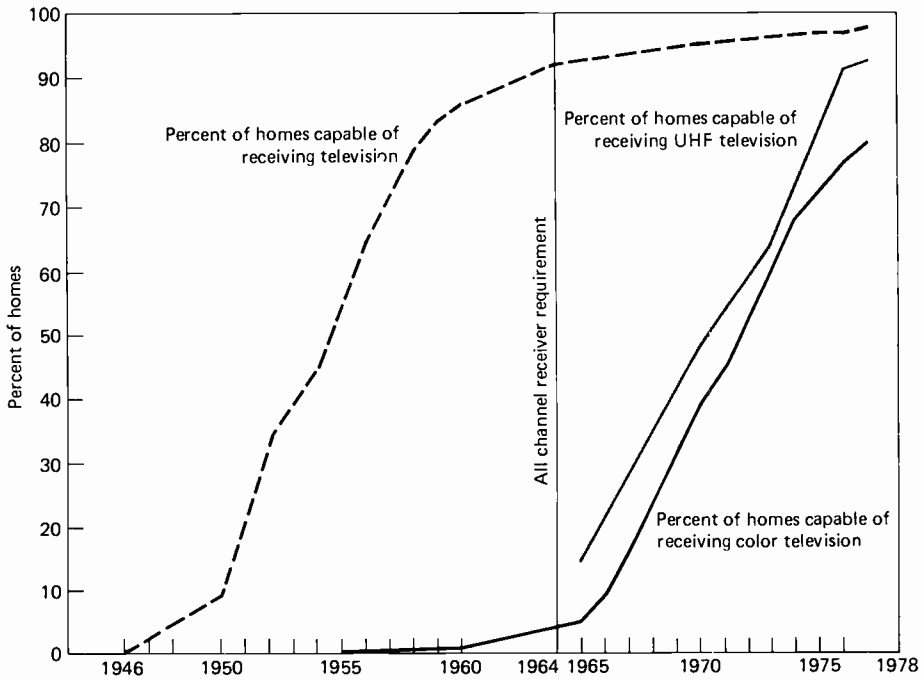


Figure 4-5. Percentage of American Homes with Television, UHF Television, and Color Television. The growth rate of television-equipped homes in the 1950s is nothing short of astounding. The growth curve for UHF and color television is almost as steep but was delayed 15 years until Congress passed the all-channel receiver bill and the cost of color receivers began to drop. Figures for 1965, 1970, and 1974 are based on Nielsen data; for 1976 and 1977, on Arbitron Television Census. The Nielsen figures measure the portion of their sample homes that can receive a UHF station, while the Arbitron figure is a pure penetration figure based on ownership of a television with a UHF dial only. There is not necessarily a UHF station in the coverage area. The Nielsen figures are in a sense understated, because some markets have no UHF stations.

SOURCES: Correspondence from NBC, Aug. 22, 1977, and *Nielsen Television 1977* (Northbrook, Ill.: A. C. Nielsen Co., 1977), p. 7. Arbitron figures for color and UHF in 1977 reported in *Broadcasting*, 27 Feb. 1978, p. 28. Nielsen figure for total homes capable of receiving television in 1977 reported in *Broadcasting Yearbook 1978* (Washington, D.C.: Broadcasting Publications, 1978), p. B-176.

Boston in 1947, to the midwest in early 1949, and to the West Coast on September 10, 1951. In the meantime, affiliated stations not on the cable received network programming as kinescope films.* By 1955, CBS and NBC had developed strong, nationwide lineups of affiliates in major markets. ABC had many fewer affiliates. Over three times as many stations carried the DuMont net-

* A kinescope film is made by aiming a motion picture camera at the face of a high-intensity television picture tube and filming a program as it is telecast.

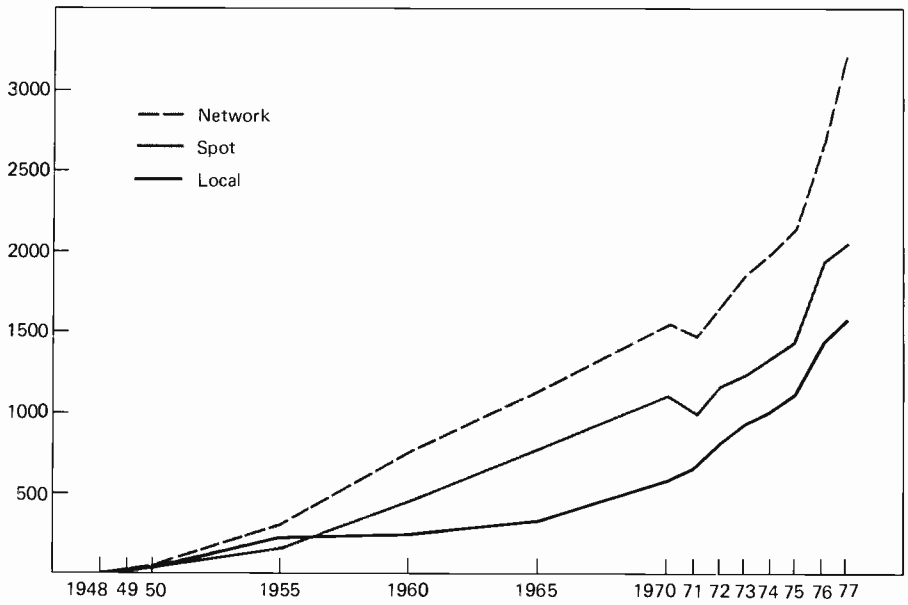


Figure 4-6. Television Gross Advertising Revenue: 1948–1977. In 1948, the FCC reported only business sold directly by stations. Part of the increase in all categories between 1955 and 1960 is due to a change in the method of computation.

SOURCES: Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual), and *TV Broadcast Financial Data—1976,* Public Notice 87928 (Washington, D.C.: FCC, 1977). Figures for 1977 based on percentages of increase predicted in U.S. Dept. of Commerce, *1978 U.S. Industrial Outlook* (Washington, D.C.: GPO, 1978), pp. 346–347.

work as carried ABC, but DuMont had trouble getting affiliates in large cities, and the network lost money. The year 1955 was Dumont's last as a network. At the same time the networks themselves expanded, so did network advertising billings. In 1948, total network billings were $2.5 million; in 1955 they were $308.9 million, up over 12,300 percent.

Gradually the growth rate slowed. It has not stopped, and overall television billings have increased every year except 1971, when a legal ban on broadcast cigarette advertising began and billings decreased by 2 percent from 1970 levels.

UHF TELEVISION

Research and development in utilization of the radio frequency portion of the electromagnetic spectrum (see Chapter 9) during World War II had shown the feasibility of using the UHF band (300–3000 MHz) for transmission and reception. When the *Sixth Report and Order* was issued, expansion of the table of assignments was based on the opening of 70 new UHF channels as part of the regular television service, and many persons applied for UHF stations.

But the cards were stacked against UHF licensees. First, all other things

being equal, the signals for UHF stations do not travel as far as those from VHF stations. The FCC had thought to correct this discrepancy by allowing UHF stations to operate with 5,000,000 watts of power for the video signal, almost 16 times more than the maximum allowed for any VHF station. But no UHF transmitters were available to operate with such high power. Thus UHF stations had shorter range and reached fewer viewers than VHF stations.

Second, the 108 stations that were on the air during the freeze were VHF stations. During the three and one-half years of the freeze, the number of homes with television sets had gone from 1.6 million to 17.3 million. Naturally, the television sets were equipped to pick up VHF television stations only, so when UHF stations went on the air no one was able to watch them.

Third, the major networks grabbed most of the big city VHF stations as affiliates, leaving many of the UHF stations as independents. The public was primarily interested in receiving network fare, and therefore did not buy con-

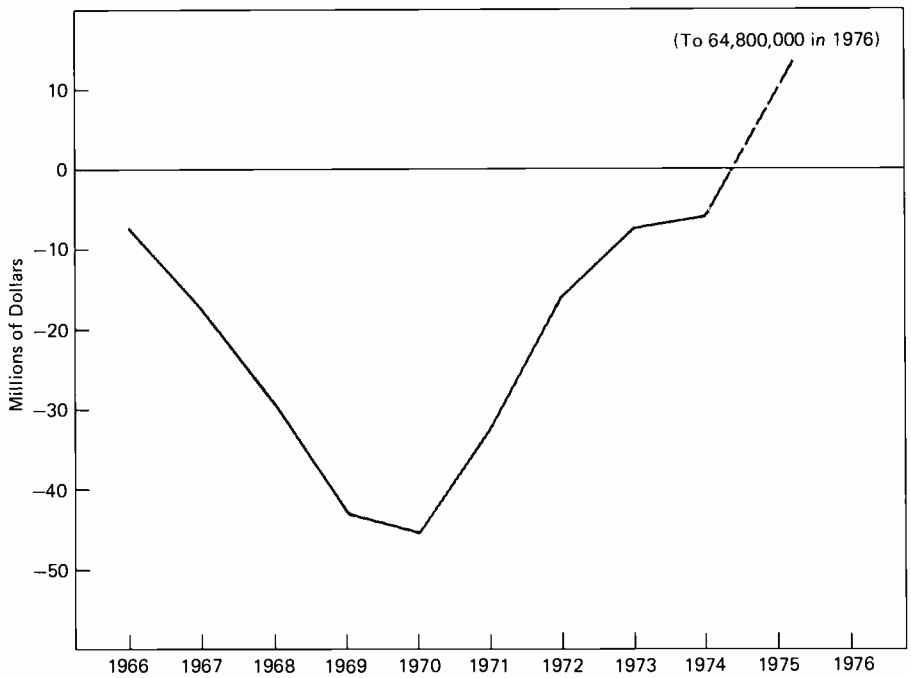


Figure 4-7. UHF Television Station Income: 1966–1976. UHF stations as a group lost more and more money, bottoming out in 1970. However, at that point the FCC's efforts to make commercial UHF television viable began to pay off, and UHF stations lost less and less money. The year of the big breakthrough was 1975.

SOURCES: Federal Communications Commission, *Annual Reports* (Washington, D.C.: GPO, annual), and *TV Broadcast Financial Data—1976,* Public Notice 87928 (Washington, D.C.: FCC, 1976).

verters to adapt existing television sets to pick up both VHF and UHF stations. Manufacturers continued to build television sets that would receive only VHF channels; the set-makers offered UHF reception capability as an extra cost option that few buyers took.

UHF licensees found it nearly impossible to compete with VHF stations and lost money. Many let their stations go dark and turned licenses back to the FCC. By 1956, the pattern of UHF television station failure was clear, and the FCC became concerned. The commission conducted transmission tests in New York City in 1961 and 1962 and found that high power transmission was feasible and did extend a UHF signal to a distance comparable to that of VHF.

At the commission's request, Congress adopted a law allowing the FCC to require manufacturers to build all television receivers with both VHF and UHF reception capability. April 30, 1964, was the date by which the industry had to meet the requirement. The new all-channel receivers still discriminated against UHF, however. The VHF dial had 12 click-stop positions, one for each channel; the UHF dial turned continuously, like a radio dial, with no clicks. It was contended that the public did not watch UHF stations because the UHF dial was more difficult to tune. Therefore rules were adopted in 1970 to make UHF tuning comparable to that of the VHF dial. In 1966, the commission revised the table of assignments to allow for additional UHF television stations.

Eventually, FCC efforts to make commercial UHF viable began to pay off. During the first half of the 1970s, UHF television stations, as a group, lost less and less money each year until 1975, when they showed a total profit of $9.9 million. Still, the average before-tax income for UHF stations lags far behind that of VHF stations, and a number of UHF stations lose money.

COLOR TELEVISION

Color television experimentation began as early as the late 1920s. Throughout the 1940s, various companies worked on and pushed systems of color television, but the main rivalry was between RCA's dot sequential system (see Chapter 11) and CBS's field sequential system. In 1949, as a result of a petition by CBS to the FCC, the major television interests demonstrated their color television systems. CBS's system was mechanical. Largely the work of Dr. Peter Goldmark, the CBS field sequential system used three filters—red, blue, and green. Each filter rotated past the camera pickup tube in rapid succession. When synchronized with similar filters on the receiver picture tube, the viewer's eye would see the full range of natural colors. Originally, the CBS system had needed an 18 MHz channel, but CBS refined it to operate in the 6 MHz channel of existing VHF channels. The field sequential system was incompatible; monochrome (black and white) receivers would get a distorted picture when tuned to field sequential color transmission. However, existing monochrome television sets could be adapted to receive black and white versions of color transmission for about $10, and to receive *color pictures for about*

$45! Further, CBS contended that the field sequential system could eventually be refined to be completely electronic, eliminating the mechanical color disc. Of all systems demonstrated, CBS's appeared to have clearly the best color.

The FCC adopted the CBS color system effective November 20, 1950. The television industry was unhappy; the system was mechanical and incompatible. Before the order could go into effect, RCA filed suit against its adoption. A number of manufacturers and service companies did the same. The suit delayed implementation of the order for six months while the case worked its way up the federal court system. On May 20, 1951, the Supreme Court upheld the FCC.[2] On October 19 the director of Defense Mobilization halted color receiver production because of the Korean War. CBS had broadcast the first network color program with the new system in June and continued technical development. Congress began to look askance at the delay in introduction of color television, and in March 1953, the ban on color television equipment manufacture was lifted.

Meanwhile, RCA and its allies had been busy. Another all-industry National Television System Committee (NTSC) of engineers was formed to study and recommend standards for an electronic, compatible color television system. By mid-1953, NTSC had completed its work, and in June, RCA petitioned the FCC to adopt NTSC standards. In December, the FCC approved the electronic system.

The first color television sets were expensive. RCA's basic color television receiver with 15-inch screen retailed for $1000 in 1954, and no $45 conversion kits were made available. Additionally, very few stations were equipped for full-color telecasting. The public did not rush out to trade in old monochrome receivers for new color television sets. In 1955 there were only about 5000 color sets in use in the entire United States. Even ten years later, less than 5 percent of all television homes were color equipped. In 1953, CBS and NBC each carried over 22 hours of color programming weekly. Both cut back, and by 1958 only NBC still broadcast a regular schedule of color programs. Then in the mid-1960s, the prices of color receivers dropped somewhat and sales picked up. Color set sales for the first nine months of 1965 doubled those of the same period in 1964. A new camera pickup tube, the **Plumbicon,*** was introduced, resulting in cameras that were easier to set up and maintain. The networks increased color telecasting, and in September 1966, began full-color programming in prime time. More and more stations bought and used color equipment; national advertisers demanded it. By 1967, color television was an unstoppable trend, and by 1969 one-third of all television homes in the United States were color equipped. Nine years later, color set penetration had gone over 80 percent.

* Plumbicon is a registered trademark by N. V. Philips.

Television Programming

In the earliest days of television, there was no large backlog of syndicated programs to fill a station's schedule. For much local programming, stations used feature films of the 1930s and early 1940s. These were the only films Hollywood had made available to its young rival medium, so that television acquired an old-movies reputation. Some stations even ran silent films, adding narration and sound track. Some stations used short films of well-known bands, vocalists, and singing groups and put them together in the form of a visual disc jockey show. Most stations ran lots of film travelogues.

But when the network was dark (not sending programs down the line) and all the old movies and travelogues had been aired, a station had little choice other than to devise and air its own programs. There was no videotape either, so they were all live. The stations tried everything: locally produced soap operas; cooking programs; interview shows; the man/lady who played the piano/organ/both and sang/recited poetry; local talent shows; children's programs, hosted by Captain/Uncle Somebody-or-other, usually featuring old black-and-white movie cartoons.

At the network level there was a great deal of experimentation in these early days, attempts to find programming forms suitable for the visual medium. These network programming efforts, however, had to await the spread of AT&T's coaxial cable. On June 24, 1946, the Joe Lewis-Billy Conn fight for the heavyweight boxing championship was broadcast on an ad hoc network to four cities on the East Coast. Sponsored by Gillette Safety Razor Company, the broadcast reached an estimated 100,000 viewers and was reported to have convinced skeptics that television was here to stay. Bristol-Myers became the first advertiser to sponsor a network television series. It was called *Geographically Speaking* and started October 27, 1946, on NBC, which, at that time, was a two-station network.

In the early days a network would often take a radio series and adapt it for television. Some series were **simulcast,** that is, aired concurrently on both radio and television. Soon the first network superstar programs emerged. In 1948, the *Texaco Star Theater* (comedy-variety show) went on the air, launching the television career of Milton Berle. "Uncle Miltie" was so popular that he became known as "Mr. Television." That same year *Toast of the Town* began, produced and hosted by Ed Sullivan. This variety program was almost straight vaudeville. Later renamed the *Ed Sullivan Show,* it ran for 22 years, ten of which it was rated as one of the 20 most popular programs. *Friday Night Frolic* began early in 1949 on the combined NBC and DuMont networks. Soon renamed *Your Show of Shows,* this program starred Sid Caesar and Imogene Coca; and people would desert restaurants, theaters, and parties on Saturday nights to go home to watch it.

There was some reliance on film programming from the very beginning,

but much of network television was live and produced in New York. Most of the early dramatic programs were episodic series—a complete story each week, evolving out of the same situation, with the same main characters. During the early 1950s another type of dramatic program developed, the anthology series. Here, the program title remained the same, but each program featured a completely different play—different characters, different actors, different stories, different situations. The programs included *Philco-Goodyear Playhouse, Kraft Television Theater, Playhouse 90,* and *Studio One,* and the plays they produced catapulted their young, previously unknown authors into prominence—Paddy Chayefsky, Rod Serling, Reginald Rose, Tad Mosel, Horton Foote, and others. Some of the plays were subsequently made into fine motion pictures— *Requiem for a Heavyweight, Marty, Dino, Twelve Angry Men, Patterns.* The anthology series reached their peak in 1953, but by 1956 they were all but gone, victims of changing audience taste, sponsor script interference, and the economics of syndication. This brief period of live, anthology series drama is often referred to as television's **golden age.** This may overstate the case; much—perhaps most—of the writing was mundane. But the plays were live, they were theater, they were peculiarly television. And when they were good, they had a quality that transcended their time, indeed, that is still evident more than 20 years later.

Overall trends in network programming began to emerge in the early and mid-1950s. In the latter part of 1948, a number of highly popular radio programs and stars moved to CBS Radio: *Amos 'n' Andy,* Jack Benny, Edgar Bergen, Red Skelton, and others. The comedians had moved to take advantage of low capital-gains tax rates. CBS had suggested the idea to Music Corporation of America, agent for many of the comedians, and the exodus became known as CBS President William S. Paley's "talent raid." The move quickly paid off for CBS, putting the radio network solidly ahead of NBC in the critical 7–8 P.M. period as early as January 1949. When time came to beef up its television network schedule, CBS stuck with success. Its television forms and formats were those of radio—fully sponsored, regularly scheduled programs. Its programming nucleus was its stable of big-name comedians. CBS's strategy worked, and by 1953 it captured the lead in prime-time network television ratings.

NBC's programming reflected the thinking of Sylvester L. "Pat" Weaver. Weaver, a former advertising executive, joined NBC in 1949 as vice-president in charge of television. In December 1953, he became president of NBC and worked to shift control of network programs from sponsors and their advertising agencies* to the network. He pushed for a new programming form, the

* The practice of advertiser/agency control of sponsored network programs had originated with AT&T's concept of toll broadcasting, was inherited by NBC after RCA's purchase of WEAF, became general network practice, and transferred to television as standard procedure.

magazine concept. The network would produce and control the program and sell time within it to advertisers for commercial messages. Each program would have a number of different advertisers. Using this concept, NBC started the *Today* and *Tonight* shows, both still in existence and still audience-ratings leaders in their time slots. Another Weaver idea was the **spectacular.** Spectaculars were one-time programs made with extra care and money, preceded by a larger-than-normal publicity campaign, and designed to stand out from the usual programming, to create talk and excitement.

ABC had been the weakest of the three major radio networks. It began video operations in 1948 and found itself even weaker, relative to CBS and NBC, as a television network. In 1951, ABC entered into negotiations for a merger with United Paramount Theaters, the former exhibition arm of Paramount Pictures. The merger was completed in 1953, bringing Paramount's working capital and former Paramount executive Leonard Goldenson into ABC. Goldenson used his Hollywood contacts to get the major studios interested in program production. Using the same themes and formulas popular among movie audiences in the 1930s and 40s—cowboys, cops and robbers, detective stories—ABC played a catch-up game. Its first big successes were *Cheyenne,* produced by Warner Brothers, and *Disneyland,* produced by the Walt Disney organization. ABC-TV based its programming strategies on action-adventure dramatic series—*The Untouchables, 77 Sunset Strip, The Rebel, Rifleman, Hawaiian Eye,* all were violent, but all attracted audiences. The network said it gave the television audience what it wanted, that audience members "voted" for violence with their television dials in a form of "cultural democracy." In spite of having fewer and weaker affiliates in the large markets, ABC-TV worked to close the ratings gap between itself and CBS-TV and NBC-TV. In the 1975–1976 season, ABC-TV actually led the other two commercial networks in overall prime-time ratings; ABC continued its rating dominance into 1978, picking up stronger affiliates on the way. Its days of being a weak third seemed to be over.

All three network programming trends have left lasting impressions on the shape of network television. The basis of the prime-time schedule is still the regularly scheduled program. On the other hand, few programs are completely sponsored; the network controls the programs, and advertisers buy spots to run commercials within them. All three networks have telecast spectaculars (now called **specials**) and magazine format programs (e.g., ABC's *Good Morning America* and CBS's former late-night *Joey Bishop Show*). Film production has displaced live production of prime-time programs (although there has been a trend toward electronic production on videotape since 1969). The television production center has shifted from New York to Hollywood, and the filmed action-adventure series is a staple of network prime-time programming.

Many of the major program types developed in radio have proved successful in television. Thus over the years in television we have watched west-

erns, spy stories, mystery series, situation comedies, musical programs, comedy-variety programs, game and quiz shows, soap operas, and all the rest. Some program types that were long-running features on network radio, however, have not been regularly scheduled on commercial network television for years and appear now only sporadically as specials—for example, experimental drama, classical music programs, and programming for minority interests, such as the old NBC radio program for farmers, *National Farm and Home Hour.*

Television series are, on the average, much shorter lived than radio series. A television series is a veteran if it survives five years, but many prime-time radio series ran ten or 15 years or even longer. Because its program series turnover is higher, television is much more cyclical than radio. A new program type becomes popular one season, and it has a host of imitators the next. For example, in the early 1970s, the popular, so-called "social consciousness" situation comedies multiplied by means of the **spin-off:** secondary characters from one series would become the basis upon which new series were built. *All in the Family* spawned *Maude* and *The Jeffersons; Maude* spun off *Good Times,* and so on.

Television, on the other hand, has popularized program forms that did not exist on radio, such as children's animated cartoons and feature films.* First introduced on network television in 1961, feature films proved to be extremely popular. They also had the advantage of capturing and holding audiences for long periods of time. This inspired the networks to lengthen other prime-time programming to one hour, 90 minutes, and even up to four hours on special occasions.† Sports events proved much more popular on television than on radio, from the early *Friday Night Boxing* and wrestling programs to sophisticated coverage of golf, tennis, football, baseball, Olympic games, and other sports. ABC has been especially aggressive in programming sports.

The forerunners of today's early evening network television news programs began in the late 1940s. The 7:30 E.S.T. CBS *Douglas Edwards with the News* went on first in 1948. NBC's *Camel News Caravan* with John Cameron Swayze at 7:45 E.S.T. began the next year, and ABC and DuMont soon followed with their own newscasts. These newscasts were 15 minutes long, and the networks contracted with newsreel and other film organizations for newsfilm. The networks strengthened their news operations during the 1950s, adding resources and personnel and newscasts at other times during the broadcast day. In 1963, CBS and NBC increased the length of their evening newscasts to 30 minutes; ABC followed four years later. Polls revealed that the public saw television as the single most-relied-upon news medium as early as 1959 and as the most believable news medium in 1961. In 1976, all three commercial television networks prepared to lengthen evening newscasts to one hour. Affili-

* The stories of feature films were sometimes adapted for radio, as in *Lux Radio Theater* (see Chapter 3).

† See Chapter 6 for a discussion of block programming and audience flow.

ates, however, protested, saying expanded newscasts would take away 30 minutes of extremely valuable, salable time. By November, network news expansion seemed to be a dead issue.

Broadcast news also expanded in two other areas—the documentary and on-the-spot coverage. Edward R. Murrow, along with Fred W. Friendly, began network television's first news documentary series, *See It Now,* in 1951 and established standards by which television documentaries are still measured. NBC broadcast its *Victory at Sea* series in 1952, recounting U.S. naval operations in World War II. ABC's documentary efforts began in the late 1950s. By 1961, all three networks were producing stimulating, vital news documentaries. Many local stations began to produce documentaries, too. Some of television's finest work has been its live coverage of various events—national political conventions; elections; presidential inaugurations; the Kefauver Crime Committee Hearings in 1951; the Army–McCarthy Hearings in 1954; the so-called "great debates" between presidential candidates in 1960 and 1976; the deaths and funerals of President John F. Kennedy, Senator Robert Kennedy, and Reverend Martin Luther King, Jr.; coverage of U.S. space efforts; the Watergate hearings.

Radio in the Age of Television

In 1950, "radio" still meant networks, national advertisers, big programs, big stars. But with the sharp increase in the number of radio stations since 1947 and the phenomenal growth of television, it was evident that radio was going to have to change. Audiences and revenues had already begun to drop.

The answer seemed to lie in a programming form as old as radio itself, the **disc jockey** or **deejay** show. Independent stations had featured music-and-talk deejay programs at least as far back as 1935. Now, some stations began to convert to a total deejay format, using it as a basis to **specialize.** In effect, these stations were saying that it was useless to compete with television for a general audience. Instead, they tailored their progamming to reach a specific segment of the audience, then sold advertising time to companies that wished to get commercial messages to that specific segment. One such radio programming specialization spread during the years, 1948–1952—the so-called "Negro radio station." These stations used black deejays, played rhythm 'n' blues and gospel music, and programmed news and features of interest to the black community.

About 1950, another specialization evolved and spread—the Top 40 radio station. Pioneered by group station owners Todd Storz and Gordon McLendon, Top 40 stations aimed at the youth market, an audience in its teens and early twenties. The Top 40 format called for emphasis on the most popular single recordings, for a rapid fire pace, and for heavy promotion, both on-air—contests, singing station identifications, and so on—and off-air, in other

media. About this same time, a new type of popular music arose that became known as "rock 'n' roll." Top 40 radio was the perfect setting for this music. As the early and mid-1950s ground on, city after city fell under the spell of raucous, razzle-dazzle, rocking Top 40 stations, and their near-fanatic youth audiences pushed them to the top of the audience-ratings race in nearly every market. Medium and large markets acquired two, three, even four Top 40 stations. After some of these failed, radio programmers realized that the lesson of Top 40 radio's success was not Top 40 itself, but specialization. In the 1960s, radio formats began to diversify—country music, beautiful music, all-talk, all-news, and so on.

Network radio's adjustment to the age of television was more difficult than that of local stations. The importance, the vitality of radio had shifted from networks to stations, and it became obvious that if radio networks were to stay in business they would have to adjust to the needs of the stations. NBC introduced *Monitor* in 1955. A radio version of Pat Weaver's magazine concept, *Monitor,* was an attempt to adjust network programming to the tune-in/tune-out listening patterns of modern radio audiences. It ran forty hours (later 25), Friday night through Sunday. Its slogan was "going places and doing things," and it covered many subjects in many areas of interest in short capsules of information. ABC and CBS began their own versions. NBC tried a weekday version of *Monitor.* Meanwhile, the Mutual Broadcasting System (MBS) and ABC had reduced radio network service to capsule news and features, usually on the hour and the half hour, giving the rest of the hour to affiliates. First NBC, then CBS adopted this pattern for weekday programming.

In 1968, ABC took a further step in adjusting its radio network to the needs of affiliated stations. It offered four separately programmed networks, each tailored to a different type of modern radio station format. None of the ABC networks dominated a station's weekend as did *Monitor;* "needs 84 percent to 196 percent less time than any other major network today," ABC said in trade press advertising. MBS followed ABC's lead four years later, adding a program service for black stations and another for Spanish-language stations (dropped after seven months). On July 2, 1973, a brand new organization, the National Black Network (NBN), signed on, originating hourly five-minute newscasts aimed at black stations across the country. NBN soon added sports and features.

In the meantime, NBC changed *Monitor* and finally dropped it in January 1975. NBC retained conventional network service (news and features), and in June 1975, added a second program service, the News and Information Service (NIS). Designed for stations with all-news formats, NIS fed capsule news, background reports, and features throughout the hour, giving affiliates opportunity to insert local news and advertising. Stations subscribed to NIS, paying a monthly fee for its use. NBC could not attract enough subscribers to make it pay and, in November 1976, announced cancellation of NIS for mid-1977. The trend toward network specialization has continued with formation of

National Public Radio in 1970 to serve noncommercial educational radio stations and with numerous regional networks that feed state, farm, and other special interest news and features to affiliated stations.

The FCC's FM nonduplication rule of 1965 hastened the trend toward diversification and specialization in station formats. FM stations began to program popular music. As rock music divided into increasingly esoteric forms, large-market FM stations specialized and appealed to the audiences that those forms generated. By 1970, FM stations successfully competed for ratings with AM stations in some markets. In 1977, FM stations attracted 44.6 percent of the radio audience in the ten largest markets and actually got larger shares than AM stations in four of those markets, Dallas-Fort Worth, Washington, D.C., Philadelphia, and Detroit.

1950s: Decade of Fear and Corruption

The 1950s constituted what was probably the most shameful, scandal-ridden ten years in the short history of radio and television. Within this one decade occurred McCarthyism, blacklisting, FCC corruption, the MBS-Trujillo deal, the quiz show scandals, and the payola/plugola revelations. **McCarthyism,** of course, transcended the field of broadcasting, pervading all aspects of American life. And in dealing with the overall issue of McCarthyism, broadcasting—for once during the 1950s—emerged from a moral problem with something more than poltroon or humbug status—largely, it must be added, through the courage of two individuals. The late Joseph McCarthy, then junior senator from Wisconsin, did not invent the mass paranoia that bears his name. He did profit by it, building a career on finding and purging from the U.S. government people he accused of being or having been Communists. McCarthy's tactics, fed by a growing public fear of atomic attack and internal subversion by Communists, created an aura of universal suspicion and accusation. People and ideas were labeled "Communist" just because they were different. An accusation by itself of being a Communist or Communist sympathizer—whether true or not—was cause enough for the accused to be summarily fired. The careers of many innocent people were ruined. McCarthy was a master at using news media to publicize his activities and thus to build his power base among the people. Few opposed him because McCarthy would brand the opposition "un-American," synonymous in those days with "Communist" or "traitor."

Finally, Edward R. Murrow and Fred Friendly did what others could not or would not do. In 1953–1954, they focused the journalistic eye of a number of *See It Now* programs on McCarthy-inspired accusations of guilt by association. On March 9, 1954, Murrow and Friendly did a program on McCarthy himself, juxtaposing film clips of various speeches the senator had made to show the inconsistencies and illogic of McCarthy's rhetoric. Letters, tele-

grams, and telephone calls flooded into CBS, overwhelmingly favorable toward the program. Senator McCarthy's rebuttal, a personal attack on Murrow, was broadcast by CBS on April 6. McCarthy seemed almost to have designed the program specifically to prove Murrow's points, and the mail ran two-to-one in favor of Murrow afterwards.

Two weeks later, ABC broadcast a series of hearings before the Senate Permanent Subcommittee on Investigations over a dispute between McCarthy and the U.S. Army. The hearings ran 36 days, exposing the real, live McCarthy to many for the first time. On the thirtieth day, McCarthy launched a vicious, unprovoked, and irrelevant attack on a junior member of the Boston law firm of Joseph N. Welch, the Army's lawyer. McCarthy's fall seemed to date from that point. The Senate voted to censure him later that year. In May 1957, he died.

One of McCarthyism's more virulent forms was known as **blacklisting.** And the broadcasting trade was anything *but* heroic in the matter of blacklisting. It worked like this: self-appointed protectors of the public weal, who professed to be concerned that Communist agents were gaining control of the nation's communications channels, would supposedly investigate the background of performers for stage, screen, and broadcasting. They circulated lists of performers alleged to be Communists or Communist sympathizers to producers, sponsors, studio heads, and others. Blacklisted performers lost their jobs and could not get new ones, often without knowing why; few employers would admit to being influenced by the blacklisters. The performers were presumed guilty based on allegations alone. Some never got entertainment work again. Some went through humiliating blacklister-specified rituals of "clearing," usually by publicly admitting they had been Communists (whether or not they actually had been) and by vowing to take a militant anti-Communist attitude from then on. Some committed suicide.

The leading blacklisters in broadcasting included three ex-FBI agents, who published *Counterattack: The Newsletter of Facts on Communism* and the paperback *Red Channels: The Report of Communist Influence in Radio and Television,* and Aware, Inc., publishers of periodical bulletins listing supposed Communists. The blacklists were by no means eleemosynary* activities. Vincent Hartnett, who formed Aware in 1953, checked out names for a fee on request by sponsors and producers. He would also prescribe how blacklisted individuals could clear themselves—again for a fee. He was backed by Laurence Johnson, owner of a supermarket chain in Syracuse, New York. If broadcast programs persisted in using performers blacklisted by Aware, Johnson could pressure the sponsors. Agencies, networks, sponsors, stations—all ran scared, bowing to the whims of Aware, because of the possibility of economic recrimination by Johnson.

* A word meaning of, for, or supported by charity; from the Greek *eleēmosynē* (pity).

John Henry Faulk, radio personality with WCBS, New York, opposed Aware influence in the New York Chapter of the American Federation of Television and Radio Artists, the broadcast performers union. In 1956, Faulk helped put together a non-Communist, anti-Aware slate of candidates for election to office in the union. He himself was one of the candidates on this slate. Aware published a bulletin blacklisting Faulk. His radio program lost its sponsors, and Faulk brought suit against Hartnett and Johnson for libel in June. WCBS fired Faulk, saying his ratings were poor. He hired Louis Nizer, a famous trial lawyer, as his attorney, and finally, in June 1962, Faulk's libel case reached the trial stage. The jury found Hartnett and Johnson guilty of libel and awarded Faulk more damages than he had asked—an unprecedented $3.5 million (subsequently scaled down to $550,000 by an appellate court). Faulk's victory signaled the end of blacklisting in the broadcast trade but opened no door for the victor. It was not until 1974 that a Dallas radio station broke the blacklisters' curse and hired Faulk as a telephone call-in show host, his first regular job in broadcasting in almost 18 years.

A third problem during the decade of the 1950s involved broadcasters, FCC commissioners, and members of Congress in a tangle of **ex parte contacts**—mutual, illegal backscratching. In 1957 the Committee on Interstate and Foreign Commerce of the U.S. House of Representatives hired Dr. Bernard Schwartz, a government teacher from New York University. Schwartz was to investigate performance of the independent regulatory agencies—FCC, Federal Trade Commission (FTC), and so on. He was thorough, and this was his undoing. Members of the Commerce Committee tried to impede his investigation and finally fired him in 1958. But Schwartz made his findings public by releasing them to the press. In the short time he served on the investigative staff, Schwartz found that FCC commissioners were being reimbursed for the same trip by both government and broadcasters and were receiving gifts from broadcasters—television sets and vacation trips. He found that one commissioner, Richard A. Mack, had sold his FCC vote to an applicant for a contested Miami television channel. And he discovered that Congressman Oren Harris, Chairman of the House Commerce Committee, had paid a cash total of $500 for one-quarter interest in an Arkansas television station, after which the station reapplied to the FCC for an increase in power—having been refused once before—and got it. Dr. Schwartz's revelations led to the resignation of FCC Chairman John C. Doerfer and Commissioner Mack.* Harris, however, went on to a federal judgeship.

A fourth problem of the 1950s involved the **Mutual Broadcasting System.** In January 1959, MBS President Alexander Guterma entered into an agreement with representatives of Rafael Trujillo, Dominican Republic dictator, to

* Sherman Adams, assistant to President Dwight D. Eisenhower, also resigned. Schwartz learned that Adams had pressured the FTC on behalf of an individual who had, in turn, given gifts to Adams.

broadcast a certain number of minutes of news and commentary concerning the Dominican Republic each month. Of course, none of this news was to be negative. In exchange for this publicity disguised as news, MBS received $750,000. The next month Guterma became involved in legal and business problems. The Dominican Republic sued to get its money, and thus the agreement came to light.

Then, there were the **quiz show scandals.** In 1955, *The $64,000 Question* started on CBS-TV. First of the big money quiz shows, it was based on an old radio program, *Take It or Leave It.* But rather than the radio ceiling of $64, contestants on the television game could win as much as $64,000. The high money, the suspense of the game itself, the gimmicky (for its time) setting—all helped to make *The $64,000 Question* immensely popular. Naturally, it spawned imitators. By July 1955, three of the top ten programs in audience ratings were big-money quiz shows. Then, in 1958, a few contestants announced the shows were rigged. Networks, advertising agencies, former contestants, producers—all vehemently denied any rigging. But in 1959, after probing by a New York district attorney, by a New York grand jury, and by a U.S. House subcommittee, the truth came out. The shows had been rigged on a regular basis to enhance, said the producers, its "entertainment value." Ten persons pleaded guilty to perjury for having lied to the grand jury, and the careers of a dozen or so other persons were ruined. The big-money quiz shows disappeared from network schedules.*

Hard on the heels of the quiz show scandals came the **payola** revelations. **Plugola** had been discovered several years before; if a certain product was used on-camera in a television program, the publicity agent for the manufacturer of that product would pay money to the program's writers and director. Network continuity offices had begun to check scripts and scenes carefully. Now, in 1959, it came out that record companies had paid disc jockeys under-the-table to promote records. The theory was that if a top disc jockey on a big market radio station played and pushed a record enough, it would become popular. Payola was, in effect, advertising for which the station received no revenue and, worse, was not labeled as advertising and thus deceived the public. Some of the nation's best-known deejays were caught in this one.†

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* The big money quiz shows began to creep back into television schedules in the mid-1970s. In late August 1976, Viacom, a prominent program syndicator, announced a weekly series titled, *The $128,000 Question.* The next week, NBC-TV released information on two new quiz shows to premiere in October—*50 Grand Slam* ($50,000 top prize) and *Stumpers* ($20,000 prize).

† In spite of congressional hearings and efforts by broadcasters and the FCC to curb the practice, payola continues. Every eight months or so the trade press reports allegations or FCC investigations of more payola.

New Brooms

"A new broom sweeps clean" goes the old bromide. And since 1959 a number of new brooms have led to sweeping changes in and challenges to commercial broadcasting: an FCC more responsive to its legal charge to regulate in the public interest, a viable system of public noncommercial broadcasting, evolution of the Fairness Doctrine, activist audiences, and new media.

The first change was the **FCC.** Beginning in 1960, there was to be a **new approach to regulation;** the public interest would come before the broadcasters' interest. No more backscratching between the regulators and the regulated (at least not so blatantly!). The FCC issued the *1960 Programming Policy Statement*[3] defining what was needed in programming to meet the public interest. An FCC Complaints and Compliance Division was created to receive and investigate complaints from the public. The commission developed a new license application form that would delve into programming in detail. Congress passed laws amending the Communications Act to make payola and plugola illegal and prohibiting rigged quiz shows. In early 1961, Newton N. Minow was appointed to chair the FCC and told broadcasters they would have to live up to their promises regarding programming on renewal applications. He told them their programming was "a vast wasteland." The FCC subsequently stepped up its disciplinary actions against erring broadcast stations. In 1962–1963, five licenses were revoked, eight license-renewal applications were denied, 17 were designated for hearing with questions concerning license renewal, ten received short-term renewals, and 20 paid fines.

Also, in the 1960s, **noncommercial broadcasting** began to develop as a **viable alternative to commercial broadcasting.** After the FCC reserved television channel allocations for noncommercial educational use in 1952, the problem of where to get money to build and operate stations still remained. By the end of 1953, only two educational stations were on the air.* The Ford Foundation, through its Fund for Adult Education, funded the initiation and operation of a number of stations. But the stations' miniscule operating budgets came mostly from the institutions to which they were licensed—communities, state universities, school systems, state educational television (ETV) authorities. Congress passed the Educational Television Facilities Act of 1962 to provide federal matching funds for construction of noncommercial television stations. The 1962 act helped put new stations on the air and expand facilities of others.

By 1965, there were 100 noncommercial television stations. Now, it was time to upgrade programming. A 1964 conference of ETV station personnel recommended formation of a commission to suggest national policy on ETV.

* KUHT, channel 8, Houston, and KTHE, channel 28, Los Angeles. The latter station went off the air, September 1954.

In 1965, the Carnegie Corporation provided funds for the commission, members were appointed, and a staff was hired. Endorsed by President Lyndon B. Johnson, this blue-ribbon citizen panel was known as the Carnegie Commission on Educational Television. In its report, released February 1967, the commission urged creation of a Corporation for Public Television. The proposed corporation would receive and disburse government and private funds to extend and improve programming. President Johnson presented a legislative proposal to establish a congressionally chartered nonprofit Corporation for Public Broadcasting (CPB) to encompass both radio and television. Congress passed the Public Broadcasting Act of 1967, extended the ETV Facilities Act for three more years, and authorized funds.

The Carnegie Commission had recommended that the Corporation be trust-funded by a dedicated federal excise tax on television sets. This would provide revenue for CPB without having to depend on congressional appropriations, thereby insulating the Corporation from political interference in programming. To avoid controversy and to get the bill passed, this trust fund tax was not made part of the legislative package. And, as the commission foresaw, there has been political interference in programming policies both from members of Congress and from the executive branch, particularly during the administration of President Richard M. Nixon.

Other problems emerged: chronic underfunding; bitter struggles among components of public broadcasting for access to funds and control of programming; constant interruption of broadcasts to raise funds, leading to complaints from viewers; continual reliance on corporate underwriting of programming, leading to complaints from commercial broadcasters; inadequate programming for attracting large national audiences or meeting special audience and strictly instructional needs. In response, the Carnegie Corporation announced formation and funding of a new commission in 1977. The Carnegie Commission on the Future of Public Broadcasting would study issues involving creative programming, public participation in policy formation, impact of new technologies, funding levels and sources, and structure of the system. The commission was to report its findings in January 1979.

Nonetheless, public (as they are now called) radio and television have improved immeasurably since 1960. Their programming is often just as slick and professional as that of commercial television [more so, in the case of the consistently fine dramas from the Public Broadcasting Service (PBS)]. They now attract audiences seeking alternatives to commercial programming and have even begun to influence—if ever so slightly—the programming of commercial broadcasters.*

* *The Forsyte Saga,* aired by PBS, inspired the commercial networks' miniseries (see Chapter 5). Recent commercial network children's programs have used some of the production techniques pioneered by Children's Television Workshop (CTW) on its *Sesame Street.* Public television personnel have been hired by commercial broadcasters (and vice versa).

A third new broom was the **evolution of the FCC's Fairness Doctrine.** Originally stated in a context that referred primarily to broadcast editorials,[4] broadcasters interpreted it for years as meaning that if they broadcast an editorial taking one side of a controversial public issue, they had to ensure that all other sides of that issue were presented over their stations, as well. However, through policy announcements, primers, and rulings in many different types of cases, the FCC, the courts, and the public interest groups have expanded the scope of the Fairness Doctrine so that its requirements come into play for almost any type of broadcast that deals with a controversial public issue.*

A fourth new broom is the **activism of the audiences.** Broadcasting's audiences have complained to the regulatory agency about stations and programming since the 1920s. But only since 1966 has the public been able to directly affect the broadcast station licensing process. In the 1966 and 1969 WLBT cases,[5] a federal court of appeals ruled that the FCC had to allow representatives of the public to participate in license-renewal proceedings and had to give weight to their testimony in arriving at decisions. Since that time, citizen groups—many formed for this one purpose—have challenged station license renewals. Stations have entered into negotiations with citizen groups, discussing policies, soliciting suggestions, and making agreements; in this way, the public can now directly influence programming. In the 1970s the FCC adopted rules, the net effect of which was to encourage the public to take a more active interest in license-renewal proceedings.[6] Citizen groups have also filed Fairness Doctrine complaints about commercials and other aspects of broadcasting programming.

The final new broom consists of **potential rivals for broadcasting.** Television licensees, perhaps remembering the way their own medium dominated and altered radio, have fought development of cable television and pay television. And they view the development of home video systems with a great deal of suspicion. Cable television (CATV) originated in the early 1950s, designed to bring television signals into a community where they could not normally be received. Subscribers paid fees to hook up to and use the signals. Cable television systems spread to urban areas and originated and carried their own programming in addition to carrying over-the-air signals. They carried the signals of television stations from other cities, giving local stations added competition for audiences.

Pay television was conceived as an over-the-air situation: a pay television station, licensed as such by the FCC, would broadcast special programming via a scrambled signal, and audiences could pay a fee to have the signal unscrambled and to see the program. In the 1970s, the concept of pay television came to cable: cable subscribers could pay an extra fee to see special, cable company-originated programming on one or more cable channels. Television licensees saw these developments as a two-prong threat: cable television, espe-

* See Chapter 14.

cially pay cable television, (1) could become a competitor for programming—major motion pictures, sports events, and so on—and (2) could drain off audiences and revenues. Both cable and pay cable showed every sign of growing into rivals for broadcast television, with pay cable particularly in the midst of a subscriber boom.

Television licensees were not exactly reassured by the prospect of home video systems, allowing people to record off the air or to buy videocassettes of their favorite performers and performances for convenient and repeated playbacks. Sony put its Betamax, first of the (relatively) low-cost, mass-produced home video systems on the U.S. market in late 1975. Other companies introduced their own brands. Prices dropped, sales went up, and by late 1977, manufacturers predicted 50, even 75 percent penetration in ten years.

Radio licensees do not seem to face such serious competition from other media. Some radio licensees have expressed concern over distant radio signals that CATV systems import into their markets, and some licensees have expressed fear that widespread use of citizens band radio has cut into automobile radio audiences. (See Chapter 22 for a discussion of cable television, pay television, and other new media; citizens band radio is discussed in Chapter 21.)

These are just some of the factors pulling for change; there are others. And together they constitute a degree of instability for the broadcasting trade. They are by no means fatal at this point. Quite the contrary: the U.S. Department of Commerce estimated television earned a record $5.9 billion in 1977 and its earnings would increase by 12 percent in 1978. On the other hand, it should be remembered that radio was making record profits, too, in 1947, just before television changed everything. So the tacit and—to the trade—terrible questions are: How long will the age of television last? and, What comes next?

Notes

1 41 FCC 148.
2 *RCA v. U.S.,* 341 U.S. 412.
3 *Report and Statement of Policy re: Commission en banc Programming Inquiry,* 25 Fed. Reg. 7291, July 29, 1960.
4 *In the Matter of Editorializing by Broadcast Licensees,* 13 FCC 1246, June 1, 1949.
5 *Office of Communication of the United Church of Christ v. Federal Communications Commission,* 359 F. 2d 994 (D.C. Cir.), Mar. 25, 1966; and 425 F. 2d 543 (D.C. Cir.), June 20, 1969.
6 47 CFR, §§ 73.1202, 1.526.

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NEW BROOMS

See Kahn, *Documents of American Broadcasting* (2) for materials that illustrate the FCC's "tightening up," expansion of the Fairness Doctrine, and public participation in the licensing process. For the history of educational broadcasting, see Donald

N. Wood and Donald G. Wylie, *Educational Telecommunications* (Belmont, Cal.: Wadsworth, 1977). Earlier accounts are in John Walker Powell, *Channels of Learning* (Washington, D.C.: Public Affairs Press, 1962), and Paul Saettler, *A History of Instructional Technology* (New York: McGraw-Hill, 1968). The report and recommendations of the Carnegie Commission on Educational Television were published as *Public Television: A Program for Action* (New York: Harper & Row, 1967).

Two

Creative/Informational Perspective

Chances are good that you will feel this section is the real meat of this book.

And you may be right.

The glamor and excitement of broadcasting definitely grow out of programming and program creation. There is a feeling of creativity and accomplishment and vitality in radio and television programming that stretches from the disc jockey shift at the local 250-watt radio station to the highest-paid directing positions for network television prime-time programs. It's fun. It's hard. It's long hours, crises, and heartbreaks. You have to *want* to do it—more than pay, pride, or privacy. And if you don't, you had better choose something easier for your life's work, such as brain surgery or corporate accounting.

End of sermon.

At any rate, this is the section in which you find out how it all works—how programs are put together; how stations are programmed; how broadcast news works; how commercials are created. But watch out! It's addictive.

5

Production, Programs, and Performance

To the broadcaster, radio and television are businesses; their purpose, to earn a profit. But to most of us radio and television are show business, and their purpose is to present programs that entertain. In this chapter we examine these programs. A broadcast program is like a many-faceted jewel that can be examined from an almost infinite number of angles. At this point we are interested in its structure, the program as a creative endeavor, thus we focus on five of the facets: production, both radio and television; types of programs; broadcast of programs; talent; and critical review.

Radio Production

To exist, a radio program must start with sound. Here, we shall see the process by which sound becomes a program.

Sound may be "live"—for example, a human voice speaking or a musical instrument being played. Or sound may be stored—for example, a disc recording (a record) or a recorded audio tape on a reel, cartridge, or cassette. But to be broadcast, sound must be converted into a series of electrical pulses called an **audio signal**—**audio** or the **signal** for short. It is the **audio source** that makes this conversion possible. A microphone and a telephone are both

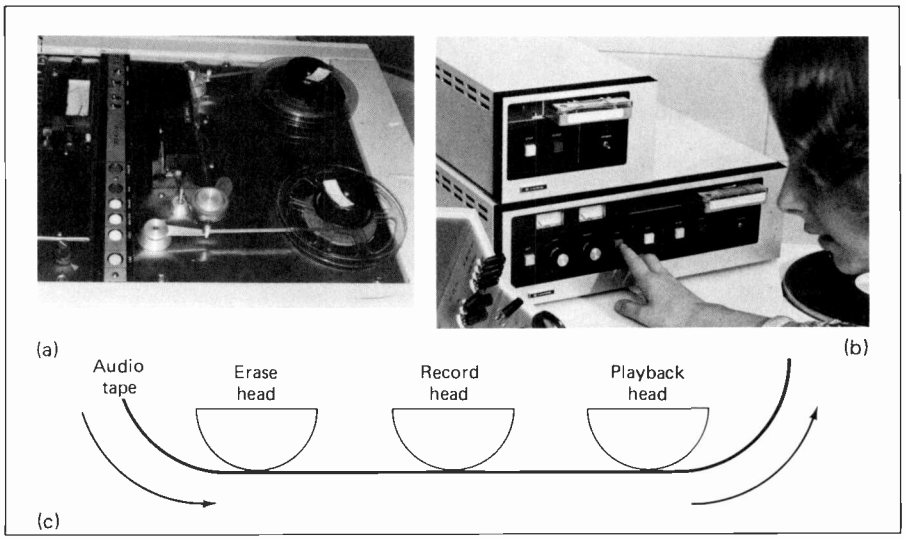

Figure 5-1. Broadcast Audio Tape Recorders. Photo (a) shows a reel-to-reel machine; photo (b) a cartridge (cart) machine. Both have their advantages: the reel-to-reel machine generally produces better quality recordings and playbacks and allows easy access to the tape for editing; the cart machine is quick to use and load and allows for automatic stop and recue of tape. Both use ¼" tape (which, in the cart, is in the form of a continuous loop enclosed in a flat plastic box) and, for broadcast work, usually operate at 7½ inches per second (i.e., 7½ inches of tape pass the heads each second). (c) To record audio, an oxide-coated tape moves past heads at constant speed. The heads are actually small electromagnets. The magnetic properties of the record head vary with the audio signal fed into it and thus induce varying patterns on the oxide as the tape moves past. By putting those patterns on the tape, the tape machine has encoded the audio into a form that may be stored and then retrieved many times. When the tape is played back, the playback head "reads" these patterns and converts them back into audio. During recording, the erase head clears off all previous signals from the tape so that the record head encounters a "clean" (i.e., unrecorded) tape.

Photo (a) courtesy of Ampex Corp. Used by permission. Photo (b) used by permission of Harris Corp.

audio sources that convert live sound into audio signals.* The stylus and cartridge of a turntable tone arm and the playback head on a tape machine convert sound stored on records or tape into audio. The audio signal from one or more sources is fed to an **audio control board** operated by an **audio technician.** A **director** tells the technician which audio signal or combination of signals to **put on the line,** that is, which to amplify and send to the next point on

* One exception to this definition of audio source is an electronic tone generator, such as the so-called "synthesizer" used in music. Here, the information is first created as audio and then converted into sound.

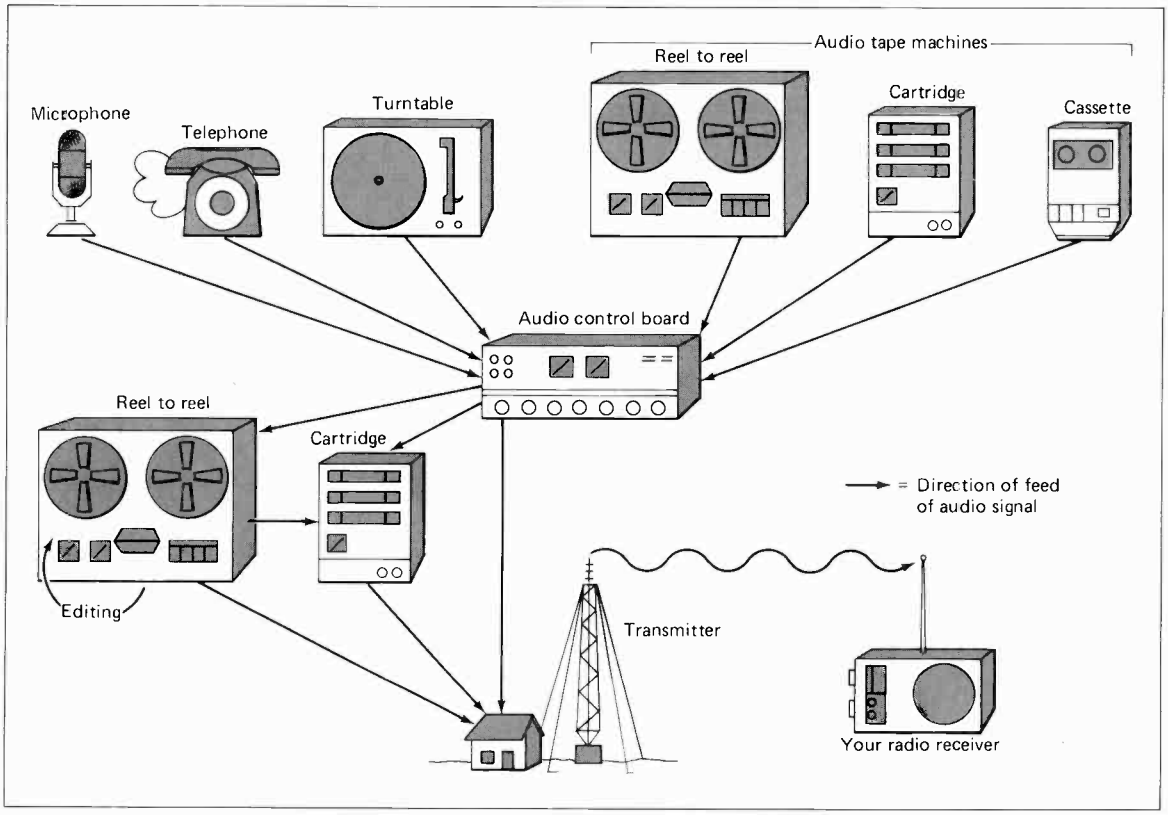

Figure 5-2. Radio Production Process.

the way to broadcast. More times than not the same person is both audio technician and director and is called the **producer.**[†] On most local disc jockey programs, the technician works alone, combining two jobs—talent and audio technician. This is called **combo** (combination) operation.

From the audio board, the signal may be routed to either of two destinations. First, the signal may go directly to the radio station transmitter. There, the carrier (the radio frequencies on which the station operates) is modulated (changed and made to carry audio) by the audio signal and radiated from the

[†] Notice that use of the terms "director" and "producer" in radio production does not necessarily correspond to their use in television and film production. To further confuse matters, titles and duties of radio program production personnel vary from place to place. Sometimes the director is called a producer. Sometimes the director's supervisor is called a producer.

Figure 5-3. Radio Combo Operation. In front of the operator is the audio console. Meters at the top of the console indicate relative loudness of the audio signal. The microphone, over the console, is on an adjustable boom to accommodate different-sized operators and may be swung out of the way when not in use. The operator is loading a cart in the tape cart machine, ready for playback when the cut is finished on the record now playing (foreground). There are other turntables handy to the operator, but not seen in this photograph. Behind the operator is a storage rack for tape carts. The CRT screen and control panel (between console and cart rack) is for remote control of other equipment.

transmitting antenna to be received by your radio. Or second, the signal may be recorded for broadcast at a later time or for repeated broadcast. If the program needs no further creative work, the recording can be made on either a reel-to-reel or a cartridge tape machine. The recorded tape is then ready for

playback, at which time the signal is fed to the transmitter for broadcast. Often, however, for reasons of time (to lengthen or shorten) or of continuity (material must be added, deleted, or rearranged), the recording is made on a reel-to-reel machine and the tape is **edited** (segments of the tape are physically cut out, added, or rearranged, or two or more tapes are edited together). This is done by the director or producer. The edited tape is then played back, and the signal is sent either directly to the transmitter for broadcast or to another tape recorder (often a cartridge machine) on which a **dub** (duplicate) of the edited tape is recorded. The signal from the dub is then fed to the transmitter.

Tape delay represents a midpoint between immediate broadcast and recording for later broadcast. Stations use tape delay to retain control over content in telephone call-in programs. A tape machine is placed between the audio control board and the transmitter. The machine's recording head puts on tape the signal coming from the board. The playback head then picks up the signal off the tape and sends it on to the transmitter. But the tape is threaded so that any given spot on the tape reaches the playback head several (usually seven) seconds *after* it leaves the recording head. Thus if someone utters an objectionable remark during a program, the station has those several seconds within which to react and cut the remark before it actually goes over the air.

Very few radio programs are produced that are both scripted and live. The majority of live programming at most radio stations consists of the disc jockey or the telephone call-in talk format. Except for perhaps some commercial copy* that must be read live, the disc jockey and call-in formats do not use a script in the formal sense of the term. Even a public interest program often takes the form of extemporaneous discussion, with the moderator's list of questions being the only written script. News programs, sports programs, and weather reports are fully scripted, and sports play-by-play broadcasts use semiscripts and format sheets.†

For the most part, scripted network- and station-produced radio programs are commentary, editorials, documentaries and (rarely) dramas. A great variety of scripted, recorded radio programs is available from syndication sources. The term **syndication** implies production, sale, and distribution of programs designed primarily for the station to attract and interest an audience. There are firms that produce such programs, and the programs themselves range from one minute to several hours in length and from commentaries and features to drama and musical anthologies. Syndicated music services offer auto-

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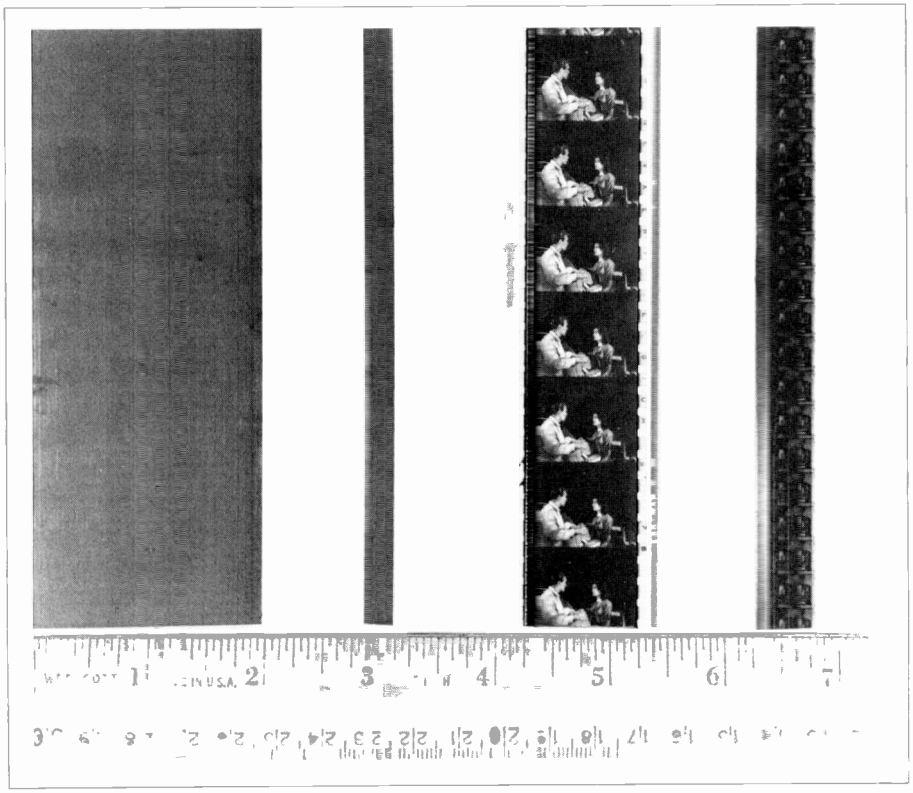
* **Copy** is often used synonymously with **script** in broadcasting.

† **Format sheets** or **rundown sheets** list each item in the program—opening, closing, first interview, and so on—in order, along with its time. A **semiscript** or **routine sheet** contains as much of the dialogue as can be prepared in advance—exact wording for the opening, for the closing, for the announcement of station breaks, for interview questions, and so on.



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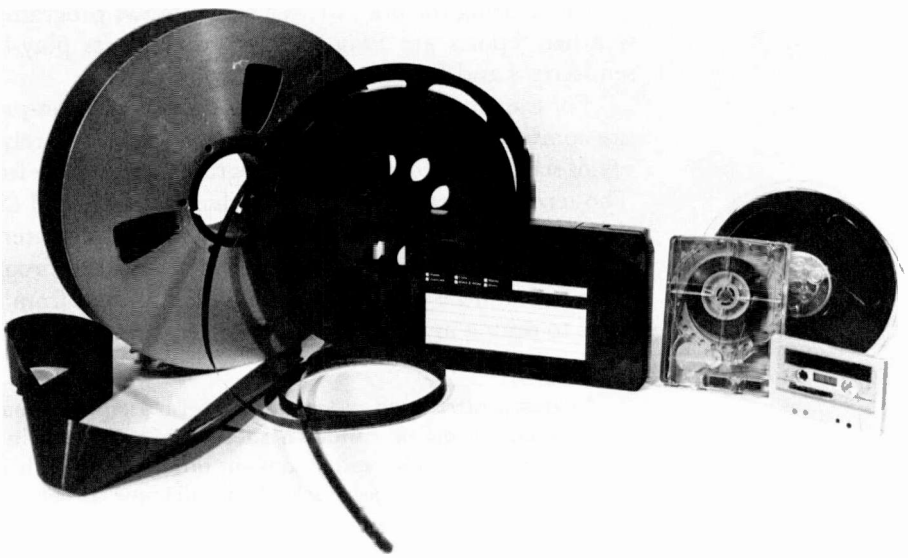

(b)

mated stations literally weeks of music programming. But there are also many programs that are designed to promote the point of view of the producing organizations. These organizations include churches and church-related groups, various levels and branches of government, educational institutions, political organizations, industry and trade groups, labor unions, and other special interest groups. Sometimes stations are asked to air these programs for free; other times stations are paid rate card prices (the amount charged to advertisers) to run them.

Television Production

Television programs originate primarily from the networks, syndication sources, and individual stations. As with radio stations, most of the scripted, locally produced television programs are news, sports, and weather. Some stations also produce well-done local public affairs, minority interest, children's, and documentary programs. Other stations put minimal effort into such programs, and the results are boring and insulting, and are scheduled at odd hours with low audience levels. Independent companies produce most of the entertainment programs for networks and for syndicators. Some production companies syndicate their own programs.

A television program begins as someone's idea, then is written up in a brief, descriptive form called the **presentation** and is submitted to a production company. Most production companies do not accept unsolicited program ideas from individuals. An individual must get a recognized agent to contact the production company and submit the presentation. If the company accepts the idea, it will buy the idea from the individual (called in the trade, the **creator),** sometimes outright, other times on a royalty or percentage basis. Often the creator is hired as **story** or **script consultant.**

When an idea for a program series is aimed at a network, the production company will present the idea to network program executives. If the network likes the idea it may commission (contract for) an elaboration of the idea, ranging from a simple outline up to an extended **pilot** (sample) show, in the form of a made-for-television movie, with all the performers and production

◀ ***Figure 5-4.*** Broadcast Recording Media. (a) (Left to right) 2" videotape for quadraplex machine; ¼" audio tape for reel-to-reel machine; 35 mm motion picture film (production medium for all film television programs and film playback medium for networks); 16 mm film (production medium for most local film commercials and for news film and playback medium for all syndicated film programming and film commercials distributed to stations). Tape is displayed oxide (recording) side up; film, emulsion side up. Note optical sound track (two thin vertical light lines) just to the right of the left sprocket holes on the 35 mm film and on the opposite side from the sprocket holes on the 16 mm film. (b) (Left to right) 2" video tape open reel; 16 mm film on reel; ¾" videotape on cassette; (top to bottom) ¼" audio tape on open reel; ¼" audio tape in cartridge; ⅛" audio tape in cassette (often used for out-of-studio news work).

personnel that would be used in the series. Should the program idea reach the pilot stage, budgets are drawn up, performers and crew are hired, sets are created or selected, and production schedules are issued.

By this time the original concept has gone through many changes at the hands of agents, production company executives, network people, and so on. Sometimes the finished product resembles the creator's first idea only in the most general manner. The script, for example, will be changed continuously right up until the first day of production, and often even during production. The script is first duplicated on white paper, then each set of changes is printed on a different colored paper. By the time production finishes, the script will consist of every imaginable hue, with very little or no white remaining.

The **producer** is the person in overall charge of the program. The producer first shepherds the program through the **preproduction phase:** has the script written, cost estimates and budgets made, personnel hired, sets built, and so on. Then the producer oversees the **production phase** as the director translates the written script into visual images. Finally, the producer supervises activities of the **postproduction phase** during which the visual images are turned into a finished program. Sometimes writers or directors, in order to retain creative control of their material, also take on the role of producer. They are called **hyphenates** because of the hyphens in their job titles: producer-director, producer-writer, or producer-director-writer.

ELECTRONIC TELEVISION PRODUCTION

As radio must have sound, television must have sound and picture. We know how sound originates. The principle is about the same for both media. But what about the picture? In electronic television production, the picture information or **video** originates in the television camera as specific electrical charges (electrons), each of which carries a different minute bit of picture information. Through various electronic devices, these electrons travel at the speed of light and are able to create a picture of a physical scene instantaneously on the television screen. (See Chapter 11 for a more complete technical explanation.) Electronic television production techniques are used for both live and videotaped television programs.

Camera. A **television camera** originates video. A television program uses a number of television cameras. Any camera or combination of cameras may be **put on the line,** that is, selected to send the video on to the next point in the production process. Each camera has an **operator** with whom the director communicates by means of a two-way headset. Each camera has a variable focal length ("zoom") lens to enable it to get closeup, medium, and long shots (camera views or pictures). A camera is usually mobile, so that it can be moved to different positions. A **camera control unit** (CCU) sends power and drive pulses (electronic picture control information) to the camera; the CCU is usually located in an engineering room, and one technician operates several

CCUs at once. A **camera cable** connects camera and CCU, delivering drive pulses to, and video from, the camera. Camera, cable, and CCU are known collectively as a **camera chain.**

The cameras discussed above are the type used for studio productions and for scheduled remotes (broadcast of events that have been planned and take

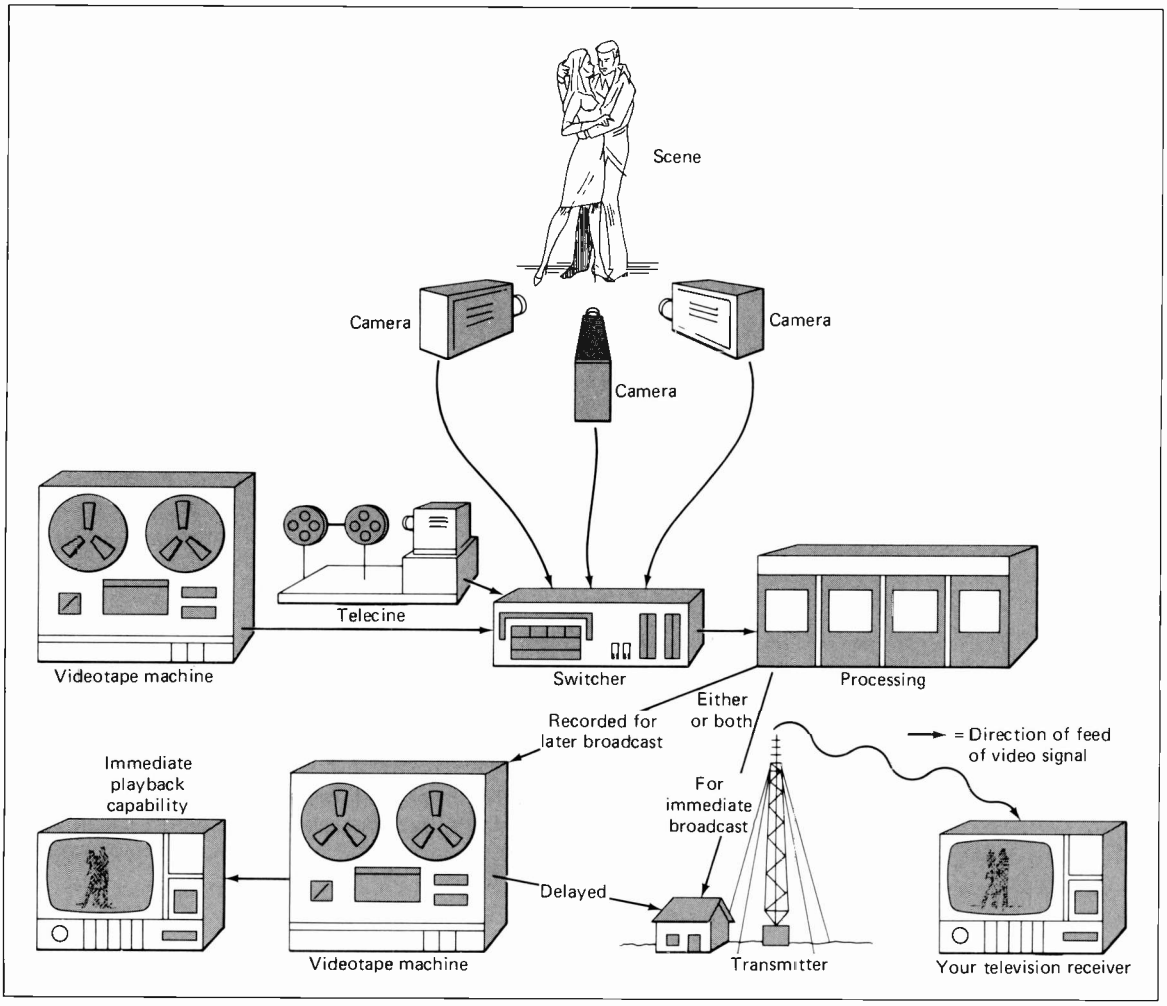

Figure 5-5. Electronic Television Production Process. Video sources include the playback head of a videotape machine, the pickup tube of the film chain in the telecine unit (for slides and film), and live studio and remote cameras. These feed to the switcher for mixing and special effects. After leaving the switcher, the video signal is processed, then recorded for later broadcast, or sent directly to the transmitter for immediate broadcast, or both broadcast and recorded at the same time. Unlike film, which has to be processed before use, videotape is ready for playback immediately after recording.

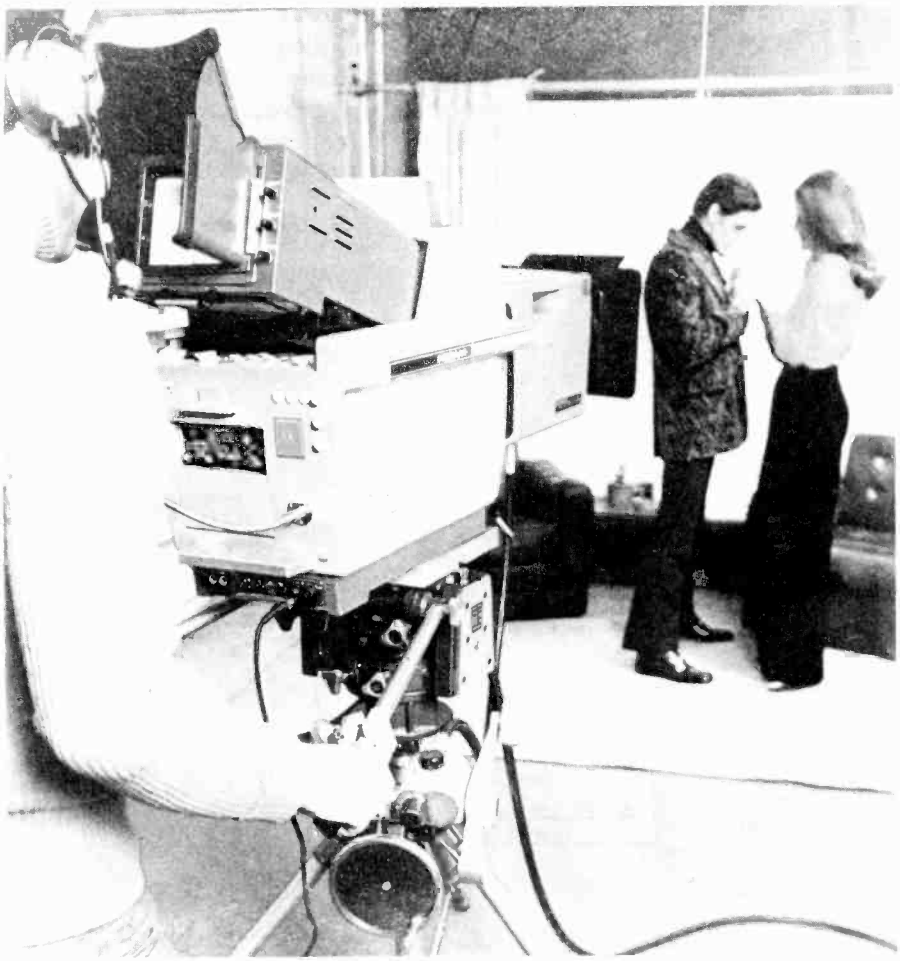

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Figure 5-6. Modern Studio Camera. The operator focuses on a scene in a dramatic production. Lighted red indicators on front, top, and rear of the camera mean that it is on the line, that is, punched up on the switcher. Note that the operator wears a headset for communication with the director.

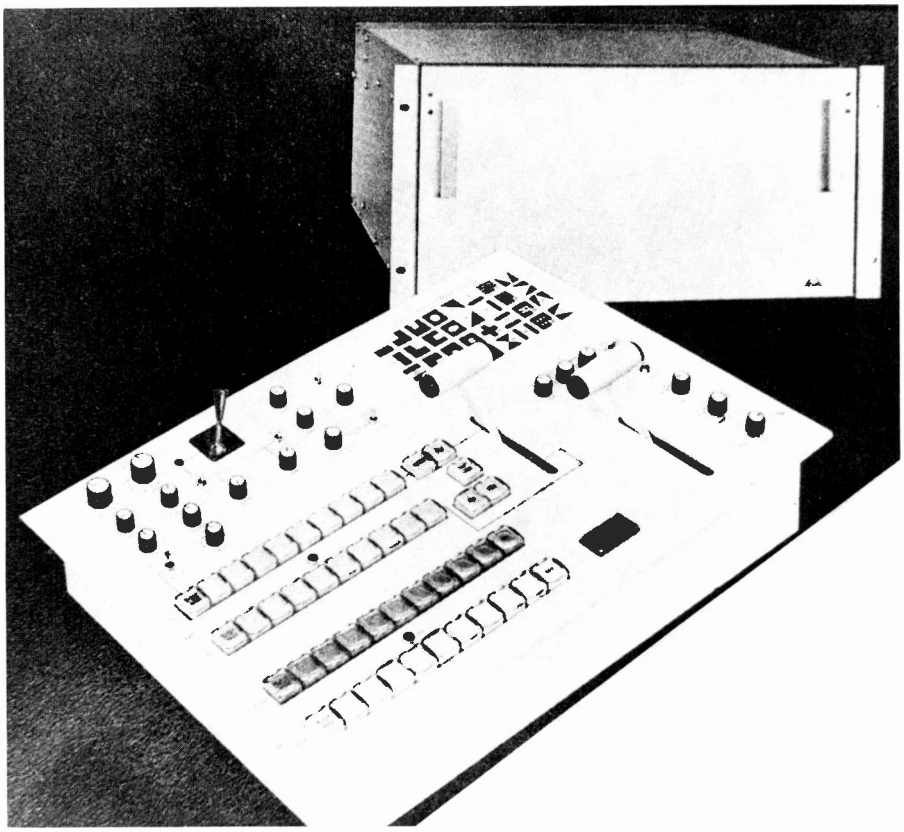
place outside the studio). Two other types of cameras are the **film chain** and the **minicamera.** The film chain is basically a camera that has been mounted permanently in a stationary position. Adjacent to it are film and slide projectors, all of which are aimed at a device called a **multiplexer.** The multiplexer, in turn, aims the beams from one or more of the projectors into the lens of the camera. Projectors, multiplexer, and camera are collectively referred to as the

Photograph courtesy of CEI. Used by permission.

Figure 5-7. Electronic Minicamera.

telecine unit and are the means for integrating slides and films into a television program. The minicamera has no cable. Its video signals can be recorded, or relayed via radio waves directly to the production studios and used live. Minicameras are used in scheduled remotes to augment the large, fixed-position remote cameras, and, increasingly, in newsgathering operations to supplement or even replace film cameras.

Mixing. **Mixing,** also called **switching,** is the selection of the camera or combination of cameras to go on the line. The mixing controls are known collectively as the **switcher.** Additionally, there is usually an **effects generator** associated with the switcher, and between the two devices, various visual effects may be achieved, ranging from a simple cut (instantaneous replacement of one picture by another) to exotic mattes and keys (part of one picture is inserted into another). Controls for the switcher, the effects generator, and the telecine are located in the production control room and operated by the **tech-**

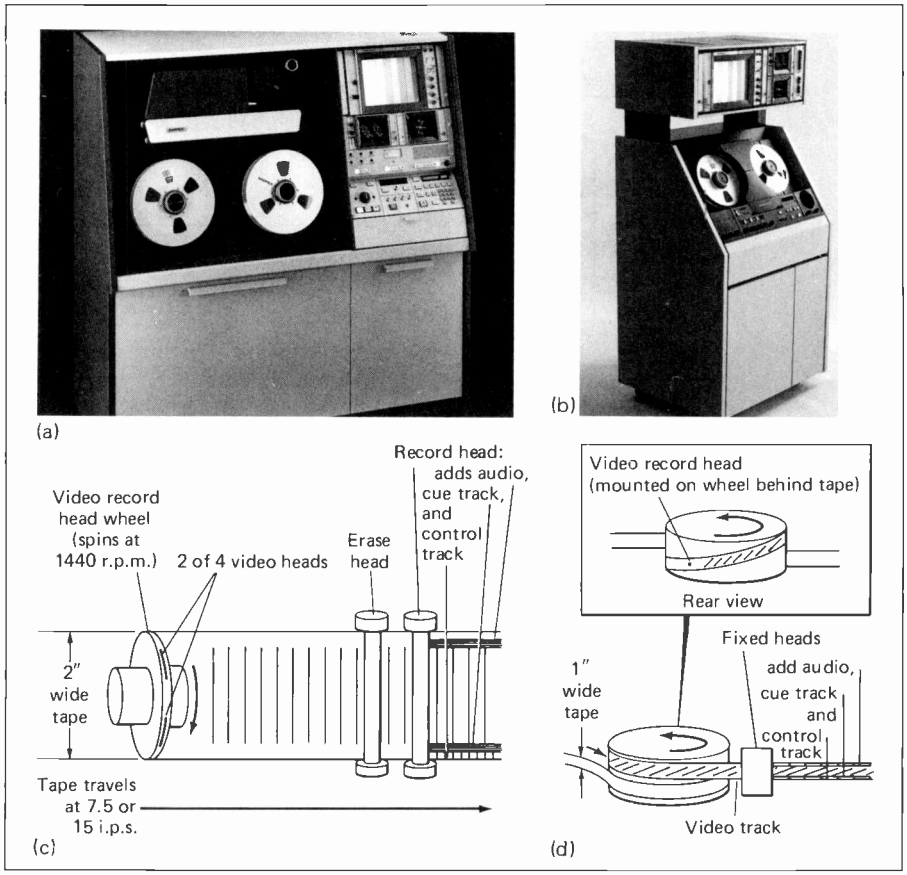


Used by permission of The Grass Valley Group.

Figure 5-8. Switcher. This compact switcher includes special effects. The bottom two banks of buttons are used for straight cuts between cameras. The fader bars (large handle) to the right allows fades, dissolves, and superimposures. The other two banks of buttons, the other fader bars, and the rest of the controls are used to achieve special effects. The chart on the upper right shows the types of effects available. The unit behind the control panel contains the electronic circuitry that actually does the work, that is, achieves the effects called for on the control panel.

nical director (TD).* The **director,** also in the control room, issues instructions to the camera operators and to the TD. Thus the director is simultaneously directing—telling the camera operators which shots to get—and editing—telling the TD which (of the several available), and in what order, shots are to go on the line.

* Confusingly enough, the TD is also sometimes called the **switcher.** And in some situations the director is also the TD.



Photographs courtesy of Ampex Corp. Used by permission.

Figure 5-9. Two Types of Videotape Recorders. (a) The unit at left is a quadraplex recorder; (b) the one at right, helical scan. (c) The quadraplex recorder is so-called because it utilizes four tiny recording heads for the video signal. They are mounted on a small wheel that spins at 14,400 revolutions per minute as the 2" wide tape moves past at 7½ or 15 inches per second. These heads thus put the video signal on the tape at right angles to the long axis of the tape while several fixed recording heads put on the audio, cue (often used for a second audio track), and control (sync pulses, to ensure synchronization during playback and editing) tracks. (d) The recording heads on a helical scan or slant-track recorder are mounted on a short, wide cylinder. The 1" wide tape is threaded so that it winds around the cylinder on a slant. As the tape moves, the cylinder turns, and the video heads put a slanted track on it. Fixed heads add audio, cue, and control tracks.

Videotape Recorders. After the video signal leaves the switcher, it is processed and goes to the transmitter or to a **videotape recorder** (VTR). If the signal goes to the transmitter, it modulates the carrier, is joined to the audio signal, and is transmitted for reception by your television receiver. If recorded

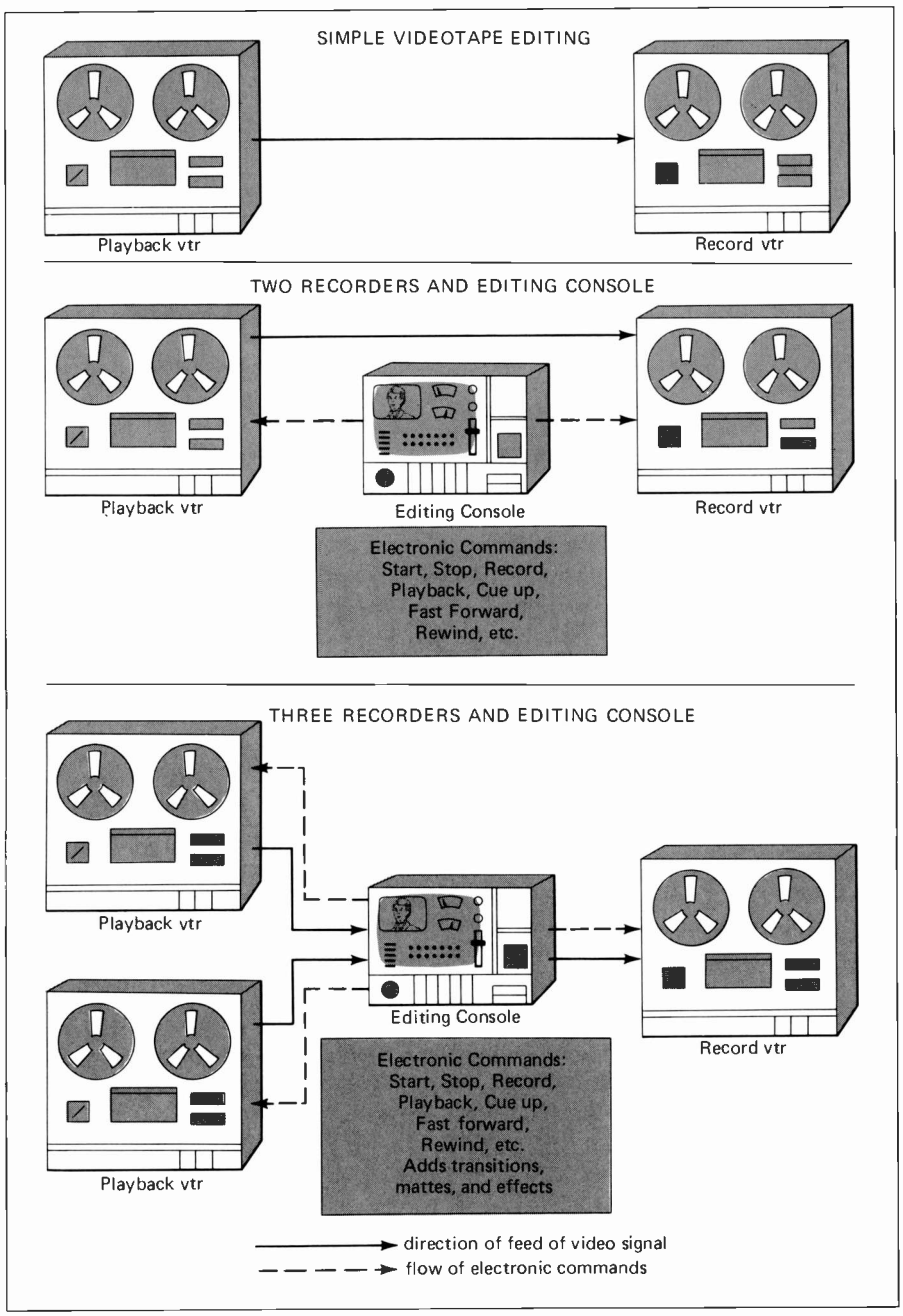


Figure 5-10. Videotape Editing Process: Three Methods.

on videotape, the signal is stored for later playback and transmission.* Like an audio tape recorder, a VTR records the electronic signal in the form of magnetic patterns on tape. Like an audio tape recorder, the VTR can play back a recording immediately; no further processing or developing is necessary. Unlike an audio tape recorder, however, a VTR records the complex video signal, as well as the comparatively simple audio signal. Therefore where audio tape may be effectively and smoothly edited by physically cutting and splicing the tape, videotape editing requires more sophisticated equipment and techniques. Minimum equipment for postproduction videotape editing consists of two VTRs. One VTR plays back and the other records program material in the order it is to appear in the final edited version. The dub becomes the edited tape. More sophisticated editing can be done by adding a control console. The tape editor operates the console to command electronically the two recorders when and where to cue up, play back, and record. Some editing consoles even allow the editor to isolate and specify the frame† on which a segment should start or end. In situations demanding elaborate postproduction editing, two videotape machines are used for playback, a third, for recording. The editor uses a special console that can insert fades, dissolves, mattes, keys, and other special effects.

VTRs can also be used as video sources by feeding their signals to the switcher. The **isolated camera** or **iso** is a special use of VTR as video source. One camera is momentarily assigned coverage of a specific person or action and its signal fed to a separate VTR. In sports, this VTR is designed to allow quick cue-up, slow motion, and freeze frame.‡ Thus, after an exciting play, the action can be reviewed in closeup and at leisure, even pausing at and repeating key points. In dramatic production the iso camera is that camera which has the second best picture or shot (the camera with the best shot is on the line) at any given time. All of the second-best shots are recorded on a VTR and may be edited into the program as (and if) needed during postproduction editing.

Audio. Television **audio** uses the same equipment and follows the same principles as radio production. Two differences should be noted, however. The first involves sound pickup, that is, the capturing of sound by microphone. Unlike radio, in television production the performer is often in motion.

* In some cases a program is simultaneously transmitted live and recorded. The recording then is used for review and critique or for archival purposes.

† American television technical standards specify 30 frames (electronic still pictures) per second, which give the illusion of motion that we see on our home television screens.

‡ **Freeze frame** is the holding and on-screen display of one of the 30 frames per second recorded on the tape.

There are basically four options for pickup of moving sound sources: small microphones with long cables held in the hand or hung on the performer; wireless microphones (actually tiny transmitters, with strategically located receivers feeding the audio into the console); boom microphones, located on the

(a)

(b)

Photograph (a), courtesy of Ampex Corp. Used by permission. Photograph (b) used by permission of Sony Corp. of America.

end of a horizontal pole that crew members move to keep positioned in front of the performer but just out of the camera picture; or prerecording, often used in musical numbers, in which a recorded audio tape is played back and the performer mouths the words. A second main difference between radio and television audio involves additional audio sources. A television audio console receives all audio sources commonly used in radio, plus audio from videotape playbacks and film sound tracks.

Rehearsal, Production, and Postproduction. In dramatic production, the director **blocks** (plans) all performer and camera movements in advance. Television studio time is expensive, so that the director rehearses performers elsewhere, perhaps in an empty rehearsal hall. By the time they move into the studio, sets have been erected, dressed (props put in place), and lighted. The director rehearses cameras and performers together many times, and finally the production is broadcast or taped.

In addition to the technical director, a number of other people work in the production control room and assist the director during rehearsals and taping. A **production assistant** keeps the place in the script and times the production. The **associate director** helps with what is coming up—readying the next camera shot, calling for rolling (starting) of film and VTR, reminding the director of upcoming lighting effects. The **lighting director,** who has already planned and supervised the setup of lighting for the production, relays the director's commands for lighting changes to the lighting board operator out in the studio via a private communication headset link. The **audio technician** and audio console are also located in the production control room.

Another set of production personnel work in the studio. In addition to camera operators, there is a **floor crew.** Floor crew members, headed by the **floor manager** or **stage manager,** hold cue cards, manage camera cables, give time and on-the-air cues to performers, and do almost anything else the director needs done off-camera during a production. One floor crew member may operate the prompter unit, a device that projects a copy of the script onto a half-mirror positioned in front of the camera lens (which explains why the

Figure 5-11. Videotape Editors. Photo (a) shows a tape editor that operates in conjunction with a quadraplex recorder. It allows the operator to see what proposed edits will look like before actually executing them, to add special effects and transitions, to add titles and captions, and even to store editing decisions for reference or future use. It includes a computer that can store edit decisions for as many as 3200 scenes, a video monitor, a cathode ray tube display, audio/video switcher and special effects controls, remote controls for the tape machine, an alphanumeric keyboard, and a computer terminal and hardcopy printout unit. Photo (b) at right shows a different type of editor. It is designed to work with ¾" videotape cassette machines and is especially popular in television news work. ENG (electronic news gathering, i.e., minicameras used in news) operators bring in recorded tape, shot on location for use in a television news program, and the news tape editor uses this device to edit the material down to fit time and story requirements. The signal is then fed through a device that brings it up to broadcast technical standards.

newscaster can look straight into the camera so much of the time). **Electricians** set up and adjust lights under supervision of the lighting director. Scene designers, carpenters, and stagehands create settings, while wardrobe, makeup, and hair styling personnel ready performers. In an engineering area the **video technicians** adjust the CCUs; the **telecine operator** loads film and slides; and the **videotape operator** loads and readies the VTRs for playback and recording.

Videotape is edited during the postproduction phase. The amount of editing varies with the program. For example, many soap operas use **live-type videotaping.** Here the VTR begins recording, and the program is performed just as if it were being broadcast live. The tape is later broadcast with little or no editing. At the other extreme is a production such as *The Electric Company,* produced in segments and assembled afterwards, almost like editing a film (see next section). Somewhere in between is *All in the Family* and similar programs. These programs are recorded twice, all the way through, then separate scenes or shots are recorded again as needed. The best of each is edited together to make one complete program.

In 1977, CBS developed a multivideotape technique, somewhat parallel to the multicamera technique used for years to produce filmed situation comedies (see below). The network outfitted its Studio Center production facility in Los Angeles with the new system and MTM Productions was the first to use it, producing two new series for the CBS fall 1977 schedule, *We've Got Each Other* and *The Betty White Show.* In the CBS system, each of four electronic cameras feeds a separate videotape recorder. All four operate simultaneously. The result is four complete videotapes of the same scene, each from a different angle or shot. There is no control room; on-line switching is completely eliminated, so that the director works in the studio with the performers. After production, an editor selects various shots and angles from the four videotapes and edits them together into the finished production. Thus all editing is done in the postproduction phase, motion picture style.

FILM PRODUCTION

Much television program material is produced on film. In motion pictures a scene is photographed as a series of still pictures (called frames) taken one after another, 24 per second. The exposed film must be chemically processed (developed) to bring out and make the photographs permanent. The film is semitransparent so that a light beamed through it projects an enlargement of the pictures. When used in a motion picture projector these separate still pictures are shown in such a way as to create the illusion of motion. The projector places one frame in front of a light source, opens and closes a shutter to allow the light to project the picture for about 1/50 of a second, closes the shutter to shut off the projection, and moves the first frame out and the next one in. This action is repeated 24 times per second. At this point, we still have a series of still pictures, but a trick of the eye called **persistence of vision** translates the still pictures into motion. When you look at an object then glance away, the

retina of your eye retains the image of the object for the briefest of instants; this is persistence of vision. As you watch a motion picture, your eye retains the image of each frame until replaced by the next image, and your brain connects the two images, interpreting the result as motion. Thus the projector and your eyes and mind collaborate to achieve the effect of motion.

Production. Some half-hour situation comedies use electronic-style production techniques with film cameras. The program is performed, often on a stage before an audience. A number of film cameras are placed so as to film the production simultaneously from different angles. The result is a number of film copies (prints) of the program. The editor chooses the best parts of each to make the final copy of the program. This technique is used in many situation comedies such as *Happy Days.* Though not currently used in broadcasting, another method of film production uses electronic cameras and a switcher. The picture is fed to a **kinescope,** a high-intensity television picture tube. A film camera is aimed at the tube and films the picture. This prevideotape method of recording electronic television is called **kinescope recording.**

The majority of film television drama is produced using feature film or "Hollywood" production techniques. One camera is used. The camera has one lens that may be changed or a turret of four lenses, any one of which may

Photograph courtesy of Victor Duncan, Inc. Used by permission.

Figure 5-12. Film production. This crew is set up for sound filming.

be used. Each time a new shot is to be filmed, the lens must be changed, the camera moved, or both. Each time the camera moves, it is a new **setup,** and often the lights and microphones must be reset, too. A setup takes anywhere from a few minutes to most of a day, according to its complexity.

The director and performers use the **shooting script** as the plan for the program. Complete with dialogue and action, the shooting script is divided into short, sequentially numbered segments called **scenes.** Consecutive scenes that take place in the same setting are referred to collectively as a **sequence** (roughly, equivalent to a scene in the theater). Each scene is filmed separately; the camera is turned on, the action is performed, and the camera is stopped. Usually, two or more attempts are needed to film a scene satisfactorily; these attempts are called **takes** and are numbered sequentially. The amount of film shot by one camera in one take is called a **shot.*** The various shots will eventually be put together into a storytelling sequence, so that the shot is the basic building unit of film. At the beginning of each take, before scripted action begins, an assistant **slates** the scene by holding in front of the camera a board called a **slate** with scene and take numbers written on it. A scene filmed as written in the script is assigned the number it has in the script. But the director also films each scene several other ways in addition to that prescribed by the script; these supplementary scenes are designated by letters of the alphabet. Thus a slate with "scene 23C, take 4" written on it identifies the fourth attempt to film the third different way the director has thought of to film scene 23 of the script. The slate also identifies the setting as **interior** (inside a house or building) or **exterior** (outside, in the open), the time as **day** or **night,** and the scene as **sound** (sound is recorded) or **silent** (no sound recorded).

Scenes are not filmed in the order they appear on the program. In the finished program, a particular sequence might open on a closeup showing head and shoulders of a performer speaking the first line, cut to a reaction shot of another performer as the original performer speaks the second line, then cut to a long shot (showing all or most of the performers and a large portion of the background) as the third line is spoken. In filming, however, the entire sequence was first filmed in one or a series of long shots. These **master shots** corresponded to the scenes as written in the script. Then the director filmed supplementary scenes—first, medium shots (showing the upper part of performers); then, closeup shots; finally, reaction shots (showing a performer seeming to watch or listen to someone or something else) and shots of objects (the closeup of the murder weapon or the glass with the lipstick on it). Sequences are also filmed out of the order in which they appear in the program. The script may call for the first sequence to take place in an office, the second in a home, the third in the office again, the fourth in a bar, the fifth in the home, the sixth in the office, and the seventh back in the bar. But in filming the program, the first, third, and sixth sequences will be filmed one after the

* The term "shot" is often used interchangeably with the term "scene"; thus the question "What's the next shot?" actually means "What scene do we film next?"

other in the office set; the second and fifth in the home set; and the fourth and seventh, in the bar set. This filming method saves time and money by reducing major camera movements from one set to another and by allowing a particular set to be struck (taken apart) or used by another production crew.

Usually, the director's supplementary scenes do not repeat the master shot in its entirety but contain only bits and pieces of the action. However, by the time the director has filmed the sequence from all angles and views, much more film has been shot than will be used. On the average, ten feet of film are shot for every one used in the program.

Dialogue is recorded at the same time as the picture, but separately. While the camera records the picture, sound is recorded on audio tape. When a sound scene is filmed, the assistant who slates the scene also announces the scene and take numbers, then snaps a **clapstick,** a small board hinged at one end to the top of the slate. This clap provides a visual and aural cue by which film and sound track may later be synchronized. Sound recorded while filming is called **sync** (for synchronous) **sound.**

A film production crew is actually a number of different crews, each responsible for a different aspect of production. The **director** supervises crew chiefs, directs performers in rehearsal and during filming, and decides how to film each scene and sequence. A **unit manager** arranges for logistical support—meals, transportation, lodging, permission for use of nonstudio sites for location filming. An **assistant director** handles administrative details on the set. A **script clerk** keeps records on which and how scenes were filmed. The **director of photography** is in charge of the **camera crew,** advises the director on how to use the camera in filming a scene, and designs and directs the setup of lighting. Members of the **lighting crew** are called **gaffers. Carpenters** build the set; **grips** move in heavy scenery and furniture, and **props** (the property crew) dress the set and procure and store small articles seen on-camera. The **sound crew** is headed by the **mixer** (who runs the audio control board) and includes the **recordist** (who operates the audio tape recorder), and one or more **boom** (microphone) **operators.** And, of course, various and sundry persons are in charge of costuming, makeup, hair dressing, and so on.

Other crews may also film parts of the program. A smaller **second unit** crew may shoot background or other scenes that do not require the director's supervision. The **special effects** crew specializes in filming tight closeups of objects that must appear to be something they are not—a closeup of a braided wire unraveling that is supposed to be the vital guy wire holding up the tower on which the star is perched, or the miniature model town that must look like its full-sized counterpart. **Animation** and **title** crews use special cameras that film as a still camera, one frame at a time, stopping after each frame. Animation is film of a series of drawings, and each second of screen time may require at least 24 separate drawings. The total number of drawings required for even a short animated sequence can be very high. Consequently, animation is very expensive compared to live action filming. Titles are the credits—"written by . . ." "directed by . . ."—at the beginning and end of the program.

Some scenes may come from **stock footage,** film shot previously for other purposes and used again as part of the current production.

Postproduction. Each day, exposed film is delivered to the processing laboratory, along with instructions as to which takes to develop. The laboratory processes the film, turning it into a **negative** on which colors and black/white values are reversed. The negative is then used to make a **positive print** (color and black/white values correct). The negative is stored, and the positive is

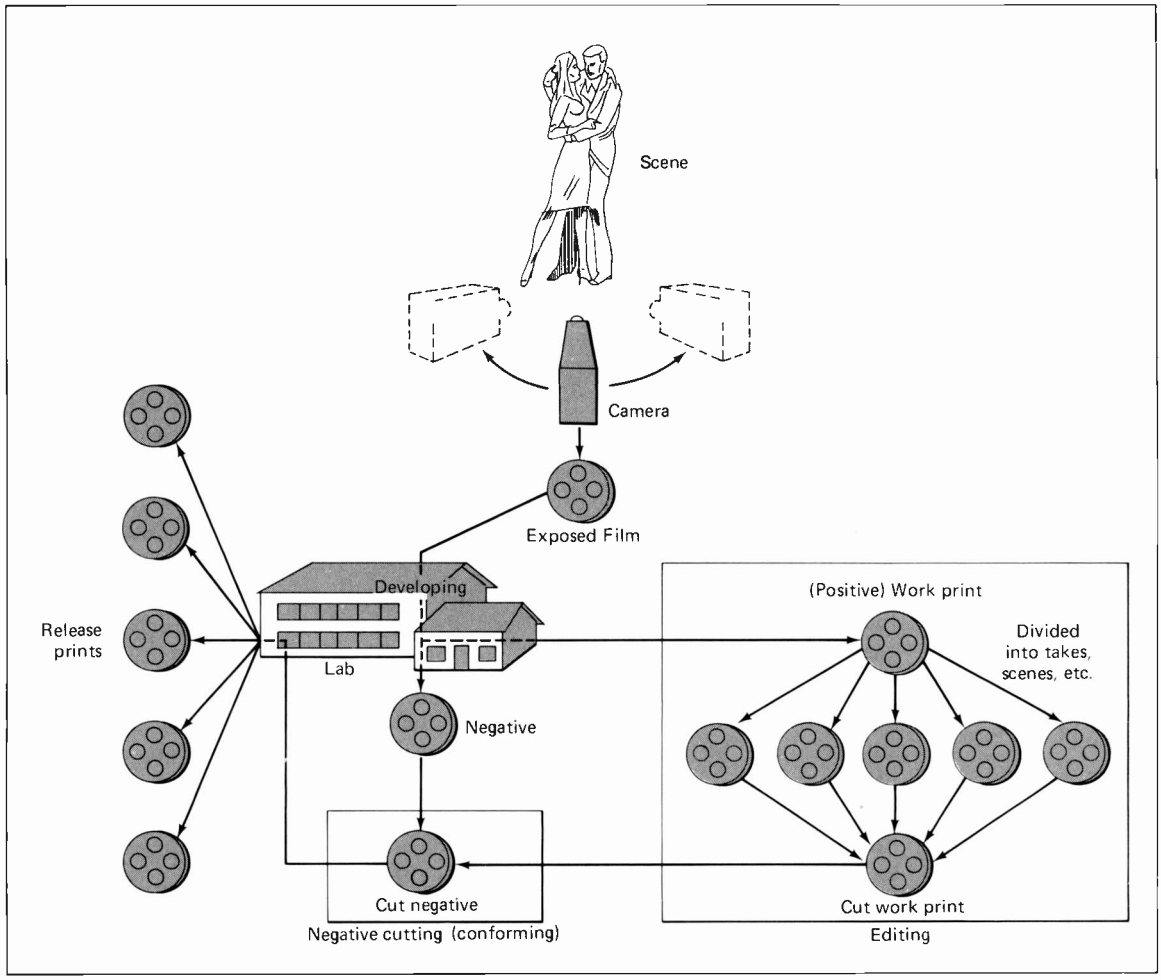


Figure 5-13. Film Production Process. Audio, design, costuming, opticals, and many other steps have been omitted for the sake of clarity.

projected and viewed the next morning by producer, director, editor, director of photography, and other key production crew members. The scenes they view are called **dailies** or **rushes** and are reviewed to determine if any need to be refilmed because of production or laboratory mistakes.

After review and approval, the print goes to the **editor.** The editor cements together shots to make the **workprint,** a prototype of the program. The editor chooses scenes and sets them in the order that will best tell the story. The first version of the workprint will be purposely too long; this is the **rough cut.** Then bits and pieces are trimmed out, both to shorten the program and to tighten it dramatically. The final version, as approved by producer and (if it is in the contract) director is the **fine cut** workprint.

The editor has also edited the dialogue to match the picture. But other sound must be added: sound loops (recorded sound effects), background or theme music, voice-over narration (if used). After music and sound effects have been selected and a narration track recorded, the fine cut workprint is sent to a rerecording studio for the **final mix.** All the separate sound elements are mixed (blended) and recorded onto a single tape. Technicians seated at a long audio control board watch the projected workprint while twisting dials to raise or lower each separate audio source. The completed sound track is then transferred from magnetic tape to a photographic film medium, the **optical sound track.**

Workprint and optical sound track go to the **negative cutter,** who takes the negative out of storage and **conforms** it, that is, cuts and edits it to match the workprint and prepares it for the laboratory. Conformed negative and optical sound track go to the laboratory where they are combined onto a single positive print, the completed program. The first print to satisfy the laboratory for technical quality is submitted to the producer. This is called the **answer print.** The producer makes suggestions concerning color and intensity, the changes are made on the laboratory printing machine, and the **release prints**—copies of the program ready for broadcast—are made and shipped to network or stations.

ELECTRONIC PRODUCTION VERSUS FILM PRODUCTION

We have described two different types of television production. In electronic production, the program is largely produced in sequence and in real time. There may be some postproduction editing, but for the most part the shots have gone together in the proper, finished order at the time of production. In film production, on the other hand, the program is produced out of sequence and is edited after production. The director films, then the editor assembles.

There is a difference, too, in quality of picture. As viewed by audience members on home receivers, electronic production results in brighter, sharper pictures, more intense colors, better color reproduction, and greater feeling of simultaneity—of watching a performance as it happens. Film programs seem less alive than electronic productions chiefly because of their **intermedium nature**—the program is produced on film and played back on television. Film

stores information via photochemical means; television transmits information using electrons. Each medium has its own limitations on amount and types of information it can reproduce. The combination of these two sets of limitations makes for a picture that is not as crisp as a direct, electronic picture. Videotape, on the other hand, is actually part of the electronic production medium. Videotape avoids loss of crispness because it simply stores signals from electronic cameras, reproducing them with nearly total fidelity upon demand. In fact, unless the viewer is so informed, it is impossible to tell whether a production is live or on videotape.

Film production, however, is still the method that allows greatest flexibility in production—scheduling performers, crews, and sets; moving from location to location; postproduction editing. Film is also the medium with which most major production companies are most experienced. And although videotape production is slightly less costly, initial investment in equipment is much higher than for film production. Also, film is still an easier medium by which to syndicate programs (see Chapter 6).

A sort of trichotomy has evolved based on live, videotape and film production characteristics. Programs on which the element of time is important—to get it on the air as soon as possible—are produced live, using electronic techniques. These include news, sports, play-by-play, on-the-spot coverage, local church services, and occasionally, informational and public affairs. However, the majority of television programs are produced on either videotape or film. Both allow some degree of flexibility in production scheduling and postproduction editing. Perhaps more important from an economic standpoint, both allow the program to be syndicated. Videotape is used for programs in which the illusion of aliveness and simultaneity is thought to be important. These include soap operas, a number of network prime-time half-hour situation comedies, almost all of the Public Broadcasting Service's dramatic programs, couch-and-talk shows, children's programs, game shows, various commercial network musical, variety and (occasionally) dramatic programs, and some syndicated religious programs. Videotape is also used for instructional television programs for time and money saved over comparable film productions. Film production is used for programs where production flexibility and syndication are important, while time and apparent simultaneity are not. These include most regularly scheduled commercial network dramatic programs, some situation comedies, documentaries, and made-for-television movies. Film is the natural medium for animation as well, thus children's cartoon programs are on film.

Programs

Most radio stations emphasize **programming** as a whole, not individual programs. Radio audiences listen to rock radio stations, not to rock radio programs; they listen to country music stations, not country music programs; they

listen to jazz stations, not jazz programs. Radio programming is discussed in some detail in Chapter 6; therefore the remainder of this section focuses on television programs. We shall examine television programs in five broad categories: entertainment, information, sports, special audience, and educational and religious.

ENTERTAINMENT

One continually popular type of television entertainment program is the weekly **dramatic series.** A program in the dramatic series is one hour, sometimes 30 or 90 minutes. Each program in the series features a complete and different play, but the same performers play the same main characters every week, with only supporting characters changing. Some examples of dramatic series are *CHiPs, The Waltons, Quincy,* and *Barnaby Jones.* A second type of dramatic program is the **daily serial,** also called **soap opera.** Soap operas run 30 or 60 minutes per daily episode. Usually, several main plots unfold at once in a soap opera. Dramatic pacing is slow, and plot and characters carry over from one program to the next.

A third type of dramatic program, the **miniseries,** combines elements of both the dramatic series and the serial. The miniseries is finite; the series will run for a specific number of programs and then end. The individual programs have continuing characters, and each program is a complete story, but the series also tells an overall story—a family evolving with the times or an individual going through a particularly critical phase of life. There is a trace of the soap opera's cliff-hanging element in the miniseries; an individual episode, while complete in itself, may close with a tacit question concerning the fate of a major character or endeavor. The miniseries met first success with a British Broadcasting Corporation production, *The Forsyte Saga,* aired by the Public Broadcasting Service (PBS) in 1969. The most successful miniseries in terms of audience was ABC-TV's *Roots,* broadcast over eight days in January 1977. Overall, *Roots* was the most watched program in the history of television; individually, its eight episodes attracted the first, fourth, fifth, sixth, eighth, ninth, tenth, and thirteenth largest audiences in television. A number of television stations banded together to finance **Operation Prime Time** (OPT). OPT's first production effort was the miniseries, *Testimony of Two Men,* which the stations broadcast in May 1977. *Testimony* was successful enough to inspire OPT to plan three more miniseries for 1978.

Other types of entertainment programs include comedy, musical, variety, talk shows, game shows, and feature films. **Comedy programs** may feature the funny person, the comedy that derives from putting certain types of people in certain types of situations (the situation comedy, for example, *M*A*S*H, Laverne and Shirley*), or a string of seemingly unrelated funny lines and situations (*Monty Python's Flying Circus, Hee Haw*).

In their pure forms, **musical programs** would feature only music, and **variety programs** would feature various changing acts and performers. Most often, however, music and variety are combined. In the *Donny and Marie* program, for example, the stars have performing guests and act in comedy skits,

as well as do musical numbers. Even comedy programs may contain music and variety, for example, *Saturday Night Live.*

The basic talk show format features a moderator who carries on conversations with one or more guests, for example, *Johnny Carson* and *Merv Griffin.* Talk shows may have elements of comedy, music, and variety as well. **Game shows** use a host or hostess who sets up the game situation or asks the questions and one or more contestants who try to win the game and collect a prize. The variations on this theme are endless, and the multitude of programs covered by the term "game show" run from the local stations' *Bowling for Dollars* to the networks' and syndicators' *Let's Make A Deal* and *Hollywood Squares.*

Both stations and networks run **feature films.** Networks usually attempt to acquire the most recent or successful films they can. Local stations also do this, but in addition, package older and less well-known movies in imaginative ways, for example, "Science Fiction Week" on the afternoon movie or the "Mr. Moto" series on the Saturday night film program. Public television stations have even run films from the silent era. With the exception of game shows and feature films, any of the entertainment program types may be developed into a one-time, high-budget **special.*** A special is usually at least an hour in length and widely publicized in advance. Most specials come from the network, but some are available from syndicators.

INFORMATION

Information programs include news, discussion, documentaries, on-the-spot coverage, and commentary and editorials. A television **news program** features one or more **anchor** reporters who appear on every program and read the news stories. They concentrate on the latest and most important news, and their reports may be accompanied by slides or film. They also introduce short films or videotapes containing news items related by other reporters. **Discussion programs** feature a group of persons—journalists, experts in some field, or well-known erudite persons—discussing a subject among themselves. *Washington Week in Review* and *Wall Street Week* are examples. On an **interview program,** one or more persons ask questions of a politician or other public figure. *Meet the Press* and *Face the Nation* are weekly interview programs that have been running for years.

Documentaries are extended film reports on a particular subject, featuring footage of the actual individuals, activities, and locations involved. Network news organizations, local stations, and syndicators all produce documentaries. They usually average 60 to 90 minutes in length, although ABC-TV once ran a four-hour documentary on Africa. Some local stations produce **minidocumentaries,** which run no more than ten minutes or so and are aired daily on the early evening newscast. **On-the-spot** or **remote coverage**

* Even feature films have been given "special" status on occasion, for example, *Gone With the Wind, Bridge over the River Kwai* and *The Godfather.*

is a live broadcast from the scene of a news event. Both stations and networks air **commentary,** but only stations broadcast **editorials**—in which a stand is taken on an issue—on a regular basis.

SPORTS

Sports programs are divided into two main categories—sports reports and play-by-play. A **sports report** is structured much like a newscast. An anchor reporter reads sports news—who won, who got hired, what stadium is nearing completion—often using slides and film. Sometimes the sports report includes an interview with a prominent sports figure. Local stations do most of the regularly scheduled sports reports. **Play-by-play** is a remote telecast of an entire sports event—a football game, a horse race, a golf tournament. Several sports announcers offer commentary, statistics, explanations, and interviews during the event. Play-by-play comes from local stations, from national networks, or from special networks formed just to carry a particular sports event or series of events. In addition to reports and play-by-play, there are documentaries on sports personalities or events, program series devoted to a single sport (such as fishing or hunting), and sports potpourri programs, for example, ABC's *Wide World of Sports,* CBS's *Sports Spectacular,* and NBC's *Sportsworld.*

SPECIAL AUDIENCE

Special audience programs are designed to appeal to a particular segment of the public. Common special audience programs include those for women, children, specific ethnic groups, and farmers. This program category overlaps the others somewhat; many of these programs could also be classified as entertainment or informational. Local commercial stations and PBS originate a majority of the special audience programs. **Women's programs** range from the traditional fashions-and-cooking presentations to a few that explore the meaning and worth of being female. There are a great many **programs for children,** from the Saturday morning cartoons, many of which serve chiefly as vehicles for selling toys, cereal, and sweets to children, to the entertaining, learning-oriented *Captain Kangaroo, Misterogers Neighborhood,* and *Sesame Street.* Programs for **special ethnic groups** originate chiefly from local stations and PBS. Local stations are also the chief source of programs for **farmers.** Find a special audience of a large enough size, and someone will program for it—cooking shows, home repair programs,·gardening programs, and so on.

EDUCATIONAL AND RELIGIOUS

Educational programs may be **instruction**—for-credit lessons for classroom or home use—or **educational in a broad sense** of the term, as public interest or cultural enrichment programming. Not surprisingly, public television stations have the heaviest concentration of both types of educational programs. But using our broad, second definition of "educational programs," much of the news and public service efforts of commercial stations could also be considered educational.

Religious programs are broadcast chiefly on commercial stations. Some are local in origin, some come from networks, others come from religious syn-

dication sources—a denominational radio-television-film agency or an evangelistic association. The programs themselves range from local Sunday morning worship services to slick, star-studded productions of major evangelists, from childrens' programs that teach moral lessons to intellectually stimulating, professionally produced dramatic presentations.

On-the-Air

In the United States, radio and television programs begin and end at exactly the time they are supposed to, and every second during the broadcast day is accounted for. This precision would not be possible without the **program log,** published by the station traffic department. The traffic department maintains charts and notebooks showing what program elements (programs, commercials, public service announcements, and other material) go on the air, when and how often they run, and how many days, weeks, or months they will run. Changes, deletions, and additions are posted on these charts and notebooks. Each day, the traffic department compiles information about the next day's programming and publishes the log, ready for the sign-on crew the next morning. The log lists in chronological order each program and announcement, its length, when it begins and ends, the type of program material it is (news, religion, entertainment, etc.), whether or not it is recorded, the source of the audio and (in television) the video, and sponsor and advertiser information.

To understand how a broadcast station translates its program log into an ongoing broadcast of programs, it is necessary to know the physical place from which programs originate. We shall call these places of origin **sources,** although it must be understood this is a special use of the term. Sources of programs here means where the programs come from when they are actually broadcast, not who produced or distributed them. The term **program** is also used here in a special sense to refer to anything listed on the program log and thus includes commercials, station identifications, and other such elements, as well as those productions we normally think of as programs.

Radio and television stations have four main sources or inputs of programs. One source is **live from the studio.** Some programs that originate in the studio also have input from other sources. For example, a disc jockey radio program includes disc recordings and audio tape commercials and jingles. A television news program includes film and tape reports and commercials. A second source is the **network.** A radio station may belong to several networks, for example, a national radio network, a network to broadcast major league baseball games, a network to broadcast the state university's football games, and a farm news network. Even an independent (i.e., not affiliated with one of the three major commercial networks) television station may occasionally carry programs from a network of one kind or another. A third source is live

ANNOUNCER ON: _____

ANNOUNCER OFF: _____

KDNT 1440

DAILY PROGRAM LOG

DENTON, TEXAS

DAY: THURSDAY DATE: 2/16/78

CST [XX] CDT [ ] PAGE NO. 3

	PROGRAM TITLE/SPOT ADVERTISER	START TIME	COMM. TIME ANNCR. INT.	TYPE ANNCT.	SOURCE PROG.	COPY
7 :00	STATION ID - KDNT - DENTON, TEXAS					
7:00	SCHOOL LUNCH MENUS		5M	PSA	L	
	428 PLYMOUTH CHRYSLER/DALLAS ZONE		60	CM	T	
	433 TRITTS LADIES WEAR		30	CM	T	
	393 WAREHOUSE PARTS		30	CM	T	
7 :15	COMMUNITY ANNC.			PSA	L	
	394 LEE OPTICAL		30	CM	T	
	363 BILL NUE/STATE REP/DEM (PAID FOR BY COMM ELECT. BILL NUE)		30	CM/POL	T	
7:24	KDNT NEWS/420 WESTERN STATE BANK(OPEN & CLOSE)		5M/60	N/CM	L/T	
7:29	505 DALLAS FORD DEALERS		60	CM	T	
7 :30	STATION ID - KDNT - DENTON, TEXAS					
7:30	TSN NEWS (OPEN & CLOSE)		15M	N	NET	
	375 TEXAS MEADOWS		60	CM	T	
	375 TEXAS MEADOWS		60	CM	T	
	375 TEXAS MEADOWS		60	CM	T	
7 :45	WEATHER /356 TRAIL DUST STEAK HOUSE(OPEN & CLOSE)		60/30	N /CM	L/T	
	392 MUFFLER MASTERS		30	CM	T	
	324 COWTOWN BOOTS		30	CM	T	
	438 NORTH TEXAS BANK		30	CM	T	
7:50	T.D.T.Q.			CM	L	
7 :55	TSN NEWSxx			N	NET	

Log courtesy of KDNT. Used by permission.

Figure 5-14. Radio Program Log. This is part of a morning drive time log. In the "Program Title/Spot Advertiser" column, the numbered items are commercials; the numbers indicate which tape carts they are on. Numbers in the "Comm. Time Annc. Int." column indicate times: "30" = 30 seconds; "60" = 60 seconds; "5M" = 5 minutes; and so on. The next column reflects the classification of each program item: "PSA" = public service announcement; "CM" = commercial announcement; "CM/POL" = paid political announcement; "N" = news. The last column shows program sources: "L" = live; "T" = tape; "NET" = network. The operator writes in the time each item begins in the "Start Time" column. The operator puts a check mark in the "Spot" column after each program or announcement has been broadcast.

from a **remote.** The program is relayed from the remote location to the station. The broadcast of a local high school basketball game, the Sunday morning worship service at a local church, the annual Thanksgiving Day parade—all are examples of remote broadcasts.

A fourth major source is from **recordings.** These may be syndicated programs or locally produced programs. Some syndicated radio material arrives at radio stations on large disc recordings called **electrical transcriptions;** most, on reels of audio tape. But almost all radio programs are put on audio tape cartridges for easy handling and instantaneous cueing. Recorded television programs are on film or videotape. Television stations may put short program material on videotape cartridges for ease of handling. Television audio and video may originate from different sources, for example, a news story may consist of a silent film narrated live by the newscaster.

The **operator** at a radio station (usually the announcer or disc jockey on duty) sits at the audio console and feeds the programs to the transmitter as prescribed by the log—originating some live, throwing the switch to bring in the remote, loading and playing back tape programs, opening the microphone in the booth for the newscaster, bringing in the network on time. The person in charge of getting a television station's programs on the air on time and in correct order is the **duty director** or **residue director.** Aided by an audio technician seated at a nearby console, a video engineer, a videotape technician, and a telecine technician, the duty director starts and stops film projectors and videotape recorders, joins the network, cues the booth announcer, signals directors of live studio and remote programs when to begin, and goes into and out of various program sources.

Talent

The two major production centers for nationally distributed television programs are New York and Hollywood. People who wish to write, direct, and perform in "the big time" congregate around these two cities. While the pay is high and the life seems glamourous, the work is hard and long, and job security is low. To put together an hour-long television film show such as *CHiPs, Wonder Woman,* or *Lou Grant* every week is all-involving and demanding, requiring early-morning-to-late-evening production schedules and, for the director, producer, and other key creative personnel, seven-day work weeks for most of the year. Programs using electronic production techniques take just as much time; the taped half-hour situation comedies such as *All in the Family* and *One Day at a Time* are usually produced on a seven-day per week schedule.

Perhaps the hardest grind of all is the daily soap opera. Writers must prepare five scripts a week in advance. The director must work out camera and actor blocking on five programs per week. Actors must memorize lines from five scripts a week. Say what you will about the content of soap operas, the

level of directing and acting is consistently at least adequate, sometimes very good. The "soaps" are a real finishing school in which directors and actors polish their craft.

It is extremely difficult to break into big time television without (and sometimes even with) experience and performance credits. Actors have usually performed in a number of stage productions before they get their first part in a television commercial or bit-part in a dramatic program. Singers and dancers usually have stage, nightclub, or recording credits before they get their first chorus job in a television musical-variety show. News reporters come from local stations, from wire services, or from newspapers. Sports announcers have worked at local stations or have previously made names for themselves in other fields. Directors start as script clerks or assistant directors on television commercials, begin at local stations, or come from other media. Writers have agents to submit program scripts; and most agents will not represent a writer who has no previous writing credits.*

Even at the local station level it is difficult to get a first job in television or radio in large or medium-sized cities. It is not until you get to smaller television stations or small town radio stations that it is usual for the talented newcomer to break into broadcasting. From there it is a matter of talent, ambition, and hard work to get to the good pay and bright lights of large market stations or national television or radio. Chapter 20 examines the hows and whys of careers in broadcasting in some detail.

Criticism

A play in the theater runs for a number of performances. A motion picture plays for days or even weeks at various theaters around the country. A book remains in bookstores or in libraries over a period of time. A work of art exists for the ages. Critics of theater, motion pictures, literature, and fine arts report on what they see as good, bad, or indifferent and can influence future attendance and sales. A television critic cannot do this. A television program is here and gone in an instant, to be repeated rarely and at widely spaced, unannounced intervals as reruns or in syndication, making it difficult for the TV critic to influence future attendance.

What is **criticism?** You have probably heard some people say they never watch television because it is so bad, so violent, so immoral, or so commercial. That is criticism, but it is not the type we mean here. Usually, the I-never-watch-TV criticism implies (1) use of critical standards from other media such as literature or painting to judge television and (2) judgment of the medium as a whole, rather than as to its individual parts. After all, few people have

* In which case the fledgling writer attempts to find an agent who does take on new talent.

stopped reading books because there is so much "trash" in the bookstores; why then should television be judged by such an inclusive standard? To condemn television out of hand is to condemn the consistently high standards of network news organizations, the occasional presentation of outstanding drama, music, dance, and film, and the entire schedule of PBS, much of which qualifies as fine art by any standards.

Aside from its presentation of journalism and fine art, one should be able to distinguish between good and bad television, even among the more popular entertainment programs. This is the job of professional critics—persons such as John O'Conner of *The New York Times,* Terrence O'Flaherty of the *San Francisco Chronicle,* Barbara Holsopple of the *Pittsburgh Press.* These critics look at a television program and, recognizing the **limitations of the medium**—it has to draw a large audience, has to fit within a time slot, has to be sponsorable, and all the rest of the "has-tos"—judge the worth of the program. They look at its overall premise or theme or idea, the writing, the directing, the acting, the opening and closing titles and credits, the music, the setting. They judge these elements on originality, cleverness or quality, depth, taste. And, based on prior experience and their individual, absolute standards, they make distinction between good and bad situation comedies, game shows, comedy-variety shows, action-adventure dramas, soap operas, sports play-by-play, talk shows, children's programs, political convention coverage, documentaries, and so on.

A critic pays particular attention to the new programs each September and January. The repetitive nature of television series allows the critic to look at the first one or two programs and to make fairly accurate critical judgments about the entire series. If the initial judgment is wrong, the critic can reexamine and re-review the series later in the season. Unlike their colleagues in art, music, drama, and literature, television critics are expected to comment on nonprogram aspects of their medium—business developments, laws and regulation, station and network personnel changes, and advertising practices.

Rarely do the mainstream broadcasting critics deal with radio. One can find, however, reviews of the programming of individual radio stations, of radio specials ("The History of Rock 'n' Roll" or "Woodstock Revisited"), and of station personalities in some youth-oriented or underground publications. Newspapers and magazines also run occasional feature articles on some aspect of radio.

Bibliography

PRODUCTION AND ON-THE-AIR

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Marinis, *Making Movies: From Script to Screen* (New York: Harcourt Brace Jovanovich, 1973); it deals primarily with film-as-film, but techniques are similar in film-as-television. Bob Shanks, programming vice-president with ABC, provides an insider's view of how television production works at the national distribution level in *The Cool Fire: How to Make It in Television* (New York: Norton, 1976). For a completely different view on the same subject, see the amusing book by Merle Miller, *Only You Dick Daring: Or How to Write One Television Script and Make $50,000,000* (New York: Sloane, 1964). Two *Journal of Broadcasting* articles describe the production cycles of weekly television programs: James E. Lynch, "Seven Days with 'All in the Family,' " 17 (summer 1973), 259–274 (videotaped half-hour situation comedy), and J. W. Ravage, " '. . . Not in the Quality Business.' A Case Study of Contemporary Television Production," 21 (winter 1977), 47–60 (filmed hour mystery).

PROGRAMS

Horace Newcomb analyses various program types, describing similarities and trends among them in *TV: The Most Popular Art* (Garden City, N.Y.: Anchor, 1974).

TALENT

There are biographies and autobiographies on a number of television personalities. Most describe the background, training, and "breaks" they had to get where they are. For example: Mary Livingston Benny, *Jack Benny* (Garden City, N.Y.: Doubleday, 1978); Dick Cavett and Christopher Porterfield, *Cavett* (New York: Harcourt Brace Jovanovich, 1974); Ed McMahon, *Here's Ed: The Autobiography of Ed McMahon* (New York: Putnam, 1976), and Mike Douglas, *My Story* (New York: Putnam, 1978).

CRITICISM

Of course, the best way to read further on broadcast criticism is to read the critics' columns. But there is some material about criticism. The *Journal of Broadcasting* has published a number of articles on broadcast criticism over the years—who the critics are, what they comment on, what their standards are. See, for example, Jules Rossman's report on his quantitative study, "The TV Critic Column: Is It Influential?" 19 (fall 1975), 401–411. See also books by two well-known critics, Robert Lewis Shayon, *Open To Criticism* (Boston: Beacon, 1971), and John Crosby, *With Love and Loathing* (New York: McGraw-Hill, 1963). Horace Newcomb has edited a collection of articles on television criticism, *Television: The Critical View* (New York: Oxford University Press, 1976).

6 Programming

The "product" of broadcasting is time, your time. You donate your time to stations (and, through them, to networks), which, in turn, sell it to advertisers to air commercial messages. In exchange, you receive elements of entertainment and information put together in a particular way. This is **programming.** Good programming convinces you to donate time to a particular station. Poor programming results in few listeners and viewers, low prices for time, few advertisers, and low profit. Ultimately, then, success in programming is measured in terms of profit, and successful programming is vital to a broadcast operation.

There are as many formulas for programming as there are stations, and there are as many formulas for successful programming as there are stations operating "in the black." The one foolproof way to high ratings* cannot be described because there is no one way. But factors that must be taken into account to achieve high ratings can be described. These factors are different for radio and television because the two media program for two different types of audiences. Therefore in this chapter we shall first examine radio programming, then television programming, both from local station and network points of view. Our examination includes discussions of audience characteristics, programming formats and concepts, competitive programming, and con-

* A station's rating is a measure of its popularity. See Chapter 17.

straints on programming. Next, we examine the role audience promotion plays in the programming effort. Finally, we look at programming in public broadcasting at both national and local levels.

Radio Programming

Physically, radio is portable, more so than any other medium. People turn on the radio primarily when they are doing something else. The radio audience is the commuter driving to work, the homemaker cleaning and cooking, the student doing a homework assignment, the counter people at the local Baskin-Robbins. The radio audience tunes in and tunes out; it does not listen for extended lengths of time. Yet, even with what seems to be slapdash attendance, radio reaches over 75 percent of all persons 12 years and older every day and some 96 percent every week.

Radio draws its largest audience during morning **drive time,** 7:00–9:00. Audience levels decline gradually until early afternoon, then begin building gradually to peak again 5:00–6:00 P.M. This evening drive time period does not have as many in the audience as does morning drive time. Radio audiences decline as television sets light up.

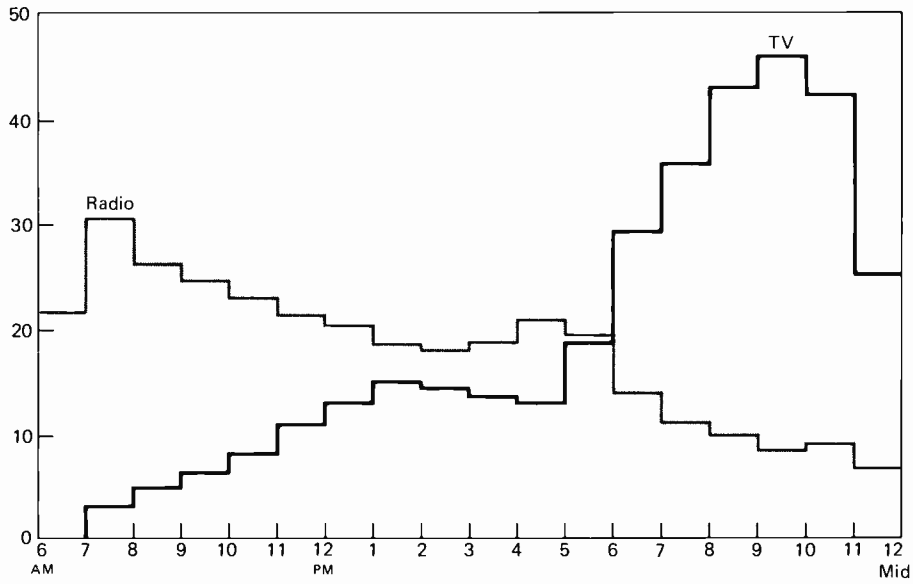

Figure 6-1. Radio and Television Audience Levels, 6:00 A.M.–Midnight. Radio's audience patterns are almost exactly opposite those of television.

SOURCE: Radio Facts: RAB Packet Piece 1976 (New York: Radio Advertising Bureau, n.d.), p. 14. Used by permission.

The implication for the radio programmer is clear. Program elements must be arranged so that the audience may tune in and tune out as their schedules demand and not feel that they have missed anything. This usually means the program elements will be short—music two and one-half to three minutes, news only slightly longer, commercial messages of no longer than 60 seconds and many still shorter. It also means there will be repetition; if you do not hear the news or your favorite record while getting dressed in the morning, turn on your radio as you drive to work and you will probably hear both. Radio stations and radio networks have designed programming around these concepts.

RADIO STATIONS

Most radio stations specialize. Rather than attempting to program for the general public as in television, a radio station chooses a target audience, then devises a programming **formula** to reach that audience. The formula is often built around music that appeals to the target audience, and a disc jockey/host alternates among records, commercials, and self-contained information capsules.

A key factor in formula programming is consistency—insurance that the listener can hear the expected programming at any time. One means of achieving consistency is a chart called the **clock hour,** which specifies certain types of music to be aired at certain times, when the disc jockey is to speak and for how long, when to air commercials, when to give time checks, when to play a musical station identification jingle, and so on. Some stations have different clock hours for different times of the day. The early morning clock hour might emphasize up-tempo oldies, while the late night clock hour might contain a larger-than-normal percentage of soft, slow instrumentals.

Formats. The formula is also called the station's **format,*** and most formats involve use of a clock hour or some similar guide to ensure consistency. Some of the major formats include Top 40, Middle-of-the-Road (MOR), Beautiful Music, Rock, Country, Black, Ethnic/Foreign Language, Talk, News, Religious, Fine Arts/Classical, and Educational.

One of the oldest radio formulas is **Top 40.** Based on a playlist of the most popular 45 rpm recordings, Top 40 radio also features news, weather, sports, traffic information, and features in short capsule form, tied together with music, commercials, time checks and station identifications by a host/disc jockey. Production is tight, with no dead air between program elements. Top 40 radio attracts a large and diverse audience.

* The word "format" in radio programming also refers to the specific lineup of program elements—introductions and closings to be used with newscasts, when and where to play jingles, air weather reports, give time checks, speak over the openings and closings of records, and so on. Thus "format" also means the clock hour and its accompanying instructions.

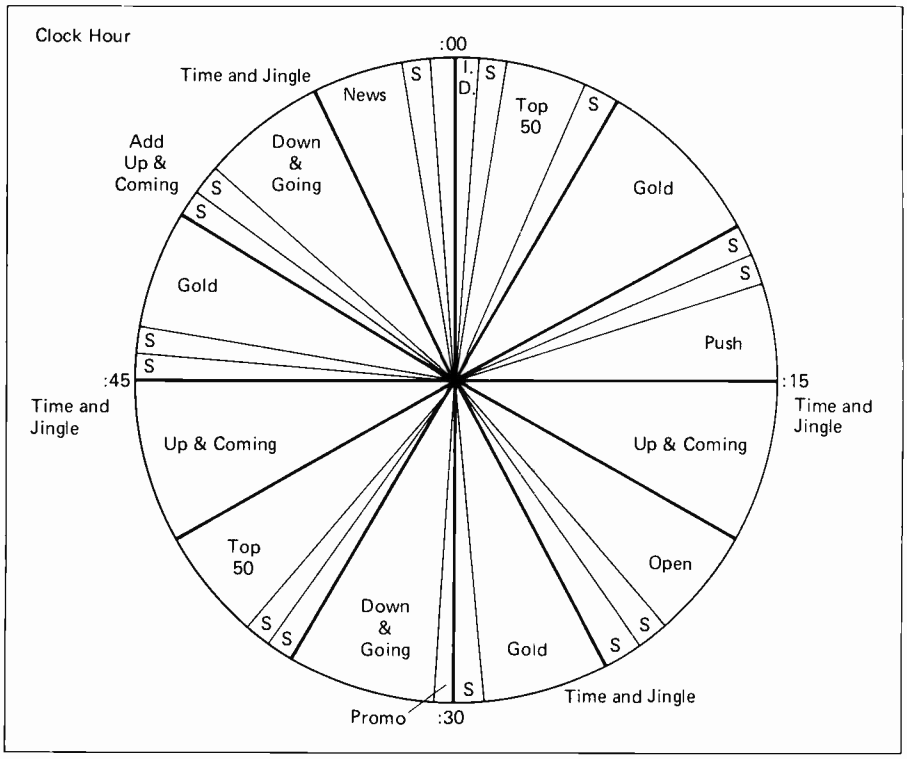

Figure 6-2. Radio Format Clock. The large "S" stands for "spot" (i.e., commercial or PSA).
Adapted from KNTU "Rock Color Wheel." Used by permission.

Middle-of-the-Road (MOR) often features the same type of program elements and tight production as Top 40. MOR hosts are usually not as frenetic as their Top 40 counterparts. They tend to stay away from the hardest rock records, instead playing softer popular music and quieter versions of rock hits. Like Top 40, successful MOR stations have large and diverse audiences. MOR is also called Adult, Adult Contemporary, Bright, Up-tempo, Good or Easy Listening, Standards, and Conservative.

Beautiful Music is often FM radio. It is characterized by lush orchestral arrangements, few and low-key commercials grouped in order not to interrupt the music, unobtrusive hosts who give only station identifications and time checks, little news, and few or no features. Beautiful Music is also called Good Music and Instrumental Music.

There are numerous esoteric variations of rock and **Rock** radio stations. A Top 40 station plays the occasional ballad that becomes popular, whereas Rock stations play only rock music. The most popular Rock radio format is

called Contemporary or Popular. A similar format is Request, in which the station's playlist is determined by audience members contacting the station and asking or "voting" for particular records. Album-Oriented Rock (AOR) radio features cuts from albums, and often whole albums. Some stations program AOR (formerly Progressive rock) using only a playlist, and the disc jockey selects records according to the mood and flow of the program. This is Free Form radio and may include music other than rock, such as classical. Golden Oldies stations feature hit rock records from past years. Golden Oldie radio is also called Nostalgia, Old Gold, Solid Gold, Solid Gold Rock, and Classic Gold.

Country radio, also called Country and Western, attracts listeners from all age groups, in all parts of the country, and from urban as well as rural areas. Modern Country radio—Countrypolitan and Contemporary Country—is often programmed much like MOR, except that the recordings are Country hits. Variants include Bluegrass and Progressive Country.

Black radio usually features the hit black records, and news, features, and comment on the black community. It is also called Soul and Rhythm and Blues. Variants include Gospel and Jazz.

Ethnic/Foreign Language stations air significant amounts of programming or even broadcast entirely in Spanish, Eskimo, Filipino, French, Greek, Italian, Japanese, and Polish.

A **Talk** radio station broadcasts little or no music. Its basis for programming is the telephone call-in show. The Talk radio audience often includes high percentages of older persons. Talk radio is also called Discussion, Interview, Personality, and Informational.

Well-done, **News** radio can be highly successful. But it is also expensive and therefore is restricted primarily to the largest markets. While in existence (1975–1977), NBC Radio's News and Information Service made News an available and realistic alternate format for stations in smaller markets.

Groups run **Religious** radio stations to spread their particular version of Divine Truth. Variations run from hard-sell, didactic programming to a more subtle approach. Some groups expect to underwrite all station expenses; others attempt to have the station generate revenues. These are also called Gospel, Sacred, Christian, and Inspirational.

Fine Arts/Classical as a format for commercial radio is found only in the largest markets. The audience for a Fine Arts/Classical radio station, while few in number, is usually well-educated, has a good income, is fiercely loyal, and actually *listens to* (which is unusual for modern radio) the programming.

Educational radio is a generic term, used here to mean **no advertising.** By far the greatest number of educational radio stations are in the reserved part of the FM band, but some are AM stations. Most have adopted one of the formats described here, particularly AOR, Classical/Fine Arts, Black, and Public Affairs.

With over 8500 radio stations on the air, one short listing of formats will

hardly be inclusive. Within each major category described above, there are almost infinite variations—for example, Latin Rock, Disco Rock, Chicken Rock. The larger and more diverse the community, the more variations will exist as full-time programming on radio stations. There are other formats that really do not fit into any of the major categories—Agriculture and Farm, Big Band, Comedy, Drama, Public Affairs, and Variety. The problem of categorization is confused, too, by **crossover** records. For example, the popularity of a recording made by a country music performer may spread beyond country music fans and show up on other types of stations—Top 40, Rock, even Beautiful Music.

Competition. The shrewd station manager will compete for audience along several fronts.* A station will upgrade the research techniques it uses to determine which records are the most popular in its coverage area. It will adjust the mechanics of its playlist and clock hour to try to get just the right mix of current top 10 hits, golden oldies, and hit-bound records. It will make on-air personnel adjustments—hiring promising new personalities, switching show hosts from one time period to another, and perhaps firing air talent who have lost and cannot regain rating points. The station will try a different approach with news—moving it from on-the-hour to 55 minutes after the hour, including more human interest stories, strengthening local coverage. It will introduce new features, alter or cut old ones, and shift time slots for them. It will upgrade weather and traffic reports by buying radar devices, satellite tracking equipment, special teletypes, helicopters. It will have more sports, less sports, no sports at all, or add sports for the first time. It will alter its air personalities' deliveries, the production gimmicks, the musical station identifications.

Some stations hire programming consultants, also called **radio doctors.** The consultant comes into the market, studies its characteristics, listens to the client station and the competition, lays out a competitive strategy, then alters the format of the client station. The radio doctor is often extremely successful, pushing a station low in the ratings to first, second, or third in its market. Radio doctors began to emerge as major forces in radio programming during the mid-1960s. For example, between 1963 and 1969, programming consultant Bill Drake radically improved the ratings of four major market stations: KHJ, Los Angeles, went from twelfth to first in the market in six months; KGB, San Diego, shot up from the bottom to the top-rated station in 63 days; KAKC, Tulsa, doubled its ratings in two months; and WOR-FM, New York, went from money-loser to tenth in the market, the only FM station in New York's top ten.

Some radio programming firms offer syndicated music services. These are used in automated programming situations, quite often in FM radio, and give

* Programming is the first line of competition, but promotion plays a vital role, too. Promotion is discussed later in this chapter.

a station a smooth, professional, big market sound no matter where it is located. The better syndicated services can help a station's ratings.

Legal and Ethical Constraints. A broadcaster has certain limitations on what can be included in station programming. Some limitations are in law or in federal regulatory agency regulations. These limitations are discussed in detail in Chapters 13 and 14.

The Radio Code of the National Association of Broadcasters contains standards of programming and advertising that subscribing stations must follow. Further limitations and requirements arise out of their standards. Not all radio licensees subscribe to the code, and the code does not have the force of law, so that not all stations are bound by provisions of the code. But the code represents the trade's assessment of what is right and proper in programming. It is a standard against which all stations may be measured. And in that respect it affects the programming of all radio licensees.

Each broadcaster has a set of personal values concerning programming. Of course, the values vary with the individual, but most broadcasters take considerable pride in programming and feel a sense of responsibility toward their audiences. Call it ethics, conservatism, social responsibility, self-censorship, or whatever—it affects form and content of programming. (See Chapter 15 for more on self-regulation and ethics.)

Finally, factors outside law, regulation, self-regulation, and the broadcaster's own sense of ethics may affect programming. The American Bar Association's Canon 35 specifies that no broadcasting of court proceedings be allowed. The houses of Congress and state legislatures place restrictions on coverage in their chambers and committee rooms. Citizen groups may organize and successfully demand or protest changes in programming. Advertisers, while they do not usually expect to dictate policy, do want to have their say.

NETWORKS

The CBS Radio Network, the NBC Radio Network, and the Mutual Broadcasting System (MBS) all program capsules of news, features, and entertainment scattered throughout the hour and the day. Three national commercial radio networks have tailored special program services to fit specific station formats. These include ABC's American Information Network aimed toward Talk and News stations, American Contemporary Network designed for Top 40 and Rock stations, American Entertainment Network for MOR stations, and American FM Network for FM stations; and the National Black Network and MBS's Mutual Black Network for black stations.

Television Programming

Unlike radio, television demands blocks of time and full attention from its audience. In spite of advances in miniaturization and portability, television is not a mobile medium. We sit down to watch television at home, and because

so much of the content is narrative or otherwise packaged as a unitary whole, we watch in blocks of half hours and hours. It takes time. And time is available for most people in the evening, after supper. Audience levels build rather gradually until 7:00 P.M.,* when they shoot up, far out of proportion to previous levels. The levels stay up until bedtime, and after 11:00 P.M. they drop dramatically. This 7:00–11:00 P.M. period is **prime time** for getting larger audiences.

NETWORKS

Television programming aims to attract and hold large, general audiences. Therefore the dominant programming in television, in terms of audience drawing power, is that produced by and for networks. The networks, through their affiliated stations, draw huge, nationwide audiences and thus can charge advertisers the sums necessary to finance programming. Local stations benefit from the generalized audience-pulling power of network programming; affiliateship brings high audience levels which allow stations to charge more for their own advertising. Where in radio, then, the emphasis in programming rests with stations, in television it rests with networks.

Costs and Control. At the outset, television programs had single sponsors; an advertiser controlled and sometimes even produced a network program as had been the case in radio. But as production costs rose, it became obvious that television would be too expensive for single sponsorship. ABC and NBC led a move toward network control of programming. At the same time, Procter and Gamble adopted the policy of spreading commercial messages over a number of programs. The result was **participation sponsorship**—the network owned the programs, and advertisers bought time during programs to air messages. To a large extent, this is the situation today.

Costs of prime-time programming are high and going higher. In 1949 the total weekly cost of programing for the elaborate *Ford Television Theatre,* an hour program, was $20,000. Milton Berle's *Texaco Star Theatre* cost $15,000 per week. Today, network costs for a half-hour series start at $160,000 per episode, with hour dramatic programs costing at least $360,000 each. Production costs have grown so great that pilot programs for a prospective series, once considered expendable if the series did not reach the air, are now often made in the form of television movies. By broadcasting a pilot as a film some use can be recovered from production costs even if the series is rejected. Production costs for daytime television programs are much lower: soap operas costs around $90,000 per week; game shows, $15,000 to $20,000 per hour; couch-and-talk shows, slightly higher.

The high per-episode cost of prime-time programming led to three developments: repeats of a series episode, increasing importance of syndication, and network ownership of programming. Per-episode production costs are so high that in most cases they cannot be recouped with advertising revenues from

* Based on Eastern Time.

Monday through Friday

	ABC	CBS	NBC
10:00 A.M.	Edge of Night (Serial)	Price Is Right (Game)	Wheel of Fortune (Game)
10:30	Family Fued (Game)	Love of Life (Serial)	It's Anybody's Guess (Game)
10:55		CBS News	
11:00	The Better Sex (Game)	Young and Restless (Serial)	Shoot for the Stars (Game)
11:30	Ryan's Hope (Serial)	Search for Tomorrow (Serial)	Chico and the Man (Situation comedy rerun)
12:00 Noon	All My Children (Serial)	Local Program	Local Program
12:30 P.M.	↓	As the World Turns (Serial)	Days of Our Lives (Serial)
1:00	$20,000 Pyramid (Game)	↓	↓
1:30	One Life to Live (Serial)	Guiding Light (Serial)	Doctors (Serial)
2:00	↓	All in the Family (Situation comedy rerun)	Another World (Serial)
2:15	General Hospital (Serial)		
2:30	↓	Match Game (Game)	↓
3:00	Local Program	Tattletales (Game)	Local Program

Figure 6-3. Strip Programming. During weekdays, commercial television networks generally program the same shows at the same time, Monday through Friday.

just one broadcast. Thus many episodes are repeated so that enough revenues are generated to cover production costs and to leave a profit. Since production economics make it almost mandatory that most episodes be repeated, fewer new episodes are produced each year. At one time, television series consisted of 39 new episodes each year, 13 of which were repeated during the summer. Now the norm is 24 or less new episodes a year, most of which are repeated. After a successful series has run a number of years, sometimes a network will begin **strip programming*** old episodes in its daytime schedule, so that each episode may be seen as many as three times on the network.

* Scheduled Monday through Friday, at the same time every day. Networks strip program most daytime and news programs.

When a series has completed its run on the network, it is put into syndication, that is, made available at a price for local stations to use. With network exposure barely covering expenses, the first high profit of a series might come in syndication, accruing to the organization that owns its syndication rights. For years, the majority of network programming has come from independent producers from whom the network purchased first broadcast rights. As syndication became more important, networks began to insist on investing in the producer's development efforts. With production costs so high, network investment was welcome, but the networks also insisted on syndication rights. Independent producers contended that the three networks now controlled all program production. Due to production costs, programming attractive enough to compete with that of the networks could not be produced without access to the large audiences of the networks. And the networks would not broadcast a program unless they had exercised production control and owned its syndication rights. By the late 1960s, local stations bought little programming directly from independent producers; most programming came from the networks, either directly or from one of their syndication subsidiaries.

The FCC, noting that the program production market had narrowed to the three national commercial networks, held hearings on the matter. In 1971, the commission issued rules designed to broaden the market for nonnetwork controlled, independently produced programming. These rules forbade networks from syndicating programming in the United States and forbade stations in the 50 largest markets (in effect, all markets) from broadcasting over three hours of network programming during the four hours of prime time. The latter rule was made in the hope that stations would purchase high quality prime-time programming directly from independent producers. The FCC modified the rules slightly in 1974, but the basic principles are still intact. They are known collectively as the "Prime Time Access Rules." In November 1976, as a result of antitrust suits filed against the three commercial networks in 1972,* NBC settled out of court and signed an agreement with the U.S. Department of Justice to further reduce network interest in production of entertainment programming and to encourage production by independent companies. ABC and CBS said they would continue to fight the suits.

Constraints. Besides having the same limitations on subject matter, theme, and depictions as radio, television has additional legal and ethical constraints. Even broadcasting's self-regulation is harder on television than radio. For example, the Radio Code says simply there should be no more than 18 minutes per hour of advertising; the Television Code has a very complicated set of standards, specifying different maximums for different times of day, number of program interruptions, and number of commercials.

Network programming seems particularly vulnerable to constraints resulting from outside pressures. The Prime Time Access Rules are an example

* Dismissed and refiled in 1974.

of direct FCC influence on network programming. The commission used less direct methods of influence in other instances. For example, the FCC issued a policy on children's programming in 1974 that encouraged reductions in levels of commercialization, maintenance of separation between program content and commercials, and "elimination of practices which take advantage of the immaturity of children." The FCC stated its policy in broad, difficult-to-enforce terms. Yet, in response, the Television Code was amended to gradually reduce commercial time and number of interruptions allowed in children's programming and to prohibit hosts or primary cartoon characters on children's programs from delivering commercials on those programs.

Also as a result of FCC pressure, the NAB amended its Television Code in 1975 to include a "family viewing" standard. The standard is aimed at reducing sex and violence in content and says "[E]ntertainment programming inappropriate for viewing by a general family audience should not be broadcast during the first hour of network entertainment programming in prime time and in the immediately preceding hour. . . ." In early November 1976, a federal district court in Los Angeles ruled that the standard violated the First Amendment, precisely because of FCC encouragement. The decision was appealed, but the NAB decided not to enforce the standard until the appeal was decided. (See also Chapter 13 for a discussion of Prime Time Access Rules.)

Some other limitations on television programming result from the commercial nature of the system and are much more intangible. With the decline of single-sponsor programs, direct advertiser control of content has greatly diminished. However, the greater the audience, the greater the charges for advertising and the higher the network profit. Therefore networks attempt to maximize audiences by programming material that appeals to the broadest spectrum of the public and by avoiding themes and depictions that might alienate major segments of the audience. Such a programming philosophy generally precludes what challenges or might in any way offend established norms, customs, political beliefs, and economic systems.

Critics contend that this philosophy of maximizing audience not only limits range and treatment of subjects within programs, but also limits the amount of certain types of programs. Programming that draws relatively low audiences—usually "serious" drama and music, documentaries, public affairs and discussion programs—is scheduled rarely and at odd hours and, when programming changes are made, is the first to be cut. Defenders say that networks give the television audience what it wants and that the consistently high ratings for entertainment programming prove it. The question then arises, how does the audience know it does not want more serious programming if it rarely has access to it.

Still, ratings are usually relatively low for even the finest Public Broadcasting Service television programs and for serious artistic and public interest

programs* from commercial networks. This phenomenon—audience rejection of certain types of programming—has even been formalized as the LOP (Least Objectionable Program) theory. LOP holds that people are such habitual viewers that, even when no program has particularly strong, positive appeal for them, they will watch television anyway, choosing the program they find least unpleasant.

Competitive Strategies. Networks program for different types of audiences at different times. During the week, daytime television contains mainly game shows and dramatic serials in an effort to capture the female audience. Some effort is made to attract younger viewers on weekday mornings and late afternoons, but the major network push to build a children's audience is Saturday morning. The networks produce news programs in magazine format early on weekday mornings. Within each period—daytime, Saturday mornings, early mornings, Sunday afternoons, and so on—the networks compete for audiences. But network competition for audiences is greatest during prime time, and we shall use this 7:00–11:00 P.M. period to illustrate network program competition at its sharpest.

Competitive strategy in prime-time network television involves the concepts of **vertical programming, audience flow,** and **counterprogramming.** The aim of a network is to capture a large share of audience and to keep it throughout the evening. This is audience flow. One way to achieve audience flow is to make programs longer. All other things being equal, an hour program gives a viewer only half the opportunity to switch networks as do two half-hour programs. Over the years, networks have lengthened many program slots from the traditional 30 minutes to 60 and even 90 minutes, with regularly scheduled slots for motion pictures of two hours and more. At one point, ABC even scheduled two 45-minute series back-to-back, the theory being the audience would stay with the network for the full 90 minutes, rather than tune into the middle of CBS and NBC programs.

More vital than length, however, is strength of individual programs. If one program has high ratings, then the following program has a built-in advantage, **inheriting** the high audience level. If the following program is a strong one, it will keep or even increase the high ratings; if poor, it will **waste the lead-in** by losing audience and may reduce audience levels for a stronger third program. Thus a network will attempt to capture and keep its audience on any given night through vertical programming. It schedules—one after another—either similar programs (e.g., all comedy and musical variety), also called **mood or block programming,** or different types of programs that have proven individually strong. If vertical programming is successful, that entire evening each week is said to be the winning network's **night.**

* In 1976, however, CBS's *60 Minutes* began to earn ratings in the top ten programs, making it the most popular public affairs series in television's history.

But total audience levels for all three networks is fairly constant, and one network gains audience at the expense of the other two. In planning its schedule, a network will try to counterprogram, to figure out what types of shows (e.g., comedy and musical variety) the other two networks will put in a certain time slot, then put a completely different type of program (e.g., crime drama) in that same slot. The hope is that the other two networks will fragment the audience, leaving the greatest share to the counterprogrammer. Another counterprogramming strategy involves length of programs, such as ABC-TV's attempt at 45-minute series. A network may counterprogram by ratings, such as CBS did in January 1975, when it replaced *Paul Sand's Friends and Lovers,* a show relatively weak in ratings, with *The Jeffersons* which turned out to be one of the most popular shows of the season. With this change, CBS also improved ratings of the program that followed in its Saturday night comedy block.

In January or February, network executives begin planning schedules for the following fall. Their tool is the **scheduling board,** a display stand with a chart showing days and time periods. Programs the other two networks are expected to offer are shown in each time slot. The other two networks' offerings are represented by two different colors. The executives then enter programs of their own network, yet a third color, in an attempt to program competitively. They must determine which existing programs to keep and which to drop, what the other networks will do at each time slot, what kind of programs are needed to maintain successful vertical programming and to counterprogram on those evenings that are not so successful, and what is available as new programming.

Ultimately, of course, each network seeks to have its programs earn highest ratings in all prime-time programming. But in most cases, the factor that determines whether a series is continued or canceled is its share.* A program that has below a 30 share—just under one-third of the total audience—is in trouble. Competition for ratings and shares is so keen that a network will not continue a series with a low share, even to the end of the current season. The practice of canceling some series and adding others at midseason began in the late 1960s, and ABC gave these January changes the name **second season.**

STATIONS

In addition to networks, there are a number of other sources of programming available to a television station. An independent station must depend entirely on these other sources. A network affiliated station draws on these sources to a much lesser degree but is still interested in getting the highest quality programming possible from them. For it is this programming that makes the crucial difference—difference between profit and loss for an independent station,

* Ratings and shares are explained in Chapter 17. For now, "rating" is the percentage of homes tuned to a program based on total television homes; "share" is percentage of homes tuned to a program based on the number of homes with sets in use.

difference between top ratings and running a poor third in a market for an affiliate. The balance of power in local ratings lies in how well a station handles these nonnetwork competitive programming elements.

Competitive Programming Elements. A key element in competitive programming is syndicated material. **Syndicated programming** includes series that have run previously on networks (called **off-net** programming) and original material prepared especially for syndication. A station tries to find syndicated programming that will be popular in its market, then buys the rights to that programming. These rights usually allow the station sole use of the programming in the market for a stated period—say two years—during which time the station may broadcast it a specified number of times, usually two or three.

Some syndicated programming is offered on a **barter** basis. Barter programming, also called **advertiser syndication,** is financed by an advertiser, and rights are offered to a station for free or very low rates. The barter program contains some commercials for the producing advertiser, which must be run, and some availabilities that the station may sell to other, noncompeting advertisers. Another source of syndicated programming is the **stations themselves.** This is exemplified by the Operation Prime Time (OPT) venture (see Chapter 5) in which television stations financed production of their own miniseries. OPT's procedures roughly parallel those of the Public Broadcasting Service's Station Acquisition Market (explained later in this chapter).

A second key element in successful competitive programming is **feature films.** A television station film buyer who knows the tastes of the market, can purchase film rights on favorable terms, and can properly package and promote films is a living profit center. Films need not be new or color blockbusters to attract large audiences. For example, films starring Humphrey Bogart are proven television favorites, and local station showings of the black-and-white film *Casablanca* often give color network fare heavy competition for ratings.

A third element—perhaps first in importance—is the station's **local news programming.** A strong news department takes time, money, and effort. But local news, well done, draws high audience levels, good advertising rates, and enough revenues to pay for itself and turn a profit. Additionally, as the most conspicuous local production, news contributes to the station's overall image.

Other local productions can be assets or liabilities in overall programming strategy. Well-planned and slickly produced local programs—discussion programs, cooking shows, children's programs—can augment a good local news effort in contributing to the public's general positive feeling and to high cir-

Figure 6-4. Film Packaging. WFAA-TV promotes its 10:30 week night films, featuring an all-Bacall week.
Used by permission of WFAA-TV.

culation for the station. Poorly done programs drive audiences away and give the station a bad name.*

The Independent Station. Independent stations do not have widely promoted current network programs to attract audiences. However, far from meaning they cannot compete, lack of network affiliation means independent stations must compete even harder. While rarely tops in ratings, many independents have enough audience to earn respectable profits.

Independent stations use the same competitive elements as affiliates but must use them in more imaginative ways. They have perfected the art of counterprogramming. When networks broadcast game shows in the morning, independents may counter with situation comedies or couch-and-talk shows. Later, when networks run soap operas, independents broadcast situation comedies, musical varieties, locally produced children's shows, and feature films. During evening fringe time, 5:00–7:00 P.M., independents do particularly well, capturing a surprisingly large number of persons who would rather watch reruns of *Bewitched* or *Star Trek* than local or network news. Effective competition becomes difficult during network prime-time programming; however, an independent may get enough tune-in/tune-out audience to raise the average rating for any given program to a respectable level. At 10:00 P.M. Eastern Time (E.T.), independents begin recapturing audiences. While network affiliates usually air showcase local news programs around the early evening network news, independents often put major news efforts in the 10:00–11:00 P.M. (E.T.) block, running a half-hour and in some cases a full hour of news. Then, while network affiliates run news at 11:00 P.M. (E.T.), independents are back to entertainment programming.

Two traditional mainstays of programming for independent stations are feature films and off-net series. Independents have been very successful in grouping old and familiar films into thematic packages—for example, "The Films of Bogart," "The Charlie Chan Series"—and drawing respectable ratings. The series are strip programmed, and it is a rare market in which at least one independent is not running the original *I Love Lucy* series, now over a quarter of a century old. Nevertheless, good series are scarce. Its classic status may keep *Lucy* viable for years, but there are too few such perennials. A larger independent may spot a popular series running on the network and pay for first off-net rights in its market, an investment of which it may not be able to take advantage for years if the series has a long network run.

Independent stations compete with affiliates in trying to get good syndicated programs of all kinds. But some independents have gone heavily into local production as well. They produce talk shows, interview programs, and children's shows. Some broadcast play-by-play of local sports events.

* As with radio, a final key in competitive programming strategy is promotion, discussed later in this chapter.

Independent stations occasionally carry network programming. If an affiliate decides not to run a particular network program, the network may offer it to another station in the market, often an independent. Independents may also broadcast programs from special networks, perhaps a championship tennis match or an entertainment special from the Hughes Television Network.

Independent stations made significant audience rating gains as a result of the Prime Time Access Rules. While affiliates could run no network programming, current or past, during the access hour, independents were free to schedule off-net series and movies that had previously run on networks. Audiences tuned to the independents. Affiliates tried to regain their audiences by programming game shows.

Role of Audience Promotion and Publicity

Effective as a programming strategy may be, it will not do any good unless the potential audience knows about it. Networks and stations cannot rely on audience dial switching and schedule listings in *TV Guide* or the local newspaper to inform the public of new programs or time changes in old programs. The role of audience promotion is to draw viewers to programming. It is, of course, up to the programming itself to keep them there, and no amount of clever promotion can keep an audience watching or listening to poor programming.

Audience promotion takes two forms: on-air and off-air. On-air promotion includes contests (e.g., *Dialing for Dollars* and the endless variety of radio station contests); promotional announcements (promos) for upcoming programs; mentions on programs of other programs; call letters (e.g., "KBIV, the Best in Viewing"); thematic graphic designs (to create an easily recognized symbol or **logo** of the station) worked into local production; clever station identification devices (special musical signature or animation); awards ("Here is channel three's award-winning news team. . . ."); and even public service ("The KBIV Action Line Ombudsman").

Off-air promotion may include advertisements in other media; personal appearances by station personalities; publicity stunts by station personalities; use of logo on all station vehicles, equipment, and people (usually on a uniform blazer jacket) seen outside the station; group tours of the station; identification and involvement of the station in worthwhile community activities; and giveaway of bumper stickers, program guides, and so on, all with the station's logo prominently displayed. In many promotional activities, the station also attempts to gain additional publicity through a printed **release** of information on the station, its personnel, and its programs to newspapers and trade publications to be run as news stories.

Good programming and good promotion and publicity are year-round requirements. Some stations increase promotion and publicity activities during

periods when ratings surveys are being conducted, hoping to generate higher than normal ratings. Such a practice is called **hypoing** and, if discovered, is risky from several standpoints: First, the station may be charged with unfair competition or with unfair or deceptive advertising practices in violation of the Federal Trade Commission Act. Second, such a charge would not sit well with the Federal Communications Commission at license renewal time. Third, the rating company would note in its report that the station had engaged in activities during the survey period that could have affected validity of its ratings, thus putting advertisers on notice. Fourth, while it could lead to short-term audience gains, if programming did not come up to standards promised by the promotion, it could result in a long-range drop in circulation.

Public Broadcast Programming

The Public Broadcasting Act of 1967 renamed educational broadcasting and revitalized its programming by providing for a higher level of (primarily federal) funding. These new funds also enabled public broadcasting stations to join together permanently in a live interconnected network. Public television programs such as *America, The Forsyte Saga, The Ascent of Man, Civilisation, The Incredible Machine,* and *Masterpiece Theatre: Upstairs/Downstairs* drew both critical notice and measurable audiences. Public broadcasters pay more attention to ratings, and their evening programming is broader in appeal than before 1967. But, *as with any broadcasting,* especially television, the greatest positive enjoyment results from selective attendance—choose the program you want to watch or listen to, then turn off the set when that program is over.

Unlike commercial broadcasting, noncommercial radio and television sell no time and therefore must derive funds for programming from other sources. However, public broadcasting, at both national and local levels, is subject to some of the same pressures and constraints that limit themes and treatments in commercial programming. Board members of stations and of national organizations often come from the same milieu as their counterparts in commercial broadcasting. Individuals often receive appointments as station managers because of fund-raising abilities, which means they have close ties with the local social, political, and economic establishment. At the national level, the majority of public broadcasting funds are appropriated by Congress and disbursed by the executive branch; programming that displeases either branch may result in reduced funding. Too often, the net effect is avoidance of controversy, a blunting of public broadcasting's potential cutting edge.

NATIONAL LEVEL

Programming for public broadcasting at the national level is largely the responsibility of two organizations, Public Broadcasting Service (PBS) and National Public Radio (NPR). The federally funded Corporation for Public Broadcasting (CPB) provides funds to PBS for network interconnection, to in-

dividual production organizations for program production, and to individual stations for programming and other operations. The PBS network program schedule consists of those programs whose production CPB has funded directly, those selected and paid for in large part by the stations as a group, those financed by corporate underwriting or by foundations, those produced by individual stations for local audiences and then selected for national exposure; and those which have been aired previously on the network and have been selected to repeat.

The affiliated stations themselves select and pay for a large portion of the programs on the PBS schedule. They do this through the Station Program Cooperative (SPC) and the Station Acquisition Market (SAM). Under the SPC, PBS solicits and selects programs for its upcoming season schedule. Then, it sends a list of its selections to each affiliate. The affiliates indicate which programs on the list they would be willing to broadcast and pay for with money provided for this purpose by CPB. This selection process may go on for several rounds. When enough stations have said they will pay to carry a program to finance production of that program, it is put on the PBS schedule. Under SAM, the PBS Programming Department finds existing programming, negotiates a price, and attempts to find enough stations willing to help pay for and air it.

Sources of programming include PBS member stations, organizations set up especially to produce for PBS, and production organizations from outside the public broadcasting pale. Major producing stations include WGBH, Boston; WNET, New York; and KQED, San Francisco. Probably the best-known special public television production agency is Children's Television Workshop (CTW), producer of *Sesame Street, Electric Company,* and the 1977 miniseries, *The Best of Families.* Long a major source of programming outside of the U.S. public broadcasting establishment, the British Broadcasting Corporation has contributed programming ranging from *An Age of Kings* to *Civilization.*

NPR, funded largely by CPB, maintains network operation and programming functions for member stations. These member stations must meet certain minimum criteria concerning staff and scheduling, but for a very low yearly price, qualified stations get extensive live programming. NPR broadcasts many events that are economically unfeasible for commercial networks to carry, for example, congressional committee hearings and readings of the complete Watergate tape transcripts. The best-known regular NPR offering is *All Things Considered,* a 90-minute news magazine presented each weekday afternoon.

LOCAL LEVEL

Local public television stations are often schizophrenic in scheduling. During daytime a station may broadcast instructional material for in-school use or for-credit home study. The contracting agency, usually a local school board or college or both, pays the station for running—and often producing—this material. Quality of instructional material varies with the amount of money,

time, and creativity put into it. During afternoon and evening hours, the station airs general interest programming. Most will come from PBS, but the station will get some from other sources and produce some itself. Other sources might include free or low-cost programming from regional networks, other public television stations, government agencies, or educational institutions. A public television station may buy relatively expensive programming from commercial syndication sources to put together its own classic film series, or to air specials or documentaries produced for and first broadcast by commercial television.

The quality also varies for locally produced general interest programming. Too often, local productions are poorly produced and boring. Lack of local funding is a primary cause. Some public television stations, however, maintain near-network quality levels in all local production. One area of programming in which some public television stations have excelled is that of local news. Ignoring the fender-bender, film-or-no-story, happy-talk school of television news favored by many commercial stations, public stations have opted for a **newsroom** approach, with reporters seated around a table responding to an editor/host. Stories are done in-depth, some with film, and using a lively, often personal writing style. Guests—usually people in the news—are treated warmly and courteously but are subject to probing questions, inevitably reflecting that the reporters have done their homework.

Local public radio stations are so diverse as to defy classification. Their programming ranges from being juke boxes for classical or progressive rock music, to a relatively "straight" variety format; from being playgrounds for a university's student government, to being laboratories for instruction in broadcast production. A few actually air classes and courses for credit.

Probably the most novel form of radio programming is the antiprogramming from stations of the Pacifica Foundation. These stations adhere to what proponent Lorenzo Milam, author of *Sex and Broadcasting,* calls "free-form noninstitutional radio." Under their philosophy of broadcasting, normal radio production values are disavowed as barriers to communication. Each and all may have access to the airwaves. This has brought unpopular causes, antiestablishment ideas, and strong language before their microphones. They depend on foundation and community support, and since much of the community often feels alienated by their programming, these stations seem to lurch from financial crisis to financial crisis. Complaints and threats to stations and personnel are normal; some stations have been bombed. Usually, audiences are so few as to be nonexistent. To these stations, however, what matters is not whether you listen (although they believe you should), but whether you have the opportunity to speak. For "odd" and "antiestablishment" as these stations are, they embody a basic principle on which was founded the political structure of the United States—freedom of expression. In spite of the supposed universality of this principle, many ideas receive their only chance for broadcast expression on these stations. Sadly, threats and

bombings against Pacifica stations reveal that there are citizens who either do not understand or do not agree with the First Amendment to their own Constitution.

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TELEVISION PROGRAMMING

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ter Than You Think," *New York,* Jan. 21, 1971, p. 21. Robert A. Malone compiled "The New Tricks of Counterprogramming," a report of how independent television stations compete with network affiliates, in *Broadcasting,* Nov. 10, 1969, pp. 36–40.

ROLE OF AUDIENCE PROMOTION AND PUBLICITY

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PUBLIC BROADCAST PROGRAMMING

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7 News

"Did you see the news last night?" someone asks. You assume the question refers to a *television* news *program,* and you are probably right. The wording of the question and your assumption illustrate a fact of modern life: most of us rely on television news so much that we have come to think of it as **the news.** In a November 1976 national poll, 64 percent of the respondents mentioned television as one of their main sources of news, and 51 percent indicated television to be the most believable news medium. Radio, too, while not dominating the news field like television, is still an important source of news for many people. Large numbers of individuals listen to radio news as they get ready for work in the morning, travel in automobiles, work in their homes or businesses. In a 1972 national poll, 46 percent of the respondents said radio was their primary source of news during the day.

In this chapter, our subject is broadcast news. First, we explore the meaning of "news." Next, we inspect radio newscasts and television newscasts. Finally, we look at other forms of news programming—documentaries, on-the-spot coverage, interviews.

Nature of News

As a broad definition, we can say that news is **reports of recent happenings.** But more specifically, we are interested primarily in **processed** news—news that has been gathered to a central point, put into form suitable for public distribution and presentation, and disseminated to an audience.

WHAT ARE THE ORIGINS OF NEWS?

In 1450 A.D., Johann Gutenberg of Mainz, Germany, introduced the concept of movable metal type to Europe. This was the birth of European printing. In the early 1600s, newspapers appeared in Germany and Holland, aimed at merchants and other persons in business. These first primitive newspapers contained mainly news of shipping and commerce. England's first regularly published newspaper began in 1621; its first daily newspaper, in 1702.

Printing came to colonial America when a hand press was established at Harvard College in 1683. Benjamin Harris published the first colonial newspaper, *Publick Occurrences,* in 1690, but authorities closed it down after the first issue. In 1704, the *Boston News-Letter* began, and by 1715 it had some 300 subscribers. It contained foreign political news, pirated from English newspapers, and local financial news. By 1750, the American colonies had 12 newspapers; 25 years later the number had multiplied fourfold. All were weeklies; America did not get its first daily until 1783.

In 1765, England imposed on the colonies the Stamp Act, a heavy tax on paper. Most colonial newspapers united to oppose the Stamp Act. The act was repealed in 1766, but a majority of the colonial press continued active in the cause of rebellion and revolution. After the American Revolution, newspapers retained partisanship but lost unity, splitting over politics. Some newspapers supported the Federalist party, made up of large land owners, merchants, manufacturers, and bankers; other newspapers backed the Republican party, made up of salaried workers and farmers. There was no objectivity; newspapers freely mixed news and opinion in the same report.

Up to the 1830s, newspapers were written primarily for the privileged classes. Prices were high; circulations, low. But a new class of people—wage earners—moved to the cities, received the right to vote, and learned to read in free, tax-supported schools. Newspaper publishers saw opportunities for large circulation newspapers. Power had been added to the printing press in 1811, and by 1833 the steam press produced thousands of copies per hour. Publishers altered content to attract these newly enfranchised readers, filling papers with material that the urban masses found interesting and easy to read. Circulations grew so large that publishers could sell advertising space to merchants who wished to have commercial messages reach the public, and the high prices for advertising financed the newspapers. The newspapers were almost given away at one cent (later two) per copy, earning them the name **penny press.** Benjamin Day started the first of the penny newspapers, the *New York Sun,* in 1833, and by 1836 the *Sun* had a circulation of over 30,000. The press was on its way to becoming a mass medium, dependent on large circulation and large advertising revenues.

In 1848, the first news agency wire service was born. Six New York newspapers agreed to share costs of telegraphing national news from Washington D.C. and foreign news from Boston through formation of a new, mutual organization, the Associated Press (AP) of New York. Soon other newspapers

asked to join. Newspapers still slanted reports to match party, cause, or editorial policy. The papers AP served had a variety of editorial policies, so that AP decided to adopt **no slant**—to report only facts. Each AP member newspaper would then be free to rewrite the wire service stories to fit its own editorial slant. Some did. Many more did not, printing stories as they came in over the wire. Eventually, this became the practice of most newspapers. Thus did necessity give birth to **objective reporting,** fathered by the telegraph, a technical device. A rival wire service, the United Press, was organized in 1882, but went bankrupt in 1897. In 1907, E. W. Scripps founded the United Press Association (UP), and in 1909 William Randolph Hearst formed the International News Service (INS). In 1958, UP and INS merged into the United Press International (UPI).

A bitter rivalry led to the age of **yellow journalism.** Joseph Pulitzer's *New York World* and William Randolph Hearst's *New York Morning Journal* (and imitators across the nation) emphasized sensationalism in efforts to appeal to working class audiences and to build huge circulations. Yellow journalism reached its peak in the 1890s, with both the *World* and the *Morning Journal* circulating to some 700,000 readers each. As they grew, however, newspapers also became big business. Publishers identified with working class readers less and less, and more and more with business interests. By 1910, the age of yellow journalism had ended. It had left its mark on the shape and form of the daily press: comics, editorial crusades against crime and corruption, and investigative reporting. But the newspapers themselves had become distinctly middle class in outlook. At the same time, another important trend had begun as E. W. Scripps began putting together the first chain of commonly owned newspapers. Hearst and others followed, buying newspapers in many different cities and managing them from one central office. Gradually, chain and absentee ownership have become the norm in the daily press, and interests of owners have shifted from editorial influence to profits.

WHAT ARE NEWS OUTLETS LIKE?

Thus we find that the pattern for mainstream, public news media had been set early in the twentieth century. First, these media evolved into what LeRoy and Sterling* have called **mass news**—distributed by organized, large, and imposing systems; attended by huge audiences; and relied on by the public for reports of recent happenings. The main news outlets—the organizations that package and present the news to the public—are generally big business, large, bureaucratic. Corporations own them. The corporate-owned news outlet is an investment and may be one of many commonly owned businesses. Corporate officers are responsible to stockholders and are interested primarily in profits, not in editorial policy. The manager of a particular news outlet is usually free to adopt any editorial stance, so long as the outlet earns a profit. With this

* See bibliography.

freedom, editorial policies vary among commonly owned outlets, from conservative to liberal. Even liberal outlets, however, identify primarily with a middle class, within-the-system approach to political and social issues.

Although editorial policies vary, most news outlets report news as objectively as they know how, without bias. (Subtler aspects of news reports, such as story placement, phrasing, and emphasis, are sometimes interpreted as bias.) Some observers attribute objective reporting to feelings of responsibility to the public on the part of news outlet managers. Objectivity also springs from at least two other sources: reliance on wire services and need for large circulation. News outlets are linked together by the two dominant domestic wire services, AP and UPI and, to a lesser degree, by a number of specialized, limited, and foreign-based services. AP and UPI provide the bulk of national and international news for many different news outlets, a situation which—as pointed out above—requires the services to be objective. Because of the wire services, news tends to be identical, often verbatim, from outlet to outlet, city to city. As to circulation, news outlets are supported primarily by advertising revenues. To keep advertising rates up, news outlets need the largest possible circulation or audience, including those persons who disagree with editorial policies. Therefore outlets report the news straight and objectively and reserve opinion for clearly labeled editorials.

As part of the efforts to increase and hold circulation and audience, news outlets produce much that is not, strictly speaking, news. Look carefully at your daily newspaper and you will find most of its space devoted to advertising, syndicated features and columns, sports, family, and other specialized departments, with hard news occupying only about 20 percent of the total. Radio and television, of course, are primarily entertainment/advertising media. Yet even on newscasts, much of the already limited time is devoted to commercials, sports, weather, features, and humorous news items.

WHAT IS NEWS?

Which brings us to the problems of defining news. What exactly is this thing that we have been calling "news." Earlier we said that news is reports of recent happenings that have been gathered and prepared for dissemination to an audience. We have added to that definition by describing the development and present structure of news outlets and their motivations for turning out the type of product they do.

News is further defined by the way in which news outlet managers decide on a news story's **news value**—that is, the story's ability to attract a large audience. A major factor in determining news value is whether a story is **hard** or **soft.** Hard news is reports of current events that are of interest because of their timeliness and general importance or their violence (crimes and accidents). Hard news declines rapidly in news value with passage of time. Soft news, on the other hand, consists of features and news of current events that lose news value relatively slowly. Although there are exceptions, sports and other specialized news is usually of secondary importance to hard news.

There are other characteristics of news, characteristics that serve as means of control over, and thus limitations on, content. Sandman, Rubin, and Sachsman* describe seven types of control: monopoly, source, government, internal, advertiser, self, and public. Giant ownership **monopolies** control news media for the most part, and they tend to reduce diversity of and impose sameness on content. **Sources**—people and institutions, private and governmental—control news about themselves through secrecy, news management, manipulation and shaping of news before it reaches the media. **Government** influences conduct of news media through the court system, agencies, and policies. **Internal control** is exercised by media personnel. Publishers, managers, editors, producers, reporters, camera crews—all act as informational gatekeepers, allowing some news to flow through media pipelines (to mix metaphors!) to the audience, stopping other news. **Advertisers** exercise control sometimes directly by individual advertisers, usually indirectly through media acceptance of commerce and industry viewpoints and conceptions of reality. **Self-**control through professional codes and standards of good practice and the **public** exercise relatively little control (although some citizen groups have succeeded in affecting broadcasting content since 1969†).

WHAT IS BROADCAST NEWS?

So far we have discussed news in general terms, applicable to all news outlets, including radio and television. Now we examine broadcast news specifically. Radio and television stations transmit news, for the most part, at regularly scheduled times. A station occasionally interrupts other programming (but never commercials) to present a news **bulletin,** a news report so important it cannot wait for the regular news broadcast.

Radio has the ability to report immediately and on-the-spot, unmatched by any other medium. A radio reporter needs little or no equipment, perhaps a book-sized audio cassette tape recorder, and can telephone or radio a report from the scene of a news event, even getting it on the air live. A television reporter is also mobile, but sound film and electronic minicamera operation usually require at least one other person at the scene, plus processing or coordination at the station. In addition, it is more difficult to extend newscasts or to break into other programs with bulletins on television because of the relative rigidity of the television programming schedule. Nevertheless, television will have a report on a late-breaking news item—often with film or tape—long before the evening or morning newspaper is published and delivered. The newspaper, on the other hand, will include considerable detail and background information—often vital for a full understanding of the item—for which neither radio nor television had time. The newspaper will also include a good many news stories that the broadcast media did not report at all.

Radio stations usually broadcast news at least once an hour, at the same

* See bibliography.
† See Chapter 14.

time each hour, for example, five minutes of news on the hour. For the most part, major news items are rewritten and repeated on each newscast, with perhaps a few changes in details. Radio's five-minute newscast is actually only four and one-half minutes long, including one minute for a commercial and 15–20 seconds for the opening and closing. This leaves a little over three minutes for news, which makes radio news primarily a headline service, and hardly "all the news when it happens, where it happens" as radio stations often claim. To be fair, however, many stations present additional news each hour, perhaps a network newscast for national and international news and a local follow-up for area and state news. They may also carry extended or more frequent newscasts early in the morning and during afternoon drive time.

All-news radio stations broadcast continuous news interspersed with features and commercials. News is repeated in cycles, around 20 minutes in length, so that a listener may tune in at any time and hear the full complement of news stories within a short period.

Television stations broadcast news less frequently but for longer periods than most radio stations. There is usually an early morning newscast that may range from a 15-minute summary straight from the news wire to an elaborate, hour-long, *Today*-type magazine format program. A second newscast is aired around noon, five to 30 minutes in length. The station broadcasts its **showcase** news program—the one that is longest, most elaborate, has the greatest number of recent or updated stories, videotape, and film—in the early evening. This lasts 30 minutes or longer. Network affiliates broadcast this news program before or after or before *and* after the network newscast. A final newscast airs at 10:00 or 11:00 P.M., 15 to 30 minutes in length. Some television stations present short news summaries at sign-off and sign-on and occasional one-minute news capsules between prime-time programs.

There are a large number of radio networks in existence,* and most provide a news service. Radio networks usually feed news at least once each hour, increasing news feeds at certain times, such as early morning and afternoon drive time. Larger radio networks may feed newscasts two or even three times an hour along with features, commentary, and sports. National Public Radio's news magazine *All Things Considered* airs during afternoon drive time. The three commercial television networks feed extended presentations in the early morning—NBC's *Today* and ABC's lighter *Good Morning, America,* both magazine format programs, and the CBS *Morning News.* The television networks all air weekday showcase newscasts in the early evening. They have shorter feeds at other times, for example, five-minute newscasts for noon broadcast, one-minute news summaries in midprime time, and individual reports that affiliated stations can record and use on their own newscasts. Public Broadcasting Service feeds its affiliates the *MacNeil/Lehrer Report* a little later than the commercial networks' early evening newscasts. This PBS news pro-

* See Chapter 19.

gram differs from those of the other three networks in that the *MacNeil/Lehrer Report* does one story in depth each evening, rather than trying to report a little bit about a lot of stories. Weekend schedules are different for all four television networks.

LIMITATIONS AND PROBLEMS OF BROADCAST NEWS

Time is a major limiting factor in broadcast news. How many stories can be reported in a five-minute radio newscast that is actually 3:10? How many details can be given for each story? In both cases, not many. Television newscasts are longer, but the problem is still the same. The script of an evening 30-minute network newscast, if set into type, would not even fill the front page of *The New York Times.* Thus television news editors must be extremely selective in choosing items for the newscast, and the writer must be extremely selective in the amount of detail to include in each story.

Television's visual element presents a whole set of problems. First, what gets covered by film or by electronic minicamera? The answer is those events that are predictable, where the assignment editor can schedule the equipment and personnel, and the camera crews can move in and set up in advance. This means heavy visual coverage of public figures arriving and departing; of meetings; of ribbon cuttings, grand openings, and the like; of speeches; and of press conferences, lots of press conferences.

Second, what gets on the air? Those stories that have film or videotape coverage. Thus a story of the opening of a new office building, with film of the mayor cutting the ribbon, may get prominence on the newscast equal to the less visually interesting, but more important story of the city auditor's report of a missing $150,000 in city revenues, or to the story of a violent school bus accident that happened too late to get film or tape crews on the scene. Of course, people turn to television news to *see* things, and if the station does not use a lot of film or tape—regardless of content—the audience tunes to a station that does. Thus we see the trivial given coverage equal to or more than the important.

Third, there are those who manipulate news coverage: the demonstrators who await arrival of television camera crews before beginning action; the gangs who plant bombs, hijack airplanes, and kidnap people at such time and in such manner as to make the 6:00 P.M. newscast; the major political parties who orchestrate national conventions to take advantage of television coverage; the politicians and other public figures who plan announcements and news conferences for major visual impact.

A fourth problem stems from subtle pressures on news camera crews to emphasize certain aspects in filming stories—action, blood, simplification, and above all, conflict. These are visual news values that get audiences. But such values tend to give a distorted picture of events. Rarely are issues so clear-cut that they can be accurately depicted as a battle of two sides, us versus them, good versus bad, black versus white. For example, during the war in Southeast Asia, network newsfilm footage from Vietnam emphasized conflict

and blood because reporters knew that was what the New York offices wanted. Supposedly, the sight of wounded and dead American armed services personnel brought war home to the public as never before, helping turn public opinion against the war. Yet, subtle—and equally important—issues of the war went undercovered or unreported, simply because they did not lend themselves to visual presentation.

There are questions of ethics that confront television reporters and technicians. Certainly, faking a scene for the camera is unethical, and most television news organizations have established policies to prevent faking. But some situations are not so easy to define as ethical or unethical. Suppose you were covering a civil rights demonstration, filming a group of persons praying in unison. You could hear the prayer clearly, but your *microphone* could not pick it up. What would you do? Ask the group to pray louder? Would that be ethical? Further, the very introduction of a television news camera into any situation changes the nature of that situation. People act and say things differently from the way they would if the camera were not there. How would you correct for that? Would you film them (in spite of their changed behavior) and use the footage anyway? Would that be ethical? Would you hide the camera? That, of course, would be clearly unethical. But what would you do?

There are problems in newsfilm that derive simply from the conception held by news personnel of how film should be shot. Warren Breed* once noted that novice newspaper reporters and writers adopt news practices and procedures, not from their perceptions of audience needs and desires, but from what older newsroom hands do and say. Thus it was in television news as well, including production of newsfilm and documentaries. Newsfilm and documentary producers put together products that *looked* good. But in the process of making the film look good, they used production and editing techniques that did not necessarily depict exactly the way the event had happened. They did this not to distort or alter reality, but because that was the way they had learned to produce newsfilm and documentaries. The results often came as a shock to those who had been filmed. The documentary or edited newsfilm would appear on television, and subjects would see themselves seeming to say or emphasize things they had not intended, commenting on things they had never seen, arguing with people they had never met.

Television's ability to alter reality had been noted as early as 1952.† However, it was not until 1967 that this ability assumed the proportions of a public issue. During the 1960s, American news media reported on the civil rights movement, riots, assassinations, and the war in Vietnam. Angered and frustrated by such reports, certain politicians and segments of the public began to look askance at the media carrying them, particularly television. In 1968, television provided pictorial coverage of demonstrations and events surrounding

* See bibliography.

† See entry for article by Lang and Lang in the bibliography.

the Democratic National Convention in Chicago. Charges were leveled that coverage was biased and unfair and that news reports had been staged and distorted through editing. Subsequently, similar charges were made against a number of television documentary projects (see "Other Forms of News Programming" later in this chapter). As a result, most television newsfilm and documentary personnel have become sensitized to production techniques that they had previously taken for granted, and the networks and many stations have instituted policies and procedures to eliminate deceptive use of production techniques.

A final problem in broadcast news involves use of consultants. In the early 1970s, competition for audiences for local television news programs became so keen that some stations hired consultants or **news doctors** to help boost ratings. Many broadcast news personnel felt the consultants' suggestions emphasized cosmetic changes: use of youthful and attractive anchor reporters with little or no previous news experience or training; light and humorous banter (called "happy talk") among anchor personnel; emphasis on stories with film and videotape reports, even when content is irrelevant or inconsequential; inclusion in the newscast of more humorous and human interest (soft news) stories; weather reporters who wear floppy bow ties and make jokes rather than having degrees in meteorology. Often, experienced station news personnel resented the efforts of the consultants, saying their changes degraded journalistic integrity of news programs.

Radio News

Radio station news efforts vary greatly from station to station. At one extreme is the profitable, middle or large market radio station, with five or more persons doing nothing but news and public affairs programming full time. At the other extreme is the **rip 'n' read** operation, where the disc jockey on duty runs down to the closet where the wire service machine is kept, rips off the latest five-minute news summary, runs back to the microphone before the record ends, then—without even looking over the copy first—opens the microphone and reads the latest news "as compiled in the newsroom of KXZX" or wherever.

Many stations fall somewhere in between. Let's look at a hypothetical small market station with a full-time news staff of two persons. Although we call these persons **reporters,** each actually fills additional roles as producer, editor, writer, and newscaster. A typical day might start at 5:00 A.M. The early shift reporter arrives at the station before sign-on to prepare for a group of extended newscasts—10–15 minutes each—starting at 6:30 and scheduled several times through wake-up and morning drive time. There may even be a **news block** of 30 to 60 minutes starting at 7:00.

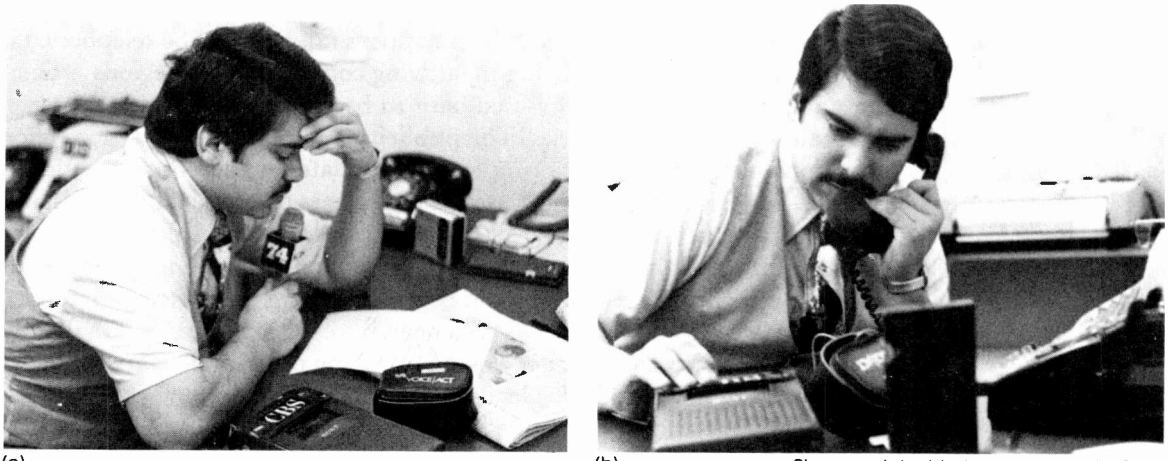
First, the reporter **clears the wire.** A great deal of information has come in

from AP or UPI overnight, and the floor behind the news wire machine is covered with a long, continuous length of wire copy. The reporter separates the most recent hard news for immediate use; certain other material (e.g., sports, features, stock reports) is filed for later use; much of the remainder is discarded. If the station is independent (not a network affiliate), the reporter will prepare local, state, national, and international news; if it is an affiliate, the network will cover national and international news and the reporter will concentrate on state and local. Sometimes a station may have more than one wire service and network. For example, in addition to an AP or UPI wire and one of the national networks, a station may also have a financial news wire and be affiliated with a state or farm news network. Additionally, AP and UPI have extensive audio services (actually nonsponsored networks) that carry both regularly scheduled network-style newscasts and feeds of **actualities** (voices of people involved in a news event) for use in locally originated newscasts.

After clearing the wire, the reporter checks other news sources. There may be audio tape cartridges made the evening before that could be used on the morning newscast—tapes of local news telephoned to the station, tapes of local newsmakers' statements or comments, tapes of special network **news feeds** (individual news stories reported by network personnel sent to stations for use during locally originated newscasts). The morning newspaper is checked. If it contains a late-breaking local news story on which the station has no information, the reporter *may*—although the practice is ethically and legally questionable—rewrite the story into broadcast news style directly from the newspaper and use it on the air. Then, the reporter makes telephone calls: the police station, the sheriff's office, the hospital, the U.S. Weather Service, the highway patrol, and, according to the station's location, other institutions that might have had overnight activity that is newsworthy—the university, the U.S. Coast Guard, the army base, and so on. During the telephone calls, sometimes the reporter records (with permission) the voice of the respondent for playback on the air; other times the information is simply jotted down, and the reporter quotes or paraphrases the respondent during the newscast.

After gathering all available, pertinent news material, the reporter assembles the newscast. Some items are standard features every morning and are automatically included: the commodity report, the farm report, the extended weather report. In hard news, however, decisions must be made as to which stories will be included and how much time to devote to each one. The newscast format allows a preset amount of time, and the reporter must select and prepare news, based on news value judgments, to fit within that time. News material must be processed for use. Processing varies from reading over and **editing** (adding or subtracting a word here and there, deleting a sentence or two) a wire service story to writing a local story from scratch and preparing a cartridge tape actuality for playback as part of the story.

After the stories have all been processed and the newscast is assembled, the reporter confers with the audio technician or disc jockey on duty. Both reporter and technician have **format sheets** that indicate when and how long



(a) (b) Photograph by Ida Lee, courtesy of KCBS. Used by permission.

Figure 7-1. Radio News Bureau. Some large radio stations maintain full-time bureaus in outlying communities and other cities. At left (a), Jim Avila, the San Jose (California) Bureau chief for KCBS, San Francisco, tapes a story around actualities previously recorded. At right (b), he uses a coupling device to feed the recorded story directly over the telephone wires to the station.

each part of the newscast is to be—the weather, the local news, the commercials, and so on. Both have also done this same routine together many times, every morning, Monday through Friday. Hence the conference is less a matter of how to do the newscast, than of what is unusual or different from the norm today. If the technician handles all technical duties during the newscast, the reporter hands over all tape cartridges for playback on cue. A well-equipped station, however, will have a small studio set aside for news, complete with its own audio control board and tape playback machines, and the reporter can engineer the entire newscast. At the scheduled time, the reporter goes on the air. Although in separate rooms, technician and reporter can see each other through a window of double-pane, soundproof glass. They exchange hand signals to notify each other when to start tape cartridges, when commercials are almost over, and so on.

Between newscasts the reporter **updates** (rewrites to include new information) some stories, deletes some, adds others. After the heavy early morning schedule of newscasts, the reporter has only five-minute hourly newscasts to prepare until noon when there may be another extended newscast.

After a well-deserved cup of coffee, the reporter begins gathering local news. A number of sources and tools are regularly available to the radio news reporter. The handiest tool is the telephone, and the reporter makes liberal use of it, calling newsmakers for comments (to be recorded and aired), calling for background information, confirming news tips and leads. When big state or regional stories break in other cities, the reporter may call and record on-the-spot reports by acquaintances at radio stations in those cities. The newsroom may be equipped with radio receivers that monitor police, fire, and other

emergency radio frequency bands so that the reporter will know when and where something happens as soon as it happens. Stories may be telephoned in by **stringers,** people—often living in outlying communities or regions—whom the station pays on a per-story-used basis to be part-time reporters. Listeners may call in tips on news stories. The publicity and public information offices of various institutions mail, bring, or call in material they hope the station will use. Some is legitimate news; some, puff pieces or propaganda. Individuals and organizations send or call in notices of meetings, elections, actions, stands taken, press conferences. Sometimes groups of commonly owned stations share exclusive news stories and coverage among themselves; a large station group may even maintain its own news bureaus in key cities. Finally, the station monitors its competition closely, watching other radio stations, television news, and newspapers for leads on major local stories.

Notice of a coming event is filed in a **future folder,** one in a box of 31 folders, numbered consecutively for days of the month. Each day's future folder is examined to see what news conferences, meetings, and special events are scheduled. This is where a second news reporter comes in handy. No matter how adept a reporter is at covering regular **beats** (places where news stories often originate and thus are checked on a frequent, periodic basis, for example, city hall and the police station) by telephone, someone has to attend, physically, the school board meeting, the mayor's press conference, and the senator's address at the Rotary Club. With a second reporter going on duty at midmorning to cover outside events, the first reporter can stay at the station, run the newsroom, prepare newscasts and receive and record telephone reports from the second reporter for use on the air.

When the first reporter goes off duty in the afternoon, the operation reverts to semi-rip 'n' read, the announcer on duty reading wire service news and recording called-in stories until the second reporter returns to the station to prepare for the evening drive time newscast. If there is no second reporter, afternoon and evening newscasts are primarily rip 'n' read. Night events, if covered, require either overtime or a juggling of schedules.

Television News

Addition of the visual element makes television news much more complex than radio. Whereas in radio news one or two people do everything, television news requires more people and more specialization. We shall look at the news operation of a hypothetical, typical television station in a market of, say, between 150,000 to 300,000 television homes.

The head of the news department is the **news director,** usually a broadcast news specialist by training and work experience. The news director may restrict activities to setting policy for and administering the department or may also play an active role in the news process, usually as producer. The **producer** is in charge of a news program and decides what news stories go on, how long

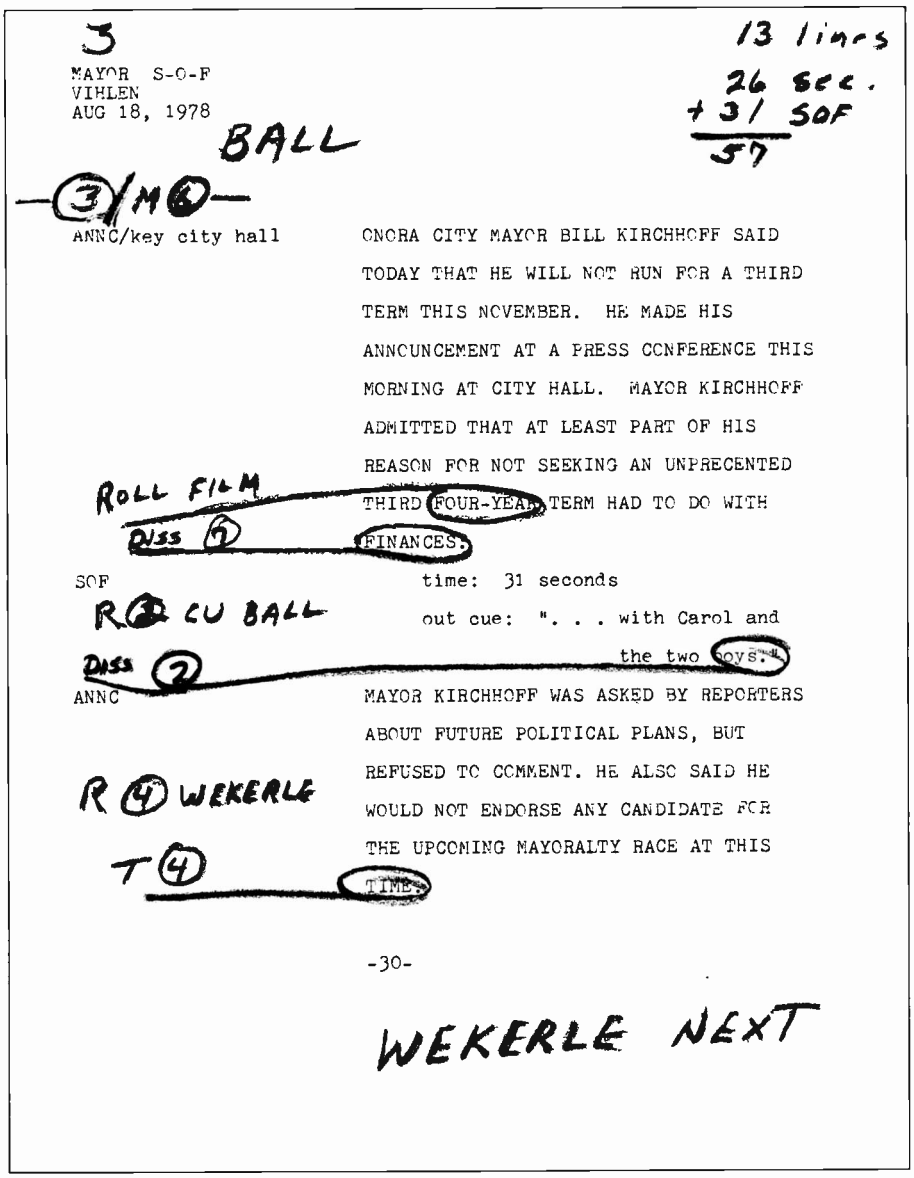
they should be, and in what order. The **assignment editor** decides which stories to cover and assigns reporters and camera crews to cover them. **Reporters** are the station's on-the-spot observers and explainers. They cover stories, interview people, write reports, supervise camera crews, and appear in newsfilm and minicamera coverage. A **camera crew** usually consists of a reporter, a camera operator, and an audio technician. A **laboratory technician** develops newsfilm. **Newsfilm** and **videotape editors** help reporters and writers prepare, trim, and arrange visual reports for the newscast. **Writers** take material from various news sources and type them into script form, to assigned length, and in the writing style preferred by the station. Writers indicate on the script the instructions on how and when film, videotape, slides, and other graphic materials are to be used. **Newscasters** or **anchor reporters** narrate the newscast on the air, reading the script and tieing together the various visual and aural elements of the program. Separate staffs prepare sports and weather news, often with a graduate meteorologist in charge of the latter. There may be additional news employees—clerical, secretarial, drivers, even a pilot.

Sources for television news are basically the same as those for radio. News tips and leads come from the public and competitive media, and stories and visual materials (still pictures, film, and videotape) come from the station's own news staff, the wire services, special network feeds, stations in other towns, stringers, public information and publicity offices of major private and public institutions, and station group news bureaus. Also, a television station will often subscribe to a number of different wire services. In addition to the broadcast news wire machines of both AP and UPI, the station may have the AP and UPI newspaper **A wires** (emphasizing national and international news) and **B wires** (emphasizing feature stories and reports in depth), sports wires, a financial wire, photo transmission wires, weather wires, and city news service wires.

The amount of time actually available for news in a newscast is absolute; it cannot be stretched or compressed. Therefore as time for the newscast approaches, the producer prepares a news **budget.** The producer reviews all news material available or due. Each potential item is judged by standard news values, whether or not there is film or videotape to go with it, and how and where it would fit in the newcast for maximum audience appeal. Then, specific items are chosen for inclusion on the newscast. They are put into a certain order, and running times are assigned to each. This is the news budget.

Using the news budget, writers put together the stories. They type scripts, work with reporters and film and videotape editors, and select other visual materials from slide and still picture films. They also prepare a number of short (five to ten seconds each) news stories for the very end of the program; the newscaster will use these **pad items** only if necessary to fill time. As stories are completed, scripts are handed to the producer who assembles them into a master script, with pages numbered continuously and consecutively. The producer pencils instructions on the bottom or top of a page, where appropriate, indicating which newscaster is to read which story, when to lead into or out of

a commercial, and so on. Meanwhile, the film editor is splicing together all film stories onto a single reel in sequential order, and a videotape editor is doing the same for tape stories. Slides, studio graphics, and other visual elements are stacked in order. During this time the newscasters have been reading over and rehearsing the script.



3

13 lines
26 sec.
+31 SOF
57

MAYOR S-O-F
VIHLEN
AUG 18, 1978

BALL

(3) / M (6)

ANNC/key city hall

ONORA CITY MAYOR BILL KIRCHHOFF SAID TODAY THAT HE WILL NOT RUN FOR A THIRD TERM THIS NOVEMBER. HE MADE HIS ANNOUNCEMENT AT A PRESS CONFERENCE THIS MORNING AT CITY HALL. MAYOR KIRCHHOFF ADMITTED THAT AT LEAST PART OF HIS REASON FOR NOT SEEKING AN UNPRECENTED THIRD FOUR-YEAR TERM HAD TO DO WITH FINANCES.

ROLL FILM
DISS (5)

SOF

time: 31 seconds

R (2) CU BALL

out cue: ". . . with Carol and the two boys."

DISS (2)

ANNC

MAYOR KIRCHHOFF WAS ASKED BY REPORTERS ABOUT FUTURE POLITICAL PLANS, BUT REFUSED TO COMMENT. HE ALSO SAID HE WOULD NOT ENDORSE ANY CANDIDATE FOR THE UPCOMING MAYORALTY RACE AT THIS TIME.

R (4) WEKERLE

T (4)

-30-

WEKERLE NEXT

Finally, the deadline arrives. The producer hands the original copy of the complete script to the newscasters, and other copies to the director of the newscast program. The director keeps a copy of the script and gives others to key members of the production crew. Films and slides go to the projectionist; studio graphics and rear screen projection slides go to the floor manager. The director marks the script with standard directing cues and makes last minute checks to ensure that all elements and personnel are in place and ready to go. At the exact instant when the newscast is to begin, the director receives the go-ahead from master control and starts the program. As with the radio newscast, the television news team and production crew have used the same basic format every weekday for so long that actual production is second nature, a matter of plugging in each day's script to the routine.

Network television news programs are put together much like those at local stations. Their emphasis, of course, is on national and international news. The networks' news operations include news bureaus at key news centers across the nation and around the world. Newsfilm and tape from these bureaus are flown or transmitted by microwave or satellite to the New York studios. Network news programs do not include sports and weather news on a regular basis.

Other Forms of News Programming

Usually, the news department produces not only the newscast, but other types of programs as well. These may include interviews, news panel programs, remote (on-the-spot) coverage, news specials, editorials and commentary, and documentaries.

Interviews are programs in which a newsmaker is questioned at length and in depth by a member of the news department. If there are two or more persons either asking questions or answering them, the format is a **panel program.** NBC's *Meet the Press* is an example of the former; PBS's *Wall Street Week,* the latter. A panel program may also feature a group of persons discussing a

Figure 7-2. Television News Script. Each news story is typed on a different page. The writer, Vihlen, has slugged the story at upper left, indicating that it deals with the mayor and has sound-on-film (SOF) as part of the story. The writer has also indicated that during the opening of the story, the newscaster should be seen in front of a picture of the city hall. The newscast editor or producer has noted that the story contains 13 lines (not counting the single-word lines) which, at a reading speed of 2 seconds per line, add up to 26 seconds. The film lasts 31 seconds for a total 57 seconds on the story. The big "3" in the upper left means that the story will be the third one reported on the newscast. Newscaster Ball will read the story, and (as noted at the bottom) Wekerle will read the next story. The director has marked the script, too. The story will open on camera 3 with camera 6 (in a film chain) on the city hall slide matted in behind. Film rolls on the term "four-year," and the director dissolves to camera 7 (another film chain), on which the film is seen, on the word "finances." During the film, the director readies camera 2 with a closeup of Ball and, at the end of the film, dissolves to 2. As Ball wraps up the story, the director readies camera 4 on a shot of Wekerle, who will read the next story and, on Ball's last word, takes (cuts to) camera 4.

subject among themselves, often with a moderator. PBS's *Washington Week in Review* is an example.

Remote coverage is a live broadcast from the scene of a news event. Broadcasts of the national political conventions, the Watergate hearings of 1973, the space shots of the late 1960s, the funerals of John and Robert Kennedy and Martin Luther King, Jr., the presidential debates of 1976—all these are examples of remote news coverage.

News specials are broadcasts or programs that deviate from the regular schedule. As such, they may include interviews, panel programs, remotes, election returns, and wrap-ups or summaries of important stories, as well as a group of network correspondents evaluating and discussing a news event.

Commentary and **editorials** are expressions of opinion. The word "editorial" carries the connotation of taking a pro or con stance, of being more hardhitting than commentary. Networks label expression of opinion as commentary, but some local stations air true editorials. Station editorials are delivered by the news director or the station manager and usually deal with local issues. Many stations do not air editorials because of Fairness Doctrine implications (see Chapter 14), because editorials could alienate advertisers or segments of the audience, or because editorializing is too much trouble.

A **documentary** shows or analyzes an issue—for example, a news event or a social condition—in nonfictional but dramatic form. Broadcast documentaries are primarily television programming, however, a few radio stations still occasionally put together and air a news documentary. Both networks and stations broadcast television documentaries. They range in length from minidocumentaries of five to ten minutes to ABC's four hour long television program on Africa. Television minidocumentaries often run daily as a regular feature in a station's early evening newscast. Each may deal with a separate subject, or one subject may be serialized over several evenings. Each complete *60 Minutes* program from CBS News consists of two or three minidocumentaries. Most often single television documentaries are 30, 60, or 90 minutes long. Their subject and approach varies.

Over the years television documentaries have generated quite a bit of public controversy and criticism. During the period 1968–1971 Congress investigated four CBS-TV documentary projects and one from NBC-TV for bias and deception;* outtakes† were subpoenaed‡ in all but one. CBS finally

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* CBS-owned WBBM-TV's *Pot Party at a University;* CBS News' never-broadcast "Project Nassau," *CBS Reports: Hunger in America,* and *CBS Reports: The Selling of the Pentagon; and NBC-TV's* Wolper-produced *Say Goodbye.*

† **Outtakes** refers to film shot but not used in the finished production.

‡ **Subpoena,** in this instance, is short for *subpoena duces tecum,* a process by which a witness is commanded to produce documents or papers—or, in this case, film. The Special Subcommittee on Investigations of the House Commerce Committee subpoenaed outtakes from *Pot Party, Selling of the Pentagon,* and *Say Goodbye.*

refused to supply outtakes for *CBS Reports: The Selling of the Pentagon* to a House subcommittee. The subcommittee recommended that the network and its president, Frank Stanton, be cited for contempt, but the contempt resolution failed on the House floor. Congress eased up on documentaries, but the private sector took over. Gun clubs, food trade associations, a psychiatric professional association, and others have attacked various documentaries during the 1970s. There is even a Washington-based organization, Accuracy in Media (AIM), that devotes full-time to searching for biased reporting on the networks, as well as in the major East Coast newspapers and magazines. Various tactics are used against documentaries—pressure on advertisers to remove their commercials, publicity, complaints to the National News Council,* civil suits for libel and trespass, complaints of Fairness Doctrine violation to the Federal Communications Commission (FCC). Normally the FCC acts in such matters only if it has **extrinsic** (i.e., outside the documentary itself) evidence of deliberate distortion or staging involving a licensee or station management. However in 1973 the FCC agreed with an AIM complaint that NBC-TV's *Pensions: The Broken Promise* violated the Fairness Doctrine because it described only the bad side of private industrial pension programs. The commission told NBC to explain how it would rectify the situation. NBC appealed, and the appeals court reversed the FCC's decision, saying opposing viewpoints do not have to be presented on the same program.

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* See Chapter 15.

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8

Commercials and Other Persuasive Announcements

Commercials. Everybody has something to say about them, mostly bad. But they work. And for the people who pay for the programming to which you listen and view, that is good. It is almost impossible to show direct cause-effect relationships, that a buyer purchases a product *because* of a radio or television commercial. Still, the fact remains that increased sales follow effective use of broadcast advertising.

The word "commercial" is short for **commercial announcement,** and we sometimes forget there are other kinds of announcements. In this chapter we shall use **announcement** to include any (usually relatively) short unit of broadcast programming that is created to attract and hold your attention in such a way as to persuade you. We shall deal with the following aspects of announcements: types; creation—pitches, approaches, and production; criticisms; and praise.

Types

Announcements may be classified by **placement, length, purpose,** marketing interest of **advertisers,** basis of **payment, medium** on which the announcement is produced, and method of **production.**

PLACEMENT

When classified by placement, announcements may be divided into four types: those within sponsored programs, those within participation programs, those within barter syndication programs, and those run at station breaks. On a **sponsored program,** all announcements are contained within the program and pertain to a single sponsoring entity (two, if the program is co-sponsored). A local sporting goods store may sponsor a five-minute radio sports report every weekday evening. An automobile company may sponsor a network television special to introduce its new models.

Full sponsorship used to be the dominant form of broadcast program advertising. Now the emphasis has shifted to **participating sponsorship.** On a participation program, all announcements are contained within the program, but each announcement may pertain to a different product or advertiser. This is because advertisers now, for the most part, use a **scatter plan** in buying broadcast advertising time, spreading announcements over a number of different dates and times, rather than on one program. The form of scatter plan buying varies with the medium. An advertiser buying one hundred 30-second positions on television and network radio buys 100 **specific dates and times.** An advertiser buying one hundred 30-second positions on a radio station usually buys **time periods** rather than specific positions; the station decides the exact times the commercials are to be run. For example, the radio advertising contract may specify that the 100 positions are all to run within two weeks and during a particular time-of-day period (e.g., morning drive time) or scattered throughout the day—**ROS** (run-of-schedule), **BTA** (best times available), or **maximum impact** (a certain number to be run in each of a number of different time periods). While not the norm, it is possible to buy specific positions on a radio station (usually for an additional charge), to buy ROS on a radio network, or to sponsor a program on a radio station or network. It is also possible to buy **rotations** on a television station. In rotations, an advertiser's commercial is run either at different positions in the same program every day, or in different programs during the same time period every day.

Barter or **advertiser syndication** has become increasingly popular among television advertisers (see Chapter 6). Barter syndication contains elements of both sponsorship and participation programming. The advertiser provides the station with a free program series, and each program contains announcements for the producing advertiser and some availabilities (places for announcements) the station may sell.

Although network television programs often contain some availabilities that affiliates may sell, prime-time programs come with all availabilities filled, sold by the network sales staff. The affiliate has little to sell during prime time except **station break** and **middle break positions.** Station breaks are the announcement positions between programs. Even though they do not occur within programs, these station break positions are valuable and expensive; the network programs on either side of them help to keep viewing levels high, even during breaks. A middle break is the temporary cut back to local stations

every 30 minutes during network television programs of one hour or longer to air locally sold commercials.*

LENGTH

When classified by length, announcements may be divided into three categories: those of 60 seconds and less, longer announcements, and program length announcements. At one time the normal length for radio and television announcements was **60 seconds.** Radio's standard length is still the 60, although **30s** and sometimes even **20s** and **10s** are available. The cost of television advertising, however, rose to expensive levels, and research seemed to show 30-second commercials to be about as effective as 60s. During the late 1960s the norm began to shift to the 30-second length, now standard in television. Television stations also have 10-second availabilities called **IDs** because of their position immediately before the station ID (identification). Some advertisers have attempted to buy one commercial position and put in it short commercials for two different products. This saves the advertiser money. An ID usually costs 50 percent of the price of a 30, therefore if a 30 costs $100, the advertiser could run two 15-second commercials in its position for the price of two IDs. This is called **piggybacking** or **multiple product announcements.** The Television Code of the National Association of Broadcasters prohibits piggyback commercials in time units less than 60 seconds, unless the commercials for the two products are integrated and appear to the viewer as a single commercial.

In 1978, television's largest advertiser, Procter and Gamble, attempted to place 45-second announcements on television. The detergent company offered to pay the full 60-second rate and to allow the broadcaster to use the remaining 15 seconds to air a public service announcement. A number of persons in television, however, expressed the fear that the 45/15 arrangement would lead eventually to sale of 15-second commercials, which, in turn, would lead to intensifying of problems and complaints of clutter (see under "Criticism" later in this chapter). Some stations and at least one network refused to accept Procter and Gamble's 45/15 offer.

Some announcements run **longer than one minute.** Some single-sponsor television specials, particularly certain types of dramatic or other fine arts presentations, are of such nature that the sponsor foregoes the usual number of interruptions allowed by the Television Code, opting instead to let commercial announcements run at natural breaks in content—between acts, or at the end of a long piece of music. In these cases, the sponsor uses specially prepared commercials of 90 seconds or longer. During election years, candidates for office sometimes use longer announcement lengths. In presidential races,

* Because the stations use 3–5 seconds of the middle break to meet FCC station identification requirements, it is often erroneously referred to (even by stations and networks) as "station identification," as in "We will return after station identification."

the networks edit down scheduled programs to make time available for five-minute political announcements.

Program length announcements are programs that interweave "program content so closely with the commercial message that the entire program must be considered commercial."[1] For example, a group of lawn and garden supply dealers sponsor a program on home garden care, and the program is liberally sprinkled with mentions of the dealers' products. The Television Code says program length commercials are "not acceptable,"[2] and the Federal Communications Commission (FCC) cracked down on them in 1973. But there is sometimes a fine line between a program length commercial and a legitimate program. For example, what about a remote radio broadcast from the opening of a new retail business?

One form the program length commercial may take is the **pitch program.** A pitch program is essentially one long sales pitch for a particular product or service. One television pitch program that ran weekly in a number of markets several years ago featured a well-known announcer selling record albums of "the great themes of classical music." For 15 minutes the announcer would extol the virtues of these albums, interspersed occasionally by a few sample bars of music from the records. Some advertising material in program length does seem to be acceptable, specifically listener swap programs (if the station does not charge to air the items), paid political programs featuring candidates for public office, and programs presenting shopping guides, fashion shows, women's service features and other material that provides a special service to the public.

PURPOSE

The purposes of announcements can be divided into five broad categories: advertising, institutional advertising, editorial advertising, corrective advertising, and counteradvertising. An **advertising announcement** is one whose ultimate aim is to have you do something that will benefit someone—you, someone else, or both. Many persuasive advertising announcements contain a direct call for action and include the following: commercials that try to get you to use some product or service for which you pay money, political advertising that urges you to vote for a certain individual or for or against a certain proposition, public service announcements (PSAs) that ask you to donate time or money, and station and network promotional announcements (promos) that urge you to tune in to programs and personalities. Some advertising announcements do not contain a direct call for action, but instead attempt to create awareness, promote understanding, shape attitudes, or enhance recall. However, the ultimate aim of many of these announcements is still to get you to do something, and thus they may be included in our definition. For example, the Advertising Council developed television PSAs featuring an American Indian shedding a tear over litter and pollution. The immediate purpose of this campaign was to create public awareness that each person plays a role in the quality of the environment with the slogan, "People start pollution.

People can stop it." Ultimately, of course, this PSA asks the people to throw trash in receptacles, commute by car pools or public transportation, and take other such actions that reduce environmental abuses.

The aim of **institutional advertising** is to enhance a company's **image,** that is, the general public's concept of the company. In other words, institutional advertising attempts to make you feel a certain way toward the advertiser. As an example, after the initial phases of the fuel shortage in 1973–1974, prices for gasoline and other petroleum products began to rise. At the same time, major oil companies ran television commercials, not to sell gasoline, but to show what they were doing to help alleviate the fuel shortage—offshore drilling, construction of the Alaskan pipeline, and research into alternative forms of fuel. More recently, American Telephone and Telegraph (AT&T) has tried to dispel its image of a large, faceless, corporate bureaucracy. AT&T's "Hello America" television commercials depict the company as a group of smiling employees whose only concern is to make America's telephone system the best in the world.

In **editorial advertising,** the advertiser pays for broadcast time to expound one side of an issue. If the issue is controversial and of public importance, the broadcaster who airs the advertisement must fulfill Fairness Doctrine obligations to present all other sides of the issue as well (see Chapter 14 for a discussion of the Fairness Doctrine). Sometimes editorial advertising resembles other forms. For example, Esso paid for and NBC ran those commercials on the Alaska pipeline mentioned above. Environmental groups filed a Fairness Doctrine complaint on the Esso spots. NBC maintained the commercials were institutional advertising, but the FCC ruled that they presented one side of the controversial issue of the pipeline's ecological impact in Alaska and thus were subject to Fairness Doctrine obligations.[3]

The goal of **corrective advertising** is to set the record straight concerning previous advertising. Corrective advertising is a regulatory device used by the Federal Trade Commission (FTC). If the FTC finds certain advertising to be false or misleading, it may seek a consent order by which the advertiser promises to devote a certain percentage of its advertising expenditures for a certain period of time to corrective advertising. The first such advertisers were ITT Continental Baking Company in 1971 and Ocean Spray Cranberries, Inc., in 1972. Both ran television commercials as part of their corrective advertising. ITT Continental had allegedly touted its Profile bread as a dietary product, and so agreed to advertise that Profile had about the same number of calories per ounce as other breads. Ocean Spray had said that its cranberry juice cocktail had more "food energy" than orange juice or tomato juice; its corrective advertising made clear that food energy was not vitamins and minerals, but calories.

The FTC won judicial sanction of corrective advertising in 1978. Three years earlier the commission had ordered Warner-Lambert Co. to state in future advertising that its Listerine mouth wash would not help prevent colds or

sore throats as previously advertised. Warner-Lambert appealed. The case wound its way to the U.S. Supreme Court, which in 1978 ruled in favor of the FTC and thereby upheld the commission's authority to order corrective advertising.[4] Listerine advertising, including broadcast commercials, must contain the message, "Listerine will not help prevent colds or sore throats or lessen their severity" until the company has spent $10 million.

The **counteradvertising** announcement, called a **countercommercial,** is actually a noncategory. Countercommercials have been prepared but never aired. The FTC proposed counteradvertising to the FCC as an extension of the Fairness Doctrine; consumer groups would have the right of access to broadcast media to present negative aspects of advertising claims. One countercommercial that was actually produced featured film actor Burt Lancaster naming a group of automobiles, by make, model, and year. After naming the cars, Lancaster explained that all these vehicles had potentially dangerous mechanical defects in their designs and warned the viewer to drive carefully to a dealer and have a certain safety device installed. In its 1974 Fairness Report, the FCC specifically rejected the idea of countercommercials, and therefore they have never been run as such on television or radio.

ADVERTISER

Announcements may be classified by marketing interest or scope of advertiser into local, network, spot, and cooperative advertising. **Local advertising** aims at persons living in the advertiser's community. The owner of the local hardware store, barber shop, or restaurant places advertising on the city's broadcast station to reach citizens of that city.

A large organization that has some product or service used by all types of persons and distributed nationwide would probably wish to place advertising on one or more of the **national networks.** Everybody brushes teeth, drinks beverages, and uses soap, so that manufacturers of these products buy advertising on networks to reach large, nationwide, relatively undifferentiated audiences. Such manufacturers may use **spot advertising,** as well. In national spot advertising, the advertiser spots commercials around the country by carefully choosing specific stations, programs, and time periods that will deliver the desired audience. A household detergent manufacturer may, in addition to regular television network advertising, use national spot advertising to get commercials on radio stations and on local or syndicated television programs whose audiences have high percentages of women. National manufacturers of specialized products and regional advertisers also use spot. A tractor manufacturer, for example, places advertising in those markets and on those stations where it would reach high concentrations of farmers. The beer from a regional brewery, available only in a three state area, is advertised only on stations within that area. In both cases, network advertising would be inefficient, reaching too many people, and local advertising would reach too few.

Cooperative advertising (or **co-op,** for short) is a combination of national spot and local advertising. In co-op, the local dealer places an ad on a station,

featuring the product of a national manufacturer, but tying it in to the local dealer (e.g., "Gant shirts are available at Jordan Marsh."). The manufacturer then shares the cost of the advertising time with the retailer. (See Chapter 16 for further discussion of local, network, national spot, and co-op.)

PAYMENT

Announcements classified by recompense to the station fall into ten categories: rate card, cut rate, sustaining, make-good, per inquiry, tradeout, advertiser barter or syndication, plugola, promotional announcements, and payola. A **rate card** is the published listing of a station's charges for advertising time, including all discounts and other prices differentials. In most cases an advertiser pays rate card prices to run a commercial. If the advertiser gets some kind of price break or discount that is not on the rate card, the commercial runs at **cut rate** or **below rate card prices.** Rate cutting is ethically questionable.

A **sustaining announcement** is one run at no charge, as, for example, most PSAs and promos. If a paid announcement does not run correctly—distorted, aired at the wrong time, not aired at all, or aired with some part or element missing—the station will broadcast the announcement again at no charge. This is called a **make-good.** A **per inquiry** (PI) announcement is one in which the station receives payment based on the number of responses to the announcement—for example, a record company's television commercial mentions a telephone number for viewers to call and order the advertised album, and the company pays the television station a certain amount for each call.

A **tradeout** or **barter** involves goods or services instead of money. If based on rate card prices and retail values, the tradeout is a perfectly ethical transaction. The local television station may run commercials for an office supply firm in exchange for a new desk for the manager, or may run commercials for a radio station or *TV Guide* magazine in exchange for advertising on those media. **Barter syndication** is actually another form of tradeout: advertising time is exchanged for program material.

In **plugola,** a performer, writer, director, or someone else affiliated with creation of a broadcast program receives payment for slipping in a **plug** (free boost or advertisement) for a product or service. The plug is not identified as a paid commercial announcement, and the station or network neither receives nor is aware of any payment. A **promotional announcement** is plugola of which the network or station *is* aware and for which it *does* receive payment. Prizes offered on television quiz shows are examples. Appearance and description of the prizes are plugs; donation of prizes (and sometimes even additional compensation to the broadcaster for using them) is payment; phrases such as "Prizes, courtesy of . . ." and "Promotional fees paid by . . ." identify the donors. Promotional announcements are often *not* based on rate card prices.

Payola is payment by a record company to a disc jockey for playing the company's records. Again, neither the public nor the station is aware of the

payment. Both plugola and payola are illegal, but evidence surfaces from time to time that payola still exists.

MEDIUM

On radio, announcements may be **live,** on **tape,** or on **record.** Sometimes an announcement will **combine** a live announcer with a recording, as when a station runs a co-op commercial produced on tape by the national manufacturer's advertising agency and the announcer gives the local dealer's name and address at the end. On television, announcements may be **live,** on **videotape,** on **slides,** on **film,** or some **combination** of these. For example, a television co-op commercial might consist of a sound film featuring the national manufacturer's product, immediately followed by a slide displaying local dealer information with the booth announcer reading additional copy live.

PRODUCTION

In radio, a **straight announcement** is one featuring an announcer reading copy, with no frills. A **production announcement** is one that adds music, sound effects, or both to the announcer's narrative. A **dialogue announcement** uses two or more voices. On a **musical announcement** or **jingle,** one or more persons sing the advertising message. Many radio announcements combine elements of two or more production techniques.

In television, one production technique is **on-camera talent**—the performer speaks and is in view. A second technique is **voice-over**—the speaker does not appear in the picture. Either of these two techniques may be done using **realistic action** or **nonrealistic action.** Realistic action features real people performing before film or electronic cameras. Nonrealistic action often takes the form of some kind of animation, whether film or videotape. **Animation** includes drawn cartoon characters, charts and two-dimensional models with moving parts, and "real" (but normally inanimate) objects that are given life by **stopmotion photography** (e.g., Pillsbury's Poppin Fresh and Alka Seltzer's Speedy). Another production technique is to use a series of **still pictures** or **slides.** And, of course, any one television announcement may combine several production techniques.

PUBLIC BROADCASTING ANNOUNCEMENTS

Public broadcasting has most of the same types of announcements that commercial broadcasting has, with the major exception of commercials. In one sense, however, public broadcasting does have commercials. One of these is the **underwriting announcement.** Many public broadcasting programs are supported by grants from various organizations, including major companies. The program contains an announcement that the program has been underwritten or supported or made possible by a grant from Mobil, Exxon, or whomever. Another type of announcement, peculiar to public broadcasting, is the **plea for money.** Station personnel ask for donations or subscriptions over the air, often promising gifts or premiums in return. Increasing numbers of public television stations have periodic **auctions** to raise money. Showing and describing the items to be auctioned, together with the names of merchants or

manufacturers donating them, would seem to parallel the promotional announcements of commercial broadcasting.

Creativity in Announcements

While marketing may claim to be a science, much of advertising is still an art. The effectiveness of an announcement depends in large part on the creative elements that make it up: format, appeals, approach, production skill.

FORMATS

The format of an announcement is the way the message is presented. One way is the **description** format. Here, the product (or service or charity or what-have-you) is simply *described,* the description being in terms of what it can do for you, why your help is needed, what its properties are, how it works, and so on. The **demonstration** format *shows* what the product is or does: how it removes spots from clothing, how it consumes 47 times its weight in excess stomach acid, what a one dollar donation will do, and so on.

The **problem** announcement is one that poses a problem, preferably one that the audience can believe and with which it can identify, and shows how the product solves that problem. The problem might be the need to shop for a particular item; the solution would be to let your fingers do the walking by using the Yellow Pages. The **slice-of-life** or **dramatic** format is often based on a problem situation, too, but sets it up within a miniature dramatic plot. Often the drama takes place in a home or in a retail store: Mrs. Olson recommending Folger's Coffee; Mr. Goodwin telling youngsters to use Crest; Mr. Whipple trying to prevent the squeezing of Charmin.

Some announcements take the form of a recognized **spokesperson** extolling a product's virtues. Ed Reimers, Ed McMahon, and Arthur Godfrey were for years associated with Allstate Insurance, Budweiser, and Lipton Tea, respectively; more recently Bill Cosby has appeared on commercials describing the testing and manufacturing processes for Ford automobiles, Joe Garagiola has sold Dodge cars, and Rex Harrison has appeared for Ford.

The **testimonial** format is autobiographical, allowing individuals to describe personal experiences with the product. The testimony may be given by a famous person (Joe DiMaggio telling how much he appreciates the Mr. Coffee coffee maker), by experts (all those television directors and engineers that preferred a certain brand of color television a few years ago), or by unknown citizens (the almost endless stream of women who have described the efficacy of various detergents over the years).

The **interview** format features one person asking questions and another responding. The Campbell Soup Co. used a variation of the interview format a few years ago on radio commercials that were recordings of an announcer telephoning homemakers and getting them to sing the Campbell Soup theme song.

The **suggestion** format takes an oblique approach. Instead of emphasizing the product's merits, the commercial shows it being used in happy or desirable settings or otherwise associates it with a particular way of life. Before they were legislated off the air, tobacco companies often advertised cigarettes this way (the Marlboro man; Salem's cool glades and icy springs). Coca-Cola has used this format cleverly and successfully ("I'd like to teach the world to sing . . ." and "It's the real thing . . .").

The **symbolic** format uses analogy, representing features or traits of the product by using completely different objects. Animals have been particularly popular. In the 1960s, television commercials for the Dreyfus Fund showed a lion strolling through New York's financial district, finally jumping onto and becoming part of the company's logo, to represent symbolically the strength and solidity of that mutual fund. A 1976 television commercial for The Hartford Insurance Company followed a similar theme, using the stag from its trademark.

A final production format could best be described as **abstract.** Imaginative editing, the synthesizer, the electronic effects generator, animation, special effects photography, computer animation—all of these have been used to produce announcements that are acoustically or graphically bold and imaginative. The abstract format can be used to appeal to younger audiences, to represent the product as innovative and modern, to represent concepts and forces in abstract symbols. Mid-1970s animated commercials for Levi's jeans and for 7-Up carbonated beverages exemplify effective use of the abstract format.

APPEALS

Appeals are implicit or explicit arguments used to get the attention of the audience. Most of us share certain psychological needs and wants, and an announcement plays on one or more of these. An insurance company's television commercial might show a family breadwinner ill or incapacitated and pose the question, "How well would your family be provided for if you were not able to work?" The commercial would then urge you to be sure of such provision by taking out a policy with the company. Your desire for security is the target of the commercial.

Psychology is as yet an inexact science, thus there are many different ways to categorize the various motivational needs and urges to which broadcast commercials appeal. One likely list of emotional appeals is that by Heighton and Cunningham*: **security, threat, sex, love and sentimental, humorous, convenience, curiosity, ego, hero worship,** and **sensory.** Usually, an emotional appeal by itself is an inadequate persuasive device; facts and arguments must be presented to support and augment the appeal.

* See bibliography.

APPROACHES

The approach is the way the appeal—and its supporting data—are presented. The most effective approach is often the simplest—**straightforward.** The straightforward approach features no yelling, no humor, no direct comparison, just persuasive arguments and data.

A second approach and one its adherents claim to be particularly effective for brand name recall is the **hard sell.** The hard sell is a high pressure, unrelenting pounding at the audience with persuasive data and repetition. In hard sell announcements the audio often sounds loud, and there is a lot of copy read by the announcer. In television hard sell announcements, key words and phrases are often flashed on the screen as the announcer says them, and simplistic diagrams and demonstrations further pound home the sales point.

Another approach is to use **direct humor.** Alka Seltzer has successfully used direct humor in television commercials a number of times; its 60-second story showing the problems of an actor making a meatball commercial ("Mama mia, that's a spicy meatball!") has become a classic. Closely related to direct humor is **self-ridicule** or **understatement.** Benson and Hedges cigarettes ran a whole series of television commercials illustrating the disadvantages of smoking their long cigarettes—they bent or burnt a hole when the smoker got too close to some solid object. This campaign continued in print long after cigarette advertising was banned from the air in 1972.

Direct comparison is a relatively new approach. Until the late 1960s, commercials for one product never mentioned the name of a rival product. Advertisers equated stimulus (brand name) with response (purchase); they assumed that if the audience saw or heard a competitor's name, that was the brand they bought. Comparisons were made between the advertiser's product and Brand X, or "the other two leading manufacturers," or "the high-priced spread." Most advertisers have abandoned this simplistic view of consumer psychology, and today it is not unusual for a broadcast commercial to compare a product to its rival by name. Two of the best-known series of comparative commercials were those by Shick Inc. for its Flexomatic electric shaver, challenged by competitors before an advertising industry self-regulatory group in 1973,* and those by Coca-Cola Co. and Pepsi Cola Co., comparing the two rival beverages by taste test, which led to a comparative advertising battle in a number of markets in 1976.

A final approach is part and parcel of the **suggestion** format, discussed earlier. Here, the announcement hints at or suggests certain things without actually saying them: this is the way to the good life; this is the way to be sexually attractive and desirable; this is the way to power and domination. In this approach, something intangible (and often not really an intrinsic part of the product or service) is featured by tone or setting of the announcement.

* The National Advertising Division of the Council of Better Business Bureaus (see Chapter 15).

Creation and Production

The history of an announcement begins with the origin of the advertising campaign of which that announcement is part. For the sake of illustration, we shall posit a national advertising campaign, a fairly complex situation compared to, say, the local hardware store owner advertising a special on the town radio station. The advertiser has secured the services of an advertising agency and has established an advertising budget, within which the campaign must be planned and carried out. The first step for the agency is to analyze the product or service that is to be advertised. The analysis is a process of asking and answering questions about the product—for example, What is it? What does it do? What is better about it than its competitors? At the same time, a similar analysis must be made of the product's buyers—Who are they? When do they buy it? Where? This study is called **marketing research** and is carried on before, during, and after an advertising campaign to check the effectiveness of the campaign and the various elements that comprise it.

After analysis of product and buyers, **advertising objectives** are formulated. Contrary to popular belief, realistic advertising objectives do not aim toward goals such as increasing sales by 15 percent or share of the market by 5 percent. These are marketing goals. Advertising is certainly one means of working toward a marketing goal, but advertising objectives are stated in specific terms and reach toward communication goals, such as introducing a new product, suggesting new uses for an old product, or publicizing a new warranty or feature on an existing product.

After objectives are defined, **strategies** are planned to meet those objectives. Three crucial strategies in any advertising campaign are: devising content and form of messages, choosing the target audience at which to aim messages, and selecting media to deliver messages to the audience. As a result of the first strategy, a **copy policy** (or **copy platform** or **campaign platform**) is developed. Copy policy guides the creation of advertising in all media and states the theme or idea of the campaign, consumer appeals, and significant product characteristics. The second strategy results in a **consumer profile**—detailed analysis of the target audience broken down by age, sex, buying habits, education, and other factors. The third strategy, the **media strategy,** is to build a **media profile** that will match the consumer profile. Media profile is selection of types of media that best deliver the message to the target audience: *this* kind of mailing list for direct mail; *that* type of magazine; newspapers and spot television in *these* geographical areas; spot radio on *this* type of station in *those* markets; participation advertising during *that* time of day on network television; sponsorship of *this* special on network or in barter syndication.

The agency prepares the **campaign plan** for presentation to the advertiser client. The plan includes general advertising strategy and concepts as well as

creative, media, and marketing recommendations. Storyboards, commercials, layouts, and copy are presented. If the campaign plan is approved (usually with client-suggested changes), the agency begins buying space in print media and time in broadcasting outlets. The agency makes a careful study, then recommends specific stations and networks, times, and programs to the client. After client approval, the agency prepares a final schedule and cost estimate. When the client signs the schedule, the agency begins negotiating contracts with stations and networks for purchase of advertising time.

Agency writers develop commercials. Their efforts are based on the copy platform, the advertising objectives, the role broadcasting is to play in the campaign, and the product, its buyers, and other market data. Storyboards and sometimes even videotaped precommercials are prepared for television commercials. A **storyboard** is a depiction of what the finished commercial will look like. Similar to a comic strip in appearance, it represents each scene of the planned commercial with a small sketch, below which is typed dialogue, sound, and description of action. A **precommercial** is an actual, nonbroadcast quality production of the commercial, done by the agency on its own videotape equipment. The precommercial serves the same purpose as the storyboard—to help the client visualize what the commercial will look like—and is not used on the air. Scripts and fact sheets are prepared for radio commercials. A **fact sheet** is not a complete script but contains only key facts on the product or service. Fact sheets are supplied to radio personalities who are especially effective at ad-libbing commercials.

RADIO COMMERCIALS

The entity that produces a radio commercial varies with the situation. In the local advertising of small markets and small retail establishments (such as our hardware store's special, mentioned earlier), the **radio station** will often write and produce the commercial at no charge above that for broadcast time. Usually, the merchant deals directly with station sales personnel, and no advertising agency is involved. The station will either do the commercial live, having the announcer on duty read it each time it is scheduled, or tape record it, having the tape played back each time it is scheduled.

Most large advertisers wish to have commercials professionally produced on tape and sent to stations for use. In this case, production work is either put out for bids to various production houses or assigned to a staff producer/director at the advertising agency. A **production house** does all creative work, often including script, based on the copy platform and subject to agency and advertiser approval. If done in-house, the script is written at the agency, and the **producer/director** handles talent and creative arrangements—auditioning and hiring actors, announcers, singers; contracting for original musical compositions and arrangements; securing musicians and a music director. Completed, taped, client-approved commercials are duplicated, and copies are sent to radio stations.

TELEVISION COMMERCIALS

After the client has approved the storyboard for a television commercial, the advertising agency production supervisor reviews it, writes a **spec** (specification) **sheet** describing the commercial and its production requirements, and puts the project out for bids to selected **production houses.** The spec sheet notes whether the commercial is to be produced on film or on videotape. The choice of medium depends on the type of commercial, the medium that seems most natural for the particular concept, the preferences of agency and client, and the plans for distribution. If the commercial is to be used in a national spot campaign, it will often be distributed on 16mm film because film release prints are cheaper than videotape copies. The production houses do their own cost estimates and submit **bids,** statements of how much money they would need to produce the commercial. Usually, the agency accepts the low bid, subject to negotiation over certain cost factors.

Once the client has accepted the agency's bid recommendation, representatives from agency and production house begin meeting together to iron out preproduction details—set design, location, crew, on-camera talent, director. An agency representative is designated producer. Agency producer and contract director work closely during the production phase. The commercial is completed during postproduction, the finished commercial is duplicated, and copies are sent to the stations.

At the local level, production may be handled by a **television station.** Local stations are usually eager to rent facilities and crew for local commercials at bargain prices (relative to the cost of large market production houses). If a station produces a commercial, it rarely has the same high quality as one produced by a large production house. However, for local advertising the savings may more than make up for the loss of quality.

ADVERTISING COUNCIL

The Advertising Council, Inc. was organized in 1942 as the War Advertising Council and reorganized under its present name after World War II. Its constituent and sponsoring organizations include major advertising and media trade groups (e.g., the American Association of Advertising Agencies and the National Association of Broadcasters). The Ad Council selects certain government and private agencies as clients, for which advertising campaigns are prepared as a public service. Some 27 advertising agencies have volunteered creative and media services to the Ad Council, and each volunteer agency is assigned a client for which to plan and execute a campaign. The client pays only for materials—artwork, engraving, printing, paper, film, slides—which are then supplied to the various media who run the message for free. A client's out-of-pocket expenditure of $75,000 to $150,000 annually yields millions of dollars worth of advertising and publicity. Ad Council campaigns have created a number of memorable symbols and slogans—Smokey Bear; Iron Eyes Cody, the Indian with a tear; A Mind is a Terrible Thing to Waste—and some of broadcasting's finest minutes have been Ad Council produced PSAs.

Radio and television stations also produce and air PSAs for local charities and other good works.

Criticism

Commercials are the broadcast announcements that are most often criticized. This is understandable; in American commercial broadcasting, commercial announcements are frequent, ubiquitous, interruptive, repetitious, intense, unavoidable, packed with highly persuasive elements, and often the product of always-suspect (in the public mind) big business. In print, the audience has the initiative of whether or not to pay attention to advertising messages. A newspaper or magazine advertisement can be read or not, as much or as little as the reader wishes, at the time chosen by and at the convenience of the reader. Not so in broadcasting. When a commercial comes on, you either sit through it—all of it, at its speed—or turn off the set or change to another station (where there is probably another commercial in progress). Any feature that conspicuous and unavoidable on media as popular as radio and television is bound to come in for at least some criticism. A great deal of criticism is leveled at television commercials, particularly, since television is the more popular and attention-demanding medium.

Commercials are criticized for **lying,** for making claims for products and services that are not true, such as bait and switch advertising,* misrepresentation of some feature of the product or service, or false description of the advertiser's financial situation or ability to do business. Local and federal authorities, better business bureaus, and others bear down hard on false advertising, and there is relatively little outright lying on broadcast commercials. **Puffery,** however, is another matter. Puffery is the half-lie, telling only the good points about a product or service, making good points even better, and not mentioning negative aspects. Puffery has traditionally been the basis of most advertising, but public interest groups and government agencies have begun to question this tradition. The Federal Trade Commission began its Advertising Substantiation Program in 1971, requiring advertisers to be able to substantiate any claim made about a product's performance, quality, effectiveness, safety, or comparative price. It is no longer acceptable to claim a product is "number one in performance" or "more effective than the three leading competitors." The advertiser must define terms and prove claims.

Somewhere between lying and puffery should go **false demonstrations.** In a false demonstration the commercial shows us that a product has certain

* In bait and switch advertising, the bait is a bargain price advertised for a particular product to lure you into the store, while the switch is the attempt to sell you a higher priced model once you are there.

qualities, but special techniques are used during production to show these qualities. In other words, the product is not like or will not do exactly what the commercial purports to show. Two of the most famous false demonstrations took place on television commercials for Rapid Shave and Libbey-Owens-Ford autoglass, as described in Chapter 13.

Another criticism of commercials is that they seem to assume and aim at insultingly **low intellectual levels** in their audience. Wording, repetition, arguments, format—every element seems to patronize listener and viewer.

There are complaints about the **salience** of commercials, their unavoidable conspicuousness: number, number of interruptions per program, clutter, and loudness. As for the **number** of commercials, there actually is a high ratio of commercial minutes to program time. The NAB Television Code allows stations to program over 25 percent of every hour in nonprogram material* most of the day. The Radio Code allows stations to program 30 percent of every hour in commercials, with provision for even more in special circumstances. And as for complaints about the **number of interruptions** per program, again there would seem to be some justification. The Television Code allows up to four interruptions per half-hour program.† The Radio Code places *no* restrictions on the number of interruptions. **Clutter** is a term implying too many different announcements during each program interruption. The Television Code allows four consecutive announcements within programs, and no more than three during station breaks.

Yet another type of criticism comes from women's and civil rights groups. They complain that commercials depict women and minorities in such a way as to **reinforce stereotypes.** Women are shown as dependent on men, concerned primarily with children and household, unable to cope with financial or mechanical complexities, valued primarily as ornaments or sex objects, and, when seen in occupations other than housekeeper, employed as secretaries and teachers. For years, members of minority racial and ethnic groups were rarely depicted at all in commercials, and their few appearances were in highly stereotyped roles. Greater percentages of minorities have appeared in commercials in the last ten years, and they are now depicted as other than servants, cooks, and peons who are lazy, shuffling, inscrutable, or sombrero'd. Advertisers, however, say they have to use stereotypes to set up and resolve a situation within a commercial's 30 seconds. As a result, we still see a nonreal TV commercial world, in which primarily white, middle-class families buy hamburgers, fried chicken, and new automobiles; women worry about clean

* **Nonprogram material** includes billboards, commercials, promos, and all program credits exceeding 30 seconds, except those in feature films.

† The TV Code has different standards for different periods of the day and for different types of stations (affiliates, independents). In most cases, standards for prime time allow fewer commercial minutes and fewer interruptions than those cited here.

clothes and shiny floors and succumb to men wearing after shave lotion; and blacks patrol police beats and deliver packages.

Consumer groups say that all too often commercials attempt to **sell products to the wrong people,** or to sell the **wrong products** to all people. Commercials have been criticized for selling toys, vitamins (which can be fatal if swallowed in large doses), and junk food to children; for selling quack medicines, nostrums, money-hungry religious charlatans, useless gadgets, and overpriced records and tapes to those least able to afford them—the old, the poor, the minority ethnic groups; and for selling large cars, leaded gasoline (both of which contribute to atmospheric pollution), cigarettes, and over-the-counter drugs to everybody. Cigarette advertising, of course, was legislated off the air, but cigarette consumption has continued to climb.

Critics question the **values** that commercials promulgate. Commercials teach. And, goes the argument, they teach much more than how to sing, "Plop, plop, fizz, fizz; oh, what a relief it is," or "Have it your way; have it your way." They teach the values, philosophies, and behaviors they depict, values that may be dysfunctional (i.e., working toward undesirable goals) for both the individual and the society. Commercials teach that it is good to be acquisitive, highly competitive, and conscious of status. They teach narcissism and that physical beauty is an end in itself. They teach us to take a pill when we feel bad, to see all issues and people—no matter how complex—in black or white terms, to think in slogans, to look no farther than the surface, to aim for a Ken-and-Barbie doll existence of eternal, middle-class, plastic-wrapped youth.

Many persons criticize the **way in which commercials appeal to certain human motivations.** In the 1973 documentary *CBS Reports: You and the Commercial,* Dr. Eric Fromm noted that one strong motivation used in commercials is the fear of not being loved—attributable to body odor or split ends or baggy panty hose—which some product promises to alleviate. A second and related theme is the concept of the miracle; use this soap or that cooking oil and a miracle will happen. Fromm observed commercials seem to say that love is dependent on a gadget. Buy and use the advertised gadget, and attain the good life. Commercials promise the fountain of youth, that the product will turn us into beautiful young people who never change. Fromm also said advertising molds us, makes us greedy, makes us *want* more and more instead of trying to *be* more and more. Commercials do not convince, they suggest. Convincing is an attempt at persuasion using rational arguments. Suggesting breaks down rationality and powers of criticism in an effort to get audiences to believe the promises of commercials. Therefore, concluded Fromm, people *know* on a rational basis that claims for the products are nonsense, but at the same time, they would *like to hope* there might be something to the claims. The result is a mixture of reality and fantasy that operates on the subconscious level.

While most criticism is directed at commercial announcements, **PSAs** and

public broadcasting announcements have also come in for a share of the criticism. In 1976, public service groups and sympathizers in Congress petitioned the FCC to adopt rules to open radio and television time to PSAs from a wider variety of sources. Over 70 disparate individuals and groups called for new rules, including Action for Children's Television, Sierra Club, National Gay Task Force, Public Media Center, and United Church of Christ (UCC). The UCC commented that licensees were abdicating the responsibility for PSAs to outside agencies, such as the Ad Council which provide broadcasters with slick, noncontroversial PSAs. And in 1977, the FCC launched an inquiry into commercial practices of noncommercial radio and television stations. The next year the commission adopted stricter rules to govern underwriting, promotions, auctions, and other fund-raising activities of public stations.

Praise

Not all words spoken about commercials are critical. For example, there is no doubt that, well-done, broadcast advertising is effective. Merchants and manufacturers who use radio and television successfully are among the first to praise broadcast commercials. Certainly, too, the skill and imagination that goes into making a commercial must be admired. Commercials are among the most carefully, painstakingly crafted productions in radio and television. Their original use of locations, props, actors, animals, and other elements to translate the fantasies of a copy writer into 60 seconds or less of sales pitch is legend. One television commercial for Great American Soup featured Ann Miller, a dancing chorus, and choreography by Busby Berkeley. The cost for this miniature extravaganza was $250,000. The best commercials each year compete for the Clio Awards. The Clio, cousin to Oscar and Emmy, is awarded to the winning commercial in each of several categories based on cleverness and artistry.

The skilled personnel and persuasive techniques honed on advertising are used to create messages designed to improve the common good. The success of Ad Council campaigns is due almost entirely to the selling skills of its agencies. Let us not forget, too, that advertising pays for programming on commercial radio and television. The music, the stars, the news operations—all are paid for by advertising dollars. Even some programming on public broadcasting is funded by business firms in return for underwriters' notices or plugs on annual fund-raising auctions. And finally, commercials, as integral part of advertising, serve as key forces in the American economy. Our economy is based in large part on mass production, mass distribution, and mass consumption. Commercials and the rest of advertising are vital to the maintenance of such an economic system.

Notes

1 FCC, *Program Length Commercials,* 26 RR 2d 1023 (1973).
2 National Association of Broadcasters, *The Television Code,* 19th ed. (Washington, D.C.: NAB, 1976), p. 21.
3 *In re Wilderness Society and Friends of the Earth,* 30 FCC 2d 643 (1971).
4 *Warner-Lambert Co. v. FTC,* 562 F2d 749, certiorari denied, _____ U.S. _____, 98 S. Ct. 1575 (1978).

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Elizabeth J. Heighton and Don R. Cunningham, *Advertising in the Broadcast Media* (Belmont, Cal.: Wadsworth, 1976) contains lucid explanations of all aspects of commercial announcements—planning, production, evaluation, placement.

CREATIVITY IN COMMERCIALS

Production is described in Lincoln Diamont, *The Anatomy of a Television Commercial* (New York: Hastings House, 1970). Also, see Heighton and Cunningham, Chapters 4–9; objectives and strategies are in Chapter 4, formats and appeals in Chapter 7, and production in Chapter 9. Although somewhat dated at this point, Seehafer and Laemmar, *Successful Television and Radio Advertising* (6) goes into a great deal of detail. See especially, Chapters 9 on writing, 10 on production and direction, and 19 and 21 on campaigns. The Ad Council is described in The Advertising Council, Inc., *Report to the American People 1974–1975* (New York: Ad Council, 1975).

CRITICISMS

There are many publications that criticize or "expose" commercials. For puffery, try Paul Stevens, *I Can Sell You Anything: How I Made Your Favorite TV Commercials with Minimum Truth and Maximum Consequences* (New York: Wyden, 1972). Time, interruption, and consecutive announcement restrictions are in National Association of Broadcasters, *The Television Code,* 19th ed. (Washington, D.C.: NAB, 1976), and *The Radio Code,* 20th ed. (Washington, D.C.: NAB, 1976). The FCC actually looked into loudness in 1965; see *Elimination of Objectionable Loudness of Commercial Announcements,* 30 FR 9660 (1965). A study of depiction of women in commercials is reported in Arthur Jay Silverstein and Rebecca Silverstein, "The Portrayal of Women in Television Advertising," *Federal Communications Bar Journal,* 27 (1974), 71. Commercials aimed at children are the subject of William Melody, *Children's Television: The Economics of Exploitation* (New Haven: Yale University Press, 1973). See also a study on what commercials were actually selling to children in the early 1970s in Charles Winnick, *et al., Children's Television Commercials: A Content Analysis* (New York: Praeger, 1973). The Sandpaper, *Libby-Owens-Ford, Friends of the Earth* (gasoline and big cars), and *Banzhaf* (cigarette) cases are discussed in Chapters 13 and 14. Regrettably, *CBS Reports: You and the Commercial* is not available on film or videotape. However, the script is available from CBS; Irv Drasnin, *CBS Reports "You and the Commercial"* (New York: CBS, 1973).

PRAISE

A spirited defense of advertising appears in National Association of Broadcasters, *Advertising Stopped at 10 O'Clock* (Washington, D.C.: NAB, 1972). Some of the great commercials of television's infancy are in Lincoln Diamont, *Television's Classic Commercials: The Golden Years, 1948–1958* (New York: Hastings House, 1971).

Three

Physical Perspective

Even Flash Gordon—when he fired his ray gun and walked on solid beams of light in those long ago Saturday movie matinees—was not quite sure how electromagnetic waves worked. Broadcasting depends on electromagnetic waves for its very existence. And for most of us the hows and whys of broadcast transmission are a mystery fathomed only by theoretical physicists and Flash's brilliant friend, Dr. Zarkov.

Understanding broadcasting's "technical part" (as many call it) is not exactly as easy as watching the televised reruns of those Flash Gordon serials. But at a basic level we can all understand the broad outlines of how radio and television work. In this section you will discover some fascinating facts you probably did not know—like how those Flash Gordon reruns get from the station to your television set. On a more practical level, the physical properties of broadcasting affect all its aspects from audience size to station licensing. The fact that broadcasting travels by radio energy, energy that has certain properties, has profoundly affected the history, regulation, and economics of radio and television. Therefore if you are going to understand broadcasting, you must understand those physical properties. Stiff upper lip, and here we go.

9 Radio Energy

Broadcast programs are radiated from a station's transmitting antenna and sent to your receiver via radio energy. You cannot smell, feel, or see it, yet radio energy is the basis on which the entire structure of broadcasting is built. To a large extent, the peculiar characteristics of radio energy determine how broadcasting is organized—the frequencies assigned to stations, the power they may use, their physical location, their very licensed status. In this chapter we examine first the concept of radio energy waves and then the various characteristics of waves in three different frequency bands.

Waves

A **radio wave** is simply a series of advancing electrical impulses, that is, electric energy traveling through space. To illustrate, imagine that you hold one end of a long rope. Shake the rope rapidly up and down. You see waves traveling the length of the rope. Your arm is the source, and your arm's back-and-forth movement—called **vibration**—sets up the wave motion. Hit a water glass with a spoon, and the glass vibrates, creating waves of sound that you can hear. Start a fire in a stove; the energy released from the fuel will cause molecules in the iron sides of the stove to vibrate and create waves that you

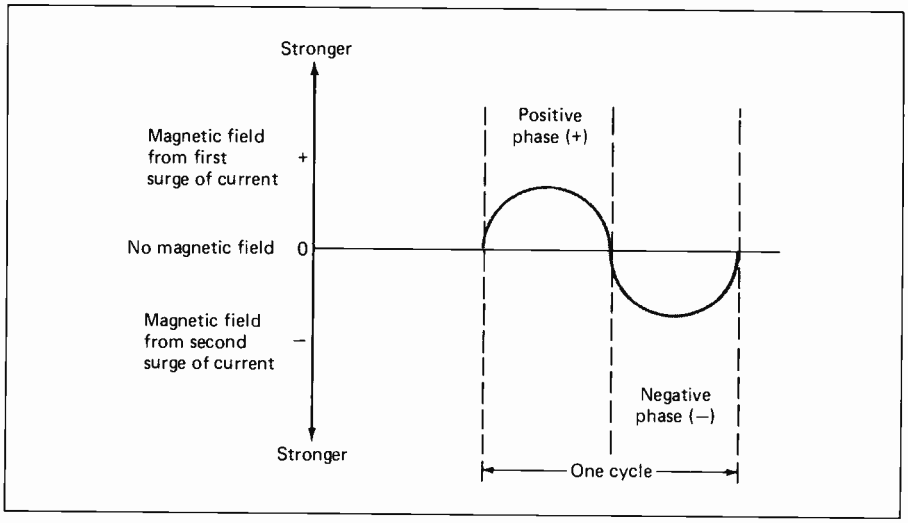

Figure 9-1. Sine Wave as Radio Wave. The sine wave is a graphic representation of a radio wave. The line through the middle of the long (horizontal) axis represents neutrality. The points at which the wave crosses that line indicate periods of nonpolarity, that is, no magnetic field. The part of the wave above the line is called the positive phase and results from the first surge of current in the transmitting antenna. The part of the wave below the line is the negative phase and results from the second surge. (To further confuse things, the sine wave is also used to represent the radio frequency current that generates the radio waves, the audio that modulates the radio frequency, the sound waves that cause the audio, and the vibration of the sound source from which the sound waves originate!)

feel as heat. In radio energy the vibrations are electrical; the waves are electric and magnetic fields.

The process of generation of radio waves is called **oscillation.** An alternating electric current is fed into a radio station's transmitting antenna. The current is called **alternating** because it goes into the antenna in pairs of surges or **half cycles.** The first half cycle will go in one direction (which we shall arbitrarily call **positive);** the second, in the opposite (which we shall call **negative).** Two successive half cycles, one in each direction, make one complete oscillation or **cycle.** Normal household electricity is alternating current that flows at a rate of 60 cycles per second. The rate for broadcast transmission, however, is much higher, usually above 400,000 cycles per second.

A positive half cycle of electrical current flows into the antenna and creates **electrical** and **magnetic fields** in the space immediately around the antenna. The nature of these fields is an electrical disturbance or pressure that moves away from the source and continues to travel through space, away from the antenna. This is the first half or **positive phase** of a radio wave. After the positive half cycle of current dies out in the antenna, the negative half cycle

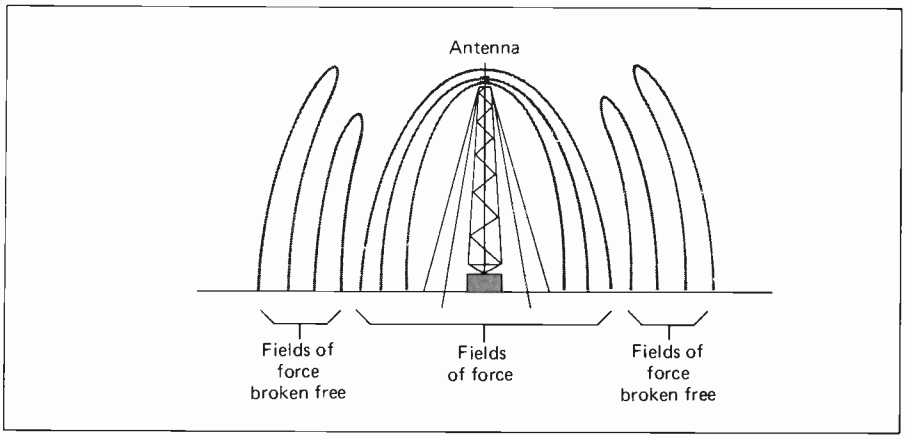

Figure 9-2. Lines of Force Radiating from Antenna. Alternating current in the antenna sets up fields of force (electric fields and magnetic fields) around the antenna. If the current frequency is high enough, these fields break free and continue to travel through space as electromagnetic waves.

begins. The negative half cycle also sets up related electric and magnetic fields around the antenna which radiate as the second half or **negative phase** of the first wave. The next half cycle is positive and starts a second wave, and the process repeats, as long as the station transmitter is on.

The strength of an electrical cycle is its **amplitude,** the point of maximum current in each of the two half cycles. The stronger the amplitude of alternat-

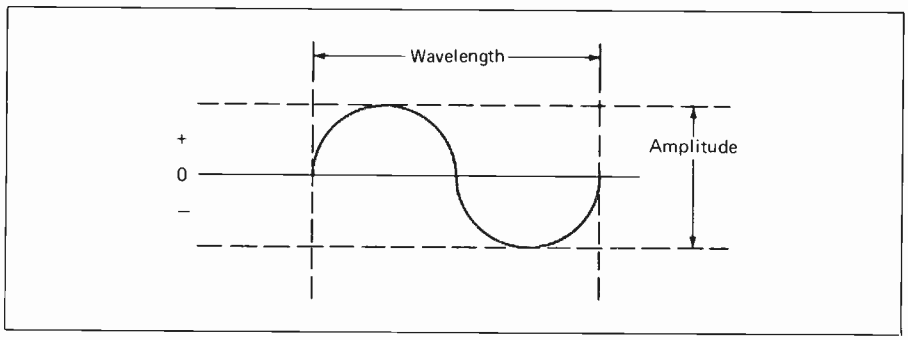

Figure 9-3. Wavelength and Amplitude. Amplitude—strength of a radio wave—is indicated by the distance from the top of the positive phase to the bottom of the negative phase. The stronger the radio wave, the greater the amplitude. The distance one radio wave travels through space before another is radiated is called the wavelength. Wavelength is indicated on a sine wave as the distance from the beginning of the positive phase to the end of the negative phase.

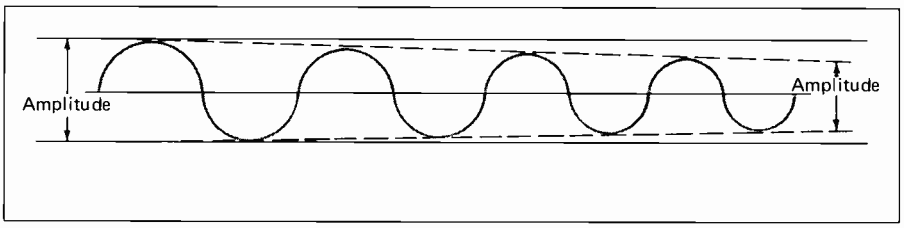

Figure 9-4. Attenuation. As radio waves travel, amplitude decreases.

ing current in the transmitting antenna, the stronger the amplitude of radiated waves. Also, the stronger the amplitude of the waves, the stronger the signal you get on your radio or television receiver. Referring to one of our earlier illustrations, the oscillations of current in the transmitting antenna are analogous to your arm as it shakes the rope up and down; the radio waves that radiate as a result parallel the waves you cause in the rope. The harder you shake the rope, the greater the waves.

Thus oscillations of current in the transmitting antenna generate **radio waves.** These waves travel through space. When the radio waves come into contact with the receiving antenna of a radio or television set, they **induce** (cause) in it oscillations of alternating current in a pattern exactly like the oscillations in the transmitting antenna, although of much lower amplitude.

As they travel, radio waves **attenuate** (lose strength) for a number of reasons. A radio wave radiates outward from a transmitting antenna in all directions in a circular pattern. As the wave travels, the circle becomes larger and the wave attenuates, spreading itself ever more thinly, diminishing amplitude as it covers a greater and greater area. Eventually, the point is reached at which amplitude is so low that, for purposes of reception, there is no more wave. This is when the signal fades out on your radio or television receiver. City noises and terrain obstacles may create **dead spots** within a station's coverage area, that is, places where you should be able to, but cannot, receive the station. **Overlapping signals** or **interference** occurs when the radio waves from one station collide with and distort or weaken those from another. **Absorption** involves expenditure of energy by a wave as it travels. When radio waves travel through a vacuum, there is little absorption. But in anything denser, such as the earth's atmosphere, radio waves lose energy. The denser the medium, the more absorption occurs. In AM radio for example, the earth conducts (i.e., allows it to travel) the ground wave,* but it also absorbs much of the wave's energy. The ground waves of even the most powerful U.S. radio stations, operating with 50,000 watts of power and no interference, lose most of their punch after about 100 miles of travel. Sky waves, on the other hand,

* Both ground waves and sky waves are described in the next section of this chapter.

undergo little absorption. They bounce from the ionosphere to earth and back again to deliver powerful, clear signals thousands of miles from their origin.

Two facts should be noted at this point. First, radio energy has a **velocity** of (i.e., it travels at) 300,000,000 meters (186,000 miles) per second in a vacuum (it travels somewhat slower in the atmosphere). That figure should sound familiar to you because it is the speed of light. All electromagnetic energy (which includes radio waves and visible light) travels at that speed.

Second, broadcast stations transmit radio waves at a rate of thousands and millions per second, the exact rate varying according to service (AM, FM, or TV) and channel assignment. The number of waves a station emits per second is, of course, determined by the number of cycles per second of alternating electrical current energy flowing to the transmitting antenna. The term **hertz** has been adopted as a name for cycles per second, honoring the work of Heinrich Hertz (see Chapter 2). The number of hertz a station generates is its **frequency.** Since such large numbers are involved, prefixes are used as shortcuts; **kilo-** means times 1000, and **mega-** means times 1,000,000. Thus 870 kilohertz (kHz) would be 870,000 cycles per second, and 98.3 megahertz (MHz) would be 98,300,000 cycles per second.

Since radio energy velocity is constant (300,000,000 meters per second), the only way to increase frequency (number of cycles/waves per second) is to shorten **wavelength.** This is easy to illustrate. Draw a horizontal line 3 inches long. Now use it as the middle line, and draw on it 3 sine waves (backwards Ss, lying on their sides; see Figure 9.5) representing 3 radio waves, each of equal length, so that they take up the whole space. How long will each sine wave have to be? Obviously, 1 inch. Now draw another line 3 inches long, and put 4 sine waves on it. This time each will have to be ¾ inch long. You have to shorten the wavelength to get more waves in the same 3-inch space. Now reread the previous sentence, substituting "time" for "3-inch space," and the same principle applies: **speed being constant at all frequencies and wavelengths, you have to shorten the wavelength to get more waves** (i.e., to increase frequency) **in the same time period.** If you are confused at this point, just remember "longer and lower"—the longer the wave, the lower the frequency. And the converse holds, too—the shorter the wave, the higher the frequency.

With radio energy velocity constant, we should be able to figure frequency if given wavelength, and wavelength if given frequency. The formula is **frequency equals velocity** (300,000,000) **divided by wavelength;** or **wavelength equals velocity divided by frequency.** For example, a broadcast station operating at 1500 kHz is using a wavelength of 200 meters (300,000,000 ÷ 1,500,000 = 200), that is, the length of each wave the station transmits is 200 meters long or nearly 219 yards (1 meter = 1.093 yards).

Before going on, let us review. Alternating electrical current sets up thousands of millions of oscillations in a broadcast transmitting antenna. These oscillations produce radio waves, each with a positive phase and a negative

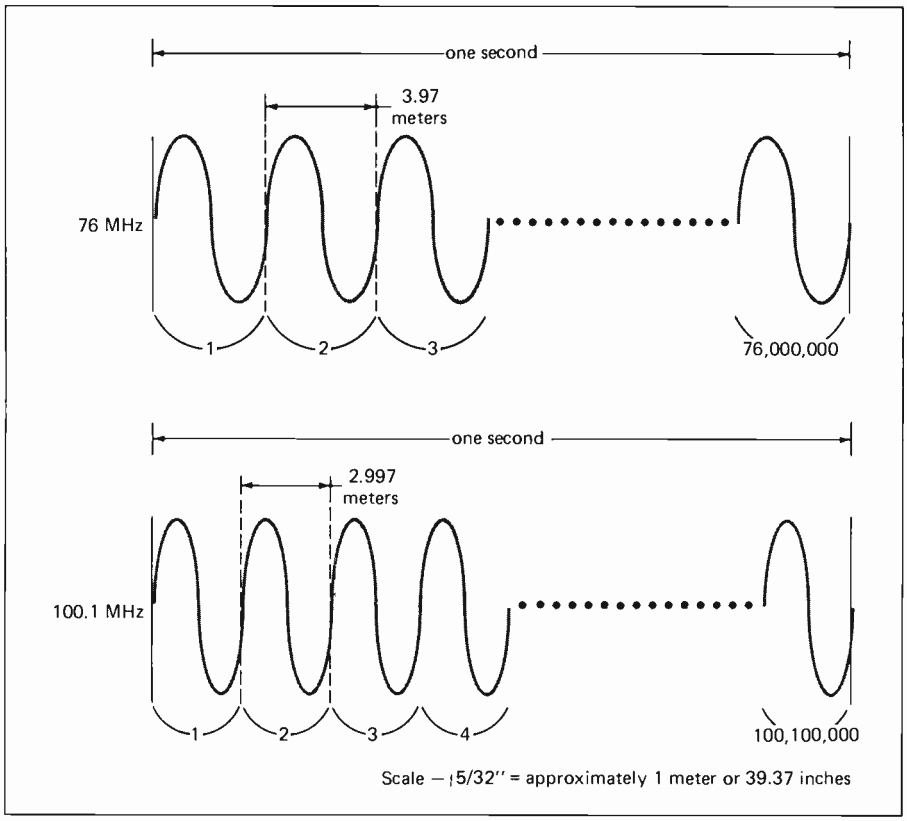

Figure 9-5. Frequency and Wavelength. Since velocity is constant, the only way to increase frequency (say, from 76 MHz to 100.1 MHz) is to decrease wavelength (here, from 3.97 meters to 2.997 meters).

phase, which travel outward from the tower at the speed of light. When the waves contact a receiving antenna, they set up similar oscillations that the receiver then amplifies and uses as the broadcast signal. The strength of a radio wave is its amplitude, which attenuates as the wave travels. The number of cycles/waves per second is called "frequency," expressed in "hertz." Speed is constant, so that frequency and wavelength are inversely related.

Frequency-Related Characteristics

Since radio waves consist of electrical and magnetic fields, radio energy is a form of **electromagnetic energy,** as are visible light, X-rays, cosmic rays, ultraviolet rays, and others. All radiate from a source and travel in waves at the

speed of light. Do not confuse sound waves with electromagnetic waves. Sound waves are physical, carried by the vibration of molecules. Sound travels about 1100 feet per second and is conducted by air and other gasses, liquids, and solids. It cannot travel in a vacuum. Electromagnetic energy needs no conduction medium, and can travel in a vacuum. In fact, it travels most efficiently through a vacuum, evident whenever radio and television signals from a rocket probe fly through the vacuum of space to show us the rocks of the moon or the red sand of Mars.

ELECTROMAGNETIC SPECTRUM

If you were to arrange all forms of electromagnetic energy in order of frequency, from highest to lowest, you would have what is called the **electromagnetic spectrum.** At the very highest frequencies (and shortest wavelengths) are cosmic rays. Below that, in descending order of frequency, come gamma rays,

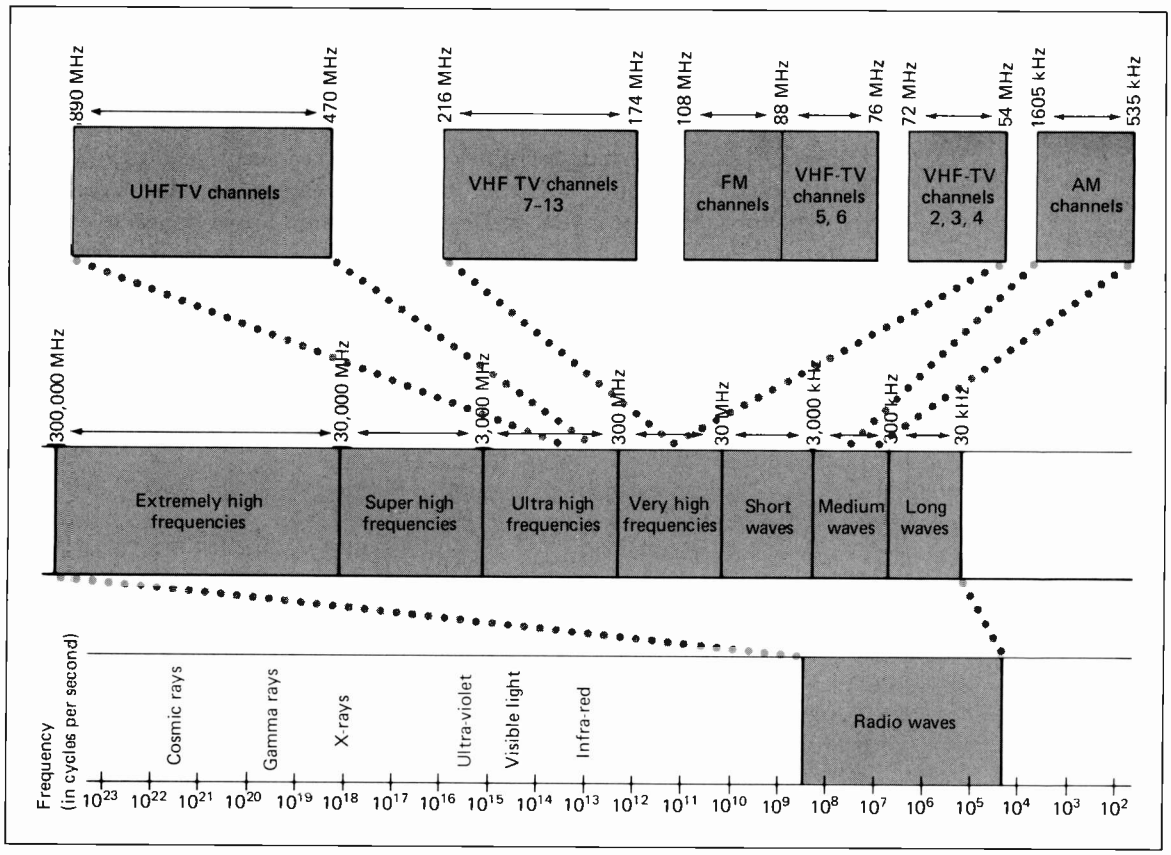

Figure 9-6. Electromagnetic Spectrum.

X-rays, ultraviolet rays, visible light, infrared rays, and, near the very bottom, radio waves. The **radio portion** of the electromagnetic spectrum has been further divided by frequency. The very highest radio frequencies are called extremely high frequencies followed, in descending order of frequency, by super high frequencies, ultra high frequencies (UHF), very high frequencies (VHF), high frequencies, medium frequencies (MF), low frequencies, and very low frequencies. In broadcasting, we are chiefly concerned with MF, VHF, and UHF. AM radio is in MF, television channels 2–13 and FM radio are VHF, and television channels 14–83 are UHF.

PROPAGATION

The manner in which radio waves travel—the paths they take—is called **propagation.** Propagation varies greatly with frequency.

Ground Waves and Sky Waves. In the MF band, **ground waves** and **sky waves** determine propagation. Ground waves follow the curvature of the earth. Sky waves are those that radiate away from the earth up into the sky. In the upper edges of the earth's atmosphere, certain types of natural radiation from the sun electrically charge groups of atoms in the relatively scattered molecules of the thin atmosphere. This charging process is called **ionization,** and the result is a series of layers of heavily ionized molecules, 30 to 200 miles above the earth's surface, called the **ionosphere.** During the day, sky waves travel right through these layers, are lost in space, and are of no use to earthly propagation. But at night the ionosphere changes, and many sky waves are bent back toward the ground by certain ionospheric layers, to land on earth hundreds of miles from the transmitter. The sky waves may then bounce up

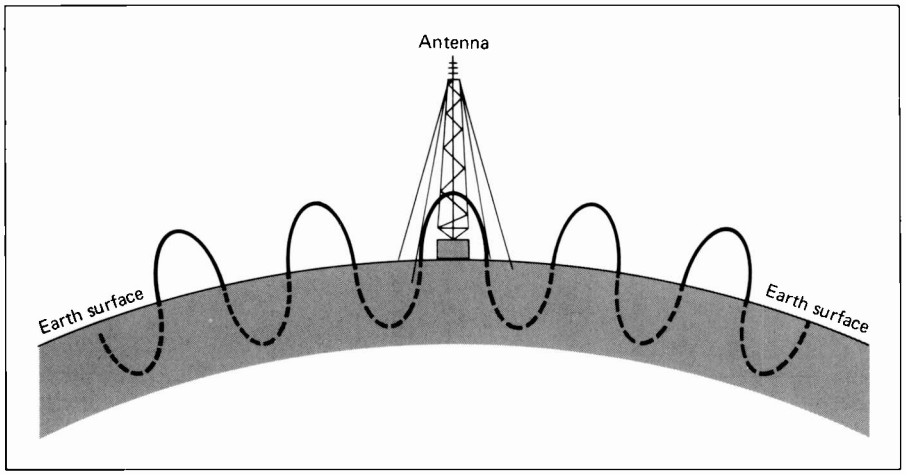

Figure 9-7. Ground Wave Propagation.

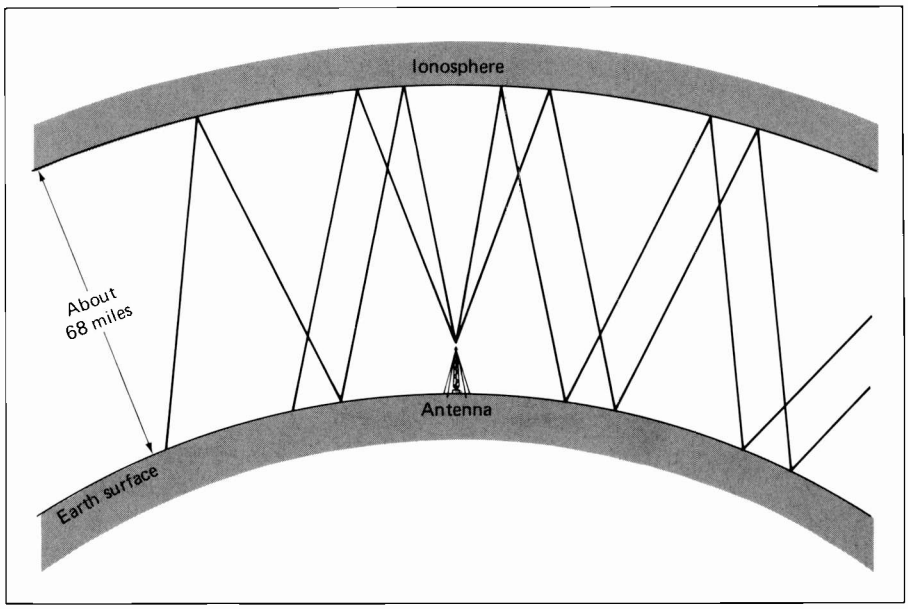

Figure 9-8. Sky Wave Propagation.

again from the earth's surface, hit the ionosphere, and bounce back to earth for a second time.

Ground waves do not travel nearly the distance that sky waves achieve, but ground waves are relatively constant, usually reaching the same distance at the same strength most of the time. Sky waves are useful only at night, and while they achieve spectacular distances, they are subject to fading. You have probably experienced sky wave reception and fade, driving at night and attempting to find a local radio station on the AM radio band. Something like the following happens: driving on Interstate 75 near Cordele, Georgia, you receive a beautifully strong, clear signal and assume it is from a Cordele station. Just as you are admiring the professional programming coming from small town radio, the signal begins to deteriorate. But before it fades out entirely, you hear the announcer give the station identification—"WCBS, New York."

Direct Waves. Higher radio frequencies are closer to visible light in the electromagnetic spectrum, and thus behave more like visible light rays. In VHF and UHF, propagation is primarily by **direct waves.** Like light, direct waves travel in straight lines, may be blocked by physical objects, may be reflected, and are subject to bending. There are no long-range sky waves and no ground waves that creep over hills and beyond the horizon.

Television and FM radio propagation have been described as **line-of-**

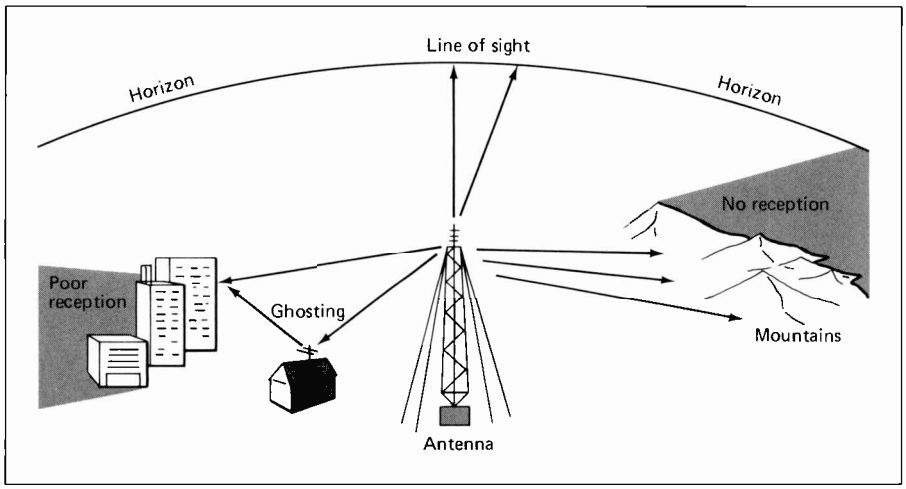

Figure 9-9. Direct Wave Propagation.

sight, and to a large extent that is true. If you were to climb to the top of a television transmitter tower, for example, you could literally see the station's primary coverage area. You see to the horizon, but no farther; for all practical purposes, that is how far the television signal reaches. A series of large hills looms up close on one side of you, blocking your view; they block the television signal, too, and people living on the other side of the hills cannot receive the station directly. Some neighborhoods are partially obscured from your view by tall buildings or other large structures; the people living in these areas pick up the television station with difficulty or not at all. Some tall buildings seem especially bright, reflecting quite a bit of light; thus they also reflect television signals. Residents living near these buildings receive one television signal directly from the station's transmitting antenna and another from the bounce off the reflective buildings. The result is ghosting (double image) on the screen.

Like light, direct waves are also subject to refraction or bending. Perhaps you have had the experience of putting a straight pole into clear water and seeing the pole appear to bend. The pole seems to enter the water at one angle, then bend at the surface to another angle. The pole has not really bent, of course, but the light rays have. The light rays reflected from the submerged part of the pole travel through a relatively dense medium, water, then enter a less dense medium, air, and in the process they bend. This is called **refraction,** and it is why the straight pole looks bent. Similarly, VHF and UHF waves can be bent as they pass through varying temperatures and weather conditions that affect density of the air.

Attentuation, absorption, interference, reflection, refraction—all affect

propagation at all frequencies to a certain extent. Some of them affect some frequencies more than others. It should be evident at this point that climate and weather play a large role in propagation. The next time a cold front, a warm front, a high pressure area, or a low pressure area is scheduled to move into your vicinity, note the changes in broadcast reception before, during, and after.

MF COVERAGE

Coverage refers to the physical area within which a radio wave may be received. Medium frequency coverage is affected by three factors—**ground, frequency,** and **power.**

Ground. Where MF is concerned, antenna height is not an important factor for coverage. Part of the antenna is buried beneath the ground, and the whole

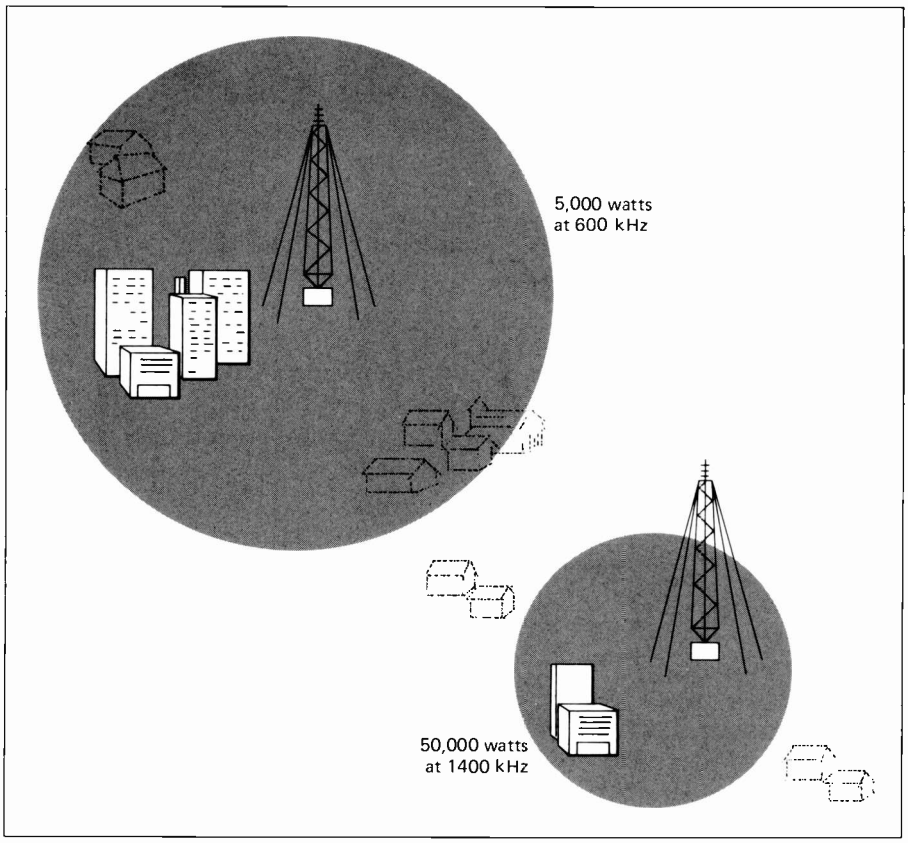

Figure 9-10. Relative Broadcast Coverage.
SOURCE: Radio (New York: AM Radio Sales, n.d.), p. 7. Used by permission of Wilmot Losee.

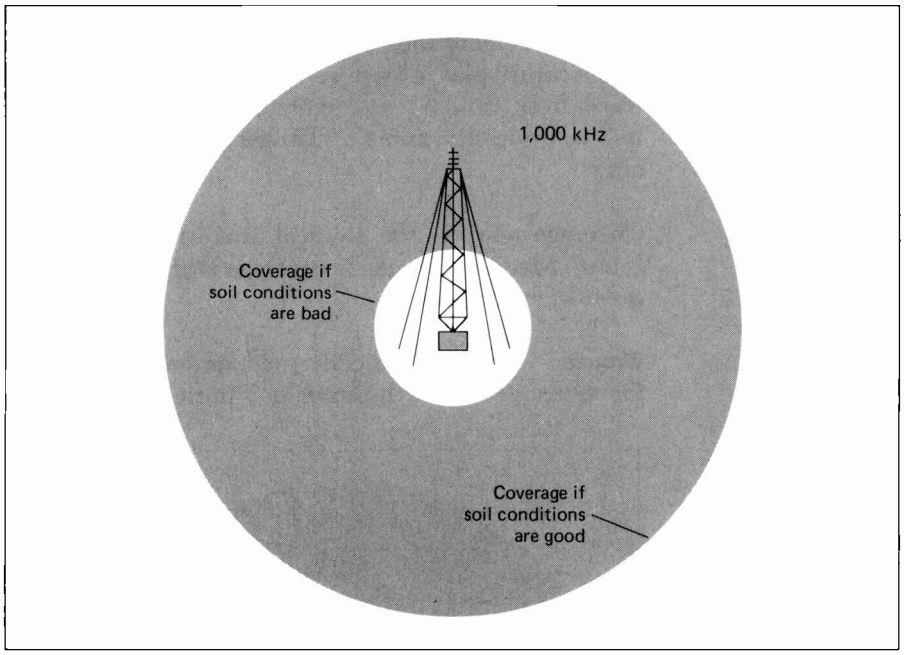

Figure 9-11. Influence of Soil Condition.
SOURCE: Radio (New York: AM Radio Sales, n.d.), p. 9. Used by permission of Wilmot Losee.

antenna structure, ground and all, transmits. The object is to make maximum use of the ground waves, which requires a good electrical ground connection. Wet soil gives a better electrical ground than does dry, so that the transmitter antenna is actually better off in a low swamp than on top of a dry, well-drained hill.

Frequency. In MF transmissions, as in all transmissions, the lower the frequency, the better the coverage. This is because lower frequencies result from longer waves, and the longer the wave, the greater the distance one wavelength covers. For example, a station transmitting at 1600 kHz uses a wavelength of 187.5 meters (about 205 yards), while a station at 540 kHz uses a wavelength of 555.6 meters (just over 607 yards). For every one wavelength the waves at 540 kHz travel, the waves at 1600 kHz must travel nearly three wavelengths, expending three times the energy in attenuation and absorption.

Power. Finally, the factor of power works the way it seems most logical: the higher the power the transmitter pumps into the antenna, the farther the wave will travel, and the greater the coverage. Because of ground wave propagation, radio transmission in the MF range is not so affected by hills and line-

of-sight considerations as VHF and UHF transmission. Given enough power, ground waves surmount hills and range beyond the horizon.

VHF AND UHF COVERAGE

Coverage in the VHF and UHF frequencies is affected by **antenna height, frequency,** and **power.** VHF and UHF propagation is by direct waves and is line-of-sight. Therefore just as the higher you fly in an airplane, the more area of ground you can see, thus the higher the antenna, the greater the coverage. Line-of-sight also means natural terrain features and man-made obstacles can block coverage, yielding dead spots and poor reception areas. Frequency and power affect VHF and UHF coverage as they do in all frequency ranges: lower frequencies and higher power yield greater coverage.

Bibliography

An easy-to-read discussion of the radio spectrum and how it is used is in Federal Communications Commission, *Frequency Allocation* (Washington, D.C.: FCC, 1976). See William I. Orr, W6SAI, *Radio Handbook,* 20th ed. (Indianapolis, Ind.: Howard W. Sams, 1975), pp. 24.3–24.8, for an excellent explanation of the nature of the electromagnetic wave—composition, formation, radiation. After reading Orr, see George J. Angerbauer, *Electronics for Modern Communication* (Englewood Cliffs, N.J.: Prentice-Hall, 1974), pp. 425–432, for characteristics of radio waves, ground waves, ionosphere, sky waves, and atmospheric disturbances.

10 Radio Channels

How can more than 8500 radio broadcasting stations in the United States fit into just 207 channels? How does sound become radio and vice versa? What is the difference between AM and FM? These are some of the questions we shall answer in this chapter. In addition to AM and FM, we shall look at another radio broadcasting band, one of which most Americans are little aware—the international broadcasting services.

Standard Broadcast Service

According to the FCC, a **standard broadcast station** is one **licensed for transmission of radiotelephone** (voice, music, etc.) **emissions** (radio waves) **primarily intended for reception by the general public and operated on a channel in the band, 535–1605 kilohertz** (kHz).[1] This places AM radio in the **medium frequency (mf) band.** Look at the dial on your AM radio. Chances are that the first numeral on the dial is 5*, 54, or 540* and the last is 16, 160, or 1600. This means your radio can pick up the entire AM band, 535,000–1,605,000 cycles per second. Between the two end figures, your radio dial con-

* Some receiver dials show 55 kHz as the first reference point on the dial; these receivers can still pick up the entire AM band.

tains seven or more other numerals, which serve only as reference points to help you find stations. There are actually **107 channels** (places for stations) on your dial, each **10 kHz wide** and identified by its **carrier** or **center frequency.** Therefore the first AM channel is 540 kHz, but it actually occupies the band of frequencies, 535–545 kHz (which explains why the first figure on your receiver dial is 540 instead of 535). Most of the 107 channels are used by more than one station, although a (relatively) small number of channels contain a large percentage of all stations.

INTERFERENCE AND COVERAGE

Interference—the mutual action of two sets of radio waves affecting each other—takes the form of **static** and **station interference.** Static is electrical discharges and can be either **natural** or **man-made.** Natural static results from atmospheric disturbances such as lightning. Man-made static originates from electrical machines and devices—the faulty ignition system of a nearby automobile, a vacuum cleaner or mixer running in another room, a faulty starter in a fluorescent light fixture. These sources generate electromagnetic waves that mix and are received with incoming radio waves.

Station interference involves signals of two or more radio stations. You tune to one station but receive one or more other stations on the same setting at the same time, a result of **adjacent channel, co-channel, second harmonic,** or **splatter** interference. In adjacent channel interference, you tune to a frequency—say, 1230 kHz—and pick up not only the nearby station operating on it, but also a strong station operating on the *next* frequency, 1240 kHz. Co-channel interference involves two stations on the *same* frequency. Such stations are normally spaced far enough apart to avoid interference; however, freak sky waves may bring one station's signal in from a thousand miles away to interfere with that of another.

Second harmonic interference occurs on the first multiple (which is the second harmonic) of a station's frequency. For example, if you live in a town with a station that operates on 600 kHz but wish to listen to a weaker or distant station at 1200 kHz, you will receive that 1200 kHz station only if you tune exactly on its frequency. The local 600 kHz station generates second harmonic radio waves at 1200 kHz (600 kHz × 2 = 1200 kHz), which weaken those of the station at 1200 kHz.

In splatter or spurious interference, the station is overmodulating, that is, feeding a signal which is too loud into the transmitter. Overmodulation generates unwanted sideband frequencies* above and below the station's channel. As a result, you receive the station's signal at several places on the dial.

Coverage is the area within which a station's signal can be received. Since AM operates in the MF band, a radio station's coverage is dependent on **soil, power,** and **frequency.**† All other things being equal, wetter soil, higher

* Sidebands are defined below.

† See Chapter 9.

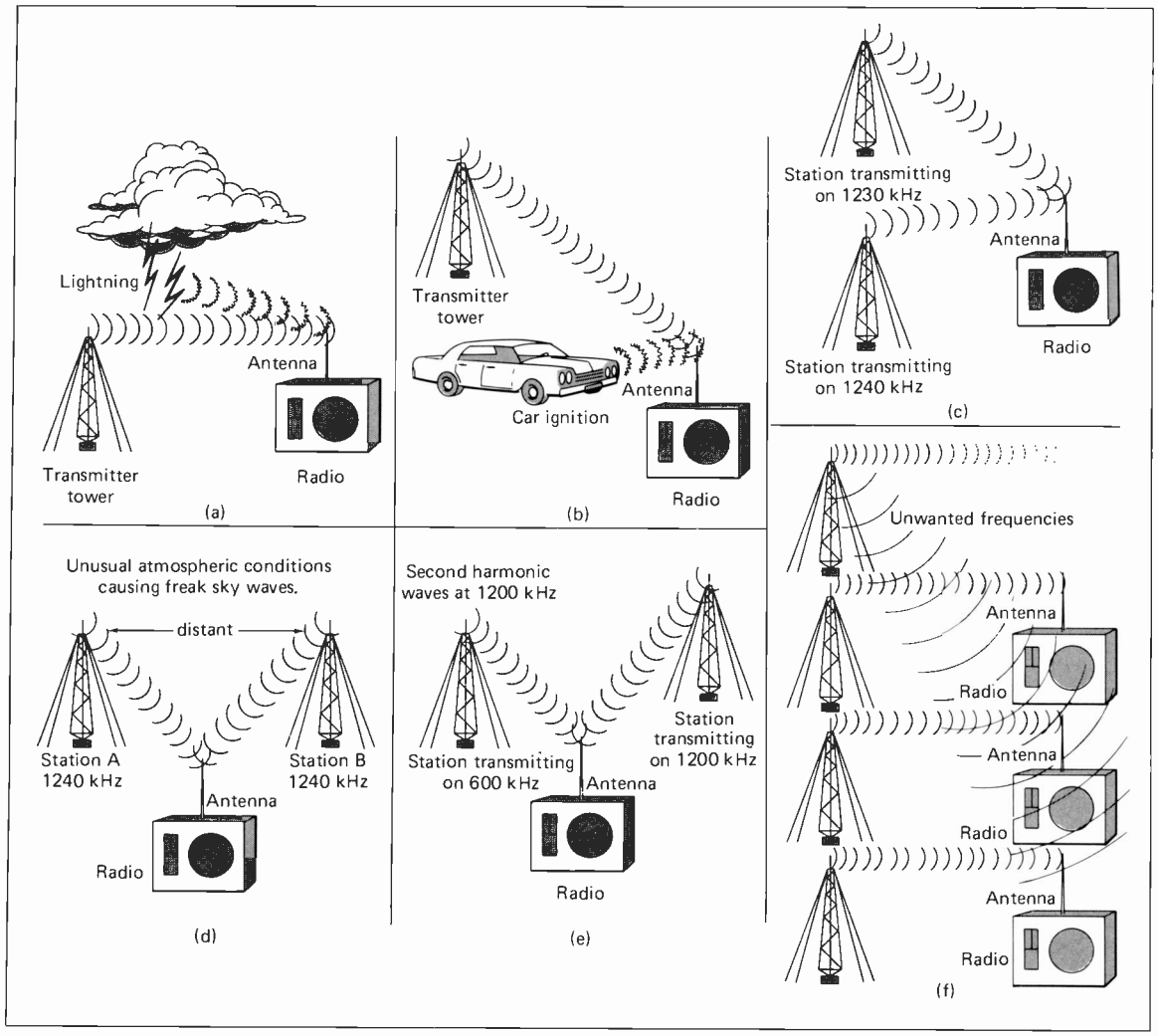

Figure 10-1. Types of Interference in AM Radio. (a) Static—natural (lightning in this example). Radio simultaneously receives station signal and static. (b) Static—man-made. Radio simultaneously receives station signal and static. (c) Station interference—adjacent channel. Radio tuned to 1230 simultaneously receives station transmitting on 1230 kHz and station transmitting on 1240 kHz. (d) Station interference—co-channel. Radio tuned to 1240 to receive station A simultaneously receives signals from both stations A and B. (e) Station interference—second harmonic. Radio tuned to distant station transmitting on 1200 kHz simultaneously receives nearby station transmitting on 600 kHz through its second harmonic frequency (1200 kHz). (f) Station interference—splatter. Station transmitting on one frequency overmodulates, and radios tuned to stations on other frequencies receive audio from the overmodulating station.

power, or lower frequency results in greater coverage. The FCC has defined two types of coverage areas: **primary** and **secondary.**[2] Generally speaking, a station's primary service area is that served by its ground wave; its secondary service area is that within which its sky wave is received with some degree of consistency.

CHANNEL AND STATION CLASSIFICATION

Early in the history of broadcasting, it became apparent that a system was needed to prevent massive interference among standard broadcast stations. Sky waves, particularly, caused problems; they were unpredictable and could skip long distances. The system that finally evolved includes two related clas-

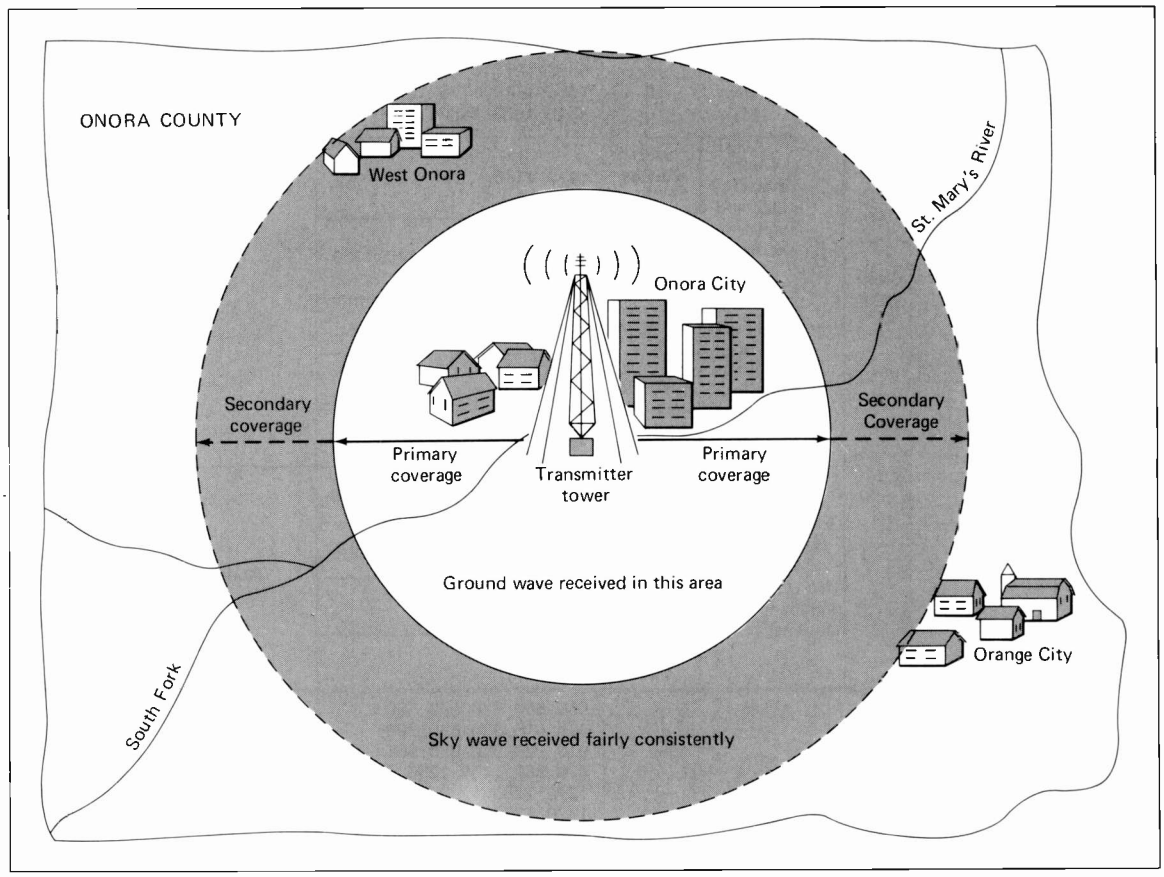

Figure 10-2. Primary and Secondary Coverage Areas—AM Radio. The radio station in Onora City serves its community and the immediately surrounding area with its ground wave; that is, its primary coverage area. The station serves most of the rest of the county with a fair degree of consistency through its sky wave. This added area is the station's secondary coverage area.

sifications: (1) AM **frequencies** or **channels** are classified **clear, regional,** or **local;** (2) **stations,** as **I, II, III,** or **IV.**

Clear Channels. Clear channels are used by **dominant** and **secondary stations.** Dominant stations serve wide areas—remote rural areas and large population centers. Secondary stations must transmit so as to **protect** the signal of

Channel classification				Frequencies (kHz)	Station classification	
					Dominant	Secondary
Clear (60)	A (25)			640, 650, 660, 670, 700, 720, 750, 760, 770, 780, 820, 830, 840, 870, 880, 890, 1020, 1030, 1040, 1100, 1120, 1160, 1180, 1200, 1210	I-A	II
	B (21)	U.S. Clears (11)		680, 710, 810, 850, 1080, 1110, 1170, 1500, 1510, 1520, 1530	I-B	II
		Clears shared by U.S. and foreign countries (7)	with Canada (2)	1070, 1130		
			with Mexico (5)	1000, 1060, 1090, 1140, 1190		
		Foreign clears with U.S. dominant stations (3)	Bahamas	1540		
			Mexico	1550		
			Cuba	1560		
	Foreign clears (14) (No U.S. dominant stations)		Canada (6)	540, 690, 740, 860, 990, 1580	None	II
			Mexico (6)	730, 800, 900,1050,1220,1570		
			Canada & Mexico	940		
			Canada & Cuba	1010		
Regional (41)				550, 560, 570, 580, 590, 600, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590, 1600	III	
Local (6)				1230, 1240, 1340, 1400, 1450, 1490	IV	

Figure 10-3. AM Channel and Station Classification.

dominant stations, that is, not interfere with their primary service areas and all or most of their secondary service areas. Of the 107 AM channels, 60 are designated clear channels.

Clear Channels A. On 25 of the 60 clear channels FCC rules specify operation of *one* dominant station.[3] These 25 are called **clear channel A** frequencies. On each clear channel A, the dominant station is authorized to operate with full power [50,000 watts (50 kilowatts or kW) in the United States], full-time nondirectional (i.e., the signal is radiated in all directions at full strength). Additionally, one or more secondary stations transmit on most of these 25 channels. Their licenses specify that they operate with relatively low power, reduce power at night, operate only in the daytime, use a directional transmitting antenna array (to focus their signals away from those of the dominant stations), or use some combination of these measures.

For example, look at the situation on one particular clear channel, 760 kHz. The dominant station is WJR, Detroit, 50,000 watts, nondirectional. Four secondary stations also transmit on 760 kHz—KGU, KFMB, WCPS, and WORA. All operate so as to protect WJR's signal. KGU is relatively powerful with 10,000 watts day and night. But KGU is half a continent and half an ocean away in Honolulu. More typical are KFMB, San Diego, 5000 watts full-time, directional at night, and WCPS, Tarboro, North Carolina, 1000 watts, daytime operation only. Even WORA, 5000 watts and all the way down in Mayaguez, Puerto Rico, uses a directional antenna to avoid intefering with WJR's signal.

Clear Channels B. FCC rules[4] list another 21 clear channels on which *two* dominant stations may operate. These are called **clear channel B** frequencies. On any given clear channel B, the dominant stations operate so as not to interfere with each other. Each secondary station protects *both* dominant stations. One such clear channel B is 1500 kHz. The two dominant stations are WTOP, Washington, D.C., and KSTP, St. Paul, Minnesota. KSTP operates with 50 kW full-time but uses a directional antenna at night. WTOP operates with 50 kW and uses directional antenna arrays day and night, a different pattern for each. Some 39 secondary stations also operate on 1500 kHz, with varying facilities, ranging from WKXO, Berea, Kentucky, 250 watts, daytime only, to WDEE, Detroit, 50 kW, directional in the daytime, and 5000 watts, directional with a different pattern at night.

Shared Clear Channels B. Ten* of the clear channel B frequencies are shared with other North American countries. On 1130 kHz, for example, KWKH,

* Three of the 11 shared clear channels are actually foreign clear channels on which the United States has made special arrangement to operate dominant stations.

Shreveport, Louisiana, and CKWX, Vancouver, British Columbia, are the two dominant stations. Both operate with 50 kW full time and use directional antennas at night. In the United States, some 28 secondary stations also operate on 1230 kHz.

Foreign Clear Channels. On 17 clear channels other North American countries have first priority. This means that all U.S. stations on these frequencies must protect the signal of the dominant foreign stations. The dominant station on 800 kHz, for example, is XEROK, Ciudad Juarez, Chihuahua, 150 kW. One other Mexican station and 32 U.S. stations also operate on 800 kHz; all protect XEROK's signal.

Regional Channels. Forty-one frequencies are regional channels. A regional channel is one on which a number of stations may operate, each of which serves a population center and adjacent rural areas. None dominates; each station operates in order to avoid interference with all others on the same and nearby channels. The most powerful stations use 5000 watts. One example of a regional channel is 1300 kHz. Sixty-four stations operate on 1300 kHz, ranging in size and facilities from WHLT, Huntington, Indiana, 500 watts, daytime operation only, directional, to KGLO, Mason City, Iowa, 5000 watts full-time, directional at night.

Local Channels. The remaining six frequencies are local channels. A local channel is one on which many stations operate, 150 and more. These stations operate with 1000 watts in the day and 250 watts at night (except in certain portions of southern Florida where power is limited to 250 watts day and night) and serve one city or town and the adjacent suburban and rural areas. For example, over 170 stations transmit on 1340 kHz, most with 1000 watts during the day and 250 watts at night.

Station Classification. The dominant station on a clear channel A is a **class I-A** station. The two dominant stations on a clear channel B are **class I-B** stations. The secondary stations that operate on a clear channel, A or B, are **class II** stations. Stations assigned to regional channels are **class III** stations. And stations on local channels are **class IV** stations.*

Spectrum Management. Most of the over 4500 AM radio stations operate on regional and local channels. The 41 regional channels contain more than 2100 stations, while the six local channels contain over 1000; 44 percent of the channels account for 70 percent of the stations. Of the 60 clear channels, 18 have five or fewer stations operating on them.

* The FCC further breaks down class II stations by minimum power and operating schedule and class III stations by minimum power.

New Stations. Should you wish to construct a new AM radio station, you will find slim pickings. All class I-A and I-B stations were taken years ago; if you want a clear channel dominant station, you will have to buy it—if you find a seller and can pay the price. The frequency you use determines the type of station you build. Therefore first you find a frequency. You hire a consulting engineer who makes a **frequency search,** that is, studies existing AM radio assignments and measures the strength of their signals in the area where you wish to build. Again, pickings are slim. Most of the better frequencies have already been taken. In your application to the FCC, you must show that your proposed station would not interfere with existing stations. Unless you locate in a remote small town or rural area, you will probably end up with a frequency no lower than 1200 and limited operation—directional, low power, reduced power at night, or even daytime operation only.

FM Broadcast Service

The FM radio broadcasting band is 88–108 MHz, in the VHF portion of the radio frequencies, located between television channels 6 and 7. There are 100 channels in the FM band, each 200 kHz wide [108 MHz − 88 MHz = 20 MHz ÷ 0.2 MHz (which is 200 kHz) = 100]. For convenience, the FCC customarily refers to FM channels by **channel number** as in television. The first FM channel is 201; the last, 300. But stations identify themselves to the public by **frequency,** similar to AM radio. The first FM channel is 88.1 MHz (representing a band of frequencies, 88–88.2 MHz) and the last is 107.9 MHz (107.8–108 MHz).

INTERFERENCE AND COVERAGE

Interference is rarely the problem in FM radio that it is in AM. Propagation is primarily by direct waves. Direct waves travel in straight lines, and therefore FM transmission is basically line-of-sight and fairly predictable. Ground waves and sky waves do not figure into FM coverage. Additionally, the VHF band contains less static and other noise than the lower frequencies.

FM receiver design also contributes toward reduction of station interference and static. In co-channel and adjacent channel interference situations, an FM receiver has a much greater ability to suppress the weaker signal than does an AM receiver. Static signals attach themselves to the positive and negative peaks of a radio wave, thus FM receivers eliminate static by **clipping** (removing) these peaks.

Since FM transmission is line-of-sight, transmitting tower height affects station coverage. Terrain and man-made obstacles can block the signal, causing **dead spots** where the station should, but cannot, be received well. Other factors that affect FM coverage include carrier frequency and transmission power; just as in AM radio, lower frequencies and higher power result in increased coverage.

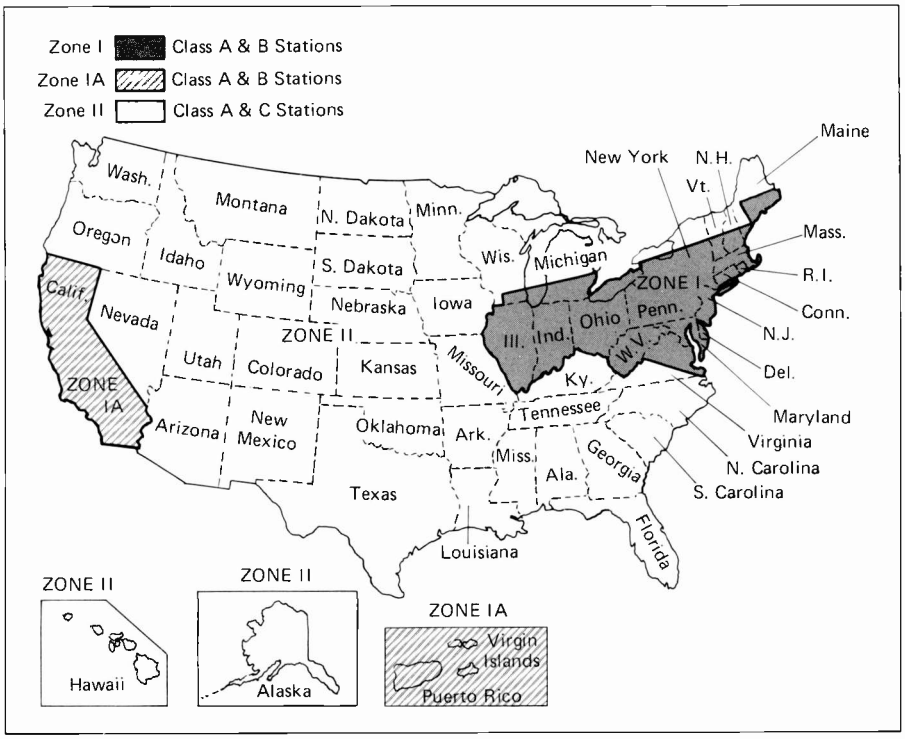

Figure 10-4. FCC's FM Zones and Types of Stations Operating in Each Zone.

COMMERCIAL FM: ORDERLY GROWTH

The FCC has adopted rules to provide for orderly growth of commercial FM radio service while minimizing possibilities for interference. The commission has divided the country into three zones, designated **I, I-A,** and **II,** and has classified stations and channels to operate within those zones.

Zones. Zone I includes all or part of 18 northeastern states and the District of Columbia. Zone I-A consists of Puerto Rico, the Virgin Islands, and southern California. Zone II includes the rest of the country, including Alaska and Hawaii.

Channel and Station Classifications. The **80 channels** (221–300) in the nonreserved (i.e., commercial) portion of the FM band are classified as **A** or **B-C.** Stations that operate on these channels are classified as **A, B,** or **C.**

Twenty of the 80 commercial FM channels are designated class A channels and are used only by class A stations. Class A stations are assigned in all zones and are designed to provide service for a relatively small community and its surrounding rural area. Class A stations have a maximum of 3000

Channel Classification	Channels and Frequencies								Station Classification	
	Ch. No.	Freq.	Ch. No.	Freq.	Ch. No.	Freq.	Ch. No.	Freq.	Station	Zones in which assigned
A	221	92.1	240	95.9	261	100.1	280	103.9	A	I, I-A, II
	224	92.7	244	96.7	265	100.9	285	104.9		
	228	93.5	249	97.7	269	101.7	288	105.5		
	232	94.3	252	98.3	272	102.3	292	106.3		
	237	95.3	257	99.3	276	103.1	296	107.1		
B-C	222	92.3	242	96.3	262	100.3	282	104.3	B and C	I, I-A and II
	223	92.5	243	96.5	263	100.5	283	104.5		
	225	92.9	245	96.9	264	100.7	284	104.7		
	226	93.1	246	97.1	266	101.1	286	105.1		
	227	93.3	247	97.3	267	101.3	287	105.3		
	229	93.7	248	97.5	268	101.5	289	105.7		
	230	93.9	250	97.9	270	101.9	290	105.9		
	231	94.1	251	98.1	271	102.1	291	106.1		
	233	94.5	253	98.5	273	102.5	293	106.5		
	234	94.7	254	98.7	274	102.7	294	106.7		
	235	94.9	255	98.9	275	102.9	295	106.9		
	236	95.1	256	99.1	277	103.3	297	107.3		
	238	95.5	258	99.5	278	103.5	298	107.5		
	239	95.7	259	99.7	279	103.7	299	107.7		
	241	96.1	260	99.9	281	104.1	300	107.9		
Reserved noncommercial educational	201	88.1	206	89.1	211	90.1	216	91.1	Noncommercial educational	
	202	88.3	207	89.3	212	90.3	217	91.3		
	203	88.5	208	89.5	213	90.5	218	91.5		
	204	88.7	209	89.7	214	90.7	219	91.7		
	205	88.9	210	89.9	215	90.9	220	91.9		

Figure 10-5. FM Channel and Station Classification.

watts effective radiated power (ERP),* use antennas at a maximum of 300 feet height above average terrain (HAAT), and put out a signal that, with maximum antenna height and power and flat terrain, extends about 15 miles.

The remaining 60 commercial channels are classified B-C and are used by class B and class C stations. Class B stations are assigned to zones I and I-A and can operate with maximums of 50 kW ERP, 500 feet antenna HAAT, and about 33 miles signal range. Class C stations are assigned to zone II and can operate with maximums of 100 kW ERP, 2000 feet antenna HAAT, and about 64 miles signal range. Stations whose antenna HAAT exceeds the maximum for their class must reduce power to compensate. FCC rules specify minimum mileage separations between stations to further protect from co-channel and adjacent channel interference.

* There are also minimum power requirements for all classes of stations.

Table of Assignments. In 1963, the FCC adopted a table assigning nonreserved channels to specific communities. Should you wish to build a new FM station, you go to the FM **table of assignments,** look up your city, choose an unused channel assigned to that city, and apply for it. If there are no vacant channels, you either find a city that does have vacant FM channels or petition the FCC to amend the table of assignments to add a new channel to your city.

NONCOMMERCIAL EDUCATIONAL FM: CONFUSED PROLIFERATION

FM channels 201–220 are reserved for noncommercial educational stations. These 20 channels were not included in the FCC's classification system nor were they included in the table of assignments. Noncommercial FM stations had been assigned on an individual application-demand basis, much like AM. However, about half of all educational FM stations were of the low power 10-watt variety. As these stations continued to proliferate, they occupied frequency space that could have been used by other educational stations that wished to go to higher power. Congestion of the reserved portion of the band had become critical in some areas. In 1978, the FCC proposed a new table of assignments for educational FM. A 10-watt station would have to either boost power to a minimum of 100 watts, or move to a new FM channel 200 (87.9 MHz), to a commercial channel (to operate as a secondary station), or to an educational channel where it would least likely block assignment of a new station. The proposal would also require noncommercial stations to operate at least 36 hours per week, and those with irregular or occasional operating schedules could be required to share time.

Modulation

Modulation is the alteration of a carrier (the alternating current that feeds the antenna and causes emission of radio waves) so that it carries the desired information, that is, programming. Two signals are involved: the **audio frequency** (AF) or audio and the **radio frequency** (RF) or carrier.

SOUND

To explain audio, we must divert briefly and discuss sound. Sound originates with the **vibrating body** of a **sound source**—the human vocal folds in the larynx, the strings of a harp, the reed of a clarinet. A plucked harp string, for example, vibrates rapidly back and forth, compressing and rarefying adjacent air molecules. As the string moves in one direction, it pushes together molecules in front while creating a partial vacuum and rarefying (i.e., making less dense) the molecules behind. After it reaches the outermost point of movement in one direction, the string begins to swing back the other way, and the condensation-rarefaction process reverses sides. As the string displaces the nearest air molecules, these molecules hit the next molecules, which then hit the next molecules, and so forth. This chain reaction creates repeating patterns of alternating condensation and rarefaction radiating outward from the

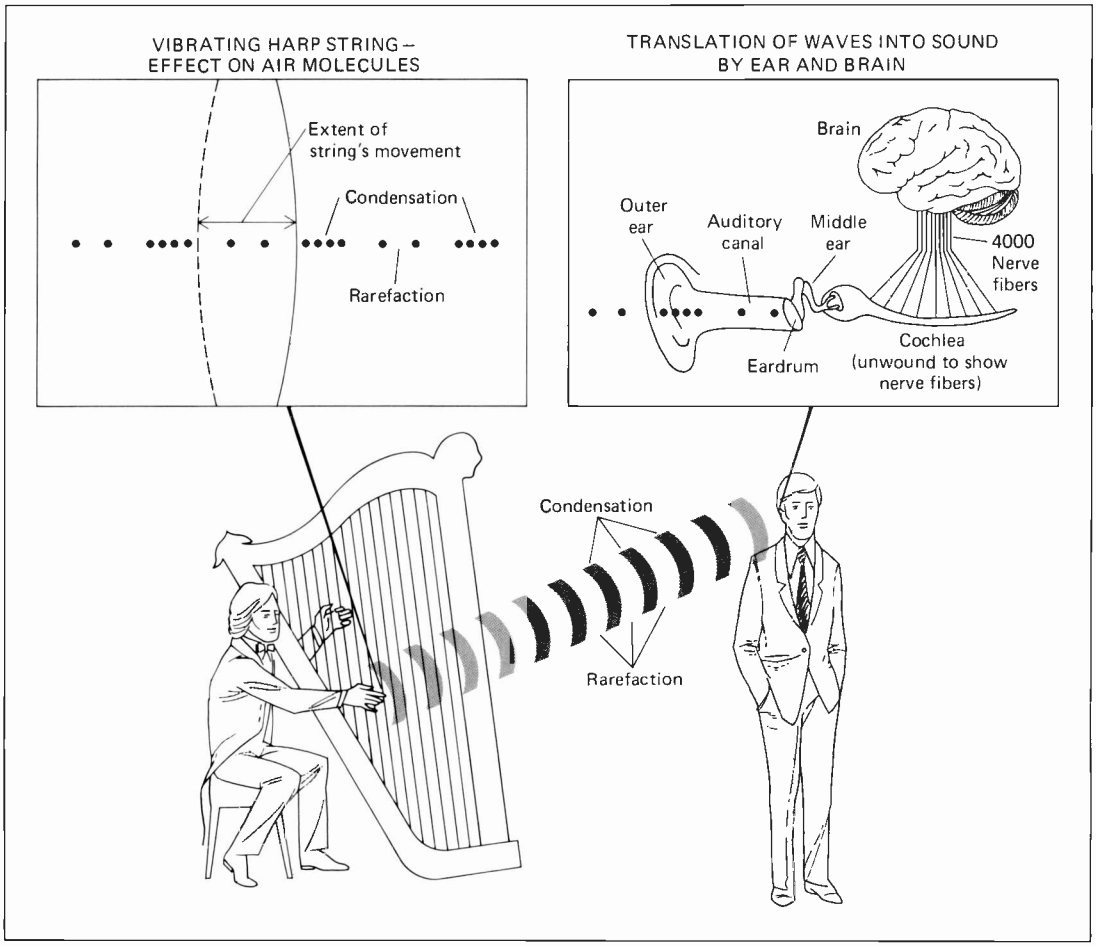

Figure 10-6. Origination, Transmission, and Reception of Sound. The condensation-rarefaction patterns (in the air molecules) radiate outward in all directions from the sound source. For clarity, the illustration shows the waves going only to the listener's ears, and the inserts show only one line of air molecules.

vibrating body. If these patterns reach an ear, they set up vibrations in the eardrum similar to those of the harp string. The vibrating eardrum activates tiny mechanisms in the middle ear that transmit sensations to the auditory nerve, which, in turn, sends the information to the brain. The brain interprets the result as sound.

Each condensation–rarefaction combination is one **wave.** Each set of back and forth movements of the vibrating body is one **cycle.** The number of cycles per second—the **frequency**— determines the **length** of the sound waves. (We first used these terms in Chapter 9, but keep in mind that this is sound energy,

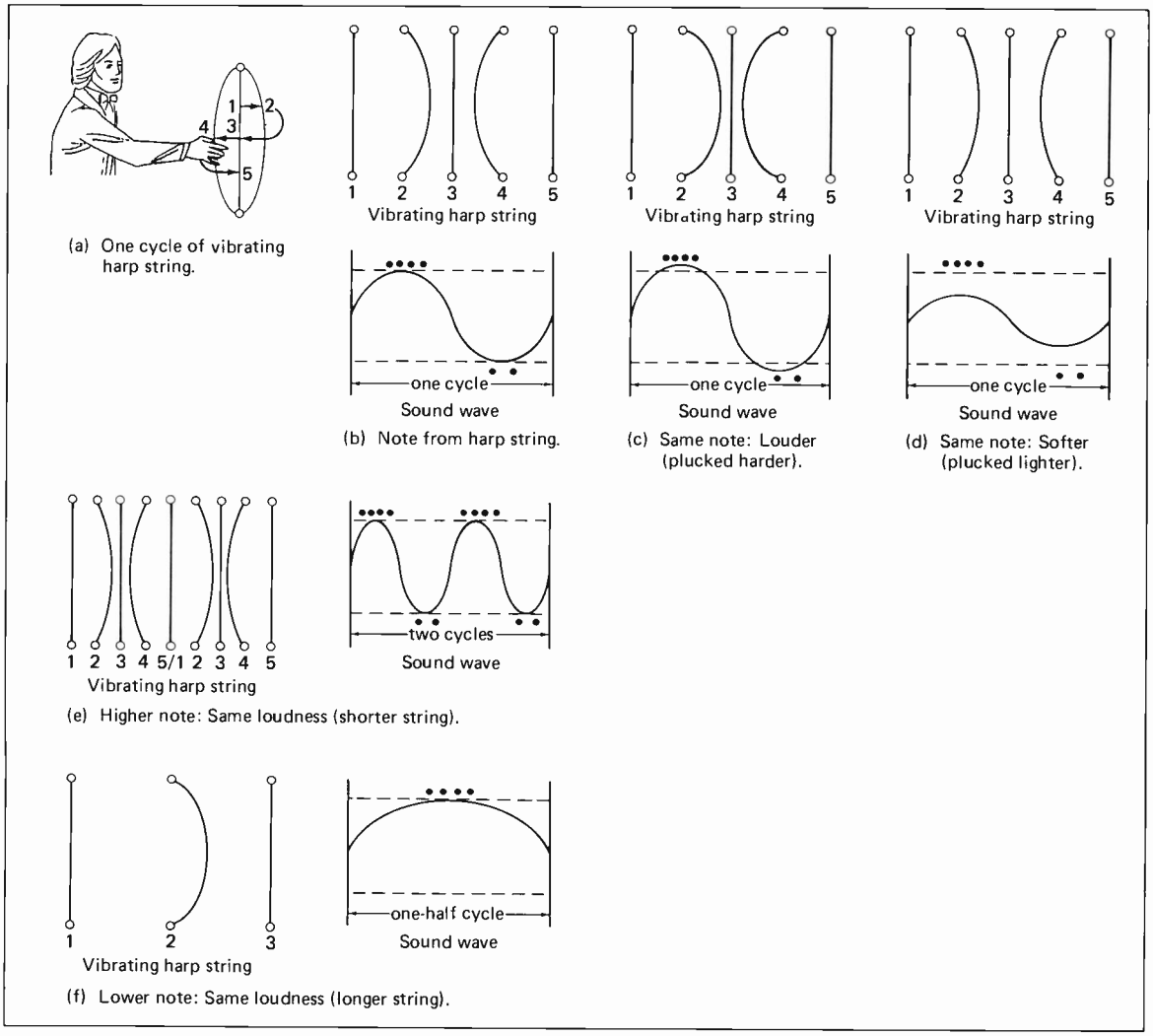

Figure 10-7. Sound Waves: Frequency and Amplitude. In drawings (b) through (f), the numbered lines show what movements the harp string makes within a given time period [the same for each drawing, (b) through (f)], while the sine wave forms show what the resulting sound waves are like. Variations in the degree of string displacement [(c) and (d)] result in variations in amplitude. Variations in the number of cycles of string movement [(e) and (f)] result in variations in frequency and thus in pitch.

not electromagnetic energy.) **Amplitude** determines **loudness.** As the body vibrates harder, amplitude increases and sound grows louder. Frequency determines **pitch.** If the body vibrates at a frequency of 440 Hz, the brain hears the musical pitch A, sixth tone in the scale of C major. A frequency of 258 Hz is middle C; twice that number is C above middle C, and so on.

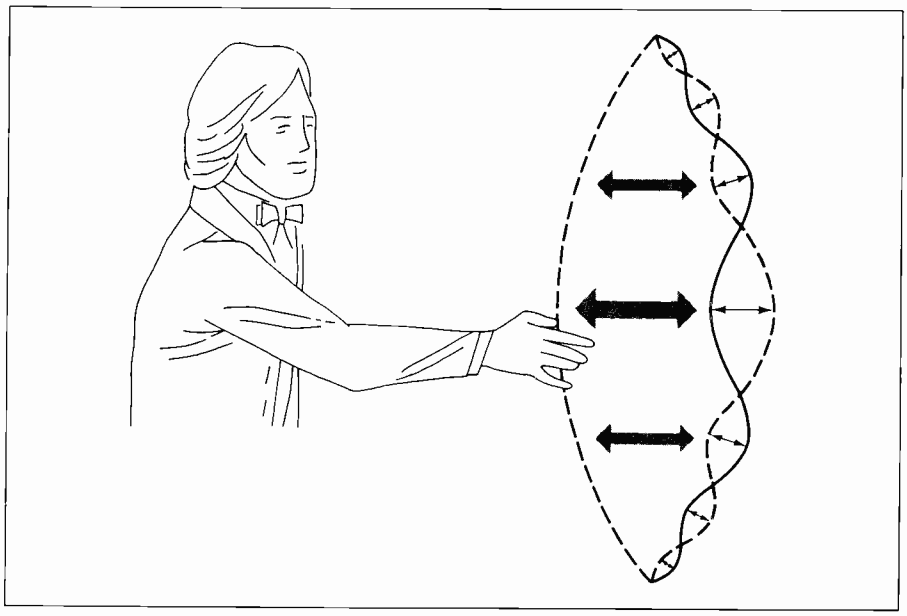

Figure 10-8. Creation of Overtones. Again, the example is our harp string. Not only does the whole string move back and forth, but individual segments of the string also move back and forth. The string's gross movement creates the fundamental tone, the note that you hear. Its segmental movements create overtones.

Any given sound usually contains many different pitches. For example, let us say that we pluck the A string of a harp. We hear a note, A above middle C, the **fundamental** tone, the one to which the string is tuned. But at the same time the whole string moves back and forth at a rate of 440 Hz, segments of the string also move back and forth independently and at a faster rate. These vibrating segments also produce pitches called **overtones.** The shorter the segment, the faster it vibrates, and the higher the pitch it produces. Overtones vary according to the type of vibrating body. When overtones are **consonant,*** we perceive the sound as pleasing, even musical; when **dissonant,** as upsetting or jarring or as noise. Although overtone frequencies go much higher, most of us cannot hear above 15,000–17,000 Hz. As we grow older, or if we damage our hearing, the upper limit drops. But most fundamentals are below 5000 Hz, and most speech sounds go no higher than 3000 Hz.

Structure and enclosure of the sound source also play a major role in what you hear. The vibrating body and its sound waves cause other parts of the

* Both consonance and dissonance are determined in large part by mathematical relationships among frequencies of the pitches involved. For our purposes, consonance is roughly equivalent to harmony; dissonance to discord or lack of harmony.

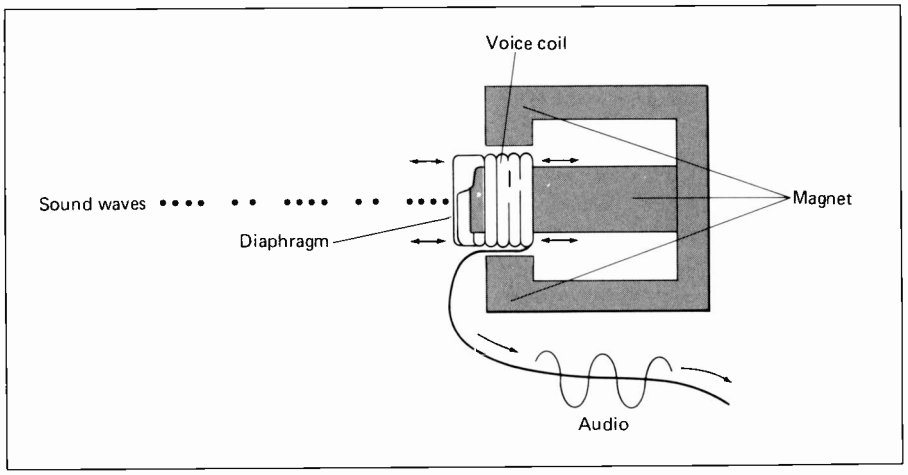

Figure 10-9. Conversion of Sound to Audio. In a dynamic microphone, a diaphragm and a voice coil are connected; when the diaphragm moves, the coil also moves. The voice coil is positioned between the poles of a magnet. Sound waves cause the diaphragm to move back and forth. Movement of the voice coil within the magnetic field sets up a weak alternating electrical current in the coil. Each back and forth movement results in one cycle of current. Sound waves cause the movement, so that the current is an electrical reproduction of the sound waves. A wire connected to the voice coil carries off the current as audio.

source to vibrate and amplify the sound. This is called **resonance,** and the nature of resonance varies from sound source to sound source. Vibrating body, overtones, and resonance are the factors that allow us to tell one sound source from another—a human voice from a harp from a trumpet from a clarinet—even though each produces the same fundamental tone. These factors also help us to tell one voice from another.

Most sound waves are highly complex. Overtones and resonance both complicate sound wave structure, as do factors such as two or more sound sources used in combination* (orchestras, singing groups, etc.) and acoustical properties (i.e., those qualities that determine how clearly sound can be heard) of the room in which sound is produced.

AUDIO

When sound energy is translated directly into electrical energy, the result is **audio.** To illustrate, let us use a **pure tone** (i.e., one with no overtones, resonance, echoes, etc.†) of 1000 Hz (nearly two Cs above middle C). A micro-

* It should be noted that some single musical instruments are capable of playing multiple pitches simultaneously—piano, harp, violin, and so on.

† Electronic tone generators can produce such tones. These devices use oscillators as the vibrating body and amplification circuits to boost amplitude.

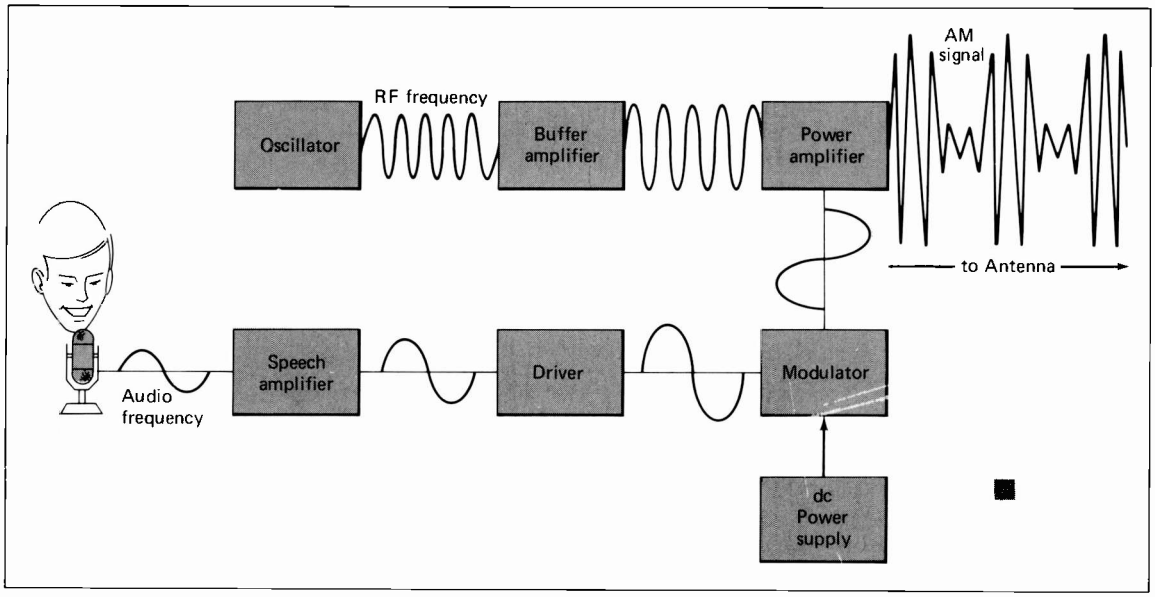

Figure 10-10. Block Diagram of an AM Transmitter. The speech amplifier boosts the weak audio frequency (AF) signal to feed the driver. The driver converts the AF signal into a large voltage and enough current to drive the modulator. Meanwhile, the oscillator has generated the radio frequency (RF). The buffer amplifier boosts the RF and prevents the modulated signal from reflecting back from the power amplifier. The DC power supply provides power to both the modulator and the power amplifier. The modulator puts the AF signal into the power amplifier, which alters the amplitude of the RF to reproduce the pattern of the AF signal. The power amplifier boosts the amplitude modulated signal and sends it on to the antenna for radiation.

phone converts this sound energy into electrical energy. The sound waves cause a diaphragm in the microphone to vibrate, and its vibrations cause current to flow, the amount of current varying with the amount of sound pressure on the diaphragm. The result is a weak electrical current of 1000 Hz. This electrical current is audio, also called the audio signal and the audio frequency (AF).* The audio frequency signal is amplified and sent to the transmitter.

AMPLITUDE MODULATION

When the audio frequency signal reaches the transmitter, it is combined or mixed with the carrier signal in a process called **amplitude modulation,** the AM of AM radio.

To illustrate how amplitude modulation works, let us look at a radio transmitter with a carrier frequency of 1000 kHz. In the transmitter three main operations occur. The first two happen simultaneously. The oscillator generates the 1000 kHz carrier frequency, and the incoming audio frequency

* The audio signal may also originate from a recorded source. See Chapter 5.

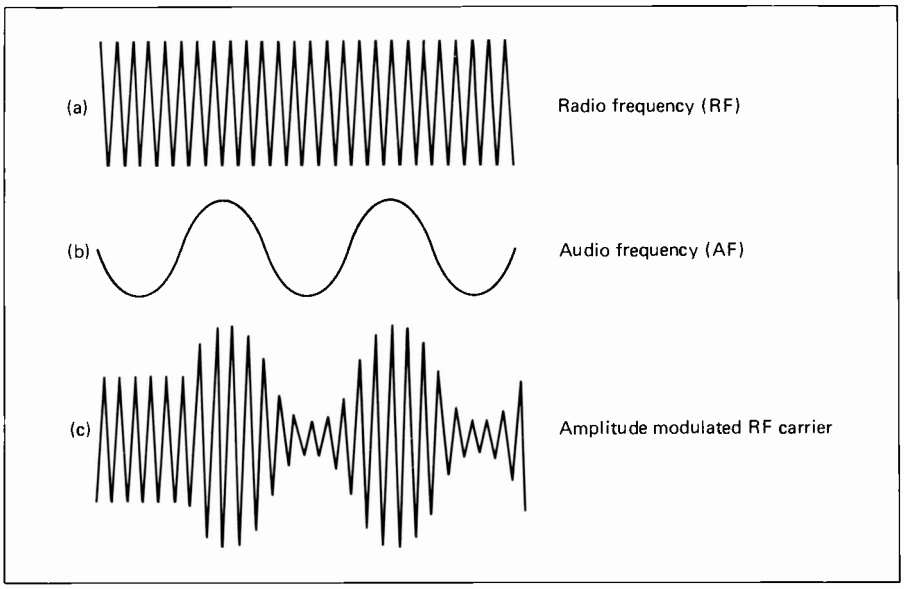

Figure 10-11. Amplitude Modulation. (a) Radio frequency (RF), that is, unmodulated carrier. (b) Audio frequency (AF). (c) Amplitude modulated RF carrier.

signal is boosted and fed into a modulator. Third, these two frequencies meet in the power amplifier, interact and generate new frequencies. Two of these new frequencies are particularly significant, the **upper side frequency** and the **lower side frequency.** As a result of these new side frequencies, the amplitude* or strength of the carrier is no longer constant, but it now varies, rising and falling periodically. The rise and fall of the carrier amplitude forms a pattern matching that of the audio signal. We now have a carrier of 1000 kHz, whose amplitude is modulated or varied so that it reproduces the pattern of the 1000 Hz audio frequency. Thus the term "amplitude modulation." Because there are both upper and lower side frequencies, the pattern is repeated so that the negative phase of the carrier bears a mirror image of the pattern carried by the positive phase.

Side frequencies are generated on a **sum** and **difference** basis. The upper side frequency is equal to the sum of the carrier frequency plus the audio frequency, in our example, 1001 kHz [1000 kHz (carrier frequency) + 1 kHz (which is the 1000 Hz audio frequency) = 1001 kHz]. The lower side frequency is equal to the difference between the two frequencies, 999 kHz in our example [1000 kHz − 1 kHz (which is 1000 Hz) = 999 kHz].

So far we have dealt with a single audio frequency, one representing a pure tone. As mentioned above, however, most sounds are complex. They re-

* See Chapter 9.

sult in a complex audio signal, containing a number of different frequencies—a **band** of frequencies. When this complex audio signal modulates the carrier, it creates bands of side frequencies—an **upper sideband** and an identical **lower sideband.** AM radio cannot, however, handle all information in

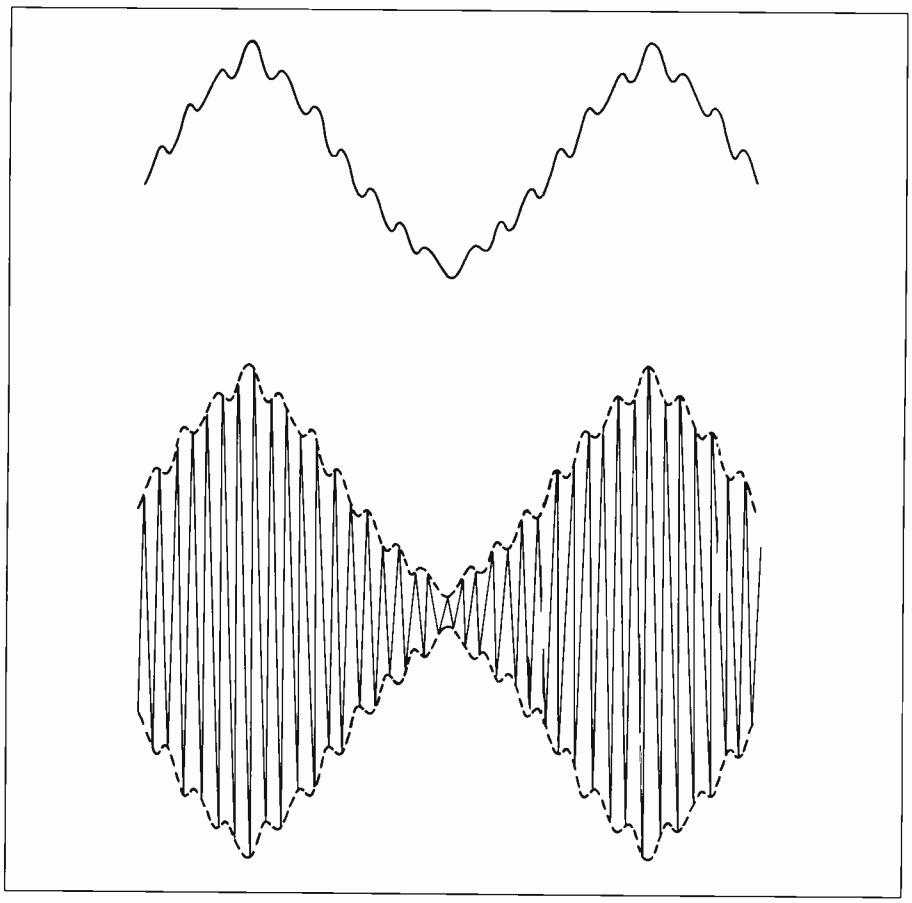

Figure 10-12. Complexity of Signals. For the sake of clarity, the other illustrations in this book show audio, sound, and modulated carrier waves as simple, repetitive forms, such as might be produced by a single pure tone. In fact, however, most sounds are complex—through overtones, combinations of sounds, and so on—and thus produce audio signals much more like the top drawing, above. Should this signal modulate a carrier in an AM transmitter, the result would be similar to the bottom drawing. Note the mirror image at top and bottom of the modulated carrier; these are the sidebands. On the drawing of the modulated carrier, the pattern of the audio signal is drawn in dashed lines to point out that the carrier's amplitude now reproduces the pattern. But technically the audio signal itself is not part of the carrier; that is, the carrier does not carry the audio signal, only the pattern of that signal.

the audio signal. The 10 kHz channel width restricts AM radio to transmission of no audio frequencies higher than 5000 Hz (which is 5 kHz). A 5000 Hz audio signal generates side frequencies at 5 kHz above (sum) and 5 kHz below (difference) the carrier frequency, the outer limits of an AM channel. Modulation of a higher audio frequency would put the station's side frequencies into adjacent AM channels, causing interference. With this 5000 Hz audio frequency limit, we receive all information vital for understanding, but not as much information as we *could* use. We still hear most fundamental tones (the highest notes of a piccolo and a piano are around 4000 Hz, although some organs can go up to 8000 Hz) but miss a good deal of overtone information. All this, of course, assumes that the receiver is of high enough quality to reproduce all information contained in the signal.

TRANSMISSION AND RECEPTION

After the carrier is modulated, it is fed to the transmitting antenna. The presence of the modulated carrier in the antenna results in radiation of electromagnetic waves, as described in Chapter 9. The electronic pattern or structure of these waves corresponds to that of the modulated carrier, and thus the waves carry the encoded audio information.

When these waves reach a receiver they must go through several processes, so that the listener may hear the audio information as sound. First the waves come into contact with a receiving antenna (usually hidden inside the case of an AM radio). They induce a small electrical signal, a weak reproduction of

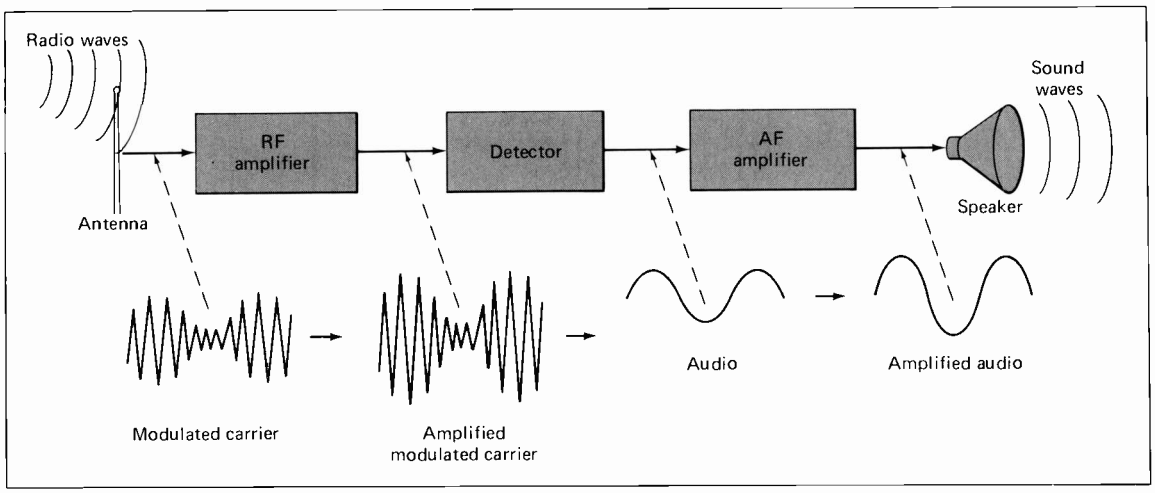

Figure 10-13. Block Diagram of an AM Receiver. The radio waves induce a weak reproduction of the modulated carrier frequency in the antenna. A tuner (not pictured) blocks all frequencies except those in the channel to which you have tuned. An RF amplifier boosts the modulated RF carrier frequency. A detector recovers the audio signal and grounds out the RF. An AF amplifier boosts the audio signal and feeds it to the speaker.

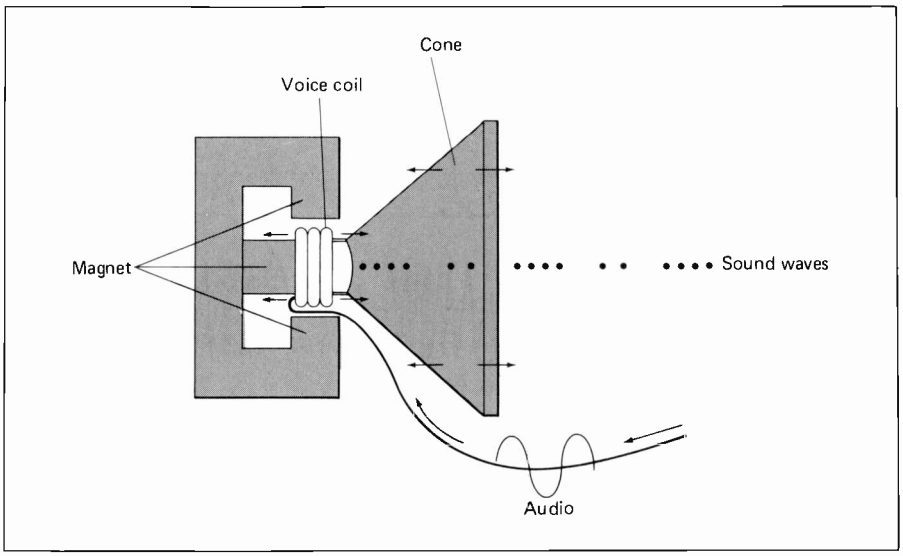

Figure 10-14. Speaker: Conversion of Audio into Sound. Note the similarity in construction and operation to the dynamic microphone (Figure 10.9).

the modulated carrier frequency, in the antenna. This weak frequency is then fed into an RF amplifier that boosts the signal. The amplified signal next goes into a detector. Detection is the reverse process of modulation and recovers the audio from the carrier, which is no longer used. The audio signal is fed to an amplifier for boosting, then to the speaker.

The speaker consists of a voice coil, a paper or fiber cone, and a magnet. The voice coil consists of a number of turns of wire wound around a lightweight form that is, in turn, attached to the cone. Voice coil and cone can move back and forth. The voice coil is mounted between the poles of the magnet. The audio signal (which, remember, is a varying alternating electrical current) is fed into the voice coil, which acts as an electromagnet. The varying magnetic field created by the voice coil interacts with the stationary field of the magnet on either side, causing the voice coil to move back and forth at the audio frequency rate. The cone, attached to the voice coil, also moves back and forth, alternately compressing and rarefying adjacent air molecules. If you are near the receiver when this happens, you identify the result as sound.

FREQUENCY MODULATION

In FM radio, modulation varies the frequency of the carrier, thus the name, **frequency modulation** (FM). During the positive phase of one cycle of an audio signal, the modulated carrier increases frequency; during the negative phase, the modulated carrier decreases frequency. Audio *frequency* is reflected in the number of *times* the modulated carrier increases and decreases frequency each second. Audio *amplitude* is reflected in the number of *carrier frequencies* in *each increase and decrease.* For example, an audio signal of 440 Hz

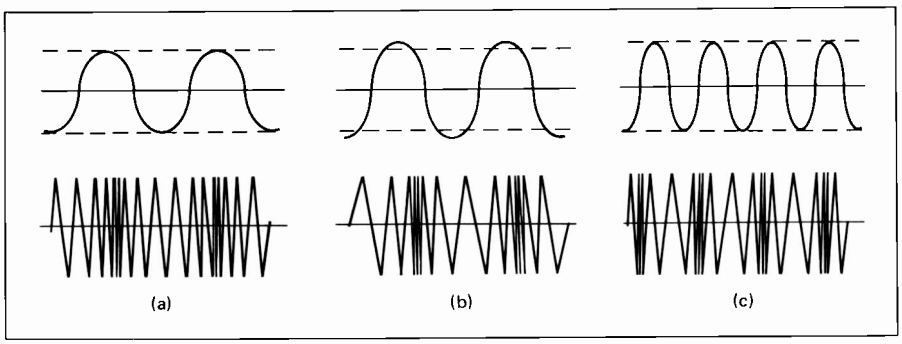

Figure 10-15. Frequency Modulation of Frequency and Amplitude. (a) The AF signal (top) modulates the frequency of the carrier (bottom). (b) Increased amplitude in the AF signal (top) intensifies the frequency groupings in the RF signal (bottom). (c) Increased frequency in the AF signal (top) produces a greater number of frequency groupings in the RF signal (bottom).

shows up in the modulated carrier as 440 increases and decreases of frequency per second. Low audio amplitude (e.g., a whisper) may increase and decrease carrier frequency by only 2 kHz; high audio amplitude (e.g., a shout) may increase and decrease carrier frequency by as much as 75 kHz.

FM is said to be a **high fidelity medium** because it is capable of reproducing most of the pitches that most of us can hear, from a low of 50 Hz to a high of 15,000 Hz. That wide range takes 15 kHz of each FM channel; sideband duplication accounts for another 15 kHz; and 25 kHz guard bands (frequencies not used for transmission) at either extreme of the channel use up an additional 50 kHz. That leaves 120 kHz unused out of the 200 kHz FM channel. The FCC has authorized FM stations to use these frequencies to broadcast **stereophonically,** and to transmit a nonbroadcast channel called **Subsidiary Communications Authorization** (SCA).

Stereophonic Sound. Stereophonic sound systems take advantage of the **binaural** nature of human hearing. We have two ears, on opposite sides of our heads, thus we hear sounds in one ear slightly after the other. Through this binaural arrangement we perceive an aural world of three dimensions, perspective in acoustic space. **Monaural** (one source) sound systems cannot reproduce this spatial effect. Stereophonic sound, on the other hand, does give a three-dimensional quality to sound. A stereophonic system involves simultaneous transmission of speech or music from two different positions. For example, if an orchestra concert were to be reproduced stereophonically, one microphone would be placed to the right front of the orchestra; the other, to the left front. Then audio from the two microphones would be transmitted over separate channels and reproduced by speakers to the right and left front

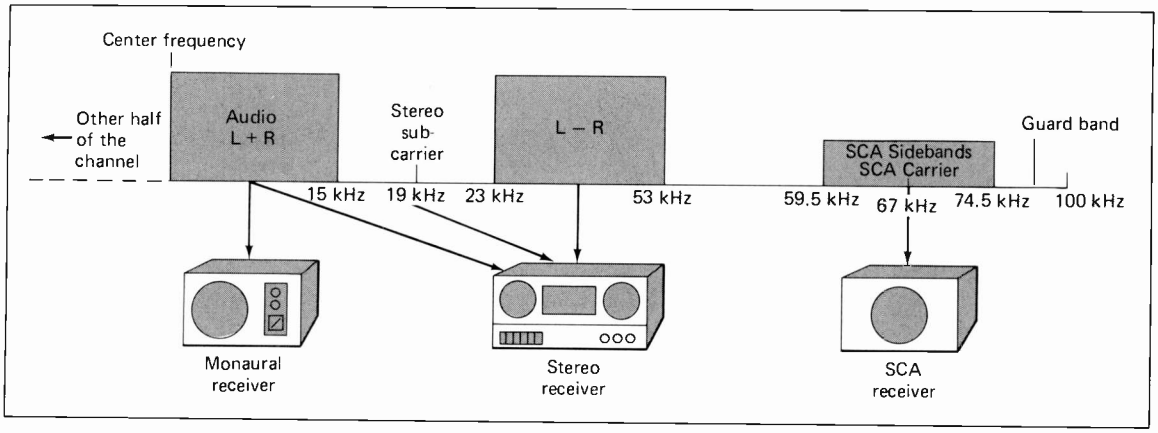

Figure 10-16. FM Channel. We are looking at the upper sideband (100 kHz) of an FM channel. The channel's center frequency is at extreme left, where the solid horizontal line begins. The lower sideband (the other 100 kHz of the channel) lies unpictured to the immediate left of the "Audio L + R" block. Numbers indicate the number of frequencies (in kHz) above the center frequency. The station using this channel broadcasts stereophonically and transmits an SCA service. A monaural receiver utilizes only the "Audio L + R" signal and reproduces a monaural signal. A stereophonic receiver utilizes the subcarrier at 19 kHz above the center frequency to recover the "L – R" signal. The stereo receiver combines the L + R and L – R signals to produce separate left and right channels. The SCA carrier is 67 kHz above center frequency, and modulation generates sidebands 7.5 kHz to either side (59.5–74.5 kHz). Only receivers equipped to utilize the SCA subcarrier can pick up SCA programming. The guard band consists of frequencies left unused so as to avoid adjacent channel interference.

of a listener. The listener would hear a relatively accurate reproduction of the live concert.

FM Multiplex. In addition to the bandwidth needed for two channels, there were two requirements for development of a stereophonic broadcast system. First, some method had to be provided so that both stereophonic channels could be transmitted independently without interfering with each other (i.e., causing crosstalk). Second, stereophonic broadcasts had to be compatible with existing monaural receivers. The FM **multiplex system** met both requirements. The word "multiplex" refers to the sending of two or more signals simultaneously over the same channel. In the FM stereophonic multiplex system, the right and left stereophonic channels are combined and transmitted along with certain accessory signals. A stereophonic receiver has special circuitry that uses the accessory signals to separate the right and left stereophonic channels and to feed them to individual speakers. A monaural receiver can pick up the transmission but does not have the circuitry to utilize the accessory signals. A listener hears a monaural broadcast, the combined right and left stereophonic channels.

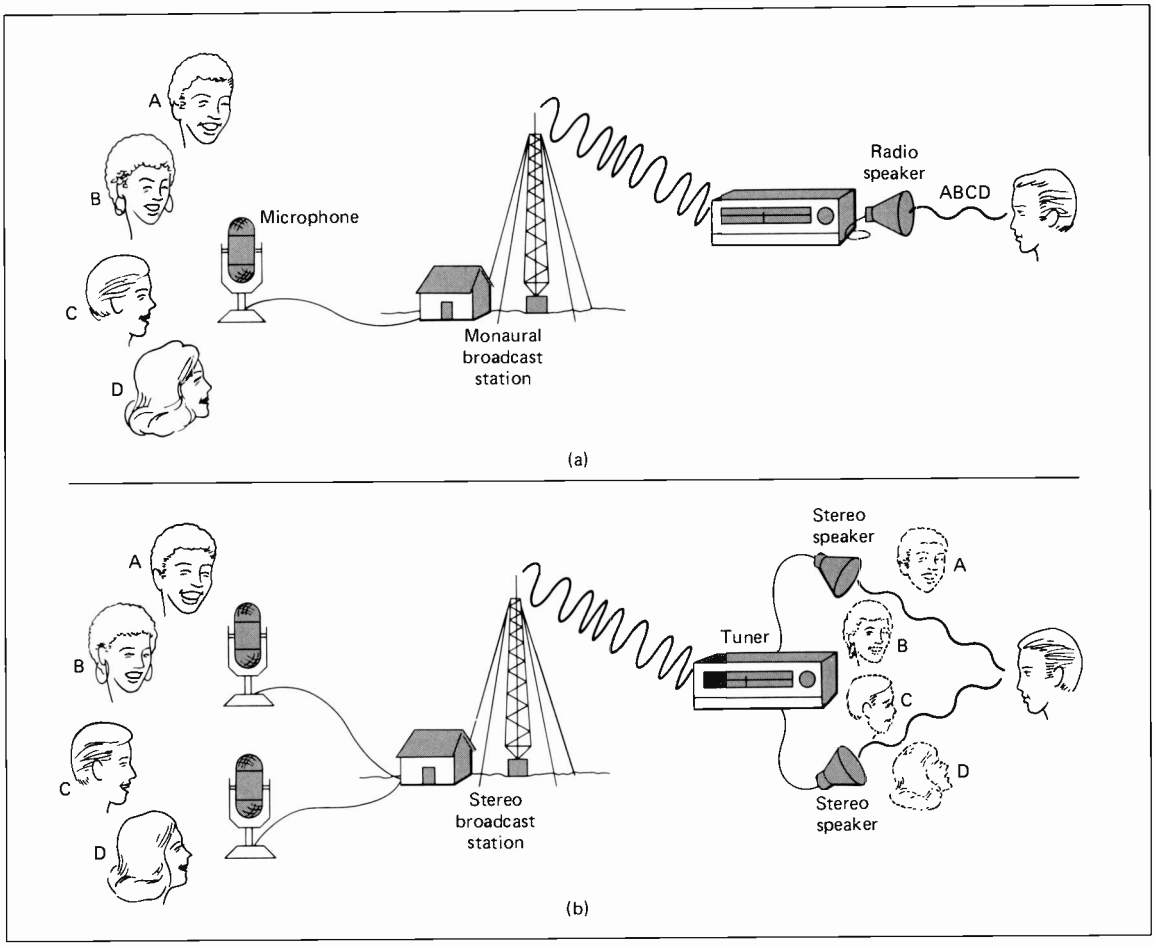

Figure 10-17. Monaural and Stereophonic Sound Systems. In monaural broadcasts (a), one microphone is used to pick up multiple sound sources (A, B, C, and D). If more than one microphone is used, audio signals from all microphones are simply blended together. The listener hears the sound as a blend (A + B + C + D) and perceives the source of the sound to be the loudspeaker. In stereophonic broadcasts (b), two microphones are used, one on the left and one on the right, and their signals remain separated until transmission. (Other microphones may be used, but their signals are blended into one of the two channels.) A stereophonic receiver reseparates right and left audio signals and feeds them to separate right and left speakers. The listener hears the sound binaurally, as though in the studio with the sound sources. When properly positioned, the listener perceives the sources of sound not to be the two loudspeakers, but to be various locations around the listening room, the same relative (to the microphones) location of the sound sources in the studio.

FM Quadraphonic Sound and AM Stereo. The FCC has granted some FM stations authorization to transmit **quadraphonic** (four channels) sound. And some manufacturers make FM quadraphonic receivers for the retail market. However, lack of agreement among manufacturers concerning standards and

methods of quadraphonic sound recording and reproduction has prevented most FM broadcasters from converting to four-channel transmission. In the meantime, AM stereophonic broadcasting has been developed. One method was tested first on a Mexican station and later at a few U.S. stations, and several other methods have since been suggested. Committees have been set up with representatives from broadcasters, manufacturers, and engineering groups to study and make recommendations to the FCC for standards for both FM quadraphonic and AM stereophonic broadcasting, and in June 1977, the commission opened inquiries into these two subjects.

SCA. Even with a stereophonic signal, there is still enough room left in an FM channel to transmit additional information. Some FM stations have been granted an SCA and transmit nonbroadcast materials. Users subscribe to the SCA service. The station provides subscribers with special receivers tuned to the station's frequency. These receivers, in turn, have circuitry that allows them to pick up the SCA programming. Most home receivers cannot receive the SCA signal but will receive only the station's broadcast programming. Do not get upset because you cannot listen to this SCA programming on your FM tuner. In most cases, SCA provides a background music service for shopping centers, elevators, dentist's offices, and the like. Therefore, frankly, you are not missing much; the fidelity is not even very good (about 7500 Hz, monaural only). However, a few stations provide specialized informational programming for physicians, lawyers, or stockbrokers, transmit an aural reading service for the blind, or feed the programming of a state radio network for pickup and broadcast by other stations.*

International Broadcasting

By international agreement, certain groups of frequencies in the high frequency bands are allocated for broadcast between nations. Propagation characteristics change with the seasons, and a station usually wishes to broadcast different programs simultaneously to different parts of the world, so that each international broadcasting station uses a number of different frequencies and multiple transmitters. The FCC licenses nongovernmental international broadcast stations in the United States. Minimum power is 50 kw. The 1978 *Broadcasting Yearbook* lists five such stations: WYFR, Scituate, Massachusetts; KGEI, San Francisco/Redwood City, California; KTWR, Agana, Guam; WINB, Red Lion, Pennsylvania; and United Nations Radio, New York. All but the last are religious stations and among them, they broadcast in English, German, Russian, Arabic, French, Spanish, Japanese, Ukranian, Mandarin, Quechuan, and Portuguese, and to Europe, Africa, the Americas, the Soviet

* See Chapter 19.

Union, Australia, China, Japan, Southeast Asia, as well as to the Caribbean, and the Mediterranean. United Nations radio broadcasts from New York and Geneva, Switzerland, to areas throughout the world.

Government operated international broadcasting stations include the Voice of America (VOA), Radio in the American Sector (RIAS), and Radio Free Europe/Radio Liberty. VOA and RIAS are both operated by the International Communications Agency. VOA is the U.S. government's official broadcast voice to the people of other nations. It attempts to gain listeners and credibility with accurate, objective news reporting, presentation of the broad range of American thought and institutions, and presentation of, and discussion and opinion on, U.S. policies. VOA has 109 transmitters, 41 of which are in the continental United States, operating on short- and medium-wave frequencies, with power from 35 to 1000 kw. Overseas relay stations are placed in locations ranging from Wooferton, England, to Colombo, Sri Lanka. The Voice broadcasts in some 35 languages for a total of more than 788 hours per week. RIAS operates in West Berlin and broadcasts about 245 hours per week in German on medium-wave, shortwave, and FM facilities. Target audiences are the people of East Berlin and East Germany.

RFE/RL, Inc. operates Radio Free Europe/Radio Liberty. At one time these stations masqueraded as privately funded organizations when, in fact, they were created and operated by the U.S. Central Intelligence Agency. Congress now funds both through a presidentially appointed Board for International Broadcasting. Radio Free Europe/Radio Liberty broadcasts to eastern Europe in six languages and to the Soviet Union in 15 languages.

American Forces Radio and Television Service (AFRTS) provides programs of information, education, and entertainment to U.S. military personnel overseas. A Los Angeles center produces and picks music, drama, variety, religious, and talk shows from syndication sources. These are recorded and mailed to local AFRTS stations. A Washington, D.C. center transmits news, sports, and special events, live from the networks with commercials deleted. AFRTS operates 300 radio and 118 television outlets—some closed circuit and others broadcast—in a number of countries. The broadcast stations operate at low power to limit coverage to American bases but can often be received (and enjoyed) by nationals who live near the bases. In this respect, AFRTS also qualifies as international broadcasting.

Notes

1 47 CFR § 73.1.
2 47 CFR § 73.11.
3 47 CFR § 73.25 (a).
4 47 CFR § 73.25 (b).

Bibliography

(Numbers in parentheses refer to chapter bibliographies containing full citations.)

AM AND FM BROADCAST SERVICES

The FCC publications "Broadcast Services," and "The ABC's of Radio and Television," available free on request, explain AM and FM radio, their frequencies, how they work, and so on. The current *Broadcasting Yearbook* includes the FCC's "The ABC's of Radio and Television" as well as relevant commission rules pertaining to classification of stations, zones, and so on.

MODULATION

For information on sound, see Harry F. Olson, *Music, Physics, and Engineering;* 2nd ed. (New York: Dover, 1967). An excellent detailed discussion of how AM and FM broadcasting work is contained in Angerbauer, *Electronics for Modern Communications* (9). This book takes a little studying, but the information is there, and the many drawings help to clarify the textual information. A book on radio transmission and reception that is much easier to understand at first reading but lacks Angerbauer's detail and is restricted to AM radio only is Martin Schwartz, *Radio Electronics Made Simple* (Williston Park, N.Y.: Ameco, 1969). Near encyclopedic in concept (and aimed primarily at the serious radio amateur) is Orr, *Radio Handbook* (9).

INTERNATIONAL BROADCASTING

Thomas C. Sorenson, former USIA deputy director, focuses on Agency activities during the decade of the 1960s in *The Word War: The Story of American Propaganda* (New York: Harper & Row, 1968). The *Journal of Broadcasting* has published a number of articles on international broadcasting. See, for example, Don R. Browne, "WINB: A Private Voice of America," 16 (spring 1972), 147–157. Browne has also written "RIAS Berlin: A Case Study of a Cold War Broadcast Operation," 10 (spring 1966), 119–135. Two articles in the same publication by Ovid L. Bayless on AFRTS are "The American Forces Network-Europe," 12 (spring 1968), 161–167; and "The American Forces Vietnam Network," 13 (spring 1969), 144–151.

11 Television Channels

The basic process of television transmission is the same as that of radio. The major difference, of course, is that television involves visual (picture) information. The visual signal is complex and requires wide bands of frequencies. We shall focus on this visual signal in this chapter.

Television Broadcast Service

The television broadcast service operates on **82 channels** spread across two different frequency bands. Television channels are identified by numbers, 2 through 83. Each channel is **6 MHz wide,** so wide that all 100 FM radio channels fit in the space of 3⅓ television channels, while the entire standard broadcast (AM) band could be repeated nearly six times within the space of one television channel. Television channels 2 through 13 lie in the **very high frequency** (VHF) band. Channels 2, 3, and 4 encompass the frequencies 54 to 172 MHz; 5 and 6, 76 to 88 MHz; and 7 through 13, 174 to 216 MHz. The FM radio band lies just above channel 6 (which is why you can often pick up television channel 6 sound on the lower end of your FM radio dial), while the frequencies between channels 4 and 5 and between the FM band and channel

TABLE 11.1
Channel Allocations for Television

VHF BAND	
Channel No.	*Channel Frequencies (MHz)*
2	54–60
3	60–66
4	66–72
5	76–82
6	82–88

VHF BAND	
Channel No.	*Channel Frequencies (MHz)*
7	174–180
8	180–186
9	186–192
10	192–198
11	198–204
12	204–210
13	210–216

UHF BAND	
Channel No.	*Channel Frequencies (MHz)*
14	470–476
15	476–482
16	482–488
17	488–494
18	494–500
19	500–506
20	506–512
21	512–518
22	518–524
23	524–530
24	530–536
25	536–542
26	542–548
27	548–554
28	554–560
29	560–566
30	566–572
31	572–578
32	578–584
33	584–590
34	590–596
35	596–602
36	602–608
37	608–614
38	614–620
39	620–626
40	626–632
41	632–638
42	638–644
43	644–650
44	650–656
45	656–662
46	662–668
47	668–674
48	674–680

UHF BAND	
Channel No.	*Channel Frequencies (MHz)*
49	680–686
50	686–692
51	692–698
52	698–704
53	704–710
54	710–716
55	716–722
56	722–728
57	728–734
58	734–740
59	740–746
60	746–752
61	752–758
62	758–764
63	764–770
64	770–776
65	776–782
66	782–788
67	788–794
68	794–800
69	800–806
70	806–812
71	812–818
72	818–824
73	824–830
74	830–836
75	836–842
76	842–848
77	848–854
78	854–860
79	860–866
80	866–872
81	872–878
82	878–884
83	884–890

7 are reserved for government use. Channels 14 through 83* are in the **ultra high frequency** (UHF) band, encompassing a continuous band of frequencies from 470 to 890 MHz. Thus there is a big gap of 254 MHz (reserved for government use) between channels 13 and 14.

Like FM radio, television signal propagation is primarily by direct waves. Coverage is determined largely by antenna height, frequency, power, and terrain. With careful planning, interference is rarely a problem.

Also like FM radio, an FCC table of assignments allocates specific television channels to specific communities. But unlike FM, the television table includes educational noncommercial channels and reserves about 20 percent of the specific allocations for noncommercial service.

Visual Perception

Television requires a lot of complex and expensive machinery. But the most complex part of the whole system is the device on which television depends for its very existence—your eyes. Television takes advantage of certain characteristics of the eye. If we want to know how television works, we must start with these characteristics.

LIGHT

We see because our eyes are sensitive to **light,** radiation in the frequency range 4×10^{14} Hz to 8×10^{14} Hz.† Light—like radio—travels in waves, measured by frequency and wave length. Light, however, is far up the electromagnetic spectrum, and where radio waves are measured in meters (1 meter = 1.093 yards), light waves are measured in **millimicrons** (mμ), each of which is one thousandth of a millionth of a meter.

COLOR

Our eyes are sensitive to light in different ways at different frequencies, and the different sensations that light produces are called **colors.** For example, we perceive light in the range 659–610 mμ as blue, 610–520 mμ as green, and so on. The sensation we call color may be described by three distinct **psychological aspects: hue**—the color itself (red, blue, green, yellow, etc.); **saturation** (also called **chroma**)—the purity or strength of a color as pale, rich, washed out, and so on; and **brightness** (also **luminance** or **value**)—whether the color is dark or light. These aspects are psychological because they are subjective, and each affects our perception of the others—if one changes we see the result as a different color.

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* Channels 14–20 and 70–83 have been reallocated to other uses in certain cities and thus are no longer available for the television broadcast service.

† To read figures expressed in exponential notation, simply use the mantissa (the first number) followed by enough zeros to equal the exponent (the little number above and to the right of the 10). Thus 4×10^{14} would be 4 plus 14 zeros, or 400,000,000,000,000 (400 trillion).

Keep in mind that we are discussing light, not pigment such as paint or crayons. Also, remember that we are dealing with **physiological** color, not **physical** color. Physical colors are pure, **monochromatic,** unmixed with other colors and can be precisely described in terms of frequencies and wavelengths. However, most light that reaches our eyes is not monochromatic, but a **mixture** of frequencies. White light, such as ordinary daylight, is a mixture; the various frequencies have, in a sense, canceled out each other so that we see no color. When one frequency in the mixture is stronger (highest intensity) than the others, we see color. If the highest intensity occurs in the yellow frequency region, we see yellow. But in some cases there is more than one strong frequency in the mixture. There could be, for example, one strong frequency in the red region and another in the green. We would see the light hitting our eyes not as separate red and green, but (given proper frequencies) as yellow. This is an example of physiological color and is apparently determined by the ratios of light picked up by red-, blue-, and green-sensitive **cones** (color receptors) in our eyes. Given proper mixtures, we would see no difference between the pure, monochromatic yellow and the physiological yellow created from red and green.

These physiological colors are possible because of the **trichromatic nature of vision,** that is, over a wide range of brightness levels, our eyes can match almost any color by specific combinations of three other colors. Color television takes advantage of this to work its chromatic illusion. The camera breaks down light reflected from a televised scene into three colors—red, blue, and green (at wavelengths of 610 mμ, 472 mμ, and 534 mμ, respectively)—called **primary colors.** When your home receiver screen reproduces the three colors in the same proportions, your eyes see all the various and assorted colors present in the original scene.

PERSISTENCE OF VISION

In Chapter 5 we determined that there is really no such thing as "moving pictures." A motion picture actually consists of a series of still pictures, each slightly different from the others. Our eyes retain the image from each picture **(persistence of vision)** long enough so that by the time the next picture appears, our brain has connected the two, and we see an illusion of motion instead of a series of still pictures. The same is true with television. Our television screens reproduce a series of electronic still pictures, but we see motion.

Video Signal

We are now ready to investigate the mechanics of television broadcasting, to find out how light, the primary colors, and persistence of vision make pictures. We begin with the key device, the **color camera,** origin of the **video** (picture) **signal.**

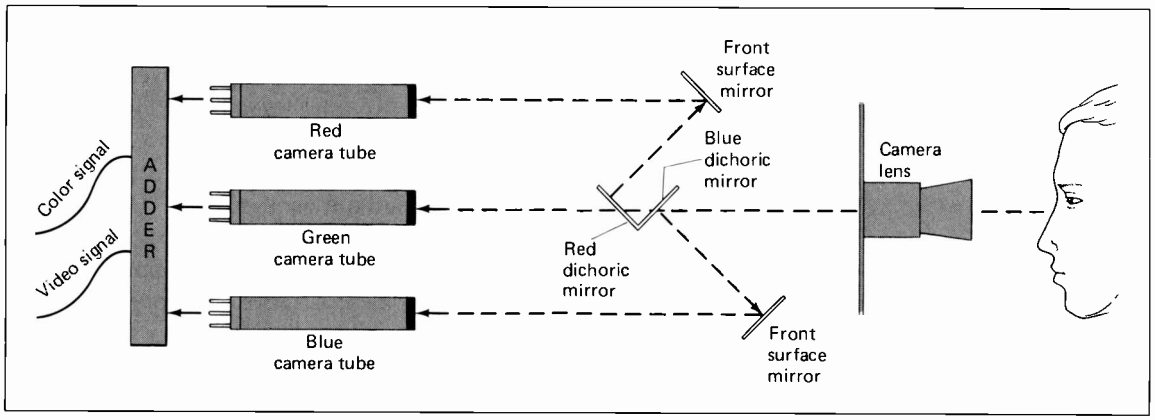


Figure 11-1. Block Diagram of a Color Television Camera.

THE COLOR CAMERA

Three main parts of the color television camera help create the video signal: the **lens,** the **internal optical system,** and the **camera tubes.** The lens is external, but attached, to the camera. The lens gathers light reflected from the scene to be televised and focuses it onto the internal optical system inside the camera. The internal optical system consists of various combinations of prisms, mirrors, and color filters, the purpose of which is to break up the light from the scene into its red, blue, and green components. Each of these three components is focused onto a separate electron tube called a "camera tube."

THE CAMERA TUBE

There are several types of camera tubes. Most color television cameras now manufactured use a **Plumbicon*** tube, a **vidicon** tube, or some variation of these. All camera tubes contain the same major parts and basically do the same thing (although the different types vary in the *way* they do it). At one end of the cylindrical camera tube is the **target.** Associated with the target is the **photosensitive layer,** a layer of material consisting of many thousands of tiny photosensitive segments or particles. When light hits one of these segments, the segment reacts in a way that alters certain of its electrical properties or characteristics, the degree of alteration varying directly with the intensity of light falling on the segment. Therefore when the image (light reflected from the scene being televised) is focused on this photosensitive layer, the pattern of light in the image creates a pattern of reaction on the layer and (thus) on the target. The **electron gun** in the other end of the tube fires a hair-thin stream of electrons at the target. This electron beam systematically travels over each part of the target (and thus the pattern on it). This is called **scanning.** As the electrons hit each part of the target, the result is an electrical

* Plumbicon is a registered trademark of N. V. Phillips of the Netherlands.

Figure 11-2. Plumbicon Camera Tubes. Tube at left (a) is used in studio color television cameras; that at right (b), in portable, hand-held color cameras.

Photographs courtesy of Amperex. Used by permission.

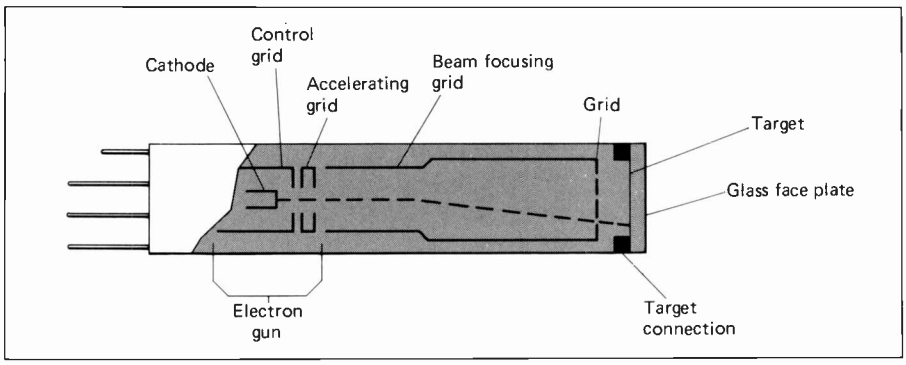


Figure 11-3. Structure of Vidicon Camera Tube. The dashed line shows the path of the electron beam. The video signal is conducted from the tube via the metal collector ring.

current that varies according to the part of the pattern being scanned. This current leaves the tube and is used as the video signal.

SCANNING PATTERN

When the electron beam scans the target, it follows a pattern somewhat like that of your eyes as they read this book. The beam starts at the top of the target, scans left to right, drops down, scans left to right, drops down, and so on. Each time the beam scans the entire target, the camera tube has created the electronic equivalent of one still picture, then has converted it into a video signal, emitting each electronic element of the picture, one-by-one, in a specific, sequential order. One complete electronic still picture is called a **frame.** The electron beam scans **525 lines per frame** and **30 frames per second** (fps).

Thirty per second would *seem* to be enough to make us see an illusion of smooth motion, especially considering that silent film achieves the illusion at 16 fps. However, as screen brightness increases, our eyes are not as easily tricked into blending together a sequence of pictures. The television screen is so much brighter than the motion picture screen that even at 30 fps we would still see **flicker**—a constant, regular variation in the overall brightness of the television screen. Therefore to eliminate flicker, American television actually shows **60 half-pictures per second.** The electron beam scans **every other line** until it reaches the bottom of the target, then it jumps back to the top and

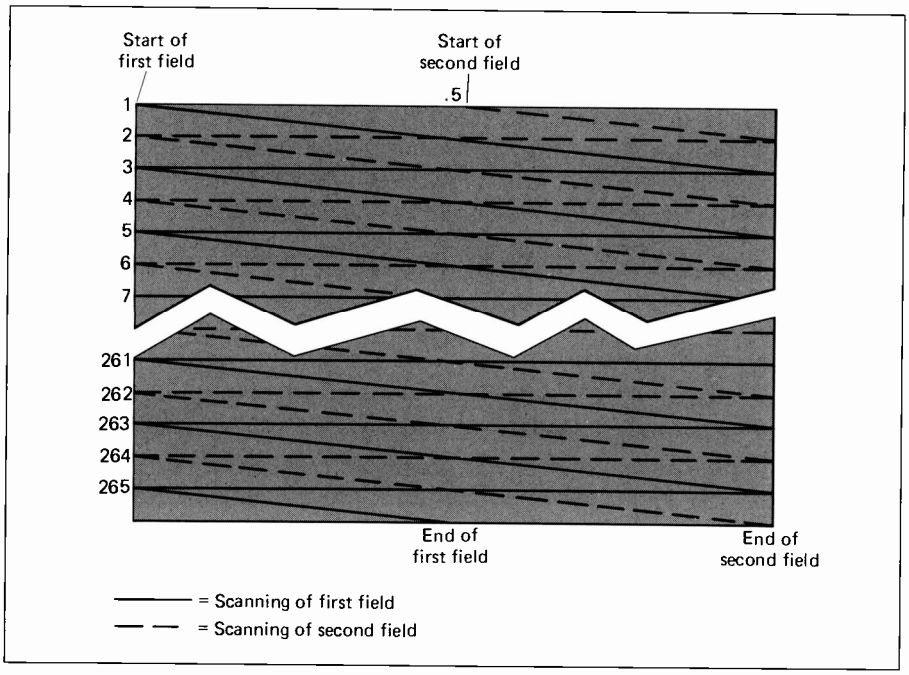


Figure 11-4. Interlaced Scanning Pattern.

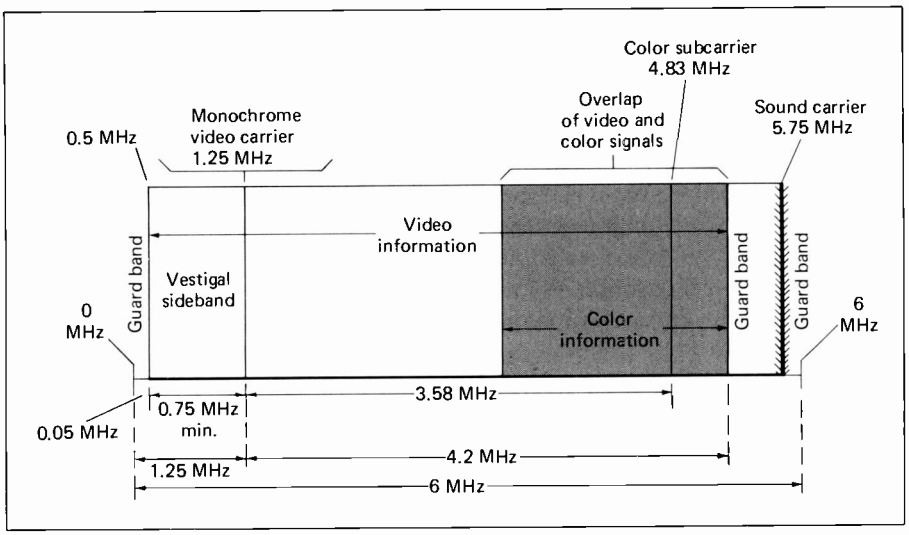


Figure 11-5. Television Channel.

starts over, scanning the lines it skipped the first time. This is called **interlace scanning.** The beam scans 262½ lines on each pass, called a **field,** so that there are **two fields per frame** and **60 fields per second.**

SIGNAL PROCESSING

Video signals from the three camera tubes feed into an **adder.** The adder combines the three signals into two—**luminance** (brightness) and **chrominance** (color). The luminance signal becomes the main video signal. Some color cameras use a fourth tube to provide luminance information; in three-tube cameras this luminance signal is created by combining portions of the three color signals, with the largest portion (59 percent) coming from the green signal. (Monochrome cameras have only one camera tube. The lens focuses directly on the target, and the camera produces only a video or luminance signal.)

Transmission

The video signal is so complex that, if full double-sideband modulation were used, a channel 9 MHz wide would be needed to transmit both video and audio. Television channels are only 6 MHz wide, however, so U.S. television uses **vestigial sideband** video modulation, in which all of the upper sideband (4 MHz) is used, but only part (1 MHz) of the lower.

COLOR SUBCARRIER

The chrominance or color signal is quite another story. First, it must fit within the already full 6 MHz television channel. Second, it must be **compatible**—that is, if you own a color receiver you must be able to receive both color and monochrome (i.e., black and white) broadcasts, and if you own a monochrome set you must be able to receive both color and monochrome broadcasts as a monochrome picture. Both requirements are met through use of a **color subcarrier** frequency. This subcarrier is actually a second carrier frequency in each channel, a carrier modulated by the color signal. The color subcarrier is 3.58 MHz above the video carrier frequency, and the color information is in the subcarrier's sidebands.

Since the upper sideband of the video signal extends 4 MHz above the video carrier frequency and the color subcarrier frequency is only 3.58 MHz above the video carrier, this means the color lower sideband overlaps the video upper sideband. The technique by which these two different signals share the same frequency space is called **frequency interlace** or **interleaving**—placing the clusters of color energy between the clusters of video energy.

Compatibility is a matter of using or not using the color signal. Both color and monochrome receivers can utilize the video signal, so both can receive monochrome broadcasts. Color receivers have special circuitry that can utilize the color signal of a color broadcast, so viewers see color pictures. A monochrome receiver lacks this circuitry, but since it receives the video signal (which is the luminance signal of a color broadcast) viewers can see color broadcasts in black and white.

At the transmitter, the **luminance** or brightness signal modulates the **amplitude** of the **video carrier.** The **saturation** part of the chrominance signal modulates the **amplitude** of the **color subcarrier.** And the **hue** part of the chrominance signal modulates the **phase** of the **color subcarrier,** varying the angle of the wave slightly differently for each hue. Thus the **video signal is amplitude modulated** (AM), while the **color signal is both AM and phase modulated.**

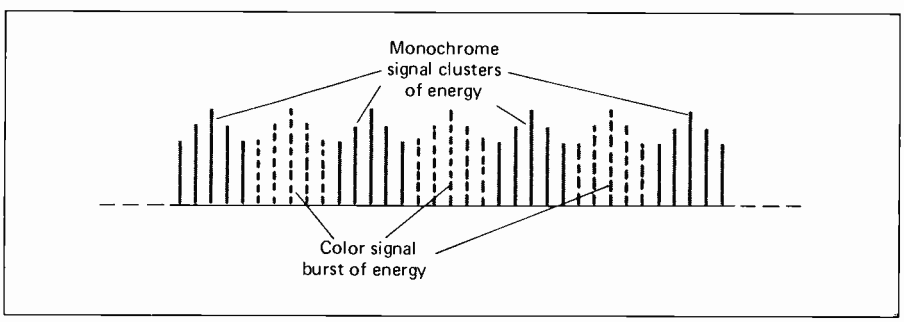


Figure 11-6. Interleaving of Color Information. The clusters of energy carrying color information are placed in gaps between those carrying video (monochrome) information.

ACCESSORY SIGNALS

In order for the home color receiver to recover the phase modulated hue information, a special signal is sent as part of the color picture. This is the **color burst,** and its purpose is to ensure that the electronic circuits in your home color receiver are exactly in phase with the original subcarrier frequency. The color burst is an **accessory signal**—a nonpicture signal sent as part of the video signal—that accompanies color transmissions.

Two other accessory signals are part of all television transmissions, both color and monochrome. These are **sync pulses** and **blanking pulses.** Sync pulses keep your receiver's scanning beam synchronized with the camera's scanning beam. Blanking pulses cut off the electron beam when it moves from the end of one line or field to the beginning of the next. This between-lines movement is called **retrace,** and the blanking pulse prevents retrace lines from showing on the screen.

The video signal is **negatively modulated.** This means that as darker areas in the scene are scanned, the video signal increases in amplitude. The amplitude of the signal can be boosted to a point beyond the darkest shade a television set can reproduce. Sync, blanking, and color burst pulses are transmitted between each line of scansion, all at this **blacker than black level** of amplitude.

AUDIO

While the video transmitter operates on AM principles, the separate audio transmitter is FM. The audio signal from the program enters the transmitter.

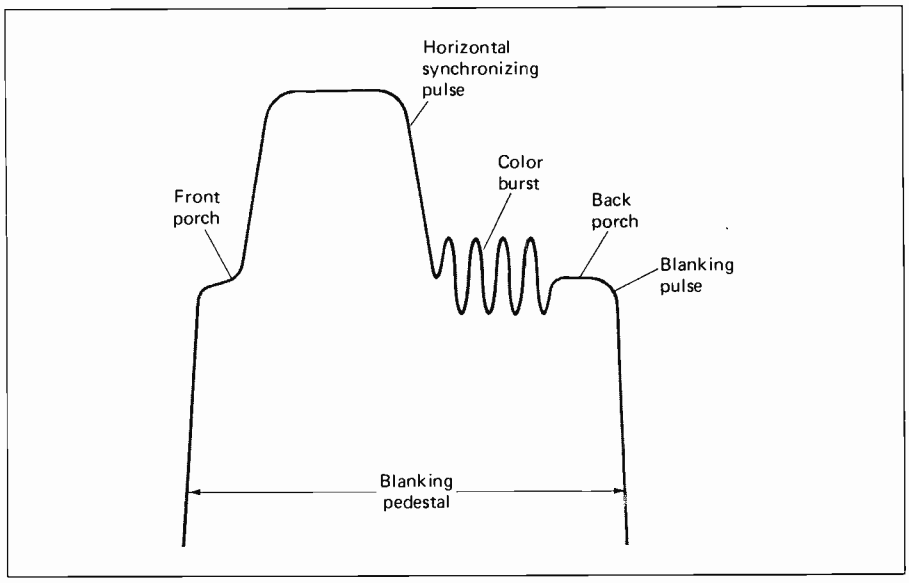


Figure 11-7. Accessory Signals: Color Burst, Sync, and Blanking.

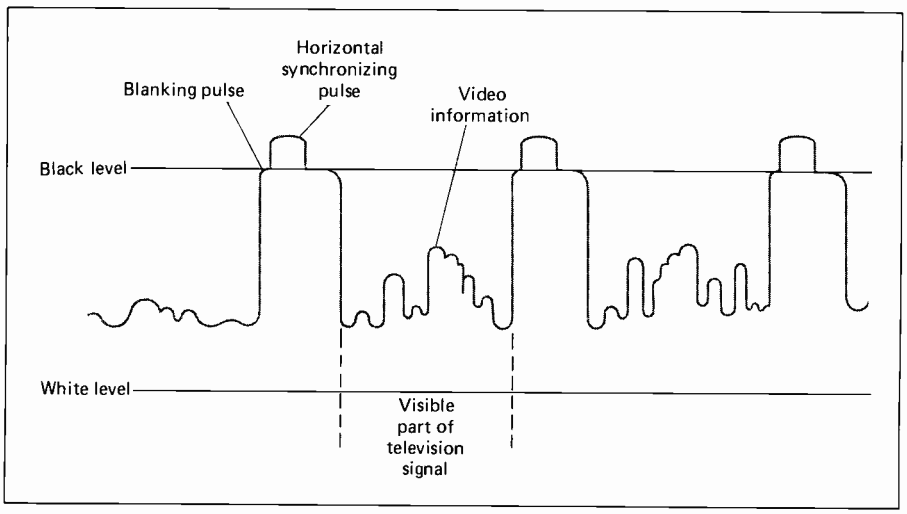


Figure 11-8. Video Signal and Accessory Signals. This diagram shows three horizontal lines of video signal with accessory signals.

In the transmitter, the oscillator generates an audio carrier frequency that is 4.5 MHz above the video carrier. The audio signal modulates the frequency of the audio carrier, generating sidebands that extend 25 kHz either side of the carrier. This leaves unused frequencies called a **guard band** between the audio upper sideband and the beginning of the next television channel.

RADIATION

The output of both the video transmitter and the audio transmitter converge on the **diplexer.** The diplexer combines the two signals while preventing them from feeding back into each other's transmitter. Finally, the combined signals power the antenna to generate the transmission waves.

Reception

The waves hit your television antenna, generating a feeble signal whose pattern matches that of the transmitting antenna. The signal moves into your color receiver to the tuner. The tuner blocks all other frequencies except those of the channel to which you have tuned. The signal is amplified, and the original audio, video (luminance), and chrominance signals are recovered from the radio frequency signals (the channel on which they were transmitted).

Next, the various picture components are reconstructed. Electronic circuits in your color receiver retrieve the green component from the luminance signal. Other circuits separate the red and blue portions out of the chrominance signal. Yet other circuits detect and make use of sync and blanking pulses.

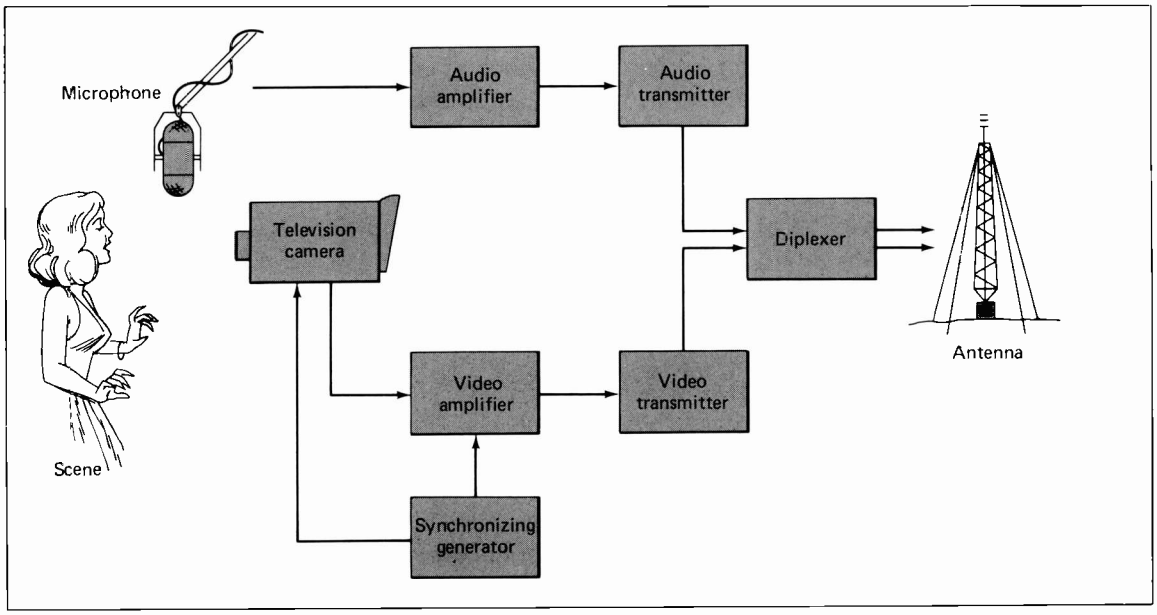


Figure 11-9. Block Diagram of Television Station and Transmitter.

The Color Picture Tube. The three separate color signals feed into the base of the picture tube where there is an **electron gun** assembly. The inside of the face of the tube—that is, the other side of the glass screen that you watch—is coated with many thousands of tiny separate **color phosphors**—red, blue, and green.* Just in back of the phosphor screen is a **mask.** The gun assembly fires at the screen three separate electron beams, the intensity of each controlled by its respective red, blue, or green signal voltage. (Remember: Electrons themselves have no color; they only carry information about color.) The mask helps to direct and sharpen the three electron beams so that they hit the proper color phosphors. The beams strike the phosphors, making them glow briefly at intensities that vary with those of the beams. However, the beams scan so quickly that, thanks to interlace scanning, we cannot see those brief instances when the phosphors are not glowing.

* There are two main variants in American home color receiver tube construction. Most manufacturers use three separate guns, arrange the phosphors in triads (triangular groups of three color dots), and employ a **shadow mask** (thin metal sheet with tiny holes, one for each triad, through which the three beams fire). The Trinitron has one gun that fires all three beams, uses vertical stripes (instead of individual dots) of phosphor in a repeating red-blue-green sequence, and contains a mask called an **aperture grill** (consisting of vertical slots through which the three beams pass).

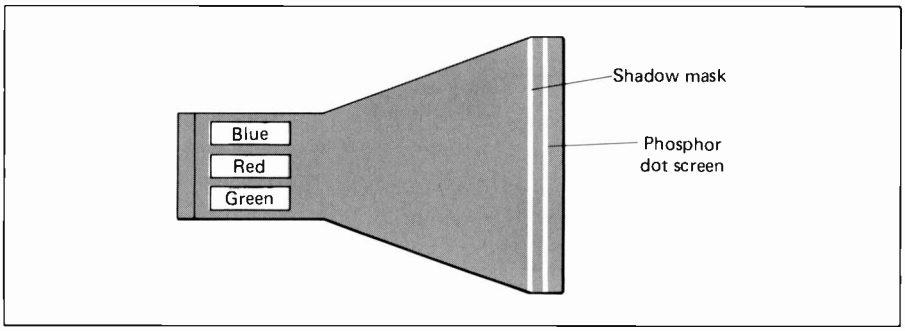


Figure 11-10. Color Receiver Picture Tube.

Color and Motion Perception. Look closely at the screen of your color television receiver: all dots of all three colors glow all the time—even when the picture is black and white! Further, red, blue, and green are the only colors actually on the screen. But at normal viewing distances, characteristics of our eyes are such that we do not see the individual phosphors. We blend together these three physical primary colors so that we see a full range of physiological colors. Scansion, of course, matches that of the camera tube: our screens contain not continuous motion, but 30 complete elctronic still pictures presented as 60 interlaced half-pictures per second. Yet, we see the illusion of motion.

Sound. After being split from the video signal, the audio signal goes through its circuitry. The process is similar to that described for radio in Chapter 10. The end result is the sound that is reproduced by the television receiver speaker.

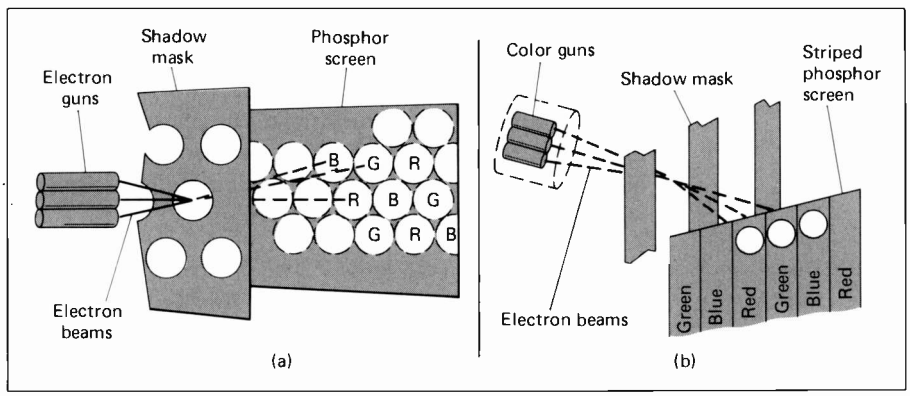


Figure 11-11. Two Types of Color Television Tubes. (a) Most American-manufactured tubes: beams converge through hole in shadow mask to hit triad. (b) Trinitron: beams converge through aperture grill to hit phosphors in stripes.

Monochrome Receivers. Monochrome television receivers pick up only the luminance signal from a color telecast. The single video signal feeds into the base of the monochrome picture tube. The gun assembly fires a single electron beam at the rear surface of the screen. Since there is only one beam, there is no mask. The phosphors all glow white.

Bibliography

If you wish more detail on the mechanics of television but are not technically inclined, see Tad Harvey, *Television: How It Works* (New York: Putnam, 1968). Harvey assumes you know nothing about television or electronics, starts from scratch, explains carefully and in everyday terms, and uses a writing style that comes as close to making his subject interesting as is humanly possible. Much more detailed and thus more difficult to read is Alexander Schure, *Basic Television,* Rev. 2nd ed. (Rochelle Park, N.J.: Hayden, 1975). See especially: Voume I on the studio and the development and transmission of video and audio signals; Volume 5 which includes a discussion of picture tubes; and Volume 6 on color television. Volume 6 includes an appendix with an excellent, color-illustrated explanation of the physics of color. A single volume treatment is Milton S. Kiver and Milton Kaufman, *Television Simplified,* 7th ed (New York: Van Nostrand, 1973). The illustrations in the Kiver and Kaufman book are particularly clear and helpful. Phillip D. Kennedy has written *Understanding Television* (Indianapolis: Sams, 1976) from the viewpoint of the consumer who owns a television set and would like to know a little more about how it all works. Kennedy concentrates on the home receiver—types of picture tubes, functions of various circuits, controls and adjustments, minor repairs and maintenance.

Four

Legal/Ethical Perspective

Section 301. It is the purpose of this act, among other things, to *maintain the control of the United States* over all the channels of interstate and foreign radio transmission; and to provide for the use of such channels, but *not the ownership* thereof, by persons for limited periods of time, under licenses granted by Federal authority, and no such license shall be construed to create any right, beyond the terms, conditions, and periods of the license. . . .

Section 307 (a). The Commission, if *public* convenience, interest, or necessity will be served thereby, subject to the limitations of this Act, shall grant to any applicant therefor a station license provided for by this Act. . . .

—*Communications Act of 1934, Public Law 416; 73d Congress*
[Italics added]

The viewer also has a responsibility to help broadcasters serve the *public*. All viewers should make their criticisms and positive suggestions about programming and advertising known to the broadcast licensee.

—*Preamble*, The Television Code, *19th Ed., 1976, National Association of Broadcasters*
[Italics added]

That "public" is all of us. No one person can own the radio frequencies any more than one person can own the air we breathe. Both are public resources and, as such, give us the right to demand they be used in our best interests. In broadcasting this right is protected by federal law and regulation and, in another sense, by self-regulation. Each of us has a stake in this next section, a chance to understand where we as the public fit in the legal and ethical bases of broadcasting.

To broadcasters the issues in this section are vital. Radio and television stations exist by provision of law, and therefore changes in that law or its interpretation affect the operation and even existence of these stations.

Like the business to which they apply, broadcast law and regulation constantly change. New issues arise. Old ones evolve. Arguments, court cases, government hearings and investigations continually explore and define the nature of broadcasting.

12 Communications Act of 1934

The basic law of broadcasting is the **Communications Act of 1934.** This law provides for both the existence of broadcast stations and for their regulation. In this chapter we first trace the origins and authority for government regulation and then survey the overall nature and status of broadcasting under the 1934 law. We also examine some of the amendments that Congress has made to the law since 1934 and look at a sweeping revision that has been proposed.

Origins and Authority

Article 1, Section 8, of the Constitution of the United States contains the **commerce clause,** giving Congress power to regulate **interstate commerce.** Early on, the U.S. Supreme Court ruled that Congress' power extends to all kinds of commercial dealings involving more than one state and to the formulation of rules to regulate those dealings.[1] Later, the Court ruled that the term "commerce" includes interstate electrical communication.[2] Still later, the Court held that all radio communication is, by nature, interstate.[3] These decisions established the right of Congress to regulate broadcasting.

Congress wrote the basic law of radio, but it also created an independent agency and delegated to it authority to make specific rules and regulations. A federal court ruled in 1929 that Congress had the power to establish such an

agency,[4] and four years later Congress passed the Communications Act,[5] which created the present agency, the seven-member Federal Communications Commission. Although amended a number of times, this 1934 act is the law under which broadcasting is currently regulated. Congress, of course, still has ultimate control over broadcasting and monitors the functioning and adequacy of the Communications Act, including FCC regulation, through the commerce committees of its two houses.

The Law of Broadcasting

The Communications Act of 1934 deals with more than just broadcasting. The purposes of the act are "regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all people of the United States a rapid, efficient, nation-wide, world-wide wire and radio communication service with adequate facilities at reasonable charges, . . . [aiding] the national defense, . . . [and] promoting safety of life and property through the use of wire and radio communication. . . ."[6] The act applies "to all interstate and foreign communication by wire or radio and all interstate and foreign transmission of energy by radio which originates and/or is received within the United States, and to all persons engaged within the United States in such communication or such transmission of energy by radio and to the licensing and regulating of all radio stations. . . ."[7]

The Government Printing Office publishes federal laws as the **United States Code** (U.S.C.). **Title 47** of U.S.C. contains the Communications Act of 1934 as amended. The act itself consists of six major sections called "titles."* Title I defines the purposes of the act and specifies terms, organization, duties, and general powers of the Federal Communications Commission. Title II covers communications common carriers. Title III deals with radio and is divided into four parts—(1) radio licensing and regulation in general, (2) radio equipment and radio operators on board ship, (3) radio installations on vessels carrying passengers for hire, and (4) special provisions pertaining to noncommercial educational broadcasting. Title IV spells out procedural and administrative provisions. Title V prescribes penalties and forfeitures for violators of law or FCC regulation. Title VI prohibits unauthorized interception and publication of communications by wire or radio and gives the president of the United States certain powers to deal with communication matters in the event of war or other national emergency.

From our perspective of interest in broadcasting, three aspects of the act stand out—its **comprehensiveness,** its **flexibility,** and its **establishment of the**

* Within each title are numbered paragraphs called "sections" (for which the symbol is §). Section numbers are keyed to title numbers, e.g., all sections in Title II are numbered in the 200s; all in Title III, 300s; and so on.

FCC. Profiting from the lesson of the Radio Act of 1912,* Congress wrote the Radio Act of 1927 to be comprehensive enough to cover all types of radio communication—maritime, broadcasting, amateur, common carrier. Seven years later Congress wrote most of the provisions of the Radio Act into the Communications Act. As a result we find principles—first written into law over half a century earlier—used today to regulate technology and developments that were brand new, still in the laboratory, or not yet even dreamed of in 1927, for example, microwave relay, television, cable television, pay television, FM radio, stereophonic radio, solid state electronics, ultra high frequencies, citizens band radio, videotape.

Congress wrote the Communications Act to be flexible. The law sets forth basic principles and creates the FCC to carry out the intent of those principles. It establishes a general legal framework and provides the FCC with **discretionary powers** to make specific rules and regulations concerning licensing and operational requirements. Within this legal framework the FCC has power to set up criteria for licensing, to grant or refuse licenses, to attach conditions to licenses, to revoke licenses, to specify how and where stations are to operate, to change regulations to keep up with changing conditions and technology.[8] Further, FCC rules and regulations have the force of law, yet the Communications Act provides for their challenge in the federal courts,[9] adding yet another dimension to the concept of flexibility.

Finally, the Communications Act established the Federal Communications Commission. The commission carries out the specific functions prescribed by the act, makes rules and regulations, checks to see they are being followed,[10] and takes corrective or punitive action when they are not.[11] In other words, the FCC regulates.

Status of Broadcasting Under Law

In writing the Communications Act, Congress defined the legal status of broadcasting, that is, set forth its legal characteristics—what it is, what rights are assigned to it, how it is to be treated. Under this law, broadcasting is (1) **a unique form of electrical communication,** unlike any other, (2) **a function of the private sector,** not of the government, and a form of expression (3) that is **distributed via** radio frequencies, **a scarce natural resource in the public domain** (4) to which **the government may limit access,** and (5) that has **limited protection under the First Amendment.** Let us examine each of these characteristics.

First, the Communications Act of 1934 recognizes broadcasting as an unique form of radio communication. Section 153(b) defines **radio communication** as any transmission by radio of intelligence. But Section 153(o) defines

* See Chapter 2.

broadcasting as radio communication intended **for reception by the general public.** The act contains a number of sections that apply to radio communication in general, but it also contains provisions that apply only to broadcasting, such as Section 315 (dealing with use of broadcast stations by political candidates) and Section 317 (requiring identification of sponsors or underwriters of broadcast programming).

Note that the law's definition of broadcasting emphasizes reception. Such emphasis distinguishes broadcasting from common carriers. Section 303(h) defines a common carrier as radio or interstate wire communication facilities for hire, a definition that emphasizes the sender of the message. The telephone company and the telegraph company are both examples of common carriers. Common carriers render essential services, and Congress wrote Title II of the act to ensure reliability and continuity of these services. How does this make a common carrier different from a broadcast licensee? A highly simplified comparison: a common carrier enjoys a limited monopoly—for example, you have only one telephone company in your town—but it is closely regulated, even to the rates it may charge and the services it may provide. A broadcast station, on the other hand, must be licensed and is subject to some regulation, but the licensee is basically an entrepreneur in competition with other broadcast licensees and may charge whatever rates and (to a large extent) may provide whatever services the market will bear.

Second, the Communications Act affirms that private individuals—real or corporate—may use the radio frequencies.[12] By the time Congress passed the Radio Act of 1927, the pattern for broadcasting in the United States was set. Radio broadcasting had developed primarily as a function of private enterprise and had evolved into an advertising medium operated to earn a profit. Congress accepted the status quo. Contrary to the arrangement in many other countries—in which broadcasting was some combination of monopoly, noncommercial, and government operated or chartered—the U.S. Congress wrote in private operation as one of the basic assumptions of its first comprehensive radio law. The FCC has since reserved channels for noncommercial FM and television stations. And Congress has also set up and funded the national and noncommercial Corporation for Public Broadcasting. But by and large the broadcasting system in the United States is still privately operated and commercial.

On the other hand, the government retains ultimate control of the radio frequencies and requires all broadcast licensees to meet certain responsibilities and operate within certain limitations. Congress wrote this into the law because (and this is the third characteristic) broadcasting is a form of expression distributed through use of a scarce natural resource in the public domain. The natural resource is the electromagnetic spectrum, and it is scarce because a finite number of stations can operate in any given geographical area.* The FCC may allow individuals to use the frequencies for limited periods of time,[13]

* See Chapters 10 and 11.

but only after ensuring that those individuals will use the frequencies to serve the public convenience, interest, and necessity.[14] Furthermore, the FCC must see that everyone receives radio service.[15] A parallel could be drawn between a broadcast licensee and a concessionaire—restaurant, inn, gasoline station—in a national park: both operate on the public domain, and both are in business to earn a profit, but the government allows them to operate only insofar as they serve and help make the natural resource more useful to the public.

The fourth characteristic is a logical extension of the previous two: the government may restrict access to the radio frequencies. Section 301 of the Communications Act **restricts use** of the radio frequencies **to those so licensed.** But licenses are not granted automatically upon application. Frequencies are scarce (i.e., not everyone can have a channel), and thus the FCC must choose who does and who does not get a license. Sections 308(b), 310, and 313 suggest basic **criteria that an applicant must meet** to be eligible for a license. The FCC has adopted additional criteria.* Even if the applicant meets all criteria and the FCC grants a license, Sections 304 and 309(h)(1) make clear that the licensee **does not own the frequencies.** Further, the licensee must operate the station within all applicable conditions, rules, and regulations or, as prescribed in Sections 307(d) and 312(a), **lose the license.**

Finally, the Communications Act applies the constitutional guarantee of free speech to broadcasting. Section 326 states that the FCC does not have the power of censorship and may make no regulation or set any condition that would interfere with the right of free speech by means of radio. The fact is, however, that broadcast licensees do not have the same degree of First Amendment protection enjoyed by publishers of print media. Licensing, legal requirements, FCC standards on programming—none of these apply to print. Yet certain types of broadcast content may be restricted or required when it would be in the public interest to do so[16] or when it would enhance the public's First Amendment right to *hear* all points of view.[17] In Chapter 14 we discuss in detail the complicated relationships involved in broadcasting and the First Amendment. For now, let it suffice to say that the broadcast licensee does have protection of freedom of speech under the First Amendment; however, that protection is circumscribed by requirements to operate in the public interest and thus is less than that enjoyed by a publisher.

Amendments

From time to time Congress has amended Title 47 of the United States Code. Some of these amendments depart somewhat from the original thrust of the Communications Act to deal with other matters. One of these is the **Communications Satellite Act** (Sections 701–744), passed in 1962. The Communications Satellite Act created the Communications Satellite Corporation

* See Chapter 18.

(Comsat), a private corporation owned partly by common carriers and partly by individual stockholders. Comsat was to provide long distance commercial communication by use of space satellites. The act gives the FCC overall regulatory authority over the corporation, and the FCC regulates it as a common carrier. Actually, however, Comsat is not really a common carrier in the strict sense of the term. Comsat makes its communications channels available on a lease basis primarily to other common carriers, which then use the satellite system to relay telephone conversations, television programs, telegraph communications, and what-have-you. In other words, we deal with the telephone and telegraph companies, and they deal with Comsat. The act encourages that the U.S. system be an integral part of a global commercial system of satellite communications. To this end, the International Telecommunications Satellite Consortium (Intelsat) was created in 1964 with Comsat as manager. Intelsat has grown from the original 14 to over 100 member nations.

Also, in 1962 Congress passed the **Educational Television** (ETV) **Facilities Act** (Sections 390–395) which provided the first direct federal governmental aid to educational television. The ETV Facilities Act directed the Secretary of Health, Education and Welfare (HEW) to work with state agencies to award a total of $32 million over a five year period for construction, purchase, and improvement of the physical facilities of educational television stations. The act specified awards be made on a 50–50 matching basis—HEW would match every dollar the local station could raise. Later, Congress revised the matching basis to a maximum of 75–25—up to three HEW dollars for every station dollar. By the end of 1966 there were 121 educational television stations on the air, more than double the 60 that were on in 1961. Many of the new stations operated on UHF channels, having received additional encouragement in 1962 when Congress passed **all-channel television receiver legislation*** [Section 303(s)].

Congress passed the **Public Broadcasting Act** in 1967. This act established the Corporation for Public Broadcasting (CPB), a nonprofit, nongovernmental organization created to help educational broadcasting grow and to protect it from outside interference and control. The Public Broadcasting Act also extended the ETV Facilities Act and provided money for a study to determine if federal funds were needed for instructional (i.e., formal courses and in-class use of) radio and television. CPB is discussed further in Chapters 4 and 21.

A New Communications Act?

In 1976, the Communications Subcommittee of the House Commerce Committee announced plans for a major rewrite of the Communications Act. Representative Lionel Van Deerlin of California chaired the subcommittee and

* See Chapter 4.

said his aim was a "basement to attic" revision of what he felt was a dated, inadequate law for regulating contemporary communication. On June 7, 1978, Mr. Van Deerlin and Representative Lou Frey of Florida, the subcommittee's ranking Republican, made public H.R. 13015, the draft bill of a "Communications Act of 1978."

H.R. 13015 would do away with the FCC and CPB and create in their places a Communications Regulatory Commission (CRC) and a Public Telecommunication Programming Endowment (PTPE). Licensees would pay a license fee. All license fees would go into a Telecommunications Fund which would be administered by the Secretary of the Treasury and support the CRC and the PTPE. The bill would eliminate much of the regulatory minutiae that now concern the FCC, and the CRC's workload would be considerably less than that of the FCC. The proposed new communications act would rely on competition and the marketplace to a greater extent than does the 1934 law.

The PTPE would use its share of the Telecommunications Fund to make grants for production and acquisition of programming to public television stations, producers, and educational institutions. PTPE would be governed by a nine-member presidentially appointed board. The endowment could accept no grants for support of individual programs, which would eliminate corporate underwriting (see "Types: Public Broadcasting Announcements" in Chapter 8 and "Public Broadcasting Sales" in Chapter 16). Responsibility for facilities grants would move from HEW to a new executive branch department, the National Telecommunications Agency (NTA), which would also fund public broadcasting interconnection facilities.*

The Telecommunications Fund would also provide money for a Rural Telecommunications Loan Account and a Minority Ownership Loan Account. The former would provide loans to expand telecommunications services to rural areas; the latter, to encourage minority ownership of broadcast stations. NTA would be responsible for administering loans from these accounts.

The CRC would have only five commissioners, and each would serve one 10-year term. Various provisions of the proposed act would attempt to upgrade quality of CRC appointees and to reduce chances for conflict of interest in commissioners. The act would also abolish all federal regulation of cable television, the equal opportunities requirement for radio stations, and the equal opportunities requirement for television stations for all statewide elective offices (e.g., president, U.S. senator). Nowhere would the words "public interest, convenience, and necessity" appear; instead the commission would

* NTA would replace the National Telecommunications and Information Agency of the Department of Commerce (see "Executive, Legislative, and Judicial Branches" in Chapter 13).

have to find "that the purposes of this act will be served."* Additionally, the proposed act would do away with commission involvement in radio station format changes, with the Fairness Doctrine, and with ascertainment requirements.†

The proposed act would award radio stations permanent licenses. Television stations would get five-year licenses, but ten years after passage of the act, they, too, would get permanent licenses. Such licenses would be subject to revocation, primarily for nonprogramming reasons. A licensee could own no more than five television stations (no more than three in the 50 largest markets), plus five radio stations, and no more than one station of any kind per market. Existing owners would be "grandfathered in" (i.e., would not have to divest stations they own in excess of these limits); however, if they lost or sold stations they could not replace them (so that their station holdings would reduce down toward the new limits). The CRC could make regulations concerning diversity and control of ownership of broadcast stations and other media and would be directed to take such factors into account in considering grant or renewal of a broadcast station license. The commission would choose from among qualified applicants for the same channel by random selection. And if a licensee wished to sell a television station, the commission could consider applicants other than the proposed buyer.‡

Few persons were willing to predict an early passage for the proposed communications act revision. Even Mr. Van Deerlin viewed the bill as only a starting point, and he predicted amendments and long hearings.

Notes

1 *Gibbon v. Ogden,* 9 Wheat 1 (1824).
2 *Pensacola Telegraph Co. v. Western Union Telegraph Co.,* 96 U.S. 1 (1878).
3 *Federal Radio Commission v. Nelson Brothers Bond & Mortgage Co.,* 53 Sup. Ct. 627, 633–634 (1933).
4 *General Electric Co. v. Federal Radio Commission,* 31 F. 2d 630 (App. D.C. 1929).
5 48 Stat. 1064, 19 June 1934.
6 47 U.S.C. § 151.
7 47 U.S.C. § 152.
8 47 U.S.C. § 154(i), 303, 307, 309.

* Regulation of cable television, the equal opportunities requirement (Section 315(a) of the Communications Act of 1934), and the public interest requirement are explained in Chapter 13.

† The Fairness Doctrine and ascertainment are explained in Chapter 14. A television station would have to carry news, public affairs, and locally produced programs throughout the day. And while it would have no Fairness Doctrine, it would have to abide by an "Equity Principle": the station would not be required to deal with any controversial issues of public importance, but if it did deal with such issues it would have to do so "in an equitable manner." A radio station would have no such programming requirements.

‡ Ownership qualifications and limitations are explained in Chapter 18.

9 47 U.S.C. § 402.
10 47 U.S.C. § 303(n), 403.
11 47 U.S.C. § 307(d), 312, 501–503.
12 47 U.S.C. § 307(a).
13 47 U.S.C. § 301.
14 47 U.S.C. § 307(a), 307(d), 309(a), 310(b), 303(f).
15 47 U.S.C. § 151, 307(b).
16 *National Broadcasting Co., Inc., et al. v. United States, et al.,* 319 U.S. 190, 227 (1943).
17 *Red Lion Broadcasting Co., Inc., et al. v. Federal Communications Commission, et al.,* 395 U.S. 367, 390 (1969).

Bibliography

As mentioned in the chapter, the Communications Act of 1934 can be found in Title 47 in the *United States Code.* It is also printed by itself in loose-leaf form by the G.P.O. and—along with notes and references—as Title 47 of *United States Code Annotated* by West Publishing Co., St. Paul, Minn. You may wish to read some of the judicial and administrative decisions cited in this and other chapters. Legal citation is easy to read: the first number is the volume; the word, phrase, or initial (the law librarian will help you interpret the abbreviation) indicates the source; if the source is followed by "2d," this refers you to its second series (i.e., they started numbering from Volume 1 a second time); and the next number is the page on which the decision begins (any additional number—following the comma or the word "at"—is the specific page on which the quoted or paraphrased words appear). So to look up the court's decision in *General Electric Co. v. Federal Radio Commission,* 31 F. 2d 630, go to Volume 31 of the second series of the *Federal Reporter* (St. Paul, Minn.: West), and you find the court's decision begins on page 630. FCC decisions appear in *Federal Communications Commission Reports,* abbreviated as *FCC* (Washington, D.C.: GPO, annual). A more complete, up-to-date compilation of FCC action is the loose-leaf service, *Radio Regulation* or *RR* (Washington, D.C.: Pike & Fischer).

At present, there are really no comprehensive, general books on broadcast law. Most books on mass communication law, however, usually contain a chapter or two which they call an "overview" of radio and television. See, for example, Chapter XIV of William E. Francois, *Mass Media Law and Regulation,* 2nd ed. (Columbus, Ohio: Grid, 1978), and Chapter I of William K. Jones, *Cases and Materials on Electronic Mass Media: Radio, Television and Cable* (Mineola, N.Y.: Foundation, 1976). For years, a standard textbook in radio-television law classes was Walter B. Emery, *Broadcasting and Government: Responsibilities and Regulations* (East Lansing, Mich.: Michigan State University Press, 1971), which took a rather technical approach—how the broadcast services are organized and how to put a station on the air and keep it on.

Two articles that deal with the phrase "the public interest" are Frederick W. Ford, "The Meaning of the 'Public Interest, Convenience, or Necessity'," *Journal of Broadcasting,* 5 (summer 1961), 205–218; and Darrel Holt, "The Origin of 'Public Interest' in Broadcasting," *Educational Broadcasting Review,* 1, No. 1 (1967), 15–19. W. Theodore Pierson examines the dual nature of the American system of broadcasting—essentially commercial, but with increasing influence by noncommercial stations—in "What Is the American System of Broadcasting," *Journal of Broadcasting,* 10 (summer 1966), 191–198.

13 Regulation

Regulation means control or direction by government agency according to rule, principle, or law. Primary responsibility for regulation of radio and television belongs to the **Federal Communications Commission.** However, since commercial radio and television are advertising media, they are also subject to regulation by the **Federal Trade Commission.** Each of the **three major branches** of the federal government influence regulation. Even **state and local governments** can affect radio and television. In fact, regulation of cable television is divided about evenly between federal and local levels.

Federal Communications Commission

The Federal Communications Commission (FCC) consists of **seven commissioners** who set policy and a **federal agency** that carries it out. The president of the United States appoints the commissioners with the advice and consent of the Senate. Commissioners must be citizens and have no financial interest in any industry the commission regulates. No more than four may belong to the same political party. The terms of the commissioners are seven years, staggered so that one ends each year. Terms are fixed; for example, if one individual leaves the commission five years into a term, the replacement is appointed for the remaining two years. When the term expires, the

commissioner may be reappointed to a full seven-year term. Each commissioner may choose a small personal staff, including secretarial, legal, and engineering personnel. The president designates one of the seven to **chair** the commission, that is, to preside at meetings of the commissioners, to serve as chief executive, and to represent the commission before Congress and other agencies and groups. The commission conducts its business in meetings and must meet at least once a month at its Washington, D.C. headquarters.

The agency consists of **five bureaus** and a number of **staff offices.** Each bureau has responsibility for one of the main areas of FCC concern: **broadcast, safety and special radio services** (nonbroadcast transmitters), **cable television, common carriers** (interstate telephone and telegraph), and **field operations.** The field operations bureau oversees 48 local FCC offices, whose personnel carry out various duties, including monitoring, investigation, technical inspection, and examining applicants for operator licenses.

The FCC has **executive, legislative,** and **judicial** functions. It performs the duties specified in the Communications Act; makes rules and regulations; holds hearings, weighs evidence, and renders decisions on certain matters. The commission has **delegated authority** to the bureaus to act on most routine business. For example, the Broadcast Bureau takes final action on most station license and renewal applications. However, all rule formulations, all license revocations, all major policy decisions, and many decisions on actions appealed from lower levels of the agency are made directly by the seven commissioners.

STATUTORY REQUIREMENTS AND REGULATORY IMPLEMENTATION

The Communications Act says what to do, and FCC rules say how to do it. The how is often much longer than the what; a single phrase—one or two lines in the Communications Act—is often supplemented by pages of specifics in FCC rules. In addition to the Communications Act, other laws affect broadcasting as well, such as certain provisions in the U.S. Criminal Code.

General Powers. Section 303 of the Communications Act spells out the **general powers** of the FCC. Several of these powers center on traffic duties, that is, ensuring that stations operate in such manner so that they do not interfere with each other. This section also gives the FCC power to license operators, to inspect stations, to regulate network-affiliated stations, to require that stations keep certain records (such as logs) and paint and illuminate transmission towers, to assign and require stations to use call letters, and to require that new television receivers be equipped to pick up all channels.

Two important provisions in Section 303 direct the commission to study new uses and otherwise to encourage more effective use of radio in the public interest, and to make rules and regulations necessary to carry out the intent of both domestic laws and all international agreements to which the United States is a party. These international agreements deal with traffic problems—who uses what frequency and when—and are made at both regional (neigh-

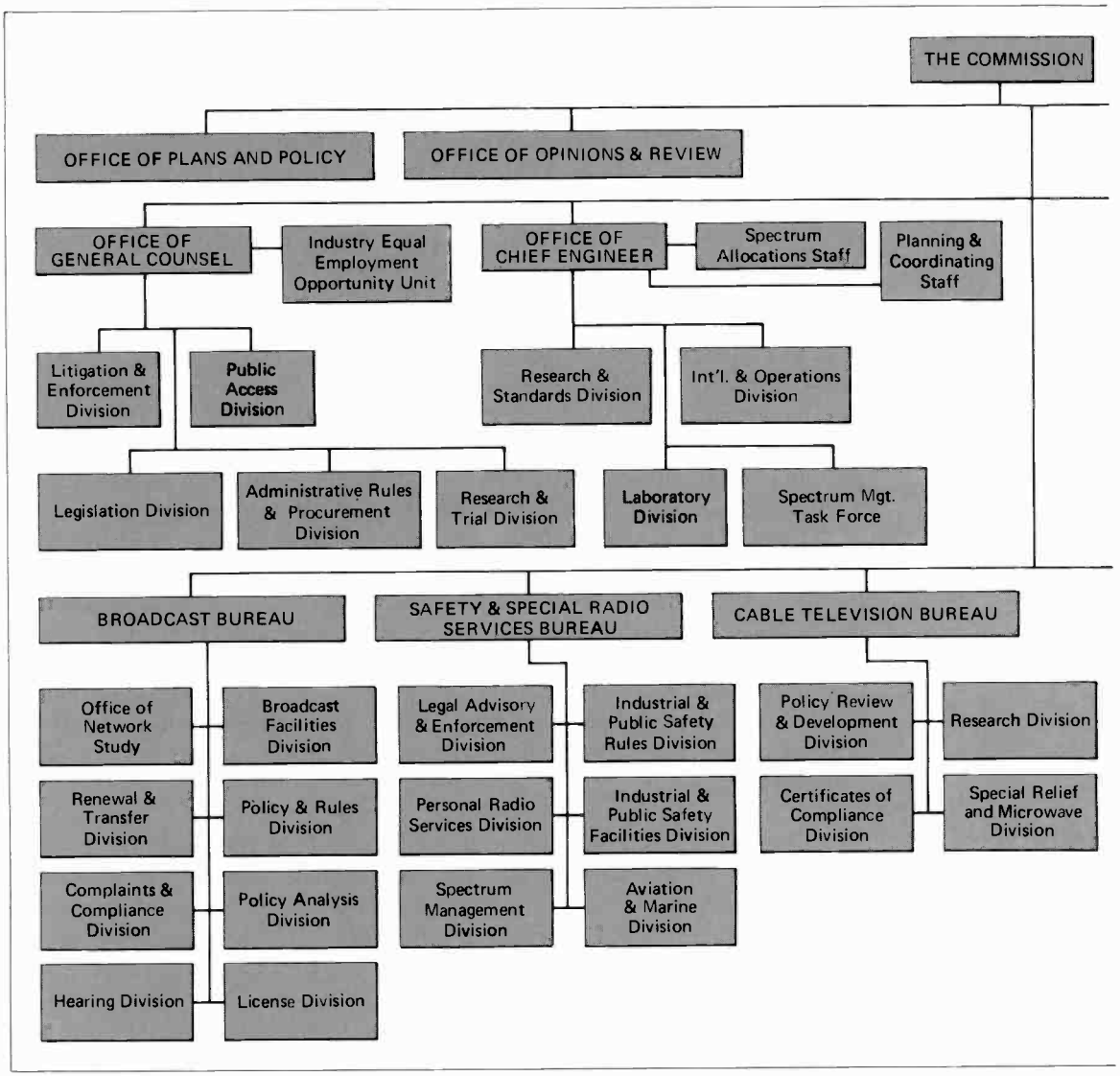
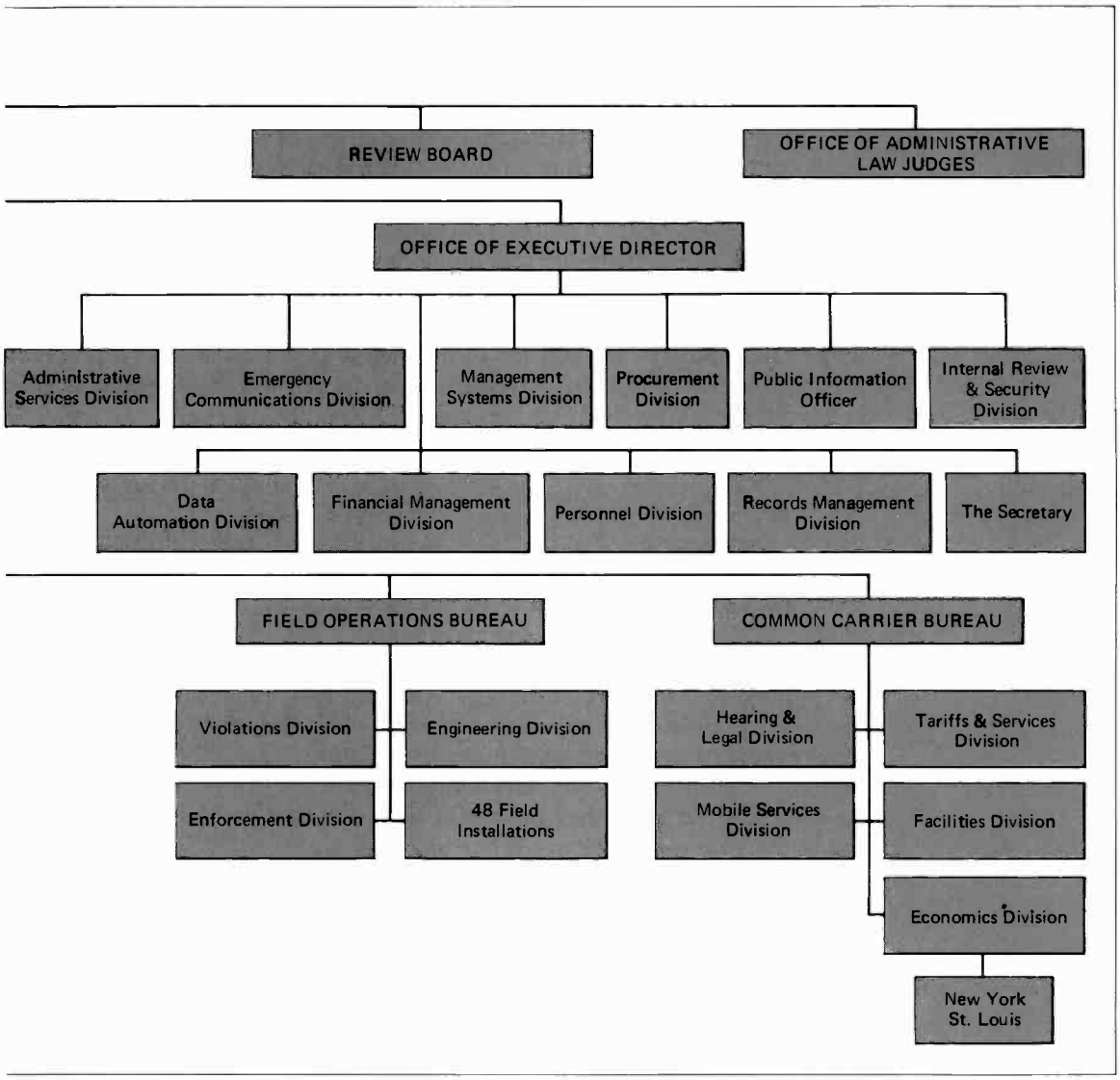


Figure 13-1. FCC Organization.

boring countries) and world levels. The world organization is the International Telecommunications Union (ITU), discussed in Chapter 24. One ITU responsibility is to assign first letters for call letters in each country. ITU assigned to the United States the letters K, N, W, and part of the A's. The FCC, in turn, has assigned to stations call letters beginning with W east of the Mississippi River and K west of the Mississippi.*

* Some pioneer broadcast stations received call letters before the government set up the present rules. For example, WBAP is in Fort Worth, while KDKA is in Pittsburgh.



Licensing. Sections 307–311 and 319 give the FCC **discretionary power to license** and to **set up criteria** for licensing. No station may operate without a license, and thus licensing is one of the FCC's most important powers. FCC rules specify when and which licenses come up for renewal. All stations in a state come due on the first day of a particular month every three years. The states are grouped so that a new batch of renewals are due on alternate months.

Sponsorship Identification. Section 317 requires **identification of sponsors.** If any program or program element is paid for or furnished by parties other than

the station licensee, the station must make an announcement to that effect and identify the sponsor or donor. This requirement pertains even if the program contains no advertising and even if the station is noncommercial. With respect to commercials, mention of the advertiser's trade name or product meets the requirement. Section 508 prohibits payola and plugola* by applying the sponsorship identification requirement to station employees, program production and creative personnel, and program distributors. Section 317(d) allows the FCC to waive the requirement in some situations. For example, many radio stations normally get records free from distributors. The distributors hope the stations will play them over the air and thus stimulate sales. However, the stations may use the records or not, as they prefer, so the commission requires no sponsorship identification announcement when they are broadcast.

Political Broadcasting. Section 315 contains the **equal opportunities**† requirement. If a licensee allows a candidate for public office to use a broadcast station, the licensee must then allow all other candidates for that office the chance to use the station for the same length of time and for the same cost. Section 315 excludes certain types of news and public affairs programs from the requirement. It also specifies that a station **may not censor** broadcasts by political candidates. It stipulates that a station may charge candidates no more than its **lowest unit rate** during periods as long as 60 days prior to the election. The quantity discounts and other rate advantages the station gives its most favored advertiser must also be given to a political candidate, no matter how little time the candidate buys. Section 312(a)(7) requires a station **make available** (by gift or by sale) **reasonable amounts of time** to candidates for federal office. Section 399 prohibits noncommercial stations from endorsing or opposing political candidates.

The **Zapple Doctrine** applies what is called a "quasi-equal opportunities" rule to supporters and persons who represent a candidate. When a licensee allows such persons to use station facilities during an election to urge their candidate's election, to discuss campaign issues, or to criticize an opponent, the licensee must afford "comparable time" to supporters of other candidates for the same office.[1]

Other Requirements. Section 325 prohibits willful transmission of false distress signals and requires a station planning to rebroadcast the signal of another station to get permission first from that other station. Section 326 **forbids** the FCC to **censor.** Section 1304 of the Criminal Code **prohibits** the broadcast of **lotteries** or information about lotteries. However, FCC rules make some exceptions for state lotteries. Section 1464 of the Criminal Code

* See Chapter 8.

† Often erroneously called "equal time."

prohibits transmission of obscene, indecent, or profane language. Section 1343 of the Criminal Code **prohibits fraud** by wire, radio, or television.

FCC rules require stations with five or more employees to establish a continuing program to afford equal opportunities to all persons. The commission has enacted rules to implement the National Environmental Policy Act (42 U.S.C. 4321–4347). These rules are designed to minimize negative impact on the environment by construction of communications facilities.

The FCC has also established rules for operation of the Emergency Broadcast System (EBS). EBS, based on broadcast stations, is designed to quickly deliver emergency information to the public. In the event of war or other large-scale disasters, EBS may be activated at the local, state, or national level.

Hearings and Appeals. The Communications Act requires that the FCC hold hearings on certain matters. The purpose is to ensure that all parties involved **have a chance to make their views known** before the FCC takes final action. Hearings are required in the following situations: when the commission decides to deny the grant of an application for new, renewal of, modification of, or transfer of license [Section 309(e)]; when a licensee whose station operation (i.e., frequency, power, or times of operation) the commission proposes to change so requests [Sections 303(f) and 316]; when the FCC wishes to revoke a license or construction permit or to issue a cease and desist order [Section 312(c)]; when a second party files a petition to deny an application for license [*if* the FCC finds the petition raises valid points (Section 309 (d))]; when two or more parties apply for the same frequency,* and when an operator whose license has been suspended so requests [Section 303(m)(2)].

An **administrative law judge** (ALJ) presides over most hearings. ALJs are commission employees. They have authority to administer oaths, to examine witnesses, and to rule on admission of evidence. An ALJ must render an impartial and independent opinion.

After conclusion of the hearing, the ALJ issues an **initial decision.** Unless reviewed, the initial decision eventually becomes final and effective. **Review** may result from appeal by one of the parties involved or by direction of the commission. Most initial decisions go to the **Review Board,** a permanent body composed of senior commission employees. In rare cases, a **panel of** one or more **commissioners** will review a decision. The panel or board issues a final decision, which, in turn, is subject to review by the seven **commissioners sitting *en banc*** (i.e., meeting and acting all together). Some initial decisions, however, go directly to the seven commissioners.

Section 405 of the Communications Act allows persons who are "aggrieved or whose interests are adversely affected" by a commission decision to **petition for rehearing.** Many decisions, however, are appealed directly to the

* See Chapter 18.

federal courts. The case then becomes [*aggrieved party*] *v. FCC.* In its decision, an **appeals court** either **affirms** or **reverses** the commission's decision. If the latter, it **remands** (i.e., sends back) the case to the FCC to carry out the judgment. The party that loses the case may petition the **U.S. Supreme Court** to review the decision of the appeals court. If the aggrieved party petitions, the case remains [*aggrieved party*] *v. FCC;* if the FCC appeals, it becomes *FCC v.* [*aggrieved party*]. The Supreme Court may or may not grant **certiorari** (i.e., in effect, review the decision), depending on the principles involved. If not, the decision of the lower court stands.

Enforcement. The Communications Act gives the FCC six ways to deal with a licensee that violates the act, FCC rules, or terms of the license. Sections 401, 501, and 502 authorize the commission to call on any U.S. district attorney to **prosecute violators in court.** Section 503(b) allows the commission to levy a **forfeiture** (i.e., a fine) of up to $2000 for each day the violation occurs, $20,000 maximum. Section 512(b) authorizes the FCC to issue a **cease and desist order.** Section 307(d) allows the FCC to grant **short-term renewals,** that is, to renew a broadcast license for a period less than three years. The commission uses the short-term renewal when it wishes to review a station's performance sooner than the normal three-year interval. Section 307(d) also gives the commission the option to **deny renewal,** and Section 312(a) allows it to **revoke** the license (i.e., take it away before renewal time). These are both serious sanctions—in effect, the death penalty for a station—and the FCC rarely uses them. Nor does it often use court prosecution and cease and desist orders, since other sanctions are easier to apply.

THE PUBLIC INTEREST

The Communications Act gives the commission very little specific control over programming. Yet, it directs the commission to grant licenses and renewals only if the **public interest, convenience, and necessity** will be served thereby. The primary means by which a station has to serve the public interest is in its programming. Therefore, of necessity, the FCC has to examine broadcast programming.

The FCC treads a thin line between censorship and program regulation. The commission does not tell a station that it can or cannot air a particular *program.* But it does hold that the station has a responsibility to provide **programming** that **meets the varied needs of its home community** and has adopted policy statements, rules, and procedures* to ensure that the station meets that responsibility. However, the *station* designs its own programming. The *station* decides how it will meet the needs of the community. And then, when the station's license comes up for renewal, the *FCC* has the authority and duty to review *overall* programming, to compare the station's *performance* during the preceding license period to *promises* it made on the last renewal application, to determine whether it operated *in the public interest.*

* Most are discussed in detail in Chapter 14.

NETWORK REGULATION

The Communications Act **does not require that networks be licensed.** However, the FCC does license network-owned stations, and Section 303(i) gives the commission authority to make special regulations for network affiliated stations. When the FCC adopted its **Chain Broadcasting Regulations** in 1941,* the rules applied through affiliated stations. Most began "No license shall be granted to a standard broadcast station . . ." and then went on to spell out what the FCC prohibited. Similar wording applied the rules to FM and television affiliates.

The Chain Broadcasting Regulations (1) give an affiliate the right to broadcast programs from networks other than its own (i.e., prohibit **exclusive affiliation),** (2) give an affiliate the right to **reject network programs,** (3) give a network the right to offer rejected programs to nonaffiliated stations (i.e., prohibit **territorial exclusivity),** (4) limit the **term of affiliation** contracts, (5) limit **option time**† (completely prohibited in television networking), (6) limit **network station ownership** to one per city, (7) prohibit one network organization from operating multiple networks that program simultaneously and serve the same areas (i.e., prohibit **dual network operation**), and (8) prohibit network **control of affiliate advertising rates.**

In 1977, the FCC repealed most Chain Broadcasting Regulations as they applied to radio, retaining only territorial exclusivity (§§73.132, 73.232) and dual network‡ (§§73.137, 73.237) rules. At the same time, the commission adopted a **radio policy statement** that deals with affiliation terms, right to reject programs, network interference with licensee programming discretion, limitations on option time, and network control of advertising rates. Network station ownership is covered by the multiple ownership rules (§§73.35, 73.240, 73.636).§ All regulations were retained for television (§73.658). Three additional rules apply only to **television** networks: (9) a network may not act as **national sales representative** for nonnetwork time (on affiliated stations, except for those it owns), (10) a network may not **syndicate programming** in the United States, and (11) television stations in the 50 largest markets (in effect, all markets) may not broadcast over **three hours of network programming during the four hours of prime time.**‖ In adopting the 1970 network syndication rule, the FCC broke precedent and applied the rule directly to the networks: "[N]o television network shall . . ."

REGULATORY WEAKNESSES

We described what should be an ideal mechanism for regulation. Feed in a problem—an erring licensee, competing applications, need for corrective ac-

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* See Chapter 3.

† See Chapter 3.

‡ ABC and Mutual both operate multiple radio networks and have multiple affiliates in many towns. However, ABC's four and Mutual's two networks do not operate simultaneously and therefore do not violate the dual network rule.

§ See Chapter 18.

‖ This is the Prime-Time Access Rule. See Chapter 8.

tion or new policy; spin it through regulatory and decision-making machinery, powered by the desire to ensure service in the public interest; and out should come the perfect solution—the sanction, the choice of best applicant, the proper action or cure-all policy. But, unfortunately, it does not work that way. Anyone who has ever dealt with government agencies knows that even the best are not too efficient and are prone to make mistakes. The FCC is not one of the best; some critics say it is one of the worst. They complain that the commission cannot set policy and long-range plans. Problems and cases require a long time to resolve, often years. Decisions are inconsistent, that is, the commission applies different principles in different ways in similar cases. Efficiency is strangled in red tape. Huge backlogs of work build up, causing unreasonable delays. The commission does not follow its own guidelines nor use sanctions available to it in day-to-day regulation; as a result, licenses are renewed routinely (irrespective of how well stations met public interest criteria). Rarely are licenses revoked for even the most serious violations of law and regulation, and license transfers are granted that concentrate station control into fewer and larger corporate structures and create more and more absentee owners. Further, the commission seems incapable of devising procedures, of adopting innovative solutions, to deal with those chronic regulatory weaknesses.

A major part of the problem stems from the commission itself. The agency is a bureaucracy. It consists of a massive hierarchy of chiefs and a staff of entrenched civil servants, many of whom are more interested in keeping pensions intact than in problem solving, innovation, and clearing up backlogs. The commissioners themselves are often not of the quality needed to guide the civilian communications policy of the United States. Individuals are appointed to the commission, not on regulatory qualifications, but as political favors.

Once appointed, commissioners find it hard *not* to adopt the point of view of the regulated industries; that is, let the trade run itself. Broadcasters and their lobbyists and lawyers are in constant touch with the commissioners. They are always ready to provide information, help, and advice. They are the milieu within which commissioners work. Theirs is the viewpoint most often heard. Some commissioners even go to work for regulated industries after leaving the commission. Commissioners who buck the trend and try to force the issue of public interest from the *public's* point of view are branded as mavericks and troublemakers. They are vilified and harassed by broadcasters and by the trade press: these commissioners are not playing the game.

Federal Trade Commission

Like the FCC, the Federal Trade Commission (FTC) is an independent federal regulatory agency created by Congress under its constitutional power to regulate interstate commerce. Congress passed the **Federal Trade Commis-**

sion Act in 1914,[2] establishing the FTC and prohibiting "unfair methods of competition." Twenty-four years later, Congress amended the act by passing the Wheeler-Lea Act.[3] The Wheeler-Lea Act prohibits "unfair and deceptive acts or practices in commerce" and thus allows the FTC to protect the consumer from deceptive advertising. In 1972, the FCC and the FTC developed a formal liaison agreement, specifying how they would cooperate and delineating responsibility for regulation of broadcast advertising. The FTC exercises primary jurisdiction over matters involving unfair or deceptive broadcast advertising.* The FCC takes complaints of such advertising into account at license renewal time and considers them, along with all other factors in a station's record of performance.

ORGANIZATION AND OPERATION

The FTC has only five commissioners. Otherwise its structure resembles that of the FCC, complete with working bureaus, field offices, and ALJs.

A complaint of deceptive advertising may arise from the FTC's own monitoring activities, from a trade competitor, from other federal agencies (such as the FCC), from the Better Business Bureau, or from the public. If the FTC finds the complaint valid, it attempts to secure one of three types of **nonadjudicated settlements**—a voluntary **letter of compliance** from the offender, a more formal **stipulation agreement,** or a **consent order.** Failing that, the matter goes to an ALJ for **hearing.** If evidence sustains the complaint, the ALJ (or the FTC on appeal or review) issues an order requiring the respondent to **cease and desist** the deceptive advertising. The **federal courts** figure in FTC operation in three ways: cease and desist orders may be **appealed;** the government may **sue violators** of cease and desist orders; and, in some cases, the FTC may seek a court **injunction** to halt advertising even before a hearing. The injunction remains in effect until final FTC or court disposition of the case. Violators of a cease and desist order or of the FTC act are subject to **fines** and **imprisonment.** The FTC also uses **publicity** for enforcement, and publicizes complaints and cease and desist orders.

In 1971, the FTC introduced another regulatory option—**corrective advertising.** The Profile Bread, Ocean Spray, and Listerine television commercials discussed in Chapter 8 are examples of corrective advertising. Also in 1971, the FTC began its **Advertising Substantiation Program:** the Trade Commission selects certain advertisers and asks them to prove advertising claims they make for their products. Responses are made public.

The FTC also plays a positive role in prevention of deceptive practices. It holds **trade practice conferences** in which it meets with representatives of specific industries in efforts to formulate clear and needed rules. It publishes **industry guides** that give its opinion on how certain products should be marketed. On request from individuals and companies the FTC gives advi-

* As explained in Chapter 6, the FTC is also concerned with deception and misuse in audience rating surveys.

sory opinions as to whether or not specific practices would be deceptive. And it adopts **trade regulation rules** that, like FCC rules, have the force of law.

FALSE ADVERTISING

Section 15 of the Wheeler-Lea Act defines a "false advertisement" as one that is "misleading in a material respect." **Misleading** refers not only to what an advertisement says, but also to what it does not say. In other words, the FTC looks for both **direct falsehoods** and **failure to reveal material facts**—for example, facts concerning consequences from use of a product, or facts concerning a product's value in treating illness or pain.

Three of the most famous cases of deceptive broadcast advertising are the **Sandpaper case,** the **Libby-Owens-Ford** (L-O-F) **Glass case,** and the **Geritol case.** In the fall of 1959, three new commercials began running on television to advertise Rapid Shave. They purported to demonstrate how the aerosol shaving cream was "supermoisturized" to shave "a beard as tough as sandpaper." As part of the demonstration, Rapid Shave lather was spread on sandpaper, and a razor shaved a swatch clean of grit. What the commercials did *not* say was that the "sandpaper" was really a piece of Plexiglas covered with sand. The FTC found that to actually shave off the grit, sandpaper had to soak in the lather for about 80 minutes. The FTC issued a cease and desist order. The U.S. Supreme Court upheld the decision, ruling that undisclosed use of Plexiglas constituted a "material deceptive practice."[4]

In the L-O-F Glass case, a television commercial invited the audience to compare views through the glass in two different automobiles. One showed distortion in ordinary autoglass; the other represented the minimum distortion in L-O-F safety glass. What the audience was not told was that scenes purported to be camera shots through L-O-F safety glass were actually filmed through an open window! The FTC issued a cease and desist order, which a federal court upheld.[5]

J. B. Williams Company advertised its patent medicine, Geritol, heavily on television. The commercials touted the product as a remedy for tiredness, loss of strength, nervousness, or irritability due to iron deficiency anemia. The Geritol advertising failed to explain that among the number of persons who suffered from those particular symptoms, only a relative few actually had iron deficiency anemia and that therefore, Geritol would not help most such persons. The FTC issued a cease and desist order in 1964. It also required Williams to make an **affirmative disclosure** in its advertising that a great majority of persons who experience such symptoms do so *not* because of vitamin or iron deficiency.[6]

REGULATORY PROBLEMS

Like the FCC, the FTC has its problems as a regulatory agency. Two devastating critiques were published in 1969. The first came from seven young law students organized by the consumer protection advocate, Ralph Nader;[7] the other, from a committee formed by the nation's major legal professional group, the American Bar Association.[8] Both said essentially the same thing:

the FTC was not doing its job. It had mismanaged resources and was doing less even though its budget had grown. It had failed to set goals and supervise its staff. Its staff was incompetent. The Trade Commission was preoccupied with trivial, inconsequential matters. Following these reports and a good deal of citizen and congressional pressure, the FTC was drastically reorganized and has since begun to take on a more consumer-oriented, activist bent.

Four basic problems of FTC regulation include **lack of power of prior restraint, extended length of cases, lack of penalty provisions** and **inadequate budget and personnel.** The Trade Commission does not have the power to censor advertising materials. We do not mean to imply that it should have this power; such would be inimical to the First Amendment of the U.S. Constitution and would smack of totalitarianism. Yet, the fact remains that an individual can perpetrate false and misleading advertising until the FTC acts. Meanwhile, the false advertiser has bilked many consumers. Even after the FTC has stepped in, years may pass before a case is finally settled, years in which the advertiser can continue to use the techniques under question.

In the Geritol case, for example, the Trade Commission began its investigation in 1959, and 14 years of appeals, complaints, and suits passed before a federal court imposed a fine of $812,000 on J. B. Williams and its advertising agency. During that time, some $60 million had been spent on television advertising for Geritol, generating sales in 1971 alone of an estimated $90 million, which accounted for 90 percent of the tonic market.[9] Even here, the monetary fine is unusual. The court imposed the fine, not because of Williams' deceptive advertising, but because the company had violated the FTC order for affirmative disclosure.

In most cases, the only "penalty" imposed is an order to stop the deceptive practices. No provision requires the advertiser to pay for what has already been done. Only recently has the Trade Commission begun to use the constructive semipenalty of corrective advertising.

With its budget and miniscule staff, the FTC is a David in a nation of Goliaths. FTC personnel number about 1600. Its 1975 budget was $42 million. That sounds like an astronomically high figure to most of us. But in that same year, 20 advertisers *each* spent more than $42 million in television advertising alone, while total U.S. advertising expenditures in 1975 were over $28 billion.

Executive, Legislative, and Judicial Branches

The FCC, the FTC, and other such agencies are **independent regulatory agencies,** created to operate outside regular departments of government. However, the three regular branches also affect regulation.

EXECUTIVE BRANCH

A number of departments in the executive branch deal with radio and television. Some of the more important include the **Executive Office of the Presi-**

dent, the **Department of Health, Education and Welfare** (HEW), the **Food and Drug Administration** (FDA), the **Department of Commerce,** and the **Department of Justice.**

Executive Office of the President. Section 606 of the Communications Act gives the **president** authority to assume certain powers during war and other national emergencies. Under these powers the president may regulate, operate, and even appropriate civilian stations. Section 305 gives the president responsibility to allocate radio frequencies used by the federal government. Such allocations are coordinated through the Interdepartmental Radio Advisory Committee, which includes representatives of major frequency users among governmental agencies. The Office of Management and Budget (OMB) arbitrates interagency disputes about frequency allocations. A small White House staff provides the president with immediate advice on telecommunications and information policy, focusing on national security, emergency preparedness, and privacy issues.

The president has at least four ways to influence ongoing civilian communication policy and regulation. First, the president can **recommend legislation.** For example, the Communications Act of 1934 resulted in large part from a recommendation by President Franklin D. Roosevelt. Second, the president can use the **appointive power.** With careful appointments, the FCC's ideology can be molded to reflect that of the president. Third, the president can use **departments and offices in the executive branch.** For example, all agencies funded by the government must submit annual budget requests to OMB. OMB is a unit of the Executive Office of the President, so that the potential exists for the president to exert economic pressure. Fourth, the president can use **informal means:** prestige of office, speeches, and so on.

Probably no other chief executive used presidential influence to the extent that Richard Nixon did. Among other things Nixon had members of his administration make speeches that attacked media reporting; created an Office of Telecommunications Policy that took an active role in regulatory matters (e.g., proposing legislation); encouraged the Justice Department to launch antitrust suits against the networks; cut the budget of the Corporation for Public Broadcasting (CPB); and reportedly had Dean Burch, his recent appointee to chair the FCC, telephone all network presidents for copies of commentators' remarks following a televised presidential speech.

Department of Health, Education and Welfare. HEW makes **grants** to noncommercial educational broadcast stations for construction of new, or improvement of existing, **facilities.** Authorization is contained in Sections 392–395 of the Communications Act. In 1978, bills were introduced in Congress to move responsibility for the funding of public broadcasting from HEW to the Department of Commerce.

Food and Drug Administration. The FDA is a division of HEW. FDA enforces the **Federal Food, Drug and Cosmetics Act**[10] and may hold broadcasters responsible for violations thereof (e.g., advertising a medicinal product that could impair health, without stating that it could in the advertising). It adopts rules, regulations, and quality standards for marketing of products and has available a variety of procedures for enforcement and compliance. While the FTC deals with advertising, the FDA regulates **mislabeling** and **misbranding.** The two agencies cooperate and exchange information.

Department of Commerce. The **National Telecommunications and Information Agency** (NTIA) of the Department of Commerce has the responsibility to advise the secretary of commerce and the president on overall communications policies, international treaties and agreements, federal research and development activities, and spectrum management. An assistant secretary for telecommunications heads the NTIA. The assistant secretary also speaks for the administration on telecommunications issues and represents the president in FCC proceedings.

Department of Justice. The FCC, FTC, and FDA may call upon the Justice Department and its federal district attorneys to prosecute enforcement and punishment proceedings in federal courts. The Justice Department's Antitrust Division prosecutes violations of the antitrust and preservation of competition sections (313, 314) of the Communications Act. The Criminal Division prosecutes those who broadcast lottery information, fraud, obscene or indecent language, or false advertising (Sections 1304, 1343, and 1464 of the U.S. Criminal Code and 14 of the FTC Act).

CONGRESS

Congress shapes regulation directly through **legislation** and indirectly through **appropriation** and the Senate's **confirmation** power over presidential appointees. Both chambers rely heavily on recommendations of the appropriate committees. The House and Senate **Commerce Committees** review proposed and existing legislation that deals with radio and television. They investigate regulation, regulators, and regulated to determine if additional legislation is needed. Initiative to rewrite the entire Communications Act* originated in 1976 with the House Commerce Committee's subcommittee on communications. The Senate Commerce Committee examines appointees to the FCC, the FTC, and the CPB board. Congressional **appropriations committees** hold the purse strings for the regulatory commissions and CPB. **Special committees** may be appointed, whose activities affect radio and television and their regulation.

Like the president, Congress also uses informal means to influence regula-

* See Chapter 12.

tion. One such means is the **hearing.** When the FCC takes some action that congressional leaders do not like, they hold a committee hearing and demand the presence of the commission for testimony and chastisement. **Individual senators and representatives** also influence regulation. If the commission makes a decision that a licensee does not like, the licensee complains to contacts in the state's congressional delegation. The senators and representatives, in turn, pressure the FCC.

FEDERAL COURTS

Violators of law (e.g., the Communications Act) or of regulatory commission rules, decisions, or orders may be tried in federal courts. The courts may issue **writs,*** impose **fines, sentence to jail,** and even **revoke broadcast licenses.** The courts also hear and rule on **appeals** from commission decisions and orders. Over the years, court decisions have played a major role in shaping radio and television regulation. See, for example, accounts of the Brinkley, Shuler, WLBT, and *Red Lion* cases in Chapter 14.

State and Local Governments

All broadcasting is, of course, interstate in nature and therefore subject to primary regulation by the FCC. However, state and local governments and agencies may also affect broadcast stations. For example, ownership of most stations takes the form of a corporation. Each state has its own statutory requirements for **incorporation,** and a licensee must meet those requirements and file for approval with the state. States and municipalities have successfully **taxed** certain advertising revenues of broadcast stations. State legislatures have enacted laws that pertain to **educational broadcasting**—to establish state agencies; to fund stations, agencies, and programming projects; or to specify procedures and operations. City **zoning and safety ordinances**† affect location of studios and transmitter towers.

Cable Regulation

A CATV **franchise** is permission to operate in a particular area. FCC‡ rules establish minimum standards for franchising, but a local governmental entity actually awards the franchise. Typically, a **city council** draws up and adopts a **CATV ordinance.** The ordinance takes into account FCC requirements and spells out terms of the franchise—what a CATV operator may and must do, length of franchise period, time allowed to build the system, franchise fee (i.e.,

* A "writ" is a formal legal document ordering or prohibiting some action.

† An "ordinance" is a municipal statute.

‡ See Chapter 21 for a discussion of the programming aspects of CATV rules.

percent of gross subscriber revenues the CATV operator pays the city), complaint procedure, and subscriber rates. The ordinance also creates a CATV advisory committee to provide aid and information to the city council in CATV matters. The city advertises and accepts applications from parties who wish to operate a CATV system in that locale. In a public proceeding, the city council compares applications, chooses the best, and awards the franchise. The franchisee builds the system, adhering to promises made in the application and to requirements of the ordinance and FCC rules. Upon completion of the system, the operator files with the FCC a registration statement—identification, location, signals carried—and begins operation. Some states have enacted CATV legislation, and a few have established CATV commissions or councils to assure uniform franchising and regional planning.

Notes

1 Letter to *Nicholas Zapple,* 23 FCC 2d 707 (1970); and *First Report,* Docket No. 19260, 36 FCC 2d 40 (1972).
2 38 Stat. 717 (1914).
3 52 Stat. 111 (1938).
4 *Federal Trade Commission v. Colgate-Palmolive Co.,* 380 U.S. 374, 390 (1965).
5 *Libby-Owens-Ford Glass Co. v. FTC,* 352 F. 2d (1965).
6 *J. B. Williams Company, Inc. v. Federal Trade Commission,* 381 F. 2d 884 (1967).
7 Edward F. Cox, Robert C. Fellmeth, and John E. Schultz, *The Nader Report on the Federal Trade Commission* (New York: Richard W. Baron, 1969).
8 *Report of the Commission to Study the Federal Trade Commission* (Chicago: American Bar Association, 1969).
9 Donald M. Gillmor and Jerome A. Barron, *Mass Communication Law: Cases and Comments; 2nd ed. (St. Paul, Minn.: West, 1974), p. 693.*
10 52 Stat. 1041 (1938).

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The FCC describes its accomplishments each year in its *Annual Report* (Washington, D.C.: GPO). Erwin G. Krasnow and Laurence D. Longley, *The Politics of Broadcast Regulation,* 2nd ed. (New York: St. Martin's, 1978), describe how various factors—FCC, Congress, the White House, and so on—affect broadcast regulation policy. Barry Cole and Mal Oettinger take an inside look at the conflicts and compromises that temper the FCC's decisions in *Reluctant Regulators: The FCC and the Broadcast Audience* (Reading, Mass.: Addison-Wesley, 1978). Nicholas Johnson, former FCC commissioner, and John Dystal use an FCC meeting on Dec. 13, 1972 to illustrate what they feel is a lack of rationality and concern for the public interest in commission decision making in "A Day in the Life: The Federal Communications Commission," *Yale Law Journal,* 82 (July 1973), 1575–1634.

14

Broadcasting and the First Amendment

In Chapter 12 we said broadcasting enjoys limited protection under the First Amendment to the Constitution of the United States. In this chapter, we look at how that protection is limited and why.

Origins and Purposes of the First Amendment

The intellectual and philosophical climate of the seventeenth and eighteenth centuries provided ideal conditions for growth of faith in pure reason and natural rights. The individual was thought to be a rational being, one who could listen to all arguments, weigh their merits, and, through the power of reason, make an intelligent choice. Given the power to reason, continued this line of thought, the people needed no law-giving absolute ruler; they could govern themselves. But if they were to govern themselves well, they needed **access to the greatest possible flow of information and opinion**—to an uninhibited **free marketplace of ideas.** Earlier, John Milton had urged that authority open up the closed philosophical arena for debate, to allow truth and falsehood to grapple in free and open encounter. Now John Locke argued that each individual has a "natural right" to life, liberty, and property. Liberty included freedom to speak and to publish, rights considered indispensable to self-government.

Yet, the U.S. Constitution, upon emerging from the Federal Convention in 1787, contained no declaration of natural rights. A clamor arose demanding that such be added. Democratic leaders, farmers, the mercantile class—all demanded the new national charter guarantee their hard-won rights. The result was a series of ten amendments—the famous **Bill of Rights,** the first of which states in part, "Congress shall make no law . . . abridging the freedom of speech, or of the press. . . ." The free marketplace had been assured.

Exceptions to Freedom of Press

Some legal scholars believe that rights guaranteed by the First Amendment are **absolute.** They agree with late Supreme Court Justice Hugo Black who said, "[The First Amendment] says 'no law,' and that is what I believe it means."[1] The majority of courts and legislatures, however, do not share Justice Black's absolute interpretation. They recognize situations in which a medium may be punished for something it has published. Exceptions to an absolute freedom of speech and press include **defamation** law, **right of privacy,** material protected by **copyright, court proceedings, prior restraint,** lack of **access,** lack of **reporter's privilege,** and prohibitions against **obscenity.**

Is broadcasting part of "the press" as the term is used in the First Amendment? For purposes of this section, the answer is yes. Radio and television must endure all limitations imposed on print media.

DEFAMATION

Defamation is **communication that harms a person's reputation.** In a defamation case, the defamed person (the **plaintiff)** brings **civil suit** against the defamer (the **defendant**) for **damages** (monetary compensation for suffering caused by the defamation) in a **court** of law. Defendants who lose defamation suits often must pay large damages.

Defamation consists of two categories, **libel** and **slander.** Historically, **spoken** defamation was slander; **written or printed** defamation, libel. Since libel resulted in a permanent form of defamation, it was considered more serious and brought higher damages. A broadcast defamation most resembles slander in form, libel in effect. For example, a defamation spoken (slander) on a popular network television program reaches tens of millions of persons (seriousness and effect of libel). Additionally, most broadcast programming exists in permanent form—as a script, a recording, or both—from which defamation could be deleted before air time. Courts tend to treat **broadcast defamation as libel, except in live, ad-lib situations.**

When a defamation occurs on a broadcast station, the **licensee is liable** (i.e., legally responsible) for damages, no matter when it occurs, who said it, or who supplied it (including commercials produced by others). In the 1959 **WDAY case,**[2] the U.S. Supreme Court provided one exception. Section 315 of the Communications Act forbids a licensee to censor material broadcast by political candidates. Therefore if a candidate, using a station's facilities (i.e.,

broadcasting) under Section 315, utters a defamation, the licensee pays no damages. This immunity is called **absolute privilege.**

The plea of **truth** is the oldest and was, for years, the most used defense against defamation suits. If the medium can show the defamation is true, the plaintiff cannot recover damages. But truth is often hard to prove. In 1964, the U.S. Supreme Court expanded constitutional protection against defamation judgments. In its decision in *New York Times v. Sullivan,* the court wrote that fear of libel judgments might cause some who had legitimate criticisms of government conduct to keep their criticisms to themselves. This defeated the purpose of the First Amendment. Therefore **public officials** who wished to sue for defamation could not recover damages unless they could prove the defamatory statement "was made with **'actual malice'**—that is with knowledge that it was false or with reckless disregard of whether it was false or not."[3] In other words, even if a station defames a public official and the defamation is false, that official still cannot recover damages without proving (1) the station knew it was false, but aired it anyway, or (2) the station aired it without first taking normal precautions to check on its validity. Both are hard to prove.

In subsequent cases the court expanded the actual malice requirement to include **public figures**[4] (i.e., private citizens who voluntarily inject themselves into a public controversy) and even **private citizens when involved in matters of public or general concern.**[5] On the other hand, the court also ruled that private citizens are more vulnerable to injury, that they deserve more protection from defamatory statements than public offfficials or public figures.[6] Thus a station can still be successfully—and expensively—sued for defamation.

RIGHT OF PRIVACY

Should a station broadcast material that seriously invades the privacy of an individual, courts in most states allow that individual to recover damages. A station invades privacy and opens itself to a civil suit if its broadcast interferes with the solitude of, publicizes the name or likeness of, releases private information of, creates a false public impression of, or appropriates for commercial purposes elements of the personality of any person **without permission.** This pertains to all programming including advertising.

COPYRIGHT

As a general rule, a broadcaster must get permission to air material created by another person. Otherwise the broadcaster is open to suit for infringement of copyright. Copyright is the **right to control or profit from a creative work.** Copyright provisions are spelled out in Title 17 of the United States Code. Copyright covers literary works; musical works (including words); dramatic works (including any accompanying music); pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and other audiovisual works; and sound recordings. A copyright holder's exclusive rights last for the life of the work's creator plus 50 years.

Among the rights included in copyright law are those to perform or dis-

play the work publicly and to authorize someone else to perform or display it publicly. In the latter case, the copyright holder usually requires payment. This is just compensation for the effort put into creation of the work. Broadcasting is a public performance. Thus when a station or network leases a motion picture, program, or series, it pays for more than just the tape or film. It also pays for the right—that is, permission from the copyright holder—to broadcast the work a certain number of times within a certain period of time.

Copyright law does spell out exceptions. Noncommercial broadcasters can get special breaks on certain copyrighted material in particular situations. Clearance and payment are not necessary to use U.S. Government works and works in the **public domain** (i.e., those which have not been copyrighted or those on which the copyright has expired). Also, cable systems get a special compulsory license for copyrighted material on the station signals they carry.*

Music. Most commercial radio stations depend on music for most programming. And most of the music they use is copyrighted. Two organizations represent the majority of music copyright holders in the United States, **American Society of Composers, Authors, and Publishers** (ASCAP) and **Broadcast Music, Inc.** (BMI). An all-industry committee, representing station licensees, negotiates individually with ASCAP and BMI. They agree on an all-industry contract, one each for ASCAP and BMI. Under terms of the contract a licensee agrees to pay a certain percentage of gross revenues to the music copyright organization, and in return the station may use any composition in the organization's catalog (i.e., list of compositions it represents). No station has to accept the all-industry contract. A licensee may wish to negotiate individually, may wish to pay on a per-program basis, or may elect to use no copyrighted music. Most, however, accept the all-industry contract (or **license,** as it often is called) for both ASCAP and BMI. Those who wish access to literally all music also contract with the **Society of European Stage Authors and Composers** (SESAC). ASCAP, BMI, and SESAC distribute money collected from stations to the copyright holders.

FREE PRESS VERSUS FAIR TRIAL

Two constitutional rights seem to conflict, with the result that reporting of civil and criminal trials is restricted. The Sixth Amendment guarantees individuals the right to a fair trial. The First Amendment guarantees freedom of speech and press, which, presumably, includes the right to report public trials. But many attorneys maintain that media coverage often destroys the rights of a defendant before the trial can even start. Media publicity, they say, prejudices people so much that it is impossible to select an impartial jury and to get a fair trial. Reporters and editors reply that media reporting is essential and that the First Amendment takes preference over the Sixth.

A number of attempts have been made at federal, state, and local levels to

* See Chapter 21.

resolve this conflict of rights, attempts such as guidelines from the U.S. Attorney General and voluntary agreements among media, local bar associations, and law enforcement officials. At the 1968 convention of the American Bar Association (ABA), a committee chaired by Paul C. Reardon, Massachusetts Supreme Court justice, submitted a report proposing "Standards Relating to Fair Trial and Free Press." The convention approved the standards. The **Reardon Report** places a number of restrictions on information an attorney may release concerning a criminal trial, the defendant, and the case against the defendant. It also recommends procedures for law enforcement officers and for conduct of judicial proceedings in criminal cases. And it suggests that judges use the contempt power to control pretrial and during-trial reporting. In other words, if a reporter covers a trial and broadcasts information prohibited by the Reardon Report, the judge could find the reporter in contempt of court, and the reporter would have to pay a fine, go to jail, or both. News organizations have attacked the Reardon Report as, at the very least, an arrogant abrogation of the First Amendment.

Some judges have issued **gag orders.** Here, the judge *tells* reporters what they can and cannot report and how they are to report it. Violations are prosecuted as contempt of court. In 1978, however, the ABA voted to approve a new anti-gag order provision that would prevent judges from holding news reporters in contempt if leaked information is broadcast or published. The bar association adopted the standard in response to the Supreme Court decision in *Nebraska Press Association v. Stuart* (427 U.S. 539 (1976)) which strictly limited gag orders. The *Nebraska* decision seemed to approve of closed preliminary hearings in criminal cases. And although a recent ABA standard calls for press admittance at preliminary hearings, some judges continue to hold closed hearings.

Most broadcast coverage of courtroom proceedings consists of oral descriptions, sketches, and water colors, rarely film or tape. This is because of two factors that have kept microphones and television cameras out of courtrooms—**Canon 35** of the ABA's code of judicial ethics and the U.S. Supreme Court's 1965 **Estes decision.** Canon 35 prohibits photography and broadcast of courtroom proceedings. The rationale is that such activities distract participants and witnesses. In the *Estes* decision[7] the Supreme Court reversed Estes' conviction because his trial had been televised. The Court said that the televising of criminal trials denies the constitutional right of due process to defendants. This decision was interpreted to mean that no criminal trial could be televised.

The trend, however, seems to be toward allowing cameras and microphones in the courtroom. On July 5, 1977, Florida state courts began a one-year test of broadcast courtroom coverage, including live television cameras. By 1978, a number of other states permitted radio and television to cover trials, appeals proceedings, or both. In March 1978, an influential ABA committee voted in favor of opening criminal trials to radio and television. But at

its 1978 meeting, the bar association's rule-making body voted not to lift restrictions on broadcast coverage.

PRIOR RESTRAINT

Justice Oliver Wendell Holmes, in writing the opinion for the 1919 Supreme Court case, *Schenck v. U.S.*,[8] set forth a test to determine when words are no longer protected by the First Amendment. He said that not only must the **words** themselves be considered, but also the **circumstances** in which they are used. Holmes said words do not lose constitutional protection until they are "used in such circumstances and are of such nature as to create a **clear and present danger"** to the government or the society. In the 1931 *Near* decision,[9] Chief Justice Charles Evans Hughes listed the few specific instances in which the government could legitimately exercise prior restraint, that is, prevent publication.

There was no clear and present danger and none of Hughes' specific instances, however, when federal courts issued injunctions to prevent publication of the **Pentagon Papers** for 15 days in 1971. The Pentagon Papers were a massive top secret Defense Department study entitled, *History of the United States Decision-Making Process on Vietnam Policy.* First *The New York Times,* then the *Washington Post* obtained copies and began to publish articles on the study. Injunctions halted publication, and the newspapers appealed. The U.S. Supreme Court lifted the injunctions, but not before it, too, voted 5–4 to halt publication until it could hear the case and render a decision. This was the first time the Supreme Court had issued such a ban. Additionally, its brief decision seemed to allow the government to exercise prior restraint any time it could meet the "heavy burden of showing justification,"[10] although the 1976 *Nebraska Press Association* decision may have narrowed that possibility somewhat.

ACCESS AND REPORTER'S PRIVILEGE

Two exceptions to freedom of press involve reporter's sources of information. One has to do with access—**the ability to get to those sources.** The idea of necessity of access grows from the same philosophical soil as the First Amendment. The government of the United States is based on the presumption of an informed citizenry. That being the case, news media have an obligation to report to the public on government operation. And the government has an obligation to enhance the media's ability to report. The government should allow reporters access to information on its own performance and operation, except where national security or public welfare would be compromised. But such is not the case.

Over the years the media have had an increasingly difficult time gaining access to information. Denial of access takes several forms: **executive privilege,** a right claimed by the president to conceal information; **classification** (as "top secret," "secret," or "confidential"), supposedly to protect against unauthorized disclosure in the interests of national defense; **agency-created barriers and dodges** (also called "the runaround") to avoid releasing

information, and **executive sessions** or **secret meetings** of decision-making bodies (such as Congress, most of whose committees often meet in executive session). Many states and the federal government[11] have enacted **government-in-the-sunshine** and **open records laws** designed to tear down barriers to access. Such laws help, but most contain enough loopholes to allow a determined official to deny access. [Additionally, U.S. Supreme Court actions have effectively barred reporters from jails (*Houchins v. KQED, Inc.,* _____ U.S. ____, 98 S. Ct. 2588 (1978)) and from state executions of criminals (*Garrett v. Estelle,* certiorari denied, _____ U.S. _____, 98 S. Ct. 3142 (1978)), without permission of local authorities.]

The other exception involves news reporter's privilege—**the ability to protect a confidential source from identification** in legal and legislative proceedings. The news media contend that if a source provides information to a reporter, with the provision that the source's identity remain secret, the First Amendment protects that reporter from having to reveal the source or to yield notes, tape, film, and other unpublished information about the source. The media maintain that confidential communications between reporter and source are privileged (i.e., do not have to be revealed) in a manner somewhat similar to those between lawyer and client or priest and confessant. Besides, conclude the media, if the courts force reporters to reveal confidential sources, the sources will stop being sources. This affects the public's right to know and thus violates the First Amendment.

A number of states have adopted **shield laws** to ensure that reporters do have some form of privilege. There is no national shield law, however, and the U.S. Supreme Court has refused to recognize any sweeping reporter's privilege. On the other hand, the court has also said that in all cases except grand jury proceedings and criminal trials, the reporter's wish to protect a confidential source must be balanced against the government's need to know; one must be weighed against the other to determine which should prevail.[12] Even a grand jury may not use a reporter's notes for a "fishing expedition," that is, just to see if anything turns up. Meanwhile, reporters from both print and broadcast media have spent time in jail, not because they were criminals, but because they wished to preserve the confidentiality of their sources.

Even a strong national shield law would not help in some cases. In its 1978 ruling in the *Stanford Daily* case [*Zurcher v. Stanford Daily,* _____, U.S. _____, 98 S. Ct. 1970 (1978)], the U.S. Supreme Court interpreted the Fourth Amendment to the Constitution to mean that police need only have a warrant to search a newsroom. If the police can show reasonable belief that evidence of a crime may be in the possession of an innocent third party, they may obtain a warrant which is sufficient to allow them to make a search. The First Amendment does not protect news reporters and media from such search.

OBSCENITY

Most persons agree that obscenity does not deserve First Amendment protection. The disagreement comes in defining obscenity, that is, saying what is

and what is not obscene. After all, something you consider art might be pornography to someone else, and vice versa. Over the years, legislatures and courts have attempted to define the term "obscene," to draw the line between the permissible and the prohibited. Most attempts have centered on sexual matters. The current definition comes from the 1973 case, ***Miller v. California.***[13] In its *Miller* decision the U.S. Supreme Court ruled that material would have to meet all three of the following tests before it could be declared obscene: (1) the **average person,** applying **contemporary community standards** (i.e., local standards, not national) finds the **work, taken as a whole, appeals to prurient* interest,** (2) the work depicts or describes, in a **patently offensive manner, sexual conduct specifically defined by state law;** and (3) the work **lacks serious literary, artistic, political, or scientific value.** Material that meets all three tests is obscene and therefore, says the court, does not merit First Amendment protection.

Exceptions to Freedom of Broadcasting

Even with all the exceptions described above, the United States still enjoys one of the greatest latitudes for freedom of expression of any country. Broadcasting, however, has an additional set of restrictions.

EXCEPTIONS BY LAW AND REGULATION

The **Communications Act and FCC rules** impose on broadcast licensees myriad and varied programming requirements—things they must or must not do. For example: FM radio stations may duplicate programming of co-owned AM stations in the same city no more than 25 percent of an average week;[14] commercial stations must broadcast a minimum number of hours each day;[15] certain types of recorded material must be identified as such;[16] stations must identify themselves to listeners at certain times and in a certain manner;[17] cigarette advertising is prohibited on radio and television.[18] Additional requirements are discussed below and in Chapter 13.

SECTION 315

One of the most important programming requirements—a major fact of regulatory life for most licensees—is **Section 315** of the Communications Act. Congress wrote the equal opportunities provision into Section 315 to ensure that broadcasters treat all candidates for the same political office equally. After all, the public interest and the free marketplace of ideas are better served when the audience can hear all candidates equally, rather than only those favored by the licensee. However, some licensees say they find the mechanisms of Section 315 so intricate and so burdensome that they avoid the whole thing by allowing no candidates to use their facilities.† In these cases the provision lit-

* "Prurient" means tending to incite lust; lewd.

† Except as required under Section 312(a)(7).

erally defeats its own purpose; it silences the very political debate that Congress intended it to promote.

For years the networks ran no election-time programming featuring presidential and vice-presidential candidates. They said they wanted to produce programs on the Democratic and Republican candidates, but under Section 315 they would also have to provide equal opportunity for a score of minor party candidates. And, they argued, most of the electorate is interested only in major party candidates. In 1960, Congress decided to suspend the equal opportunity requirement on an experimental basis. Special legislation applied the suspension to the presidential and vice-presidential races only and for that election only.[19] The networks jointly arranged and broadcast on radio and television four one-hour question-and-answer sessions featuring Senator John F. Kennedy, the Democratic candidate, and Vice-President Richard M. Nixon, the Republican. Kennedy, relatively unknown before these so-called **Great Debates,** went on to win the election by a slim margin.

Congress did not repeat the experiment, nor did it permanently repeal Section 315. However, in 1975 the FCC ruled that **candidate news conferences and debates between political candidates** both qualify as "on-the-spot coverage of a bona fide news event" and therefore, as provided in Section 315 (a)(4), are exempt from equal opportunities requirements. The only qualification is that the debate has to be under control of someone other than broadcasters or candidates.[20]

The FCC's ruling set the stage for another round of Great Debates. In 1976 the networks broadcast four public question-and-answer sessions sponsored by the League of Women Voters. Three sessions pitted Republican presidential incumbent Gerald R. Ford against the Democratic challenger, former Georgia Governor Jimmy Carter; the other, the vice-presidential candidates, Senators Robert Dole (R) and Walter Mondale (D). Of at least equal importance to the debates themselves was the fact that the mechanism that made them possible now seemed permanent,[21] allowing future debates at all levels of candidacy.

FCC CONCERN WITH PROGRAMMING

As discussed in Chapter 13, the FCC examines **programming** as one means to determine whether the public interest would be served by granting or renewing a broadcast license. Broadcasters have objected that FCC review of programming violates both the First Amendment and Section 326 of the Communications Act (which forbids FCC censorship). Yet, the courts have consistently supported the FCC.

Judicial Affirmation. The first ruling came in the 1931 **Brinkley case,*** *KFKB v. FRC.*[22] The Federal Radio Commission (FRC), forerunner of the FCC, had denied John Brinkley's application for renewal of KFKB's license based on his

* See Chapter 2.

use of the station to peddle patent medicines. Brinkley appealed on the grounds that the commission's actions amounted to censorship. The Court of Appeals affirmed the denial. In its decision, the court equated "censorship" with "prior scrutiny," and ruled that FRC review of **past conduct** to determine whether a license renewal would serve the public interest does not constitute censorship.

The next ruling came in the 1932 **Shuler case,*** *Trinity v. FRC.*[23] The FRC had denied Reverend Bob Shuler's application for renewal of KGEF's license because of his use of the station for defamatory and otherwise objectionable utterances. Shuler appealed on both First and Fifth Amendment grounds. The court ruled that the FRC had not denied Shuler's freedom of speech—he could continue to say whatever he wished—but had merely applied legitimate regulatory power. As to the Fifth Amendment appeal, the court ruled that since KGEF's frequency was not Shuler's property, but a grant or permit from the government, the government had the right to withdraw it without compensation. The Supreme Court refused to review,[24] which allowed the appeals court decision to stand.

FCC Statements. But what was programming in the public interest? What did it consist of? What should a station program to avoid trouble at renewal time? The commission hesitated to set forth specific programming guidelines. After all, the law forbade censorship, and guidelines smacked heavily of prior restraint. Once the Brinkleys and Shulers were cleared off the air, the FCC rarely used its program review power. The commission routinely approved renewal applications, based entirely on engineering reports, without examining past programming.

During the late 1930s and early 1940s the FCC received a number of complaints on programming. Commissioner Clifford J. Durr investigated and found widespread programming abuses. The commission decided to act. It hired Dr. Charles Siepmann, former executive with the British Broadcasting Corporation, to direct a study and to suggest criteria the FCC might use to evaluate program service. The result was the 1946 **blue book.**† The broadcasters were so successful in fighting the blue book, that the commission never revoked or denied renewal of a license based on blue book criteria. The commission did, however, adopt several blue book recommendations. One of these was a new renewal application form that called for information on past and proposed programming. A station was to base its report of past programming on a **composite week;** just before renewal time the FCC would notify the station of seven specific days—a Monday, a Tuesday, and so on—scattered over the three-year license period just ending. In processing the renewal application, the commission could thus compare **performance**—as reflected by pro-

* See Chapter 2.

† See Chapter 3.

gramming during the composite week—to the programming **promises** made on the previous renewal application.

In 1960, the FCC adopted a policy statement that defined what it felt was needed in programming to meet the public interest. The **1960 Programming Policy Statement*** provides no pat formula. It contains two broad guidelines: first, the broadcaster should **ascertain the tastes, needs, and desires of the community** to which the station is licensed; second, the broadcaster must **decide what specific programs and program types** will meet these needs. The policy statement names some program types that have evolved as usually necessary to meet the public interest but adds that the list is "neither all-embracing nor constant," that the commission relies primarily on the broadcaster's own judgment. A court decision in the 1962 **Suburban case** affirmed the commission's right to require ascertainment of local needs.[25]

Public Participation in the Licensing Process. Until 1966, you had almost no say in the licensing process. The FCC interpreted the Supreme Court's 1940 *Sanders Brothers* decision[26] to mean that only other licensees alleging economic injury or electrical interference could intervene in a station's license renewal proceedings; you, as a member of the public, could not. The **WLBT cases*** changed that.

In 1964 the FCC received a petition from the United Church of Christ (UCC) on behalf of blacks in Jackson, Mississippi. UCC asked to intervene in (i.e., present evidence and arguments opposing) renewal proceedings for television station WLBT, Jackson. The church said the station practiced racial discrimination in programming. The commission contended UCC had no standing and granted WLBT a short-term renewal of one year. UCC appealed. The appeals court reversed the commission's decision and ruled that the public—in this case, as represented by the UCC—**could intervene in renewal proceedings.** So the FCC held hearings, listened to UCC's testimony, and gave the station a full three-year license term, saying UCC had failed to prove its case. The church appealed again. This time the Court ordered the commission to reverse the decision and ruled that **public intervenors do not bear the burden of proof.** Rather, said the court, intervenors present evidence, and the commission must investigate, gather facts, and, if it finds cause to believe a violation has occurred, prosecute or regulate.

As a result of the WLBT cases, you, the public, now have a mechanism by which you can affect programming of a broadcast station, by which you can ensure that it serves the interests of your community. The fact that you can intervene means that many licensees not only open their doors to you, but also listen and negotiate. Such negotiations are usually most effective when carried on by an organized group representing interests of a particular segment of the

* See Chapter 4.

community, for example, blacks, Spanish-surnamed, or classical music lovers. Such groups have formed all over the country. Some have successfully negotiated with stations. Others have had to take their cases to the FCC and even into the courts. Some have been successful; others have not. Some have abused the process by making outrageous demands.

Ascertainment. FCC guidelines specify that a licensee must ask members of the community what they see as the community's needs. The licensee must ask at two levels: **leaders of significant groups** in the community, and a random sample of members of the **general public.** The licensee need survey the public only once during the three-year license period but must consult with community leaders on a continuous basis. Each year the licensee must place in the public inspection file (see below) **a list of no more than ten significant problems, needs and interests ascertained** during the preceding 12 months, along with descriptions of typical and illustrative programs broadcast in response to these problems, needs, and interests. The licensee must also submit information on ascertainment efforts as part of each license renewal application. Specific ascertainment requirements vary with station type and market size, for example, certain noncommercial FM radio stations need carry out no ascertainment procedures.

1973 License Renewal Rules. In 1973, the commission revised license renewal procedures in an effort to encourage dialogue between you and the broadcast stations licensed to serve you. These actions included adoption of an **Annual Programming Report** (FCC Form 303-A), a **revised television renewal application form,** and rules requiring stations to maintain a **public inspection file** and to broadcast periodically certain **public notices.**

The Annual Programming Report must be completed by each commercial television licensee. The report is based on an annual composite week and must show totals for news, public affairs, and other progamming. The renewal application form was revised to ask television licensees for more information in certain areas. For example, it asks for details on public service announcements and children's programs not required on previous versions.

The public inspection file is kept at the station for you to request and examine during regular business hours. In the file you will find the following: copies of various documents the station has filed with the FCC—applications (e.g., application for license renewal), Ownership Reports (FCC Form 323), annual Employment Reports (FCC Section VI Supplement), and the current Annual Programming Report; a copy of the FCC publication *Public and Broadcasting Procedural Manual;* all letters received from the public; all requests for political time; and a copy of the current annual problems-and-programs list.[27]

The public notices take two forms: renewal announcements and 1202 announcements. The renewal announcements begin six months before a sta-

tion's license expires. During this period the station must periodically broadcast notice of intent to renew. The notice advises that you may examine the renewal application and may comment on it and the station's performance in meeting the public interest to the FCC.[28] The 1202 announcement, so-called because it is required by Section 73.1202 of the FCC rules, is broadcast during the other 30 months of the license period. In the 1202 announcement the station tells when its license was last renewed, briefly describes its ascertainment responsibilities, and invites your suggestions and comments on station operation and programming.

FAIRNESS DOCTRINE

In 1949, the FCC reversed its Mayflower decision* and announced that broadcast licensees could editorialize.† In its opinion (i.e., statement of decision), the commission noted that in the American system of broadcasting, the right of the public to be informed takes precedence over the right of a station to air the licensee's private opinions. That being the case, concluded the commission, (1) a licensee has an **affirmative duty to broadcast all sides of a controversial issue,** and (2) a licensee has an **obligation to provide some programming that deals with controversial public issues.** The requirement for overall balance in treating controversial issues became known as the **Fairness Doctrine.** Basically, it works like this: if a broadcaster airs a particular view on a controversial issue of public importance, that broadcaster has the duty to afford **reasonable** (not necessarily equal) opportunity for presentation of contrasting views sometime (not necessarily on the same program) in the station's broadcast schedule. The mechanics of achieving a balanced presentation—for example, types of programs, when and how long they run—are up to the licensee. At license renewal time the commission considers a station's program service as a whole, not specific programs, to determine if the balance has been fair.

Section 315 and the Personal Attack and Political Editorial Rules. In 1959, Congress seemed to write Fairness into law. It amended Section 315 of the Communications Act to exclude news-type programming from the equal opportunities requirement. It also added, "Nothing in the foregoing shall be construed as relieving broadcasters . . . from the obligation imposed on them . . . to afford **reasonable opportunity for the discussion of conflicting views on issues of public importance** [emphasis added]."

In 1967, the FCC converted two aspects of Fairness into formal rules: the **Personal Attack** and **Political Editorial** rules.[29] These rules require a station to notify and give reasonable opportunity for reply to (1) an individual who has been attacked during a broadcast discussion of controversial public issues, (2) a political candidate against whom the station has editorialized, and (3)

* See Chapter 3.
† See Chapter 4.

TABLE 14.1
Mechanics of Section 315 and the Fairness Doctrine: A Comparison

	Section 315, Communications Act	*Fairness Doctrine*
Applies to	Candidates. (But the Zapple doctrine extends it to recognized candidate representatives.)	Issues (Controversial, of public importance).
Triggered by	Use (which equals appearance by image or voice).	Discussion by anyone.
Affects	All programming except bona fide newscasts, news interviews, documentaries, and news events covered on-the-spot.	All programming, including news-type programs
Required reply	Equal opportunity.	Reasonable opportunity.
Basis	Law (47 U.S.C. § 315).	(1) An FCC report (*In the Matter of Editorializing by Broadcast Licensees*, 13 FCC 1246) derived from the public interest requirement. (2) Implied by 1959 amendments to Section 315. (3) Personal Attack and Political Editorial Rules in FCC regulations (47 CFR §§ 73.123, 73.300,73.679).
Burden is on	Other candidates to request time within seven days of first candidate's use.	Licensee to seek out representatives to speak on the issue. (Personal Attack and Political Editorial Rules require the licensee to seek out respondents within specified time limits.)
Other requirements	Station may charge candidates no more than lowest unit rate during specified preelection period. Section 312(a)(7) has the effect of requiring the licensee to allow candidates for federal office to use a reasonable amount of time.	Personal Attack and Political Editorial Rules. Licensee should run some programming that discusses controversial issues of public importance.

all candidates running against a candidate who has been endorsed by the station.

The *Red Lion* Case. The U.S. Supreme Court upheld constitutionality of Fairness in the 1969 ***Red Lion* case.** In 1964, WGCB, Red Lion, Pennsylvania broadcast a program in which Reverend Billy James Hargis reviewed the book, *Goldwater—Extremist of the Right,* and attacked its author, Fred J. Cook. Cook asked to reply, the station refused, so Cook complained to the FCC.

Basing its decision on the Fairness Doctrine, the commission ordered WGCB to give Cook reply time. The station appealed on grounds that the Fairness Doctrine was unconstitutional. The District of Columbia Appeals Court ruled against WGCB, and the station appealed to the Supreme Court.

Meanwhile, the FCC had adopted the Personal Attack and Political Editorial rules, the Radio Television News Directors Association (RTNDA) had challenged them in court, and an appeals court in Chicago had ruled them (and thus Fairness) unconstitutional. The FCC appealed the *RTNDA* decision, and the Supreme Court consolidated the two cases as *Red Lion v. FCC.*[30] The court reversed the Chicago judgment and affirmed that of the D.C. court. It ruled that Congress had authorized both application of the Fairness Doctrine and promulgation of the rules, that they enhanced rather than abridged the freedoms of speech and press protected by the First Amendment, and that they were constitutional.

Fairness and Cigarette Commercials. By this time Fairness had begun to spread to advertising. In 1967, John Banzhaf, a young New York lawyer, complained to the FCC that WCBS-TV had refused him time to promote nonsmoking. He had counted and found the station broadcast far more cigarette commercials (i.e., prosmoking messages) than antismoking messages (e.g., news stories and documentaries telling the dangers of smoking). The federal government had recently begun to assert that cigarette smoking could be a health hazard. In the light of these assertions, the commission ruled that cigarette smoking did constitute a controversial issue of public importance and that the Fairness Doctrine applied to cigarette advertising. A station that broadcast cigarette commercials had the duty to inform its audience of the other side of the issue, that however enjoyable, smoking could endanger health.[31] A federal court upheld the commission's decision.[32]

1974 Policy Statement. Both the FCC and the court had attempted to phrase their decisions so as to confine them to cigarette advertising. Nonetheless, the commission began to receive additional Fairness challenges on other commercial advertisements, on recruiting announcements, and on paid editorial announcements. Finally, in 1974 the FCC adopted a policy that specifically dealt with application of the Fairness Doctrine to advertising.[33] The policy says that Fairness definitely applies to **editorial advertising,** which the commission defines as commentary on public issues paid for by the sponsor. **Some institutional and promotional advertising** may contain elements of editorial advertising. If so, Fairness applies. The commission relies primarily on the licensee's judgment in such cases. Fairness applies to regular **product or service advertising** (which includes most commercials) only when it **discusses public issues in an obvious and meaningful way.** In 1977, the U.S. Court of Appeals in Washington affirmed the commission's decision on regular advertising. But it remanded the policy as a whole and told the FCC to reconsider several sug-

gestions (from non-FCC sources) the commission had rejected in drawing up the policy.[34]

WXUR Case. The only station to lose its license for violation of the Fairness Doctrine was **WXUR,** Media, Pennsylvania. Reverend Carl McIntire* bought this radio station in 1965 to bring conservative, fundamentalist religion and his syndicated *Twentieth Century Reformation Hour* to the Philadelphia area. After continued complaints from local citizens, the FCC denied renewal in 1970, based in part on what it saw as the station's failure to comply with the Fairness Doctrine and the Personal Attack Rule.[35] McIntire appealed, and the court upheld the denial. But of the three judges who heard the case, only one affirmed the denial because of the Fairness issue.[36]

Obligation to Deal with Controversial Issues. Most Fairness cases have involved reasonable opportunity to **respond.** But, as mentioned earlier, the Fairness Doctrine also holds that a licensee has an obligation to **provide** some programming that deals with controversial public issues. The commission did not enforce that obligation until 1976. In June of that year, the commission, acting in response to a complaint, informed radio station **WHAR,** serving Clarksburg in the West Virginia strip mining country, that it had failed to adequately cover the controversial issue of strip mining. This violated the Fairness Doctrine, and the station was directed to notify the commission as to how it planned to remedy its failure.[37]

INDECENCY

Section 1464 of the Criminal Code provides fines and prison penalties for anyone who uses "obscene, indecent, or profane language" on the radio waves. The courts had defined obscene (in the *Miller* case) and profane (language that invokes Divine condemnation or contains blasphemous statements,[38] such as, "Damn you" or irreverent use of "By God"). But they did not define **indecent** until 1978.

Most broadcast language that offends through sexual connotation does not meet all three *Miller* tests and thus is not legally obscene.[39] Yet, radio and television—unlike books, magazines, and motion pictures—are directly available in the home, requiring no more positive action than turning a switch. They occupy a large percentage of time for many persons. They easily reach children, as well as adults who are offended by sexually oriented material. The FCC receives more complaints on objectionable language than for any other reason—nearly as many as for all other types of complaints put together![40] Therefore the FCC felt that public interest considerations require it to establish a standard for broadcasting that is stricter than *Miller.* The commission established such a standard in the WBAI case.

* See Chapter 15.

WBAI Case. The case began with a complaint from a man who, with his son, happened to hear Pacifica-owned* **WBAI-FM,** New York, broadcast a George Carlin record album cut that contained several common sexual and scatological slang terms. The FCC ruled the broadcast "indecent" and took the occasion to issue a declaratory ruling to tell what the term meant. The commission said indecent "refers to words that describe sexual or execretory activities and organs in a patently offensive manner." The indecency standard does not include the dominant-appeal-to-prurient-interest test from *Miller.* And only if a program containing indecent material (1) is broadcast late at night when children are unlikely to be in the audience, and the broadcaster (2) has made solid effort to warn adults in advance that the program contains such material—only then will literary, artistic, political, or scientific value redeem it (i.e., make it worthwhile).[41]

In 1977, the U.S. Court of Appeals in Washington overturned the FCC's declaratory ruling.[42] But in 1978, the U.S. Supreme Court reversed the lower court, thereby affirming the FCC's "indecent" standard.[43] Meanwhile, the commission sent a draft bill to Congress that it hoped would clarify the whole issue of objectionable broadcasts. The FCC bill would move the statute dealing with offensive material to the Communications Act, define both "obscene" and "indecent" as they pertain to broadcasting and cable, apply them to conduct as well as language, and delete references to profanity.[44]

First Amendment for Whom?

With so many additional requirements and restrictions, you may wonder whether the First Amendment really applies to broadcasting at all. After all, if these same restrictions were applied to print, they would be considered serious violations of constitutional free speech/free press guarantees. The difference, of course, is the **scarcity factor.** Radio frequencies are a scarce natural resource in the public domain. They are scarce because there is a limited number of them, and a finite number of stations can operate in a given geographical area.† As a result, the FCC and the courts approach the freedom of speech guarantee for broadcasting from quite a different perspective—different from print, different from that of most other media.

Consider, for example, the legal justification for the Fairness Doctrine. We mentioned at the beginning of this chapter that the basic purpose of the First Amendment is to preserve an uninhibited marketplace of ideas; what is important is that you be able to **hear** all points of view. In broadcasting, it would be possible to restrict the marketplace; the few who receive licenses could use the airwaves to present their own views exclusive of all others. Under the ex-

* See Chapter 6.

† See Chapters 10, 11, and 12.

isting system, however, a broadcast license does not include the right to monopolize the frequencies. The station is free to express the licensee's point of view. But, as Justice White wrote in the *Red Lion* decision, "There is nothing in the First Amendment which prevents the Government from requiring a licensee [to act as] a proxy or fiduciary* with obligations to present those views and voices which are representative of [the] community and which would otherwise, by necessity, be barred from the airwaves."[45] Because of the scarcity factor, then, the government puts restrictions on licensees to ensure that the marketplace remains open, to ensure that you have the opportunity to hear these other "views and voices" on radio and television.

Yes, there is a conflict of First Amendment rights here: the right of the licensee to program the station without restriction versus your right to a balanced program service that serves the public interest. But, as Justice White wrote in *Red Lion,* "It is the right of the viewers and listeners, not the right of the broadcasters, which is paramount."[46]

Broadcasters and their allies[47] argue that the scarcity assumption is no longer valid. They point to the fact that the United States has less than 1800 daily newspapers as compared to nearly 10,000 broadcast stations. They also point out that economic realities bar access to newspaper publishing; the cost of starting a new daily would total many millions. Therefore, conclude the broadcasters, the First Amendment should apply to broadcasting as it does to newspapers. Their persuasive arguments have even won over some members of Congress and the judiciary.[48]

At the other end of the spectrum lies the school of thought that—far from removing them from broadcasting—would apply some of these controls to print. Those who subscribe to this idea cite the same argument—the declining number of daily newspapers. But they would use it as partial justification for reinterpretation of the First Amendment to require a **public right of access** to all media.[49] In effect, they would spread the Fairness Doctrine to print.[50]

Disparate as they are, both views seem to derive at least in part from the same mistaken assumption: the meaning of the word "press" in the First Amendment. The constitutional "press" is not a synonym for "daily newspaper" or for "mass media"; it is a clipped form of the term "printing press." And, indeed, the press is still available for use by virtually everyone at extremely low cost. If you have ever duplicated verbal or pictorial matter on an electronic copier, a mimeograph machine, a ditto machine, a hectograph, or some similar device, you have used "the press." Even a printing shop will make hundreds of copies of your typescript on politics, free love, world hunger, or whatever for a few dollars. You, then, distribute the copies via mail, home delivery, street handout, or anyway you want.

There is no equivalent to this "ease of access at low cost" in broadcasting.

* "Proxy" is authority to act for another. A "fiduciary" is a trustee, one to whom another's property or its management is entrusted.

When broadcasting is compared to the press (of which daily newspapers constitute but one use), the scarcity assumption is just as valid as ever. This is not to dispute the validity of broadcaster complaints of regulatory burdens, such as Section 315 and the Fairness Doctrine. No doubt many broadcasters, concerned about possible expenses and legal tangles, have opted to deal with no controversial public issues at all—in which case the Fairness Doctrine defeats its own purpose! And the need for the daily press to serve as an arena for exchange of diverse ideas has long been pointed out by many people. Both groups do, however, risk damaging their arguments when they link scarcity of daily newspapers with the First Amendment.

Notes

1 "Justice Black and First Amendment 'Absolutes': A Public Interview," *New York University Law Review,* 37 (June 1962), 548.
2 *Farmers Educational and Cooperative Union v. WDAY,* 360 U.S. 525 (1959).
3 376 U.S. 254, 279–280 (1964). Boldface added.
4 *Curtis Publishing Co. v. Butts* and *Associated Press v. Walker,* 388 U.S. 130 (1967).
5 *Rosenbloom v. Metromedia, Inc.,* 403 U.S. 29 (1971).
6 *Elmer Gertz v. Robert Welch, Inc.,* 418 U.S. 323 (1974).
7 *Estes v. Texas,* 381 U.S. 532 (1965).
8 249 U.S. 52 (1919). Boldface added.
9 *Near v. Minnesota,* 283 U.S. 697 (1931).
10 *New York Times Co. v. U.S.* and *U.S. v. Washington Post Co.,* 403 U.S. 713, 714 (1971).
11 5 U.S.C. 522.
12 *Branzburg v. Hayes, In the Matter of Paul Pappas,* and *U.S. v. Caldwell,* 408 U.S. 665 (1972).
13 413 U.S. 15 (1973).
14 Pertains to FM stations in communities with 100,000 or more population (25,000 or more effective 1 May 1979). 47 CFR § 73.242.
15 47 CFR §§ 73.71, 73.261, 73.651 (a).
16 47 CFR § 73.1208.
17 47 CFR § 73.1201.
18 Public Law 91–222, 79 Stat. 282, 15 U.S.C.A. 1335 (1969).
19 Public Law 86–677, 74 Stat. 554 (1960).
20 *Aspen Institute Program on Communications . . .*, 55 FCC 2d 697 (1975).
21 *Chisholm v. FCC* and *Democratic National Committee v. FCC,* 588 F. 2d 349 (1976); certiorari denied, 50 L. Ed 2d 173 (1976).
22 47 F. 2d 670 (1931).
23 62 F. 2d 850 (1932).
24 288 U.S. 599 (1933).
25 *Henry v. FCC,* 302 F. 2d 191 (1962); certiorari denied, 371 U.S. 821 (1962).
26 *FCC v. Sanders,* 309 U.S. 470 (1940).
27 47 CFR § 1.526.
28 47 CFR § 1.580(d).
29 47 CFR §§ 73.123, 73.300, 73.598, 73.679.

30 395 U.S. 367 (1969).
31 *Letter from Federal Communications Commission to Television Station WCBS-TV,* 8 FCC 2d 381 (1967).
32 *Banzhaf v. FCC,* 405 F. 2d 1081 (1968); certiorari denied, 396 U.S. 842 (1969). Congress later banned broadcast cigarette advertising completely. See note 18.
33 *Fairness Doctrine and Public Interest Standards,* 39 Fed. Reg. 263372, 26380 (July 18, 1974).
34 *National Citizens Committee for Broadcasting v. FCC,* 41 RR 2d 1311 (1977).
35 *Brandywine Main Line Radio, Inc.,* 24 FCC 2d 18 (1970).
36 *Brandywine Main Line v. FCC,* 473 F. 2d 16 (1972).
37 *Rep. Patsy Mink,* 37 RR 2d 744 (1976).
38 *Duncan v. U.S.,* 48 F. 2d 128 (1931).
39 The commission ruled afternoon radio discussions that included details of oral sex and masturbation were both indecent and obscene. *Apparent Liability of WGLD-FM,* 41 FCC 2d 919 (1973). A citizens group appealed. The Washington D.C. Court of Appeals ruled on the obscenity issue and affirmed the FCC's decision. *Illinois Citizens Committee v. FCC,* 515 F. 2d 397 (1975). This effectively killed the so-called "topless radio" fad that had hit big market radio stations in 1973. On these programs women would call in and describe their sexual experiences.
40 FCC, *40th Annual Report: Fiscal Year 1974* (Washington, D.C.: GPO, 1975), pp. 116–117.
41 *Pacifica Foundation,* 32 RR 1331 (1975).
42 *Pacifica Foundation v. FCC,* 556 F. 2d 9 (1977).
43 *FCC v. Pacifica Foundation,* _____ U.S. _____, 98 S. Ct. 3026 (1978).
44 "FCC Sends Its Message to Congress on Obscenity and Indecency," *Broadcasting,* June 7, 1976, p. 19.
45 395 U.S. 367, 389 (1969).
46 395 U.S. 367, 390 (1969).
47 See for example, "Paley Declares It's Time to End Fairness Threat to News Media," *Broadcasting,* June 3, 1974, p. 32; and "One For All," *Broadcasting,* Oct. 31, 1977, p. 66.
48 See, for example, Chief Judge David Bazelon's dissent in the WXUR case (note 36, above); and "Van Deerlin Wins NRBA Audience with Talk of Total Radio Deregulation," *Broadcasting,* Oct. 17, 1977, p. 26. On introducing his bill to rewrite the Communications Act, Representative Van Deerlin said the proposed act would remove most programming restrictions and requirements from radio "on the well established ground the number of radio stations in the United States is now equal to the number of weekly newspapers and that the scarcity element that existed at the time the 1934 act was written no longer applies." Quoted in "And It Is from the Basement to the Attic," *Broadcasting,* June 12, 1978, p. 29.
49 See, for example, Jerrome A. Barron, "Access to the Press—A New First Amendment Right," *Harvard Law Review,* 80 (June 1967), 1641; and Jerrome A. Barron, "Access—the Only Choice for the Media?" *Texas Law Review,* 48 (March 1970), 766.
50 Media access advocates received a setback in 1974, however. In *Miami Herald v. Tornillo* (94 S. Ct. 2831, 1974), the U.S. Supreme Court ruled unconstitutional a

rarely used Florida law, enacted in 1913, that required newspapers which editorially attacked political candidates to publish the candidates' replies at no charge. The Court ruled that government cannot interfere with editorial judgment in a newspaper.

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ORIGINS AND PURPOSES OF THE FIRST AMENDMENT

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EXCEPTIONS TO FREEDOM OF BROADCASTING

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FIRST AMENDMENT FOR WHOM?

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15

Ethics and Self-Regulation

Broadcasting is a highly competitive business. It can also be very lucrative. Therefore why not bend the rules just a little and get the jump on the competition? Or go ahead and run that questionable advertising for a few extra hundred dollars? Some broadcasters do. Many do not. Why not? Certainly they fear the wrath of the Federal Communications Commission (FCC). But there are two other factors also—factors that both deter misconduct and stimulate performance above the required legal minimum standards. These factors are **ethics** and **self-regulation.** In broadcasting ethics is the individual licensee's personal sense of what is right and what is wrong. Self-regulation is the translation of those ethics into rules of conduct. We mentioned the effect of ethics and self-regulation on programming in Chapter 6. In this chapter we examine these two factors in more detail.

Ethical Considerations

Contrary to the implication of some critics, there is nothing inherently bad about a licensee running a commercial broadcast station to make money. Given a capitalistic economic system such as that of the United States, the earning of a profit is a desirable goal. However, some of the means employed to the end of making money could be considered inherently bad, means that

seem to violate certain obligations or responsibilities. We call such means **unethical.** Means that meet these obligations are **ethical.**

What do we mean by "ethical means," "ethical practices," and "ethical station operation?" The nouns in these terms are easier to define than their common adjective. **Means** are ways to earn a profit. A commercial broadcast licensee operates a station to earn a profit, therefore **operation** of the station is the licensee's means. **Practices** refers to the things a licensee does in operating a station. All three terms are closely related, and thus we shall use them interchangeably to refer to **the things a licensee does in operating a station so as to earn a profit.**

As for "ethical," it would seem logical to employ our definition of "ethics"—the individual licensee's personal sense of what is right and what is wrong. But "right" and "wrong" are relative concepts. For example, in 1973, Rev. Carl McIntire announced plans to open a pirate* radio station on board a ship just outside the (then) three-mile limit off Cape May, New Jersey. Doubtless, this was an act of pure conscience on the part of the minister; the FCC had not renewed the license of his seminary's radio stations,† and Rev. McIntire told reporters he was ready to risk going to jail to broadcast "the message God wants me to preach." Yet while Rev. McIntire may have believed his plan to be the right thing to do (given the circumstances in which he found himself), it is conceivable that the federal government and the licensees with whose station signals the pirate transmitter would interfere would have viewed the pirate station as wrong. Therefore our first definition of "ethics" is not entirely adequate for our present discussion of "ethical."

The dictionary defines "ethical" as "conforming to professional standards of conduct." There are at least two problems with this definition. First, it seems to imply existence of a **profession.** Broadcasting, however, does not fit many of the characteristics generally attributed to a profession. For example, a profession often requires advanced academic training, as in medicine and law; broadcasting does not. A profession stresses service; we have already discovered that commercial broadcasting emphasizes profit, while service is mandated by the FCC. Second, our dictionary definition does not tell us to what or whose standards to conform, beyond that of the vague and probably invalid term "professional."

MORAL OBLIGATIONS

Somehow, then, our definition of "ethical" should include the concepts of (1) effects on other persons and (2) specificity—that is, kinds of acts or things that are ethical. Perhaps we can combine these two concepts by speaking in terms of obligations, duties the broadcaster is bound to perform as a result of moral responsibility. The broadcast licensee would seem to have at least three sets of such obligations—**those of any business; those of a medium of**

* See Chapter 24.

† See WXUR case in Chapter 14.

mass communication, and **those of a proxy or fiduciary who uses the radio frequencies.**

Obligations of a Business. There are laws to protect the individual consumer. There are laws to preserve competition and prevent restraint of trade. But over and above legal and regulatory requirements, there are also moral responsibilities. Businesses are expected to produce good products and services at fair prices. They are expected to contribute toward the betterment of the community in which they do business. They are expected to follow the Golden Rule in dealing with customers and competitors. In short, they are expected to be good neighbors, to do voluntarily more than the law requires, as good neighbors do. And, just as any other business, the broadcast licensee is expected to accept this general responsibility to produce a good product, to contribute to the community, to be an honest competitor, to be a good neighbor.

Obligations of a Medium of Mass Communication. Like a newspaper publisher, the broadcast licensee is subject to laws and judicial decisions involving defamation, invasion of privacy, pornographic material,* false and misleading advertising.† But also like the publisher, the licensee operates an instrument of tremendous potential for contribution to the public weal. As such, the publisher and the licensee have certain obligations to society, corollaries of the **social responsibility theory of mass communication.** According to this theory, the press, which includes broadcasting, is guaranteed freedom by the Constitution and so is obliged to perform certain essential functions of mass communication in modern society. In 1948, the Commission on Freedom of the Press, a University of Chicago project funded by private enterprise and staffed by scholars, suggested five such functions. The media should (1) present a truthful account of the day's news in such way as to give it meaning, (2) serve as a forum for the exchange of ideas, (3) present a representative picture of the various groups that make up society, (4) present and clarify the goals and values of society, and (5) provide full access to the day's intelligence. Over the years national surveys have indicated the public increasingly relies for its news on the broadcast media, particularly television. For this reason, it has become increasingly important for broadcast licensees to meet this second set of obligations and to perform the commission's five functions.

Obligations from Use of Radio Frequencies. Unlike other businesses and media, the broadcast licensee does not own means of distribution, but instead *uses radio frequencies,* natural resources in the public domain. The Communications Act of 1934 and the FCC place certain requirements on the licensee to ensure that the station operates in the public interest. These are minimum re-

* See Chapter 14.

† See Chapter 13.

quirements. The licensee has a positive obligation to regard them as such and to use the station to serve the public interest to the maximum extent possible. Justice Byron R. White, in writing the U.S. Supreme Court's *Red Lion* decision, alluded to this obligation. He noted that only a few persons in each community can be licensed to operate a broadcast station. However, those few who do receive licenses could be required to operate as proxies or fiduciaries.* In making this point, Justice White was explaining the rationale for FCC regulation under the Fairness Doctrine. But the same reasoning applies to extralegal, moral obligations: the licensee has been entrusted with the radio frequencies and, in using them, should act for all the rest of the people in the community who cannot and do not have access to them.

ETHICS OF FULFILLING REQUIREMENTS

The term "ethical" also seems to imply the concept of **voluntary.** No one requires a licensee to operate in an ethical manner; the licensee should do so voluntarily. Even the fulfilling of regulatory requirements could be considered voluntary. The FCC has only about 2130 employees to regulate all interstate common carriers and literally millions of radio transmitters in the various services, to say nothing of nearly 10,000 broadcasting stations in all fifty states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. With this workload, it is impossible for the commission to check the performance of every station. A careful licensee could bend or break a few rules, and no one would ever know.

There are also **degrees** of ethicality in meeting the regulatory minimums. Regulatory requirements can be fulfilled to the best of the licensee's ability, or they can be fulfilled grudgingly, with the least amount of effort possible. Most persons would probably feel the first operation to be the more ethical of the two.

"ETHICAL" DEFINED

Having looked at some of the implications of the term "ethical," let us now attempt to define "ethical practices" as they apply to broadcasting. Ethical practices are **the things a licensee does to operate a commercial broadcast station for profit in such way as to fulfill certain obligations it has as a business, as a medium of mass communication, and as a proxy or fiduciary who uses the radio frequencies.** The licensee **operates this way voluntarily and in response to a personal sense of what should be done, of what is right and what is wrong.**

THE ETHICAL BROADCASTER

It is possible for a licensee to be both ethical and unethical. For example, a station might program so as to serve well its obligations to the community, yet at the same time engage in all manner of unfair business practices. Generally, however, a station is either mostly ethical or mostly unethical.

Size has little to do with ethicality. You might think that a large, suc-

* See Chapter 14.

cessful group-owned station could afford to be more ethical than a mom-and-pop operation. You could also argue that the locally owned small station has to operate ethically since it is so close to and so dependent on its public and its advertisers. But you can find examples of both kinds of stations that do as little as they can for as much as they can get.

An ethical broadcaster does not have to be a hero. But it does take empathy and the milk of human kindness. And strength—when the chips, the ratings, the rates, and the gross are down, when the P & L statement is full of red ink,* or when the competition is hot, it takes a strong will to resist certain unethical practices.

Specifically, what does an ethical broadcaster do that makes the operation ethical? As we said earlier, simply doing what is required could be considered ethical. But some licensees have taken a more positive approach. Some examples: airing the weekly high school speech and drama class program at a decent time rather than ten o'clock Sunday morning; employing a full-time news reporter and stringers when, as the only radio station in town, a rip'n'read operation would do; lending space or equipment to a competitor whose station has been destroyed; mounting an appeal for clothing, shelter, and food for a destitute family; scheduling a hardhitting investigative documentary in spite of opposition from several advertisers; running editorials favoring the side that seems best for the community in a heated local controversy; establishing paid internships to help young people get started in broadcasting; subscribing to the Code of the National Association of Broadcasters, but adhering to higher standards than it requires.

THE UNETHICAL BROADCASTER

Motivations for unethical conduct in broadcasting are the same as in any other field—drive for power, promotion of a cause, desire for prestige. But in most cases the immediate stimulus is much simpler—money. A broadcast station has the potential of being a very lucrative business. When a station loses money, the licensee often continues to operate it in hopes that it will turn the corner and begin to pay off. In the meantime, however, the station has sacrificed ethics to cut costs enough to stay in business. At the other end of the spectrum is the already successful station whose management feels it must squeeze maximum profit from the business. The licensee in this case is often a corporation whose owners are thousands of stockholders. When profits or ratings drop, so do stock prices, and the stockholders suffer. Thus corporate officers run the station as a profit machine, reacting more to financial pressure than to their own taste and sense of responsibility.

Some persons assert that radio and television seem to be particularly vulnerable to the lure of money, and broadcasting is often unfavorably compared to the daily press. At least three factors seem to support this assertion. First,

* P & L is "profit and loss"; see Chapter 18. "Full of red ink" would mean the station is losing money.

time is limited. If a newspaper wishes to make more money, it adds more pages and sells more advertising to fill them. A broadcast station however cannot add more time. To earn more money it must attract a greater audience so that it can charge more for advertising time. And it attracts greater audiences by airing more popular programs, which, because of audience tastes, means programs with little or no serious or worthwhile content.

Second, **broadcasting does not maintain strict separation of content and advertising considerations.** In preparing a daily newspaper, all space not taken by advertising belongs to the editor, and the editor is relatively free to select news, information, and entertainment to fill this "news hole." In broadcasting, most content is selected specifically for the purpose of attracting an audience for advertising. This advertising/content relationship is deeply rooted in the very origins of commercial broadcasting.*

Finally, the **policy makers** in broadcasting **are,** by and large, **sales people.** In newspapers, the editor makes the content decisions, and editors have come up through the content ranks—copy, rewrite, and reporter. In broadcast stations, the manager makes the content decisions, and most station managers have come up through the ranks of broadcast sales. They see their medium as a sales vehicle and so do not hesitate to do whatever is necessary to make their medium attractive to prospective advertisers. With these three factors—limited time, strong content/advertising relationship, and sales orientation of managers—it would be surprising if broadcasting were not more vulnerable to the lure of the dollar than the daily press.

UNETHICAL BUSINESS PRACTICES

For our purposes, unethical practices show up in two main areas of station operation—**business** and **programming.** Unethical business practices include rate cutting, double billing, hypoing, clipping, and blacklisting. In **rate cutting,** a station retains its existing rate card. But if sales personnel cannot sell time at rate card prices, they are allowed to make special deals with clients at lower prices. This practice can set off rate cutting wars involving all stations in a market, and in the end no one benefits.

Double billing is tied to cooperative advertising.† In double billing, the station issues two bills to the local advertiser. One reflects the amount the advertiser actually paid, for example, "50 one-minute spots ROS @ $5.00 = $250." The other shows a higher amount, for example, "50 one-minute spots in class AAA time @ $10.00 = $500." The local advertiser sends the higher bill to the manufacturer and, according to amount involved and terms of the co-op deal, recovers most or all of the expenditure or even makes a little money. Double billing violates section 73.1205 of the FCC rules. [Note in our example that the commercials actually ran ROS (run-of-schedule), but the

* See Chapters 2, 3, and 4.

† See Chapters 8 and 16.

station has written the second bill as though they all ran in the more expensive class AAA* time to justify the higher total. This is one of a number of factors that may be falsified.]

Hypoing—a station's attempt to falsely inflate ratings—is described in Chapter 6 as risky from legal and programming standpoints. It is also unethical. Station advertising rates are based on ratings, so the station that hypos sets itself up to charge advertisers for audience it does not have. At the same time, it gets an unfair, unearned competitive advantage over other stations in the market.

A station that deletes, or superimposes local material over, portions of network programming is **clipping.** The affiliate usually clips off the opening or closing of a program to gain a few more seconds of local time to sell. Clipping is unethical because the station deletes material it has promised to air in its affiliation contract with the network. Clipping may be illegal as well. If the station clips programs, but certifies to the network (for affiliate compensation) that it carried the programming in full, or if the clipped material contains legally required sponsor identification, the licensee may be subject to forfeiture or other FCC sanctions.

A **blacklist** is a list of persons to be refused employment. The broadcasting blacklists of the 1950s are explained in Chapter 4. Broadcasters adhered to them, under pressure from advertisers. In effect, the broadcasters cooperated in a conspiracy to keep large numbers of talented people—people convicted in no court of law—from earning a living. Such a practice is at the least unethical.

PROGRAM PRACTICES UNDER QUESTION

Unethical practices seem to show up most blatantly in the programming area of commercials. One such practice is **deception in production,** often a false demonstration. Two of the most famous false demonstration cases—the sandpaper and Libby-Owens-Ford autoglass cases are discussed in Chapter 13.

The problem of **number of commercials** is also discussed in Chapter 8. The NAB Codes already allow a high percentage of broadcast time for commercials. Yet some stations exceed code limits at every opportunity, running the total per hour as high as possible.

Some stations accept advertising for **borderline products.** These are products that may not be exactly illegal, but a station exhibits questionable ethics in advertising them. Borderline products include quack medicines and nostrums; services of palm readers, fortune tellers, and faith healers; certain religious articles (e.g., "an eight-by-ten glossy photograph suitable for framing of Jesus Christ personally autographed by Leonardo de Vinci"); shady real estate promotions; overpriced and useless gadgets; get-rich-quick schemes; automotive devices that purport to increase horsepower or allow a car to run on

* See Chapter 17.

water. Unethical stations may accept **questionable advertising**—program length commercials* or deceptive advertising (such as bait-and-switch).

Some unethical licensees sell time to **charlatans,** the modern-day Brinkleys, Shulers, and Bakers.† The licensees inquire into the backgrounds and motives of such persons no further than the color of their money. The charlatans buy availabilities, program slots, or even whole blocks of time for resale to others (called **brokerage**). They use the time to get money from the poor, the uneducated, the elderly, the non-English speaking—that is, those who can least afford it. Their schemes are as varied as their methods are nefarious, ranging from religion and politics to real estate.

Closely related are **phony products** and **shady advertisers.** The broadcast commercial describes the phony product in glowing terms, says that it is not sold in stores, cautions that supplies are limited, and urges you to write or call (Operators are standing by!) immediately. Then (1) you get the product and either (a) it does not come anywhere near to the commercial's description or (b) you find the stores flooded with them at half the price two weeks later. Or (2) you send in money and receive nothing; subsequent inquiries are returned to you marked "Moved; left no forwarding address." In this case, you have encountered a shady advertiser. Other shady advertisers include the discount merchant who uses bait-and-switch advertising, the used car dealer who sells primarily to racial minorities and enlisted service personnel for low down payments and usurer's interest rates, and almost any business that promises way more than it can deliver without some catch. No ethical broadcaster knowingly accepts such advertising.

So far our discussion has centered around advertising. But unethical practices show up in other types of programming as well. For example, in Chapter 4 we discussed rigging of big money quiz shows in the 1950s. The rigging supposedly enhanced "entertainment values" which, interpreted, meant "ratings." In Chapter 7 we discussed ethical problems in television news, most of which grew out of the drive for high ratings: emphasis on stories of conflict, that are particularly visual, or that are on film or videotape; staging and deceptive editing of news film; the news doctor consultants.

There is also the question of news bias. Each of us perceives the same thing in different ways, a result of differential learning.‡ One person's objective report is another person's lie. As long as human beings report the news, there will be this kind of bias. Far different is the situation in which a licensee orders news slanted, often for commercial reasons. If the nightly 15-minute local television newscast features a 2½ minute film story on the arrival of a trainload of new pickup trucks at the local Chevrolet dealer, you can bet the car dealer is

* See Chapter 8.
† See Chapter 2.
‡ See Chapter 24.

or soon will be one of the station's big advertising clients. Such practices hardly present a truthful account of the news, serve as a forum for the exchange of ideas, or fulfill any of the other obligations of a medium of mass communication.

Self-Regulation

When ethics are translated into policy, the result is self-regulation. Since each licensee's ethics is reflected in station operation, each station has some sort of self-regulation. Many stations have no formal written policies; new employees must learn station policy by osmosis—posted memos, the grapevine, and the like. Some stations and all the networks have policy books that each new employee must read. These range in size from a couple of double-spaced typewritten pages to large and detailed tomes that attempt to cover every department and every eventuality. Most stations rely on one of the Codes of the National Association of Broadcasters (NAB) as basis for their policy, either formally, as subscribers, or informally, through the codes' general influence on the trade. The codes represent the collective average ethics of the subscribing stations, a set of rules that the licensees agree should serve as minimum ethical standards. This is what most people mean when they use the term "self-regulation." We shall limit our discussion to trade group self-regulation.

NAB CODES

The NAB's codes are the best-known products of broadcasting self-regulation. There are two—the **Radio Code** and the **Television Code.** Both are administered by a semiautonomous division of the NAB, the Code Authority. The NAB president appoints the Code Authority Director, and the Code Authority has offices in Washington, D.C., New York, and Hollywood. Broadcasters on special NAB committees oversee code operation and administration, and the NAB's separate boards of directors for radio and television amend their respective codes. The Code Authority carries on day-to-day operations; consults with and advises stations, networks, production houses, advertising agencies and others on specific problems of Code compliance; issues interpretations and clarifications of Code provisions; enforces provisions of the Code by systematic monitoring of subscribing stations and investigating complaints; maintains liaison with government (Congress, FCC, FTC, Food and Drug Administration, and others) and other trade groups (American Association of Advertising Agencies, Association of National Advertisers, Proprietary Association, etc.); recruits new member stations; and puts out information to members, nonmembers, and the public.

Station licensees and network owners subscribe to the Code, one subscription per station or network (i.e., group owners subscribe separately for each station). A station may subscribe to the code without belonging to the NAB,

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Figure 15-1. Seals of the Television Code and the Radio Code.

and vice versa. Prospective subscribers make application, receive approval, and pay a fee. A code-subscribing station is expected to operate according to standards and rules contained in the code. In return, the station receives the right to say it is a subscriber and to display the code's "Seal of Good Practice," and is eligible for the various consultation and information services of the Code Authority.

A code subscriber that does not conform to the code and comply with code rulings runs the risk of losing membership and the right to display the seal. Advertisers, advertising agencies, and program producers that do not comply with code rulings risk having the Code Authority declare their material unsuitable and not to be aired by code subscribers. A code subscriber may resign from the code voluntarily. On the other hand, involuntary removal of an offending station from code membership is complex, involving hearings and appeals.

The two codes have parallel structures. The first section contains a general statement that points out the important role broadcasting plays in American society and the responsibilities inherent in that role. In the Television Code, this first section is the "Preamble"; the first section of the Radio Code contains both a "Preamble" and "The Radio Broadcaster's Creed."

The main body of the two codes contains the standards. These are divided into "Program Standards" and "Advertising Standards." Both are a mixture of positive statements of general principles and negative statements of specific things that should not be done. For example, in one spot the Television Code states that programming should "reflect the influence of the established institutions that shape our values and culture," as well as "the dynamics of social change which bear upon our lives." Yet, in another spot, the Television Code specifies that in commercials for nonprescription health-related goods and

services, laboratory settings may be used, "provided they bear a direct relationship to bonafide research which has been conducted for the product or service," and that laboratory technicians are identified as such and do not "speak on behalf of the product." The standards sections of the Television Code are longer, are more detailed, and contain more shall-nots and should-nots than those of the Radio Code.

The final section of each code is "Regulations and Procedures." This section spells out the administrative structure and operation of the codes. The Television Code has an additional section, "Interpretations," between the standards and the regulations. These interpretations amplify certain standards or explain how they apply in specific situations. For example, the advertising standard that cautions beer and wine commercials are acceptable "only when presented in the best of good taste and discretion" is interpreted to mean "avoid any representation of on-camera drinking."

The codes have been criticized for their **pickiness and specificity.** Such detail, goes the argument, is an open invitation to work around the codes, to observe the letter, but not the spirit of the standards. Another criticism involves their **voluntary nature.** No station has to subscribe, and the codes are not law, so there are a number of stations that do not observe code standards. A third criticism is that the **public does not know what the code and the seal are or do.** If a station does not conform to code standards and is suspended from subscription, losing the right to display the seal, it makes little difference to the listening and viewing public. Therefore suspension has little meaning as an enforcement tool. Further, a subscribing station can drop out of the code, run a series of money-making commercials for products proscribed by code standards, then, after the contract has run out, rejoin the code. No one is the wiser.

The codes are criticized as **defensive and reactive.** The codes, it is contended, are primarily defense mechanisms, devices that the trade can point to in order to forestall government regulation. The codes are changed or tightened when government or public ire is aroused and loosened in those areas where there will be little protest. Indeed, the history of the codes seems to bear this out. The first Radio Code was written in 1929 and then rewritten and strengthened in 1935, 1939, and 1946, corresponding with passage of the Communications Act of 1934, FCC hearings on network operations, and publication of the blue book.* The Television Code, first written in 1951, combined language from the Radio Code and the Motion Picture Code. The result was mainly a compilation of things stations should not do. By 1978 the Television Code had gone through nineteen editions. Revisions came in the wake of congressional or FCC concern over payola and quiz scandals, cigarette advertising, children's programming, and family viewing.† Such reactive

* See Chapter 3.

† See Chapter 6.

measures seem to defeat one main purpose of the codes—to show trade self-regulation is adequate, and government regulation is not needed. If self-regulation is adequate, ask the critics, why did it take government concern to force these revisions?

Defenders of the codes argue that, in spite of their voluntary nature, the **codes do have an overall effect on programming and advertising standards.** The codes are agreements on what is right and proper, standards against which all stations may be measured, and thus influences on the programming of all stations. If there has been a **movement toward growth of a professional spirit** in broadcasting, it has been **best reflected in the Codes**—growth of Code operations (addition of full-time staff and enforcement procedures); changes in code content to reflect genuine concern with the public interest; increased publicity given Code Authority activities and actions; and increased awareness of necessity for self-regulation at all levels of the trade. Finally, the codes act as a **shield against intrusion by government.** And, goes the argument, according to strict libertarian interpretation of First Amendment theory, the less government interference into public communication, the better off we are.

OTHER VEHICLES FOR SELF-REGULATION

Each of the three national commercial television **networks** has its own **broadcast standards department.** Staff editors review thousands of commercials and programs each year to ensure that they meet both requirements of the NAB Code and network standards. If they find problems—taste, deception, or whatever—they suggest deletions or changes, request substantiation, or refer to outside experts for an opinion. They may check at all stages of production, from script to release print, and request changes at any or all points along the way. Even outside organizations check with network standards departments in advance. Advertising agencies, for example, ask for review of commercials that will run on the network, starting with storyboard or script. Until a commercial meets a network's standards, that network will not broadcast it.

The **National Advertising Review Board** (NARB) acts on complaints concerning advertising. Although NARB is concerned with national advertising in all media, a substantial number of cases have involved television commercials. The NARB was formed in 1971 through efforts of the American Advertising Federation (AAF), the American Association of Advertising Agencies (AAAA), the Association of National Advertisers (ANA)*, and the Council of Better Business Bureaus (CBBB). The NARB consists of a chairperson, 30 members representing advertisers, ten representing agencies, and ten representing the public. At the same time the NARB was organized, the CBBB formed a National Advertising Division (NAD) to screen complaints and monitor national advertising.

Complaints about a firm's advertising—from individuals, groups, NAD

* See Chapter 16.

monitoring activities, or even from another advertiser—go to the NAD. If the matter is not resolved at that level, it goes before the NARB. The final decision of the NARB is sent to the advertiser and made public. If the decision goes against the firm, the firm is expected to modify or withdraw the advertising under question, otherwise the NARB chairperson informs the appropriate government agency. NARB is primarily **corrective** (after-the-fact) as opposed to the NAB Codes, which are **preventive** (before-it-can-happen). Like the NAB Codes, the NARB was formed primarily to forestall government regulation.

A somewhat parallel group was organized for news in 1973, the **National News Council** (NNC). A Twentieth Century Fund task force published a report in late 1972, urging establishment of an independent and private national news council. "The core of the media council idea," said the report, was to avoid government involvement "in the evaluation of press practices." The NNC began operations the following August. Eighteen persons sit on the Council—ten representing the general public and eight representing the media. Funds come from a variety of private, research, media, and industrial foundations.

Any person or organization, including the Council's own Executive Director, may make a complaint to the Council about accuracy and fairness of news reports. (The Council also deals with complaints by media personnel against parties alleged to be restricting freedom of a national news organization to gather and disseminate news.) The Council transmits to all parties and makes public its actions and decisions.

We discuss the NNC here because it seems the most logical place. However, the NNC is really not self-regulation. Like the NARB, the NNC is a corrective, nongovernmental regulatory body, set up to forestall government involvement. But unlike the NARB, the NNC was not set up by practitioners to police itself. In fact, the national news media tend to resent any kind of watchdog agency, some contending that the agency infringes on the very First Amendment it seeks to protect, that the media should handle any corrective functions themselves, or that there is no need for any such agency in the first place.

Some other self-regulation efforts that affect broadcasting include those of **major advertising and trade groups** and of **organizations of individuals** who work in broadcasting. The AAF, the AAAA, and the ANA have all adopted "The Advertising Code of American Business." The National Better Business Bureau has a "Fair Practice Code for Advertising and Selling." The Proprietary Association, trade organization of over-the-counter drug manufacturers, has its own code that covers advertising. The Radio Television News Directors Association (RTNDA), an individual membership organization for broadcast news personnel, has a "Code of Broadcast News Ethics" that describes, in positive terms, what broadcasters should be and do. Many broadcast news people belong to the Society of Professional Journalists, Sigma Delta Chi (SDX); this group also has a code of ethics.

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(Numbers in parentheses refer to chapter bibliographies containing full citations.)

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SELF-REGULATION

The NAB Code Authority, 477 Madison Ave., Suite 1405, New York, N.Y. 10022, publishes *The Television Code* (8), *The Radio Code* (8), *Code News* (a monthly bulletin for Code subscribers that describes recent actions by and developments in the Code Authority), and *Self-Regulation, A Working Manual of the National Association of Broadcasters Code Authority* (a loose-leaf service for subscribers that explains interpretations for Code standards). See also Bruce Linton's analysis of the Codes in *Self-Regulation in Broadcasting* (Washington, D.C.: NAB, 1967). Chapter 17 of Heighton and Cunningham, *Advertising in the Broadcast Media* (8), examines self-regulation, including network standards departments, NAB Codes, and the National Advertising Review Board. The Twentieth Century Fund Task Force Report for a National News Council is *A Free and Responsive Press* (New York: Twentieth Century Fund, 1973). The National News Council's first report of complaints handled and actions taken, August 1, 1973 through 31 July 1975, is published as *In the Public Interest* (New York: NNC, 1975). See also, the mimeographed "Report of the Committee to Evaluate the National News Council" (New York: the Committee, 1976).

Five

Economic Perspective

> They say money isn't everything. Well, I know. I've been rich and I've been poor. Believe me, rich is better.
>
> —*Old vaudeville gag*

In broadcasting, rich is not only better, it is quintessential. This unit describes how broadcasting makes its money . . . and, if you are interested, how you can get in on the action.

16 Sales and Advertising

In commercial broadcasting, advertising revenues are vital. Advertising underwrites programming, supports broadcast operations, and generates profits which, in the final analysis, is the whole point of running a commercial station or network. It is no wonder that broadcast managers come from the ranks of sales.

In this chapter, we begin with a discussion of advertising in general. Next, we look at advertisers and advertising agencies. Then we focus on broadcast advertising and examine station time sales, national advertising representatives, and network time sales. We end with noncommercial broadcasting sales—audience memberships and subscriptions, program grants and underwriting, and auctions.

Advertising

The dictionary tells us **advertising** is a noun meaning "the business of preparing and issuing public notices or announcements, usually paid for, as of things for sale, needs, etc." Hiebert, Ungurait, and Bohn* tell us that an advertising message has four characteristics: (1) an advertiser pays money to a medium

* See bibliography.

(2) to transmit a message (3) that identifies the goods or services or the advertiser (4) and is directed toward a large number of potential buyers. There are two types of advertising: institutional and product. **Institutional advertising** attempts to have the public think of the advertiser in a certain positive way. **Product advertising,** the type we see the most, attempts to sell a specific commodity—goods, services, a political candidate—by creating a new market or by winning a bigger share or increasing the size of an existing market.

In early Greece and Rome, merchants used signboards above the doors to their shops and town criers to attract customers. Advertising could not advance much beyond this primitive state, however, until development of mass media. The first advertising agency in the United States was organized about 1841, just as the daily newspaper was developing into a mass medium. At first, agencies served as space brokers or publishers' representatives, contracting for space in various publications then selling it to advertisers at higher prices. In the 1870s, the emphasis began to shift; agencies began to buy space for advertisers, rather than selling it for publishers. As time passed, agencies added client services—creative planning, design, copywriting, research and analysis. As metropolitan dailies built circulations and general interest magazines became popular, advertising continued to develop.

During the first two decades of the twentieth century, industry and business expanded and changed. Mass production called for mass advertising. The decade of the 1920s became the decade of the salesperson. The advertising trade flourished as it never had before: copytesting, study and use of psychological appeals, plans for integrated campaigns, maturity of the advertising agency, addition of broadcasting as a medium. The advertising trade boomed again after World War II, as new products and television hit the market. Advertising expenditures increased about 400 percent during the 1950s and 1960s.

Presently, U.S. advertising expenditures total about $38 billion per year. The advertising trade—the people who spend this money and produce the advertisements—consists of advertisers, advertising agencies, specialty firms (e.g., research companies, media buying services, so-called "modular" or "boutique" agencies), national sales representatives, and the media. **Major advertising media** include newspapers, television, radio, magazines, direct mail, and outdoor (billboards and rental signs). **Minor media** include such vehicles as car cards, matchbook covers, skywriting, subway posters, and giveaways (pencils, pens, etc.)

Advertisers, agencies, and media have formed a number of trade organizations. For our purposes, the most important are the **American Advertising Federation** (AAF), the **American Association of Advertising Agencies** (AAAA), the **Association of National Advertisers** (ANA), and the **National Association of Broadcasters** (NAB). The AAF represents all segments of the advertising industry—advertisers, media, agencies, advertising service companies, various media and advertising associations, and local advertising

TABLE 16.1
Estimated Annual U.S. Advertising Expenditures 1977 in Millions of Dollars

Newspapers	11,070
Magazines	2,165
Farm Publications	100
Television	
Total	7,630
Network	3,455
Spot	2,260
Local	1,915
Radio	
Total	2,595
Network	120
Spot	580
Local	1,895
Direct Mail	5,340
Business Papers	1,180
Outdoor	420
Miscellaneous	7,490
Total	
National	21,100
Local	16,890
GRAND TOTAL	37,990

SOURCE: McCann-Erickson, *1978-79 Media Planning and Buying Guide* New York: McCann-Erickson, 1977). Used by permission.

clubs. When a single voice must speak for advertising as a whole—to Congress, the Federal Trade Commission or whatever—the AAF usually provides that voice.

The ANA consists of more than 400 major companies that advertise products and services on a national basis. The ANA provides informational, educational, and representational services for its members. It also works with other trade groups and the actors' unions to negotiate union contracts for talent in broadcast commercial production.

The AAAA and the NAB* are the trade associations of advertising agencies and commercial broadcasting, respectively. The ANA, the AAAA, and the AAF all helped organize and support the National Advertising Review

* See Chapter 18.

Board (NARB).* And the AAAA and the ANA founded the Advertising Research Foundation, Incorporated (ARF), in 1936 to encourage research in advertising. Presently, the NAB also belongs to ARF, along with more than 300 advertiser, agency, media, research, association, academic, and international member organizations and institutions.

Advertising subsidizes (pays for the cost of) many of the media outlets in the United States. Advertising takes up about 60 percent of newspaper and magazine space, yet generates well over 75 percent of their revenues. Advertising supports commercial television and radio almost entirely. Only records, books, and movies receive total support from the audience. Look carefully, however, and you will see that in some cases advertising has come to these media in the form of promotional material for their own products and book inserts and film trailers for other companies' goods and services. (In 1977, some motion picture theaters began to accept national advertising and ran specially prepared commercials for their national clients.)

PROS AND CONS

In Chapter 8 we described criticisms of broadcast commercials. Critics also complain about advertising in general. Agee, Ault, and Emery† have listed some of the more common complaints and the replies by advertising's apologists. Concerning content, critics complain that advertising induces us to buy things we cannot afford, appeals primarily to emotions (rather than to intellect), is biased, makes conflicting claims about competitive products (Have you ever seen a soap advertised as second best?), is repetitious, annoying, and forced on people. Some economists charge that advertising is wasteful, unnecessary, and adds to the cost of advertised products. Social critics charge that advertising manipulates our lives, molds us, and makes us believe that consumption is a major goal of life, irrespective of social consequences. They say advertising emphasizes private and political interests at the expense of human and social interests. Critics contend advertising monopolizes consumer information, depriving the public of the diversity of opinion needed for informed choices. Many persons believe that advertisers, agencies, and media have no ethics; the advertising trade uses any means, no matter how unscrupulous, and tells any story, no matter how untrue, to get us to buy products, no matter how shoddy or dangerous. Broadcast advertising, particularly television, receives special attention from critics for loudness, frequency, clutter, and other complaints discussed in Chapter 8.

In reply, defenders say that advertising does not coerce, that we as individual consumers must exercise sound judgment in the marketplace, that advertising appeals to emotions because we are motivated largely by emotional drives, that advertising is out in the open (unlike some forms of propaganda which are hidden), and that repetition is needed to reach those not reached

* See Chapter 15.

† See bibliography.

TABLE 16.2
Annual Advertising "Tax" Paid by Consumers for Commercial Television*

Item	"Tax"	% of Total "Tax"($53)	% of Total Income ($5,000)
Cosmetics and toiletries	$12.00	22.6%	.24%
Potent medicines and drugs	10.00	18.9	.20
Car	10.00	18.9	.20
Food	6.00	11.3	.12
Cigarettes[a]	5.00	9.4	.10
Gasoline, oil, tires	3.00	5.7	.06
Soaps and detergents	3.00	5.7	.06
Other	4.00	7.6	.08
Total	$53.00	100.0[b]	1.06

SOURCE: Harry J. Skornio, *Television and Society* (New York: McGraw-Hill, 1965), p. 96. Used by permission.
* Advertisers pass the cost of the advertising on to consumers. How much extra do you pay for products advertised on television? This estimate, based on a family with a yearly disposable income of $5000, was published in 1965, thus inflation alone would have raised the total considerably by now.
[a] No longer advertised on television.
[b] Total may not add up exactly to 100.0 percent because figures are rounded out.

previously. Advertising, assert its defenders, actually serves a desirable social purpose. Our economy is based on fast turnover of merchandise. Advertising "provides selective buying information, assures us of uniform quality, saves us time in shopping, helps to lower prices through mass production and mass selling techniques, improves our standard of living by educating us concerning new products, serves cultural and intellectual ends, as well as those of a purely material nature, and enables us to enjoy the mass media at small expense."[2] The advertising trade contends that only a few advertisers use poor taste and unethical practices; all advertising should not have to share the blame of the few. The trade points to rising standards and self-regulation efforts.

Critics and defenders aside, what do we, the public, think of advertising? Generally, we do not overwhelmingly dislike advertising; in fact, we feel it is "essential." In a 1974 study of public attitudes conducted by the AAAA,* 37 percent of those sampled said they were either completely or mostly favorable to advertising, while only 21 percent were completely or mostly unfavorable. About 40 percent reported their attitudes as only slightly favorable or unfavorable. And 88 percent rated advertising as essential.

On the other hand, majorities of the sample felt most advertising insults the intelligence of the average consumer, does not present a true picture of the product advertised, and does not result in lower prices. The public also

* See bibliography.

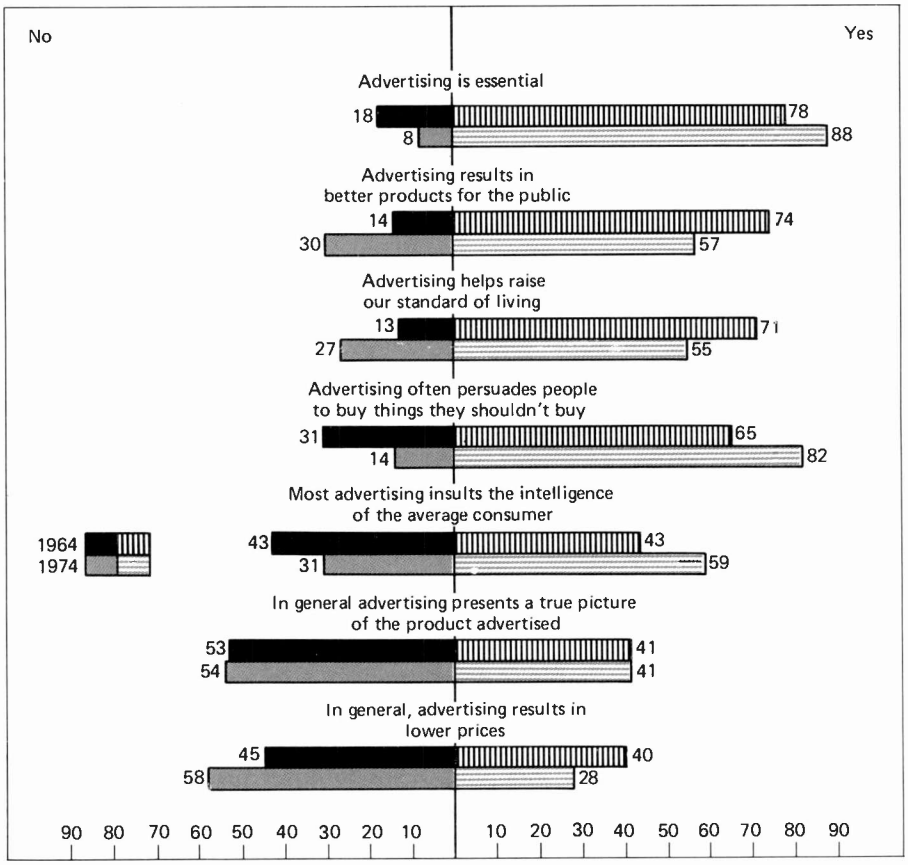

Figure 16-1. Opinions about Advertising. This illustration shows the responses that a national sample of adults gave to seven questions concerning advertising in two different years.

SOURCE: Rena Bartos and Theodore F. Dunn, *Advertising and Consumers: New Perspectives* (New York: American Association of Advertising Agencies, 1975), p. 43. Used by permission.

seemed to have become more skeptical over the years. Compared to a similar study ten years before, percentages decreased of those who felt advertising results in better products, helps raise the living standard, and results in lower prices. Percentages increased of those who felt advertising insults the intelligence and persuades people to buy things they should not.

The respondents' overall attitudes toward advertising seemed most influenced by how informative, credible, and entertaining they perceived it to be. Interestingly, the sample disliked direct mail advertising most. Out of five named media, radio and television were right in the middle, and more people liked than disliked broadcast advertising.

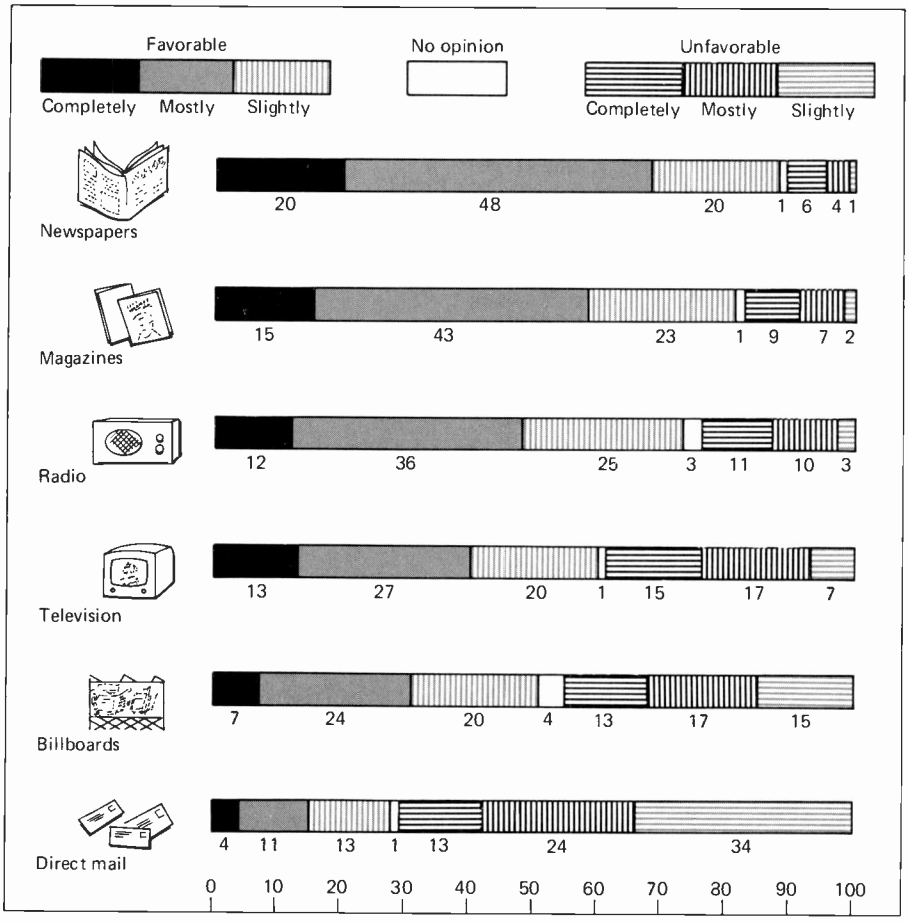

Figure 16-2. How People Feel about Advertising They See in Each Medium.

SOURCE: Rena Bartos and Theodore F. Dunn, *Advertisers and Consumers: New Perspectives* (New York: American Association of Advertising Agencies, 1975), p. 37. Used by permission.

Advertisers and Agencies

We can classify advertisers into three categories, based on marketing interest or scope: local, regional, and national. A **local advertiser** serves one community and aims advertising messages at the citizens of that community. For example, an automobile dealer's business comes primarily from the town in which the dealership is located; the dealer advertises in local media only, to reach local people only. A **regional advertiser** sells goods and services in more than one community, but not on a national basis. A regional brewery, for example, advertises beer only in the three states in which it is available. A **na-**

TOP 10 TELEVISION ADVERTISERS-1977

	Total TV	Spot TV	Network TV
1. Procter & Gamble	$349,875,900	$114,624,600	$235,251,300
2. General Foods	215,071,200	71,758,400	143,312,800
3. American Home Products	143,676,900	35,248,200	108,428,700
4 Bristol-Myers	133,366,400	18,940,800	114,425,600
5 General Mills	126,345,600	44,198,000	82,147,600
6 General Motors	117,412,900	26,713,400	90,699,500
7. Lever Brothers	104,344 700	35,926,400	68,418,300
8. Sears Roebuck	102,298,900	22,072,000	80,226,900
9. McDonald's	95,683,500	58,334,900	37,353,600
10 Ford Motor	84,119,000	28,033,600	66,085,400
Total	1,492,200,000	456,850,300	1,026,399,700

Figure 16-3. Top 10 National Advertisers—1977.

SOURCE: Television Bureau of Advertising, based on information supplied by Broadcast Advertiser Reports. Used by permission.

tional advertiser distributes products nationally and thus advertises all over the country, for example, an automobile manufacturer or a nationally distributed beer. National advertisers often spend huge sums of money to peddle their products. In 1977, Procter & Gamble alone spent well over one-third of a billion dollars just in television to advertise its various brands.

Many advertisers, particularly local advertisers, deal directly with the media. In some cases the medium prepares some or all advertising. For example, the hardware store owner buys a number of spots on the local radio station and tells the salesperson what to advertise; station copy and production people then write and produce commercials for the store. In some cases the local advertiser is large enough to have its own advertising specialists. Large department stores often have in-house advertising departments to plan campaigns, prepare newspaper layouts, write broadcast commercials, and buy space and time.

ADVERTISING AGENCIES

Most large advertisers hire advertising agencies, firms that specialize in creation and placement of advertising. Actually, any size advertiser may use an agency, from a local restaurant to a national multiproduct corporation. Just as there are local, regional, and national advertisers, so there are local, regional, and national advertising agencies.

The basic products of an advertising agency are creativity (the ideas around which a campaign is built), research and planning (how best to get those ideas across in terms of specific media), supervision (of production of materials and their use by media), and media selection and buying. (See Chapter 8 for an extended illustration of the role an advertising agency plays

in creating and mounting a campaign and working with client and media.) Oddly enough, most of these services come free to the client advertiser. When advertising has been placed in the media, the advertiser pays the agency for the media space and time based on the media's full rate card prices. The agency, in turn, pays the media full rate card prices minus a 15 percent commission. If a broadcast station charges $1000, the agency collects $1000 from the advertiser and pays the station $750. So in effect, the media pay for these basic services.

Agencies earn an average of about 75 percent of their incomes from media commissions. Clients pay the other 25 percent for materials and services used in preparing advertising (e.g., typography, filmed or taped commercials, printing, subcontracted artwork and photography, etc.). Some agencies have dropped the commission system and operate entirely on a fee basis. A 1976 ANA survey showed that one out of three advertisers uses some form of fee arrangement.[3]

In addition to independent, full-service agencies, there are two other types of advertising agencies. When an advertiser establishes its own agency, it is called a **house agency.** The advertiser may run a house agency in an attempt to save the 15 percent commission or to acquire better advertising. A **modular** or **boutique agency** sells each of its services separately. The client buys only the specific service needed—creative, media planning and buying, research, public relations—and usually pays on a fee basis.

During the mid-1960s, yet another trade specialist appeared, the **media buying service.** These organizations specialize in buying broadcast time, attempting to drive better bargains for their clients than agency media buyers. One of the largest, U.S. Media-International (U.S. M-I), went out of business in 1971, leaving many stations unpaid. After U.S. M-I's demise, the trend toward use of media buyers seemed to slow. A number of such organizations are still in business and doing well, however, providing a useful, specialized service.

TARGET AUDIENCES

Most advertisers do not wish to reach all people. Instead, they want to reach all those who might be interested in buying their goods and services. These people are the **target audience.** The job of advertising research is to identify and suggest means to reach the target audience: to describe its characteristics, to specify media that will best reach it, and to delineate appeals or approaches to persuade it to buy.

Crucial to identifying and reaching the target audience are the concepts of market, demographics, CPM, and efficiency. The term **market** refers to specific cities and surrounding areas in which a product is sold. That regional brewery, for example, is interested in reaching only the ten markets within the three states where its beer is sold.

Market also means prospective buyers for the product—who and where they are. This is where demographics come in. Demography is the statistical

study of populations—how many persons there are in various age brackets, of each sex, who earn annual incomes of various stated amounts, who have completed specific amounts of schooling, and so on. These breakdowns of population by age, sex, income, education, and other characteristics are called **demographic breakdowns** or simply **demographics.** Research can establish that a certain type of product should appeal to individuals who have certain characteristics. The advertising researcher studies demographics to determine which markets or regions contain great numbers or high percentages of persons with characteristics to whom the product should appeal. Those are the areas in which the product will be marketed and promoted most heavily.

The researcher also studies audience demographics of various media outlets. If the product is aimed at married women and distributed nationally, the advertiser would most logically want to advertise on a national medium with a high percentage of women in the audience, such as women's magazines or daytime network television. If the product is a farm tractor, the advertiser could best reach the target audience by advertising in geographic areas and media that have high percentages of farmers. The tractor manufacturer would probably spot (selectively buy) commercials in agricultural regions and on broadcast stations and programs to which farmers attend, and buy advertising space in farm and agriculture specialty publications.

Advertisers compare costs of media outlets by computing how much they would pay to reach 1000 persons. This is called **CPM,** cost per thousand (M stands for *mille,* Latin for thousand). For example, a radio station may use a contemporary music format to gain top ratings and charge $27.50 as its base rate for a one-minute availability. Another station may program country and western (C&W) music and charge only $18. The C&W station seems less expensive. But the contemporary station reaches 5000 persons, whereas the C&W station reaches only 3000. The contemporary station's CPM is $5.50 ($27.50/5 = $5.50) while that of the C&W station is $6.00 ($18/3 = $6.00), so that the contemporary station is actually less expensive.

The lowest CPM is not always best, however. If the farm tractor manufacturer were to advertise on the contemporary station, the audience might contain a high percentage of persons who have no interest in buying tractors. This is **waste circulation.** On the other hand, the C&W station's audience might contain high percentages of potential tractor buyers. In this case, the tractor manufacturer would find the C&W station more efficient—less waste circulation and actually a lower CPM (based on target audience).

CPM is difficult to use across media, however. The "M" represents different things in different media. In radio it usually stands for thousands of persons reached. In television it can mean thousands of persons or households. In newspapers and magazines it is based on number of copies sold; but two or more persons often read one copy, so the M is no indication of the number actually exposed to an advertisement.

Station Time Sales

At the local level, the broadcast station must sell itself as an advertising medium to merchants, businesses, and advertising agencies in its community. This is the job of the station sales staff.

STATION SALES STAFF

The **sales manager** is a key figure in the broadcast station. Usually a major executive answering directly to the general manager, the sales manager supervises the local sales staff and maintains liaison with the station's sales representative firm (in larger stations there may be assistants for each of these functions). The sales manager may also supervise traffic, promotion, and publicity areas, often considered necessary adjuncts to the process of selling.

It is the task of the **local sales staff** to go to advertisers in the community and to convince them to buy advertising time on the station—sometimes **sponsorship** of a program, more often **availabilities,** small segments (sixty seconds or less) of broadcast time in which commercial announcements are run. Before they buy time on the station, advertisers are **prospects;** afterwards, **clients.** The salesperson's job does not end when a client signs a sales contract. The salesperson oversees station handling of the client's advertising and periodically checks back with the client to improve the schedule and insure satisfaction. This sales-plus-follow through is called **servicing the account,** and most stations call their sales personnel **account executives.**

The sales manager usually meets with station sales personnel no less than once a week—once a day is not unusual—to exchange ideas and monitor activities. In these meetings the sales manager points out potential clients, listens to problems and suggests solutions, explains policy and intrastation mechanics (contract procedures, forms to be completed, production deadlines, availability lists, and the like), describes the station's competitive position among other media in the area, and encourages greater sales efforts. The sales manager may also meet and work with individual sales staffers and even accompany them on some of their sales calls, where more experience and ability to bargain is needed.

The station pays the sales manager a salary and usually a percentage of total station sales. There are a number of compensation arrangements for sales personnel, all involving a commission (a percentage of individual sales)—straight commission, salary plus commission, and draw (in which the salesperson is paid a regular salary but must sell a specific minimum dollar amount of advertising) plus commission. The sales manager assigns each salesperson a quota, a minimum amount of money the salesperson has to bring in. The sales manager assigns a client list to a new salesperson, but the salesperson is expected to expand the list, adding new clients or persuading old ones to buy more advertising.

TOOLS FOR SELLING

A good broadcast salesperson makes maximum use of available tools and resources. One such resource is the station **traffic department.** The salesperson depends on the traffic department for timely, correct information on availabilities and scheduling, to **protect** each client's advertising by scheduling it at least ten to 15 minutes away from that of any direct competitor, and by getting a client's commercials on the air at the times specified in the contract.

A second vital tool for selling is the **rate card.** The salesperson must know the station rate card backward and forward, ready to suggest whatever combination of availabilities, discounts, and scheduling will best meet the client's advertising needs and budget.

A third tool is station **ratings.** The salesperson has to understand ratings thoroughly—their meaning, their limitations, and, most importantly, their demographic breakdown. Only one station in town can have the largest audience. But other stations may have the largest audience at certain key times of the day, or the largest number of women 18 to 35 years of age, or the largest black audience, or some other salable feature. It is up to the salesperson to know the audience and to show the prospect how the station is a must-buy in reaching potential customers or is a more efficient buy than competing stations (e.g., the C&W station and the tractor manufacturer in the previous section).

A fourth tool is **knowledge of the station and the market.** The salesperson must know coverage; production capabilities; who buys what, and where they shop for it; strengths and weaknesses of rival media; and so forth.

A fifth tool is the help of two organizations: **Radio Advertising Bureau** (RAB) and **Television Bureau of Advertising** (TvB). Both supply member stations with direct sales aids—sales ideas, case histories, examples of particularly effective commercials, statistical reports on the dimensions of their respective media. RAB and TvB also conduct meetings and seminars to update and improve skills of member stations' local sales personnel. They work with major advertisers and agencies, selling them on their respective media.

ART OF BROADCAST SALES

One of the most creative jobs in the broadcast station is sales. It is an art. True, there are station sales personnel whose primary approach is to wander in to a prospect's place of business and ask "Wanna buy some time today?" But these people are rarely successful and rarely stay in station sales or stay long at any one station. A good broadcast salesperson sells not time, but (1) **radio or television advertising** (2) on a **particular station.** The salesperson must match the station's capabilities and resources to the prospect's advertising needs, then demonstrate that match to the prospect.

Quite often, at the local level the salesperson will have to start from scratch, educating the retailer on the value—perhaps even the existence!—of local radio or television advertising. If the retailer has advertised at all, it has probably been in the local newspaper. Newspaper advertising is something tangible, something the retailer can hold and read and post copies of all over

the establishment. Broadcast advertising is ephemeral and has no proofs and tear sheets the retailer can hold and admire. The salesperson must expand the retailer's view of advertising, educate the retailer away from any print-only, tangible-copy orientation.

The education process must often include *how* to use broadcast advertising. For example, Thursday newspapers usually contain supermarket advertising. Each ad lists dozens of items and prices. The homemaker can browse through the newspaper food section to see which store has the best prices. Some supermarkets expect radio and television advertising to do the same thing; some supermarket managers even hand tear sheets of their newspaper ads to station salespersons and expect the stations to make broadcast versions of them. But consumers cannot browse through broadcast commercials, and such advertising is largely ineffective. It is up to the salesperson to convince the manager to use commercials to advertise one thing—everyday low prices, a special sale, some service the store offers, the overall fine quality of the store's meat, or the ease and convenience of shopping at the store.

The salesperson's formal proposal to a prospect is called a **presentation.** Considerable preparation goes into this presentation. Before beginning to assemble the presentation, the salesperson visits and gets to know the prospect. They discuss marketing and advertising aims and problems, but no attempt is made to sell time. The salesperson researches the prospect's business—takes note of best-selling lines and features, observes types of customers, and tracks patterns of sales and advertising. Using this research and the various selling tools available, the salesperson puts together a package of plans and materials to show how advertising on the station would help achieve goals and reach consumers. This is the presentation.

The presentation is often in the form of a specially prepared booklet. It may contain specific suggestions of how often and when to advertise on the station, recommendations on how to tie station advertising in with other advertising (even to the point of suggesting additional advertising on other stations or in other media!), cost breakdowns, sample scripts, success stories of similar businesses that have used the station, and standard station promotional material adapted to fit the particular prospect (e.g., coverage maps and ratings data showing how the station reaches the prospect's customers). The salesperson talks through the booklet with the prospect, perhaps even accompanying it with audiovisual materials—a cassette tape of a sample radio commercial, or a storyboard or slides of a proposed television commercial.

Chances are, the sale will not be closed at this point. The salesperson may have to return several times, work with the retailer in revising the plan, ask the sales manager to come along on a call, or even bring the prospect to the station for a tour and red carpet treatment.

Once the contract has been signed, the salesperson must service the account. A broadcast salesperson sells a service, and it is the client who gets that service who tends to remain a client.

National Advertising Representative

Based on FCC data, national and regional spot advertising account for more than 20 percent of all radio station revenue and more than 50 percent of all television station revenue. The question is: how does a station get spot business? Ideally, the station would hire a salesperson whose full-time job would be to visit spot advertisers and their agencies to sell them on that station. But that would be impossible. First, each national spot advertiser would be inundated with literally thousands of salespersons, each working for a different station. Second, national and regional spot advertisers and their agencies are spread out among every large city in the country; a station would have to keep one full-time salesperson in New York, another in Los Angeles, a third in Chicago, and so on. This would be economically impossible for all but the largest group-owned stations. Instead, individual stations contract with **advertising representatives,** also called **station reps.**

Station reps are independent firms that attempt to persuade national and regional spot advertisers to buy time on client stations. Reps must be able to provide advertisers with immediate and current information on station rates and availabilities. Each rep usually has branch offices in various major advertising centers and represents a number of stations. However, a rep will handle only one station in any given market to avoid representing direct competitors. National reps have offices in at least three of the largest markets; regional reps, in fewer.

Reps work on a commission basis. Reps for radio stations receive 15 percent of the advertising revenue they generate. Television station reps receive 8 or 9 to 15 percent, the amount decreasing as station market size increases. The sales manager maintains near constant contact with a rep, advising on availabilities, sending copies of station promotional material, notifying of changes in rates and programming, ensuring that the rep is doing the job in representing the station to national and regional advertisers. Some reps supply additional services to client stations, providing advice, research, and materials on everything from sales and promotion to management and programming. The national trade organization for independent reps is the **Station Representatives Association.**

Two developments in the rep field should be noted. One is the **house rep** or **self-representation,** the terms used when a group licensee sets up a national sales department at the corporate level to represent stations in the group. The other is the **spot radio network.** A spot radio network is not interconnected and carries no common programming. It is a group of stations in various communities put together by a rep to make radio easier for the spot advertiser to buy. The net includes the organizing rep's client stations, plus stations in other markets as the needs of the advertiser dictate. The two primary aims of a spot network are flexibility and convenience. The rep tailors the network to the advertiser's needs; the advertiser mails commercials to the stations; the

stations air the commercials according to individually arranged schedules; the advertiser receives and pays a single bill from the rep. These spot radio nets vary in size and concept from groups of major stations in major markets, such as the Blair Radio Network, to small stations and small markets, such as the many state networks of Walton Station Representatives.

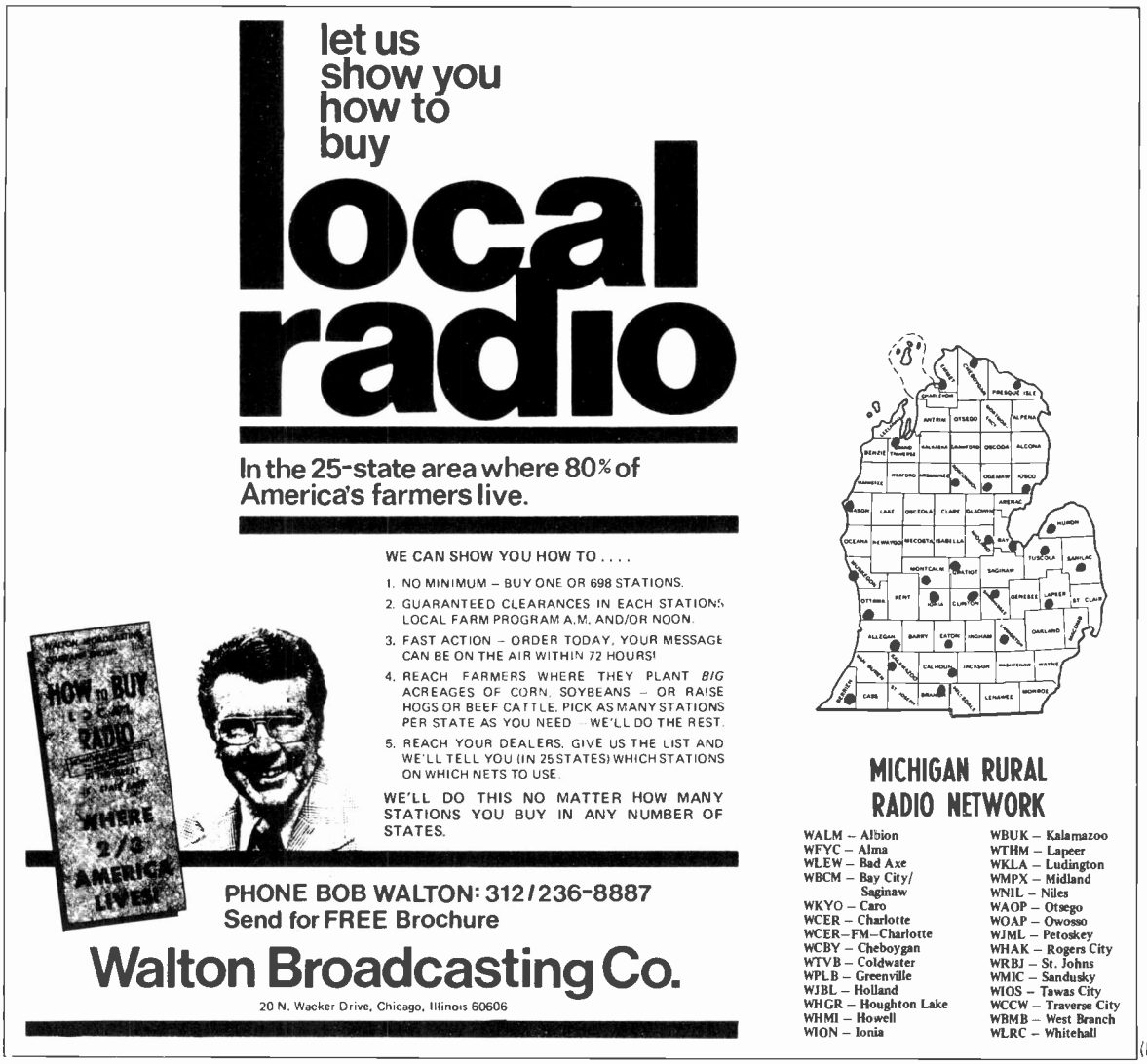

Figure 16-4. Spot Radio Networks. (a) Walton has grouped 698 radio stations into 25 spot radio networks making it easy and convenient for farm marketers to buy spot radio advertising that reaches 80 percent of the U.S. farm population. (b) One of these 25 networks is the Michigan Rural Network.

SOURCE: Walton Broadcasting Co. Used by permission.

Selling Network Time

In network television time sales, stakes are high and competition is fierce. Programming, overhead, everything in television networking is expensive. But returns can more than justify the investment, so each network attempts to sell 100 percent of inventory.*

Most network advertising is done on a **participation basis**—the network provides the programs and advertisers buy availabilities within those programs. Formal rate cards are rare. Prices are based roughly on ratings, season of the year, and time of day. But agency buyers and network sales personnel often bargain over exact costs.

Network inventory is sold in three ways—up-front, scatter plan, and opportunistic. Each spring the networks announce their schedules for the following fall. Heavy network advertisers wish to reserve the best availabilities, so their advertising agencies begin bargaining with network sales personnel right away. This is **up-front** buying. The agency buyer purchases specific commercial positions in specific weekly program series, usually for 26 weeks with option to renew.

Upon conclusion of the up-front buying season, the rest of the network inventory goes on sale for **scatter plan** buying. Here the buyer purchases any combination of availabilities. The purchase may be a continuing position in a weekly series for several months, or it may be a number of positions scattered over the entire schedule for a week or two.

As air dates draw closer, the networks drop prices of unsold positions. If they continue unsold, agency buyers can often pick up good positions at bargain prices. This is **opportunistic** buying.

Some advertisers still invest in **sponsorship,** most often sponsoring specials. In sponsorship, all commercial positions in a program are used by one advertiser (or two, if it is co-sponsored).

The purchase of network radio advertising is less frantic, less expensive, and more flexible than that of television. There are no "new seasons" in network radio. Most availabilities are in news, sports, commentary, or features. The buyer can purchase sponsorship or participation advertising, fixed position, or run-of-schedule. Prices vary by time of day, number of affiliates, size and type of audience, and other factors. Network radio is difficult to sell to new clients; most agency buyers prefer to invest in network television to reach large numbers of persons and in spot radio to reach specific target audiences.

Networks must share advertising revenue with affiliated stations. The affiliates' share is called **station compensation.** The rate of compensation is specified in the affiliation contract between network and station and is usually based on some percentage of the affiliate's national advertising rate. The exact percentage varies with a number of factors including the size of the affiliate's

* Inventory is a station or network's total number of availabilities over a period of time.

market and the affiliate's competitive position within that market. An affiliate sends monthly reports to the network listing each network program and commercial it carried; the network pays the affiliate based on this report.

Radio compensation involves much less money than television. In some cases the only compensation is the programming itself; the network sends the programming and pays line charges, perhaps including a few availabilities the station can sell.

Public Broadcasting Sales

Many public broadcast stations, as well as a number of commercial classical music and fine arts radio stations, sell advertising space. They publish and distribute program guides to their audiences, and these guides often contain advertising. Revenues from program guide advertising helps defray publication expense and, perhaps, even contributes toward station operating expenses.

Public stations also broadcast announcements somewhat analagous to the advertising of commercial broadcast stations. These include underwriting announcements, pleas for money, and auctions.* In such cases, public broadcast stations seem to sell time, much like commercial stations. They sell foundations and large corporations on underwriting programs, then mention the underwriters by name before and after the programs. They sell merchants and other retailers on donating goods and services for auctions, then name the businesses and extol the products over the air.

Many persons complain about public broadcast stations' almost continual pleas for donations and subscribers. *Broadcasting* magazine has editorialized against commercial-like practices of noncommercial stations on several occasions.† And in 1978, the Federal Communications Commission proposed stricter rules on time limits for over-the-air auctions and on underwriting announcements. The problem, however, is not that public stations engage in commercial practices or siphon off a few potential advertising dollars. The basic problem is funding. Given that public broadcasting is to continue to provide a high quality, audience-drawing program service, then unless and until Congress acts to provide continuing, adequate, and full funding—*not* tied to matching funds—public broadcasting will be forced to continue to engage in money-raising schemes. And no amount of FCC investigation nor trade press harassment will change that.

Funding, of course, was one of the primary concerns of the 1977–1978 Carnegie Commission on the Future of Public Broadcasting.‡ At midyear, trade press reports suggested that the commission had in mind billion-dollar funding levels and de-emphasis of corporate underwriting and on-air auc-

* See Chapter 8.

† See, for example, "In Name Only," *Broadcasting,* Feb. 2, 1977, p. 66.

‡ See Chapter 4.

tions. Funds would originate from a spectrum-franchise tax* and excise taxes on receivers, transmitters, and advertising revenues (based in large part on revenues and profits of commercial broadcasting).

Notes

1 From McCann-Erickson's *1978–1979 Media Planning and Buying Guide* (New York: McCann-Erickson, 1978).
2 Edwin Emery, Phillip H. Ault, Warren K. Agee, *Introduction to Mass Communications* (New York: Dodd, Mead, 1965), pp. 163–164.
3 Advertising Management Policy Committee, Association of National Advertisers, *Current Advertiser Practices in Compensating Their Advertising Agencies* (New York: ANA, 1976), p. 3.

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Chapter 25 in Ray Eldon Hiebert, Donald F. Ungurait, and Thomas W. Bohn, *Mass Media: An Introduction to Modern Communication* (New York: McKay, 1974), is on "Sales and Advertising"—definition, history, decision-making factors, controls, classifications, and creativeness. Sandman, Rubin, and Sachsman, *Media: An Introductory Analysis . . .* (7), take a primarily critical look at advertising, first as a source of control over the mass media in Chapter 5, then as a medium of communication itself in Chapter 14. Warren K. Agee, Phillip H. Ault, and Edwin Emery treat advertising from several perspectives and at several different places, in *Introduction to Mass Communications,* 5th ed. (New York: Harper & Row, 1976). That AAAA study of consumer attitudes on advertising is by Rena Bartos and Theodore F. Dunn, *Advertisers and Consumers: New Perspectives* (New York: AAAA, n.d.). For audience attitudes concerning television advertising, see Roper, *Changing Public Attitudes . . .* (1), pp, 19–22, and Bower, *Television and the Public* (6), pp. 83–87.

ADVERTISERS AND AGENCIES, STATION TIME SALES, NATIONAL ADVERTISING REPRESENTATIVES, AND SELLING NETWORK TIME

Heighton and Cunningham, *Advertising in the Broadcast Media* (8), provide a readable, concise and up-to-date picture of broadcast advertising. In Chapter 3, for example, they discuss advertisers and agencies, who they are and how they work; in Chapter 6 they discuss target audiences, CPM, waste circulation and other concepts; in Chapter 12, network sales; in Chapter 13, spot sales; and in Chapter 14, local sales. Quaal and Brown, *Broadcast Management* (6), in Chapter 6, deal with station sales staff, time selling, local sales, and national sales. The various station reps have published some interesting materials on their business. See, for example, the pictorially arresting *A Short Pause for Identification* and Robert L. Hutton, Jr., *The Role of the Sales Representative—Backbone of a Station's Income* (both New York: Edward Petry, n.d. and 1968, respectively). Erik Barnouw takes a critical look at the whole concept of broadcast advertising and sees television advertising as a primarily malevolent force in *The Sponsor: Notes on a Modern Potentate* (New York: Oxford University Press, 1978).

* The tax would be written into the Communications Act as part of an overall rewrite (see Chapter 12).

17 Rates and Ratings

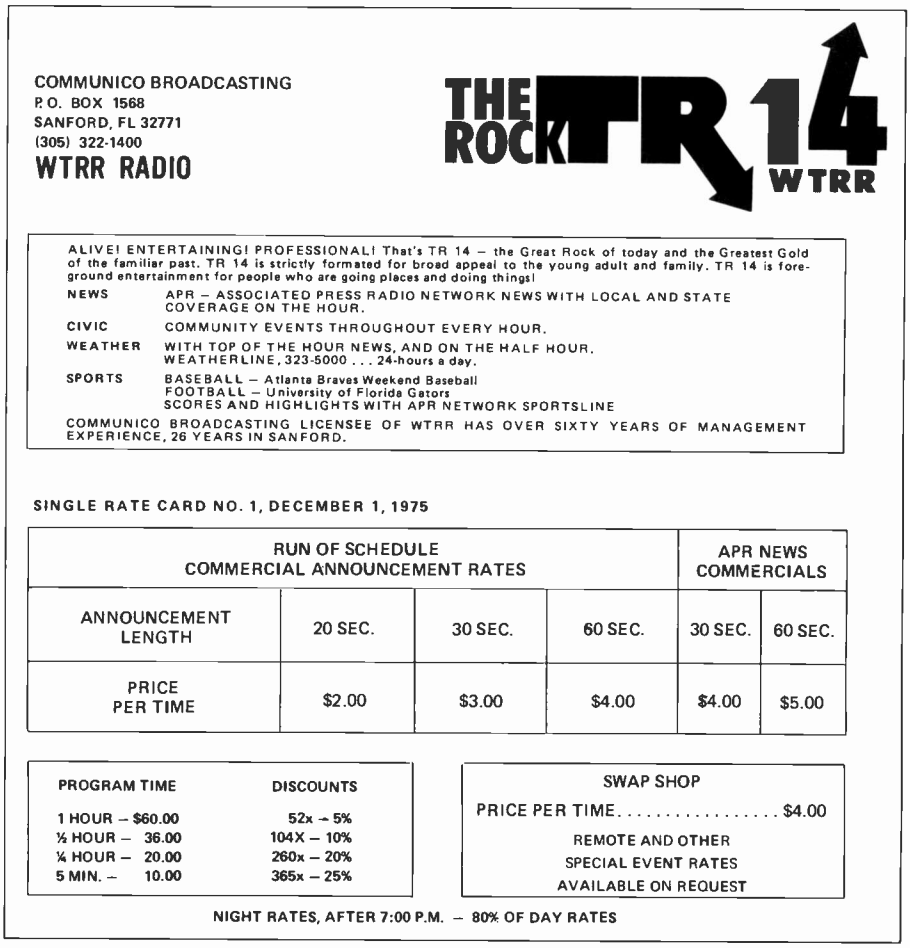
You have probably heard someone say (or even said yourself), "They're canceling my favorite television program! How can they do that? Everybody I know likes it!" Or "My favorite radio station is changing formats! I don't understand why they're doing it!"

More than likely, in both cases, the answer lies in rates and ratings. A **rate** is the amount of money a commercial station or network charges to run an announcement or a program. A **rating** is the size of a television or radio audience expressed in percentage terms. A rate pays for a segment of broadcast time; a rating tells how popular that segment was; and the two allow the advertiser to determine its cost per thousand.

In this chapter we discuss both rates and ratings. First we look at the broadcast rate card and the variables that affect it. Then we examine ratings. We find out what rating, share, and other common terms mean, how ratings data are gathered, and who some of the audience research companies are.

The Rate Card

Each radio station establishes what is called a **base rate.** The base rate is usually what the station charges an advertiser to broadcast a one-minute commercial one time. Most advertisers, however, qualify for discounts of one kind or another, and so very few actually pay the base rate. The base rate,



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NEWS	APR – ASSOCIATED PRESS RADIO NETWORK NEWS WITH LOCAL AND STATE COVERAGE ON THE HOUR.
CIVIC	COMMUNITY EVENTS THROUGHOUT EVERY HOUR.
WEATHER	WITH TOP OF THE HOUR NEWS, AND ON THE HALF HOUR. WEATHERLINE, 323-5000 . . . 24-hours a day.
SPORTS	BASEBALL – Atlanta Braves Weekend Baseball FOOTBALL – University of Florida Gators SCORES AND HIGHLIGHTS WITH APR NETWORK SPORTSLINE

COMMUNICO BROADCASTING LICENSEE OF WTRR HAS OVER SIXTY YEARS OF MANAGEMENT EXPERIENCE, 26 YEARS IN SANFORD.

SINGLE RATE CARD NO. 1, DECEMBER 1, 1975

RUN OF SCHEDULE COMMERCIAL ANNOUNCEMENT RATES				APR NEWS COMMERCIALS	
ANNOUNCEMENT LENGTH	20 SEC.	30 SEC.	60 SEC.	30 SEC.	60 SEC.
PRICE PER TIME	$2.00	$3.00	$4.00	$4.00	$5.00

PROGRAM TIME	DISCOUNTS
1 HOUR – $60.00	52x – 5%
½ HOUR – 36.00	104X – 10%
¼ HOUR – 20.00	260x – 20%
5 MIN. – 10.00	365x – 25%

SWAP SHOP
PRICE PER TIME. $4.00
REMOTE AND OTHER SPECIAL EVENT RATES AVAILABLE ON REQUEST

NIGHT RATES, AFTER 7:00 P.M. – 80% OF DAY RATES

Figure 17-1. Small Market Radio Rate Card.
SOURCE: WTRR. Used by permission.

then, is just that: a base from which to figure the various discounts for which an advertiser may be eligible.

A radio station publishes a **rate card,** a statement of the rates advertisers pay under various conditions. Since a station routinely grants a number of different types of discounts, its rate card can be fairly complicated. The local salesperson or national rep uses the rate card to show a potential client exactly what the per-commercial cost would be in any situation.

Small and medium market radio stations actually issue two rate cards: a **local rate card** and a **spot rate card.** A station receives national and regional spot sales revenue with 15 percent deducted by advertising agencies and with

another 15 percent due out for the rep. Thus the station must raise its rates for national and regional spot advertising in order to get a rate of return comparable to that of its local rate card. This higher rate structure is the spot rate card and is published in one or both of two publications used by ad agency media buyers, the monthly *Spot Radio Rates and Data* and the semiannual *Spot Radio Small Markets Edition.* Both are published by Standard Rates and Data Service (SRDS), Skokie, Illinois. Many stations, however, particularly successful stations in large markets, use one rate card for both local and spot sales.

The rate discounts a radio station gives are called **variables.** One such variable is length; a station's rate varies according to the **lengths of time** the advertiser buys. For example, a 30-second availability costs 80 to 90 percent of the one-minute rate; a 10-second availability, 50 to 65 percent; sponsorship of a five-minute feature or news program (typically, mention of the advertiser at the beginning and end and a 60-second commercial within), one and a fraction times the one-minute rate.

Rates also vary by **time of day.** In most cases the radio station chooses exact times commercials run, but the advertiser may specify the time periods during which they run. Stations charge most for time when the largest number of persons are listening. They call availabilities during these hours something like "AAA" or "AAAA" time. Smaller stations may lump together all nonpeak listening hours under a single rate; others divide remaining hours in descending audience levels and price them accordingly. Radio stations also sell availabilities scattered through different time periods—ROS (run of schedule), BTA (best times available), or maximum impact, also called TAP (total audience plan).* Specific positions (e.g., at 4:45 every weekday afternoon, or immediately after the 6:00 P.M. sports report) cost extra.

A third variable is **quantity.** The more availabilities an advertiser buys at one time, the less that advertiser pays for each availability. Some radio stations have **package plans** that drop price; a specified number of spots cost less if they all run within a certain period of time (a week, two weeks, a month, etc.).

Television stations have higher overall audience levels than radio stations, therefore television availabilities are higher priced. Television audience levels also fluctuate much more than radio, program by program. Whereas a radio card lists prices by time periods, a television station rate card lists specific positions, each with its own price. Price depends on the size of audience at that time; as the audience increases, the prices go up. The closest parallel to radio's ROS is the rotation.* Most television stations issue just one rate card. Television rate cards are published in SRDS's monthly *Spot Television Rates and Data.*

The 30-second availability is standard in television. A 60-second availability costs double the 30-second rate; an ID (10-second availability), 50 percent.

* See Chapter 8.

RATE CARD

Channel 11 KCBD–TV Lubbock, Texas

GENERAL RATE CARD #17 EFFECTIVE JANUARY 1, 1977

ANNOUNCEMENTS

	Sec. I	Sec. II	Sec. III	Sec. IV	Sec. V
CLASS "AA"					
(6:30 - 10:00 p.m. Daily)					
30 sec.	$200	$175	$150	$125	$110
10 sec.	100	85	75	65	50
CLASS "A"					
(12:00 - 3:30 p.m. and 10:30 p.m. - cc)					
30 sec.	$80	$70	$60	$50	$40
10 sec.	40	35	30	25	20
CLASS "B"					
(3:30 - 5:30 p.m. Daily and 12:00 - 5:30 p.m. Sat. & Sun.)					
30 sec.	$65	$55	$45	$35	$25
10 sec.	35	30	25	20	15
CLASS "C"					
(Sign on to 12:00 noon Daily)					
30 sec.	$60	$50	$40	$30	$20
10 sec.	30	25	20	15	10
Announcements in News Segments					
(6:00 - 6:30 p.m. Mon. thru Fri.)					
30 sec.	$110	$100	$90	$80	$70
10 sec.	55	50	45	40	35
(10:00 - 10:30 p.m. Daily)					
30 sec.	$135	$125	$100	$90	$80
10 sec.	70	65	50	45	40
Special Rate: Farm Show					
(6:45 a.m. - 7:30 a.m.)					
30 sec.	Flat $25				
60 sec.	Flat $40				

60 second rates are double the 30 second rate.

SECTION I: Non-Preemptible
SECTION II: Preemptible on 3 telecasts notice by Sec. 1 advertiser
SECTION III: Preemptible on 2 telecast notice
SECTION IV: Preemptible on 1 telecast notice
SECTION V: Immediately Preemptible on notice by Station.

Figure 17-2. Television Station Rate Card.
SOURCE: KCBD-TV. Used by permission.

Advertisers can also buy program sponsorships at vastly discounted rates.

The two most common types of television discounts are **quantity/time limits** and **preemptibility.** The quantity/time limit discount includes package plans and discounts for advertisers who buy heavily within a certain period of time (anything from a week to a year, depending on the money involved). Preemptibility is, in effect, an auction. If an advertiser buys a position at a

preemptible rate, another advertiser may later pay a higher rate and get that position. The station then reschedules the first advertiser's commercial into another time. Rate cards often list degrees of preemptibility, each with a different price, so that each position may have five or six prices. On some rate cards, these prices are labeled, for example, "fixed," "preemptible," or some similar term. Some rate cards list degrees of preemptibility in **sections** or **grids;** an advertiser who buys a position at the grid 4 price, for example, could be preempted by an advertiser who later bought it at the grid 2 price.

TEXAS

LUBBOCK (3 Stations)

Lubbock County—Map Location B-4

See SRDS consumer market map and data at beginning of the State.

KCBD-TV

(Affiliate May 10, 1953)
KSWS-TV—ROSWELL, NEW MEXICO—SATELLITE

NBC Television Network

BLAIR TELEVISION

Subscriber to the NAB Television Code

Media Code 6 245 1600 1.00

State Telecasting Company, Inc., Box 2190, Lubbock, Tex. 79408. Phone 806-744-1414. TWX 910-896-4306.

1. PERSONNEL
President—W. Frank Harden
Vice-Pres. & Gen'l Mgr.—W. Robert McKinsey.
General Sales Manager—Carl Minor.

2. REPRESENTATIVES
Blair Television.

3. FACILITIES
Video 316,000 w., audio 60,000 w.; ch 11.
Antenna ht.: 760 ft. above average terrain.
Operating schedule: 7 am-midnight Mon thru Fri; 7:30 am-midnight Sat; 8 am-midnight Sun. CST.

4. AGENCY COMMISSION
15% to recognized agencies on rates listed. Bills due and payable when rendered.

5. GENERAL ADVERTISING See coded regulations
General: 1b, 2b, 3a, 3b, 3c, 3d, 4a, 5, 6a, 7b, 8.
*Rate Protection: 10l, 11m, 13n, 14f, 17.
Contracts: 20c, 21, 22a, 22c, 25, 26, 27a, 28, 29, 31c, 32b.
Basic Rates: 40a, 40b, 41a, 41c, 42, 43a, 46.
Cancellation: 70o, 70p, 71, 72, 73a, 75b.
Prod. Services: 80, 81, 83, 84, 85, 86, 87a, 87b.
(*) Fixed 90 days, all others 28 days.
Affiliated with NBC Television Network.
The rates and discounts for time periods designated herein apply only to products of a single advertiser.

Product Protection

Rebates, credits or makegoods will not be issued for any product conflict, other than those resulting from back-to-back scheduling.
Station will give separation in the scheduling of announcements for directly competitive products, when the placing of both announcements is directly controlled by the station. When a spot is placed next to a network program and the network advertiser involved sponsors less than 1/2 of that program, the station will try to give reasonable product protection, but cannot guarantee to do so.
When a network or local movie, special or other programming runs late, announcements within and announcements or programs immediately following will take the original rate regardless of the time of conclusion of the network or local program.

Multiple Product Announcements

Station does not accept commercials of any length containing advertising messages of two separate corporations; nor one minute announcements containing more than two selling messages or more than two products (or services); or announcements of less than one minute in length which urge the viewer to purchase more than one product (or service).
Service charge for splicing and/or editing multiple product commercials is $5.00.
Time rates include satellite KSWS-TV, Roswell, N. Mex.

6. TIME RATES
No. 17 Eff 1/1/77—Rec'd 1/10/77.

7. SPOT ANNOUNCEMENTS
AA—Daily 6:30-10 pm.
A—Mon thru Fri 12:30-3 pm & 10:30 pm-sign-off.
B—Mon thru Fri 3:30-5:30 pm.
C—Mon thru Fri sign-on-noon; Sat & Sun noon-5:30 pm.

30 SECONDS

	Section				
CLASS:	I	II	III	IV	V
AA	200	175	150	125	110
A	80	70	60	50	40
B	65	55	45	35	25
C	60	50	40	30	20

Section I—Non Preemptible.
Section II—Preemptible on 3 telecasts notice.
Section III—Preemptible on 2 telecasts notice.
Section IV—Preemptible on 1 telecasts notice.
Section V—Immediately preemptible on notice by station.

8. PARTICIPATING ANNOUNCEMENT PROGRAMS
Rec'd 1/10/77.

	Section				
	I	II	III	IV	V
News—6-6:30 pm Mon thru Fri	110	100	90	80	70
News—10-10:30 pm Mon thru Sun	135	125	100	90	80

10. PROGRAM RATES
Daily 6:30-10 pm, 1 hr. 300

11. SPECIAL FEATURES
COLOR
Schedules network & local color, film, slides and live.
Equipped with high band VTR.

13. CLOSING TIME
72 hours copy, film and slides; 1 week artwork.
Submitted by Carl Minor.

Figure 17-3. Spot Television Rates and Data Listing.
SOURCE: SRDS and KCBD-TV. Reprinted by permission.

OFF THE CARD

The whole television station rate structure seems to invite bargaining, wheeling-and-dealing, and negotiation. Buyers want the most they can get for the least they can pay; stations want premium prices for each position. But this is not endemic to television. Media buyers routinely attempt to buy both television and radio station time at prices below those on the rate card. And—depending on how much the station needs the business, how much management wants that particular account, how much total money is involved, or any of a number of factors—a station may sell at below published rates. Sometimes station personnel suggest the lower price. If a local salesperson cannot sell a prospect at rate card prices and if the station needs the money, the salesperson may offer the prospect a cut rate.

The simplest form of selling at below published prices is to cut rates without publishing a new rate card. But there are other ways, the most common of which are discussed in Chapter 8: per-inquiry or PI, plugola, and payola. A tradeout or barter may or may not be a form of rate-cutting, depending on the terms of the individual deal. In Chapter 15 we looked at several other practices, the ultimate result of which was to cut rates, for example, double billing and airing commercial promotions as news.

NETWORK RATE CARDS

Network rate cards are published in SRDS's bimonthly *Network Rates and Data.* Television networks list only program rates;* prices for commercials within network-supplied programs are available on request.† Radio networks list charges for one-minute and for 30-second commercials and, where applicable, price differentials for times of day and quantity discounts. Each radio or television network listing includes a roster of the network's affiliated stations. A number of spot networks‡ also list rates in *Network Rates and Data.* All network listings carry information such as amount of agency commissions, terms of acceptability, and additional charges to handle and play back tapes and films.

Ratings

Broadcasters need to know how many individuals are in the audience and who they are in order to set rates and sell to advertisers. Advertisers need the same information to determine first, which station, network, or program has

* Program rates are based on individual rates of affiliated stations that the sponsor wishes to carry the program. These individual rates are totaled, and the sponsor pays a percentage of the total, plus other charges for handling, and similar incidentals. The rate card spells out the various affiliates' program rates and percentages.

† See discussion of network television time sales in Chapter 16.

‡ See discussion of spot radio networks in Chapter 16.

the audience they want, and later, whether they reach all the audience for which they pay. This is where ratings come in.

There are independent organizations—not connected with any broadcaster, advertiser or advertising agency—that perform audience research. They measure the size of audiences and the types of persons in those audiences. One of the concepts they use in describing broadcast audience is called a **rating.**

BASIC CONCEPTS

Audience research companies do not count the entire audience of a program or station. Such a count would be prohibitively expensive, would not allow repeats of the count (so that broadcasters and advertisers could see trends and changes), and, in fact, are not even needed to meet accepted standards of accuracy. Instead, they use **statistical surveys,** also called **sweeps.** In a statistical survey, the company selects a small group of individuals, collects data on **audience behavior** (i.e., tuning, listening, viewing) within the group, then **projects** the results, that is, reports that behavior as probably (within certain well-defined limits) being similar to that of the entire audience.

One of the first tasks in the survey is to define **audience.** Certainly, the audience is a collection of individuals, but individual what? Households? Persons?* Whatever the answer, that is the **elementary unit,** the basic unit about which a statistical survey is intended to gather information. All elementary units within the specific geographic area to be surveyed comprise the **statistical population** also called **population** or **universe.** Out of the population, the research company selects the **sample,** the small group of elementary units from which the company collects audience behavior data.

THE SAMPLE

Many persons do not understand how a sample—a relatively small number of units—can represent the entire population of a city, region, or country. But it can. The sample, of course, must meet stringent requirements. It must be selected according to a detailed procedure that the audience research company spells out in advance and publishes along with its results. The sample must be a **probability sample,** that is, one based on **random selection** procedures. In a random selection process, each unit of the population must have an equal chance of being selected for the sample, and each unit in the sample must be selected strictly by chance. This means that when an audience research company surveys your area, you (or your home with at least one television set, or whatever) literally have as much chance of being selected for the sample as any other person (or home, or what-have-you).

The size of the sample determines accuracy of the survey; as sample size increases, so does accuracy. However, sample size is governed by a kind of law of diminishing returns. As more units are added to the sample, each addition contributes less accuracy until the point is reached at which hundreds (even-

* In broadcast audience research, the elementary unit is often either a household or an individual person.

Try this interesting experiment. (Hypothetically--unless you happen to have 100,000 beads handy). Imagine 100,000 beads in a washtub; 30,000 red and 70,000 white. Mix thoroughly, then scoop out a sample of 1,000. Even before counting, you'll know that not all beads in your sample are red. Nor would you expect your sample to divide exactly at 300 red and 700 white.

As a matter of fact, the mathematical odds are about 20 to 1 that the count of red beads will be between 270 and 330--or 27% to 33% of the sample.

So, in short, you have now produced a "rating" of 30, plus or minus 3, with a 20 to 1 assurance of statistical reliability.

These basic sampling laws wouldn't change even if you drew your sample of 1,000 from 68-million beads instead of 100,000--assuming that the 68-million beads had the same ratio of red and white.

This is a simple demonstration of why a sample of 1,000 is just as adequate for a nation of 68-million households as for a city of 100,000.

Figure 17-4. How Can a Sample of 1000 Represent a Population?

SOURCE: Everything You've Always Wanted to Know about TV Ratings (Northbrook, Ill.: A. C. Nielsen Co., n.d.), p. 13. Used by permission.

tually thousands) of units must be added to increase accuracy by just one-tenth of 1 percent. Therefore a rating company selects a sample size that yields reasonably accurate results without being prohibitively expensive. For most of the better known firms this works out to a sample size of 1100–1700 units.

You might think there is also a connection between sample size and population size. It would certainly seem logical that larger populations require larger samples. But it does not work that way. The size of a sample needed to achieve a certain statistical precision is about as adequate for a nation of 68 million households as for a city of 100,000.

There are two distinct levels of broadcast audience research surveys: **national** and **market.** A national survey yields data on audiences for network programs. The population is all units in the continental United States, and the sample is drawn randomly from that population. A survey in a market yields data on audiences for local stations and programs. Usually, a market consists of an area's largest city and those surrounding counties in which that city's stations are most often heard or watched. The survey report, however, lists not only those in the market, but all stations to which people listen or view. The population is all units within the market, and the sample is drawn accordingly.

Sometimes a research company's local report includes two breakdowns: one for the entire market and the other for just the central city. Each research

company has a different concept of what area constitutes the market in any given locale. And a company that measures both television and radio audiences will define the market differently for each medium, due to factors such as number of markets surveyed, differences between coverage areas of radio and television, and locations of primary audiences.

One caution concerning the sample: no one person represents you. Many people object to ratings methodology because of the imagined effect of some little old lady in Peoria who turns on the television set in her parlor so that Lawrence Welk can amuse the cat while she makes cookies out in the kitchen. This is a needless worry. This lady, if selected for the Nielsen Television Index national sample, would be one person out of 1200 homes in the sample. And it is the tuning behavior of the sample as a whole that approximates the tuning behavior of the population as a whole. On the other hand, the tuning behavior of all persons in the sample who are female and 55 years or older does tend to reflect to a high degree the tuning behavior of all persons in the population who are female and 55 years or older. But our little old lady by herself does not represent either all persons in Peoria or all persons 55 and older.

RATINGS AND SHARES

A research company reports the results of its audience survey as ratings and shares. For illustration purposes, let us assume that a company is conducting a television audience survey in a market of 100,000 television households, using a random sample of 1000 such households. The research company uses the household as the elementary unit so that it reports results in terms of how many households were tuned to each station.

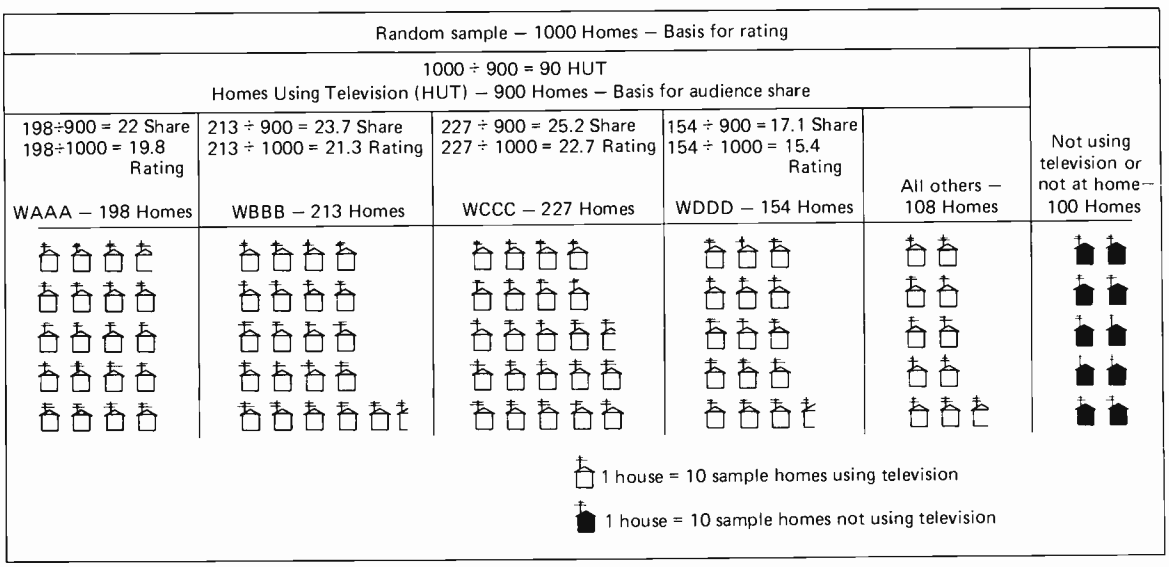

Figure 17-5. Ratings and Shares: An Illustration.

After the data have been gathered, the company finds that at 8:15 P.M. one Thursday during the survey, television receivers in 198 sample homes were tuned to WAAA, channel 2; 213, to WBBB, channel 5; 227 to WCCC, channel 8; 154 to WDDD, channel 37; and 108 to all other stations. The **rating** for each station at that time is the **percentage of sample households tuned to the station.** WAAA's rating is figured 198 ÷ 1000 = 0.198 for a rating of 19.8. And so the rating for WBBB is 21.3; WCCC, 22.7; and WDDD, 15.4.

Note that television receivers were operating in a total of 900 sample homes (198 + 213 + 227 + 154 + 108 = 900);* in the other 100, the residents were not at home or not watching. These 900 homes are also expressed as a percentage of the sample, called the **households-using-television** (HUT) rating: 900 ÷ 1000 = 0.90 for a 90 HUT rating. A station's **share of the audience** (or simply **share**) is the percentage of *audience* (i.e., all households in the sample actually using television) tuned to that station. WAAA's share is figured 198 ÷ 900 = 0.22 for a 22 share.

The ratings in our example are **instantaneous ratings** because they report viewing at a particular instant of time,† in this case 8:15 P.M. on a certain Thursday. The rating for a time period (e.g., drive time, daytime, etc.) or a whole program is the average of these instantaneous figures; it is called an **average rating.** The rating for a group of time periods (e.g., drive time every day for two weeks) or a group of programs in a series or the entire programming of a network or a station is a **cume** (for **cumulative audience**) **rating.**

The cume rating reflects total unduplicated audience. For example, if WAAA runs a variety show series 8–9:00 P.M. every Thursday, the cume would reflect each household that tuned to that program at least once during a four-week period. A household that tuned in to two or more programs in the series would be counted only once. The cumulative audience for a program series is often called **reach,** while that of a station or network is **circulation.** Both reach and circulation indicate the number of households or individuals estimated to be in the audience at least once over a length of time.

PROJECTION AND SAMPLING ERROR

Although based on audience behavior in the sample, ratings are used to tell what the population did. But it is important to remember that the projected figures are not exact percentages, they are **statistical estimates.** This means there is probably some difference between results from the sample and results that might be obtained from a census (asking every unit in the population).

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* We are assuming that all receivers in multiset households were tuned to the same station. If a household contains two or more sets and all are tuned to the same station, the household is counted as being in that station's audience only once. However, if the various sets in that household are tuned to different stations, then it is counted as being in the audience of each of those stations.

† The word "instantaneous" has nothing to do with how quickly data are gathered and ratings reported.

TABLE 17.1
Deviation: Effects of Sample Size and Research Results*

		PROBABLE DEVIATION (PLUS OR MINUS) OF RESULTS DUE TO SIZE OF SAMPLE ONLY (SAFETY FACTOR OF 20 TO 1)										
Survey Result Is:		*1% or 99%*	*5% or 95%*	*10% or 90%*	*15% or 85%*	*20% or 80%*	*25% or 75%*	*30% or 70%*	*35% or 65%*	*40% or 60%*	*45% or 55%*	*50%*
Sample of:	25	4.0	8.7	12.0	14.3	16.0	17.3	18.3	19.1	19.6	19.8	20.0
	50	2.8	6.2	8.5	10.1	11.4	12.3	13.0	13.5	13.9	14.1	14.2
	75	2.3	5.0	6.9	8.2	9.2	10.0	10.5	11.0	11.3	11.4	11.5
	100	2.0	4.4	6.0	7.1	8.0	8.7	9.2	9.5	9.8	9.9	10.0
	150	1.6	3.6	4.9	5.9	6.6	7.1	7.5	7.8	8.0	8.1	8.2
	200	1.4	3.1	4.3	5.1	5.7	6.1	6.5	6.8	7.0	7.0	7.1
	250	1.2	2.7	3.8	4.5	5.0	5.5	5.8	6.0	6.2	6.2	6.3
	300	1.1	2.5	3.5	4.1	4.6	5.0	5.3	5.5	5.7	5.8	5.8
	400	.99	2.2	3.0	3.6	4.0	4.3	4.6	4.8	4.9	5.0	5.0
	500	.89	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
	600	.81	1.8	2.5	2.9	3.3	3.6	3.8	3.9	4.0	4.1	4.1
	800	.69	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.5	3.5
	1,000	.63	1.4	1.9	2.3	2.6	2.8	2.9	3.1	3.1	3.2	3.2
	2,000	.44	.96	1.3	1.6	1.8	1.9	2.0	2.1	2.2	2.2	2.2
	3,000	.36	.79	1.1	1.3	1.5	1.6	1.7	1.7	1.8	1.8	1.8
	4,000	.31	.69	.95	1.1	1.3	1.4	1.4	1.5	1.5	1.6	1.6
	5,000	.28	.62	.85	1.0	1.1	1.2	1.3	1.4	1.4	1.4	1.4
	10,000	.20	.44	.60	.71	.80	.87	.92	.95	.98	.99	1.0
	50,000	.08	.17	.24	.29	.32	.35	.37	.38	.39	.40	.40

SOURCE: Joe Belden, *A Broadcast Research Primer* (Washington, D.C.: National Association of Broadcasters, 1966), p. 19. Used by permission.

* Probable deviation increases as sample size decreases and survey results approach equal proportions.

Example: When size of sample is 500 and survey result comes out 25%, you may be reasonably sure (odds 20 to 1) that this result is no more than 3.9 off, plus or minus. Doubling the sample to 1,000 reduces this margin to 2.8.

This difference is the **sampling error** and is inherent in the statistical processes of sampling.

If an audience research company follows correct procedures in planning and executing a survey, it can specify the **confidence level.** The confidence level expresses the degree of probability that sampling error falls within a certain range. For example, in our survey with a sample of 1000, we may say that the probability is 95 percent (i.e., 19 chances out of 20) that WAAA's 19.8 rating is in error by no more than ± 2.6 (i.e., plus or minus 2.6 percent). Or stated another way, odds are 20 to 1 that the actual percentage of the TV household population watching WAAA at 8:15 Thursday evening is somewhere in the range of 17.2–22.4 (19.8 − 2.6 = 17.2; 19.8 + 2.6 = 22.4).

These same limitations should be kept in mind when projecting the rating

into **numbers** of units. The population is 100,000 television households, so we can multiply the rating times the population (19.8 × 100,000 = 19,800) and say that there is a 95 percent probability that 19,800, give or take as much as 2600, of the market's TV households were tuned to WAAA.

The 95 percent figure is standard, but the range of possible error varies with audience proportions (the ratings) and sample size. As stations in a market begin to draw more equal-sized audiences, the range of statistical error increases. Most ratings reports break overall ratings down into demographic categories. The range of error for ratings in each category is greater than for those of the entire sample. For example, one category might be working, single women, 18 years and older, say, 200 persons out of a total sample of 1000. The report, then, shows what percentage of those 200 persons tuned to each station. In such breakdowns, each category becomes, in effect, a separate sample. Since the category sample contains fewer units than the overall sample, ratings projected from the category sample contain a greater margin of error. Research companies often use sample sizes in excess of 2000 during local surveys to raise confidence levels of the demographic breakdowns.

One further note: ratings are **history.** They reflect the broadcaster's competitive position during the time the survey was conducted—not when the reports were published, or now, or for the next two months. Advertisers accept ratings, however, because broadcast audience patterns are relatively stable, slow to change, and they look for trends and changes over several rating periods. Therefore when you hear a station promote itself as "number one," remember that means it *was* number one at the time of the last sweep. (You should also ask at what times and with what audience it was "number one.")

DATA GATHERING

Research companies use a number of different means to gather audience behavior data from the sample. One is the **personal interview;** an interviewer goes to the sample home and questions each individual on listening or viewing activity within the past 24 hours. This is the **recall method,** and the interviewer often shows to the respondents lists (called **rosters**) of stations and programs to help their memory. The personal interview can yield detailed information, including data on out-of-home viewing and listening and opinions and attitudes on programming. On the other hand, respondents may not remember very accurately; or they may inadvertently telescope data and remember (and report) listening or viewing for the past several days as though occurring within the preceding one day. Additionally, the roster may introduce bias in favor of listed stations and against unlisted ones.

Personal interview surveys often employ a **cluster sample.** In cluster sampling, groups of elementary units are selected. For example, if the unit were the household, the cluster would be the neighborhood. Neighborhoods would be randomly selected, then interviewers would go to each house in the sample neighborhoods.

A second means of gathering data is the **telephone survey.** The inter-

viewer has a list of randomly selected telephone numbers and calls them one after another. There are two types of telephone surveys: **recall** and **coincidental.** In telephone recall the interviewer asks what listening or viewing the respondent has done within a specified previous time period, often that day (of the call) plus the previous evening. The telephone coincidental gathers data on audience behavior at the time of (i.e., coincidental with) the telephone call. The interviewer asks the respondent if there is a receiver turned on in the house and, if so, to what station it is tuned and how many persons are listening or viewing.

The telephone survey is fast and relatively inexpensive. When conducted correctly by trained interviewers under supervision, a telephone interview can yield detailed information, including likes and dislikes. On the other hand, nontelephone homes, those with unlisted telephone numbers, and new listings not yet in the telephone directory are not sampled.*

Telephone recall is subject to the same memory problems as personal interview recall. Telephone coincidental, by nature, is primarily instantaneous, a problem where average and cumulative data are needed. Coincidental data cannot be gathered during early morning and late evening hours because respondents might resent telephone calls at these hours.

A third method involves a **diary.** The diary is an easy-to-fill-out log of viewing or listening activities. Households are selected on a random basis, and an interviewer calls and asks if members of the household would consent to participate in the survey and keep the diary. In television surveys, the company sends one diary for each television receiver in the household. Respondent families are asked to record when the receiver is turned on, when it is turned off, to what station and program it is tuned at specific intervals (usually every 15 minutes) and the sex and age of each person watching, including visitors.

In radio, the company sends one diary for each person (usually excluding children under 12 years) in the household. Individuals take the pocket-sized diaries with them and record time of listening, call letters or dial setting of the station, and whether they listen at home or elsewhere. They fill out age, sex, and address in the back of the diary.

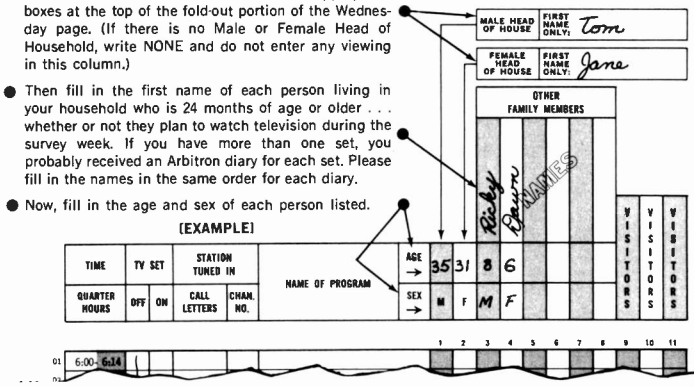
Respondents are usually asked to record listening or viewing during a one-week period, then put the prestamped and addressed diaries in the mail. Often the company provides some small compensation to encourage completion and return.

The diary picks up data at all hours, provides information on audience composition, can be used to sample both urban and rural audiences, and is fast and economical. On the other hand, diary families are liable to become self-conscious of audience behavior, listen or view more or less than normally,

* Computer-generated lists of telephone numbers are sometimes used to correct for the problem of unlisted telephones and new listings.

HERE'S HOW TO BEGIN YOUR ARBITRON DIARY . . .

- Fill in the first name of the Male Head of Household and Female Head of Household in the appropriate boxes at the top of the fold-out portion of the Wednesday page. (If there is no Male or Female Head of Household, write NONE and do not enter any viewing in this column.)
- Then fill in the first name of each person living in your household who is 24 months of age or older . . . whether or not they plan to watch television during the survey week. If you have more than one set, you probably received an Arbitron diary for each set. Please fill in the names in the same order for each diary.
- Now, fill in the age and sex of each person listed.



HERE'S HOW TO MAKE VIEWING ENTRIES . . .

The example in the lower part of this page shows you how to make the entries.

When the set is OFF . . .

❶ Draw a line in the "Set Off" column for ALL quarter-hours the set is OFF.

When the set is ON . . .

❷ Draw a line in the "Set On" column and ask yourself these questions:

What Station?

❸ Opposite the correct time period, write in the station call letters, channel number and the name of the program, whenever this set is on for 5 minutes or more in a quarter-hour.

Who is watching?

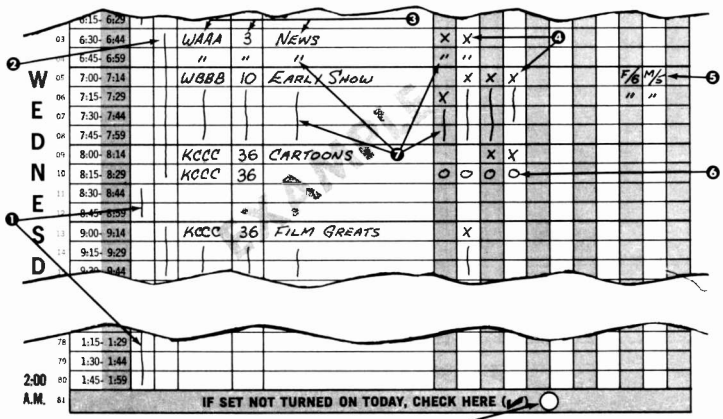
❹ **Household Members**
Put an **X** in the proper columns to indicate the persons who are watching or listening to this set for 5 minutes or more in a quarter-hour.

❺ **Visitors**
If a visitor watches or listens to this set, fill in the visitor's age and sex in a VISITORS column (see example).

❻ **No one watching or listening but the set is on.**
If the set is on but no one is watching or listening, opposite the correct time period, write in the station call letters, channel number and "0" under all family member columns (see example).

How long?

❼ When the information from one quarter-hour to another remains the same, draw lines or use ditto marks (") . . . as shown in the example.



If your set was not turned on during an entire day, check the circle at the bottom of the evening page.

YOUR ARBITRON DIARY STARTS ON THE NEXT PAGE . . .

Courtesy of Arbitron. Used by permission.

or choose programs they ordinarily would not select. Additionally, if respondents do not keep up the diaries as requested—for example, recording a whole day's listening or viewing at once—they may make omissions and errors.

A fourth method uses a **mechanical recorder.** The audience research company randomly selects sample households, then contacts each to solicit cooperation in the survey. The company sends out personnel to install recorders in cooperating households. The mechanical recorder is attached to each receiver in the sample household and makes a permanent record of tuning activity (i.e., on-off and channel number), which is then sent to the research company. As with the diary method, the company often provides a small payment for cooperation.

At one time, data from mechanical recorders took longer to tabulate, analyze, and report than any other method. Respondents in sample homes were asked to remove and send in data cartridges and to insert new ones each week. This is no longer done. Now, the recorder is tied in to telephone lines, and a computer at the research company's home office automatically dials each recorder in the sample and collects stored information. Generally, the computer collects a full day's data from a recorder in a matter of seconds. The recorder, called the **automatic retrieval meter,** eliminates problems inherent in relying on respondents to send in data cartridges. It is also fast; subscribers may receive prime-time program ratings and some other information as early as the next morning.

The recorder method eliminates human error and forgetfulness. It is valuable in making detailed analyses and tabulations of results. Because of the expense involved, the recorder remains in and collects data from a sample household much longer than other methods; this reduces effects of hypoing and sample self-consciousness. But both mechanical and automatic retrieval recorders really measure only set usage and do not tell who and how many (if any) were listening or viewing. Additionally, recorders do not measure out-of-home usage.

A final method employs two devices—**diary and simple mechanical recorder.** In this case the recorder records only the amount of time the receiver is switched on. It also provides a signal every 30 minutes of set use to remind respondents to make diary entries. Once a day respondents are to read total set use time off the recorder and to write it in the diary. The company then compares the sum of the respondents' individual entries of set use to the daily elapsed time figure from the recorder. Sample homes keep diaries for a number of weeks.

RATINGS ORGANIZATIONS

Audience research companies syndicate services. A buyer pays a fee and receives copies of pertinent research reports and permission to use them. Buyers

Figure 17-6. Arbitron Diaries. Instruction page for a television diary.

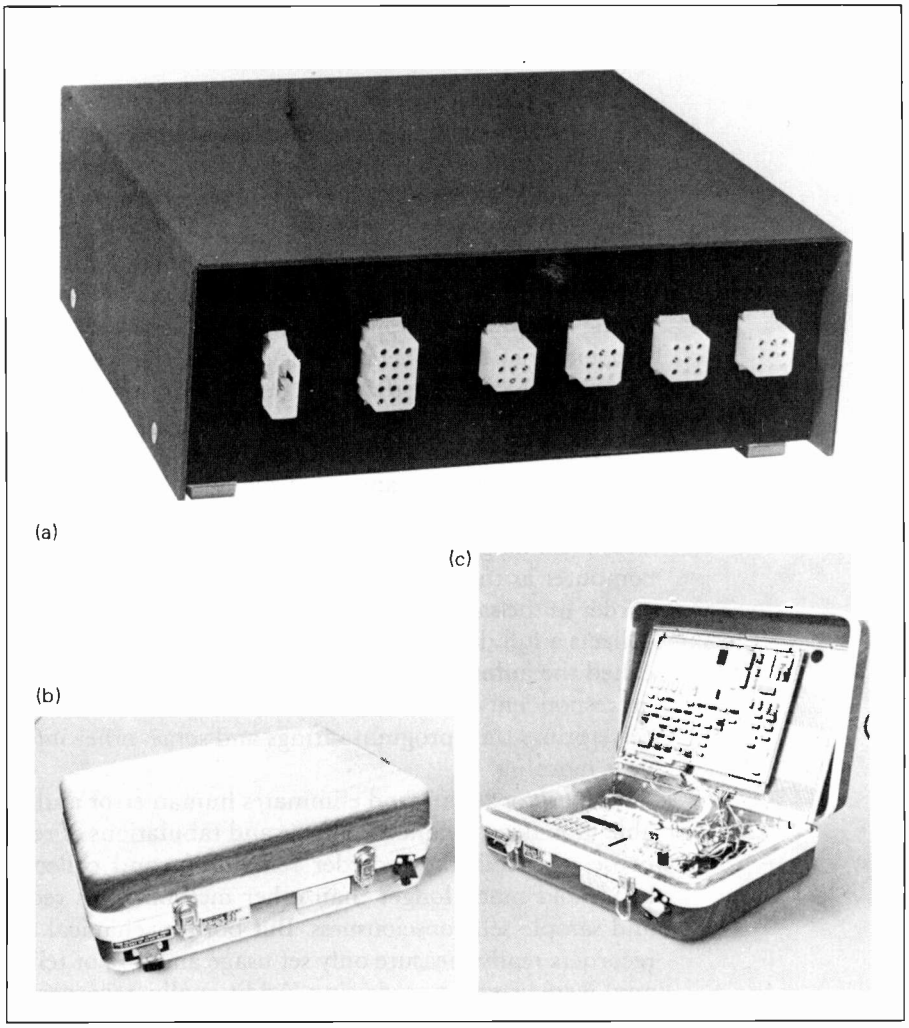
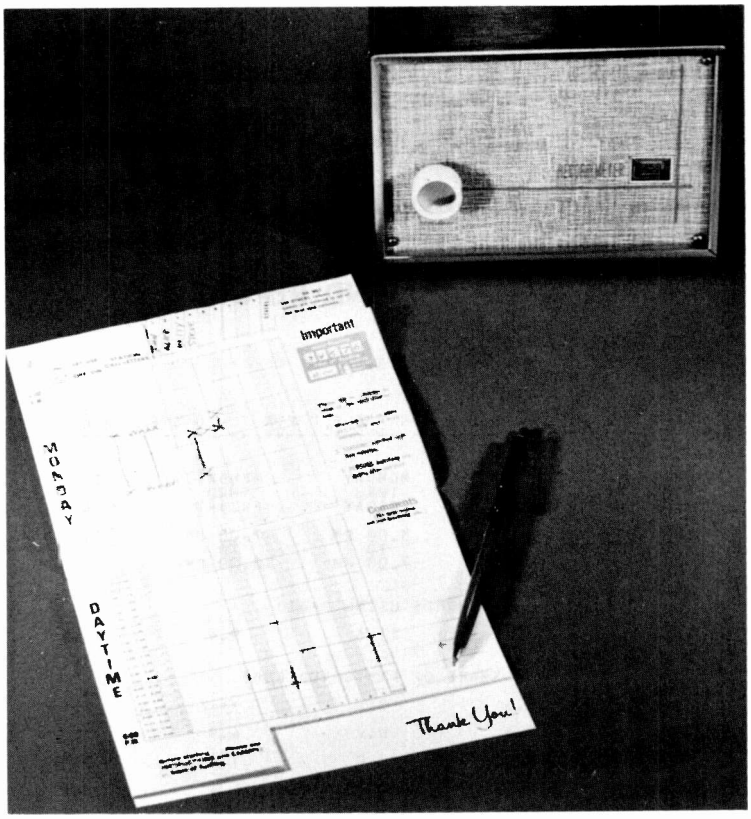


Figure 17-7. Automatic Retrieval Meters. (a) Even backyard and patio usage of battery portables can be recorded by the Nielsen Storage Instantaneous Audimeter (shown here) through use of a transmitter mounted on the television set and radio-linked to the Audimeter. The Audimeter itself is installed out of sight in a closet, basement, or cabinet. (b) and (c) The Arbitron meter attaches directly to the television set, while the Household Collector (shown here), slightly larger than an attaché case, is placed out of the way—closet, basement, attic.

Audimeter photograph courtesy A. C. Nielsen Co. Source for Arbitron Household Collectors: *A Reflection of the Real World* (New York: Arbitron, n.d.), p. iii. Both used by permission.

are primarily broadcasters (both stations and networks) and advertising agencies. Broadcasters bear the largest portion of cost of audience research, but agencies say what information should be in the reports. After all, in the broadcast time market, agencies are buyers, and broadcasters must package and present their product to meet buyer specifications. Nonbuyers may not



Photograph courtesy of A. C. Nielsen Co. Used by permission.

Figure 17-8. Simple Recorder and Diary. Nielsen calls its simple recorder a Recordimeter and the accompanying log an Audilog.

use a ratings report in any way. If a station elects not to subscribe, its ratings will show up in the reports, but the station may not promote the ratings to public or potential clients, even if it has the highest ratings in the market.

A number of firms syndicate broadcast audience research. Some of the better known firms include: *Media Statistics, Incorporated; C. E. Hooper, Incorporated; Trendex, Incorporated; American Research Bureau;* and *A. C. Nielsen Company.* American Research Bureau and Nielsen, are generally acknowledged as the leaders. For years the Pulse Incorporated was also a leading firm. **Pulse** began radio research in 1941, used Roster-aided recall, and was the only syndicated broadcast research service to employ personal in-home interviews for audience measurement. Pulse, however, ceased operations in April 1978, reportedly because of growing lack of support from radio stations.

Media Statistics started in 1964. This company syndicates **Mediastat** reports on radio audiences in small and medium markets. Mediastat employs telephone recall. Sample size varies from 100 to 900 completed interviews, according to geographical area and desired breakdown of data. For large markets the company syndicates monthly **Mediatrend** reports. Telephone recall is

used to interview a new sample each month of 500 to 1000 persons 12 years and older in each market. There are Mediatrend reports for Baltimore, Chicago, Dallas-Fort Worth, Philadelphia, San Francisco, and other large markets.

C. E. Hooper and **Trendex** both use telephone coincidental. Hooper

HOOPER *RADIO* TREND REPORT

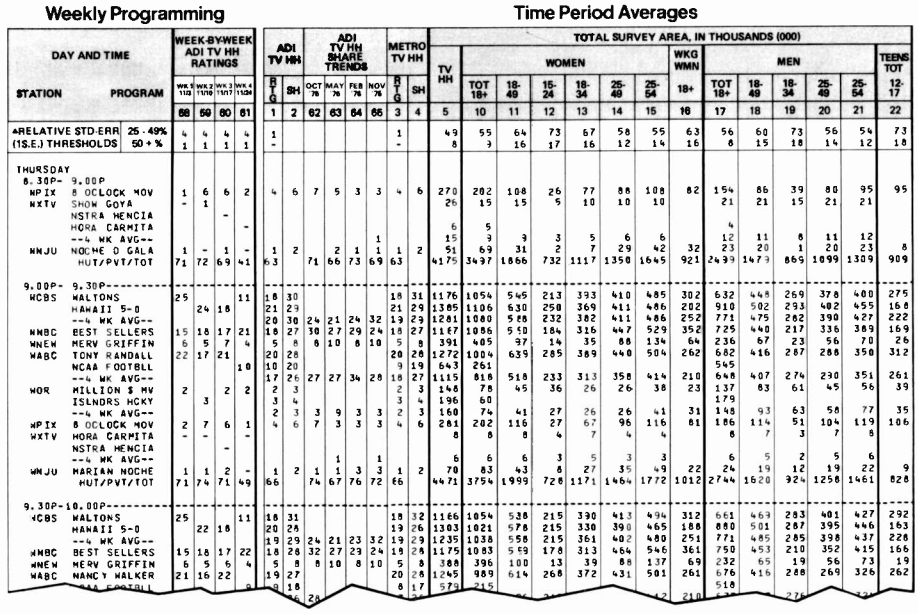
MILWAUKEE, WIS.
MAY, 1976

CONFIDENTIAL - FOR MANAGEMENT USE ONLY

	MONDAY THRU FRIDAY 7.00 AM TO 10.00 AM	MONDAY THRU FRIDAY 10.00 AM TO 3.00 PM	MONDAY THRU FRIDAY 3.00 PM TO 7.00 PM	MONDAY THRU FRIDAY 7.00 PM TO 10.00 PM	TOTAL RATED TIME PERIODS
			HOMES USING RADIO		
	20.5	13.2	11.6	9.4	13.4
			SHARE OF RADIO AUDIENCE		
WAWA	4.1	0.6	0.8	***	1.7*
WBCS	2.1	0.8	0.9	4.9	1.9
WEMP	7.8	5.4	8.0	1.4	6.1
WEZW	6.0	12.9	4.0	15.4	9.2
WFMR	0.6	5.1	3.2	5.9	3.4
WGN	**	1.0	1.6	1.3	0.9
WISN	14.7	12.0	6.1	4.0	10.3
WISN-FM	3.4	4.3	7.0	2.7	4.4
WKTI	0.6	4.7	6.7	6.4	4.2
WMAQ	2.6	0.7	6.2	**	2.4
WOKY	13.8	13.7	14.7	7.4	13.0
WQFM	3.6	2.7	8.4	10.0	5.4
WRIT	1.3	1.1	0.8	6.4	1.9
WTMJ	26.2	19.2	18.8	20.2	21.3
WVCY	**	4.2	0.8	**	1.5
WZMF	5.9	4.4	5.3	6.1	5.3
WZUU-FM	2.3	5.2	2.8	6.6	4.0
OTHER	10.2	3.9	6.0	6.1	6.6
			SAMPLE SIZE		
	1,096	2,319	1,694	1,232	6,341

* ADJUSTED FOR BROADCAST TIME.
** LESS THAN 0.05.
*** SAMPLE FROM STATION'S BROADCAST TIME IS INSUFFICIENT FOR REPORTING OF ADJUSTED SHARE. STATION INCLUDED IN 'OTHER' FOR THIS DAY-PART.
ALL SHARE INFORMATION IS BASED ON TOTAL IN-HOME AUDIENCE 12+.

Figure 17-9. Hooper Local Radio Ratings.
SOURCE: Starch INRA Hooper. Used by permission.



Weekly Programming — Time Period Averages

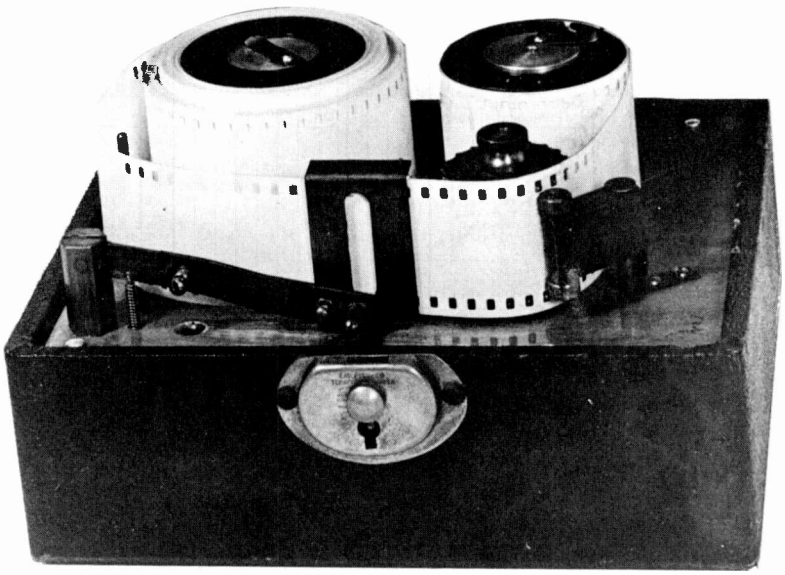
DAY AND TIME / STATION / PROGRAM	WEEK-BY-WEEK ADI TV HH RATINGS				ADI TV HH	ADI TV HH SHARE TRENDS				METRO TV HH		TOTAL SURVEY AREA, IN THOUSANDS (000)												
													WOMEN						WKG WMN	MEN					TEENS TOT
	WK 5 11/3	WK 2 11/10	WK 3 11/17	WK 4 11/24	B I G	SH	OCT '76	MAY '76	FEB '76	NOV '75	B I G	SH	TV HH	TOT 18+	18-49	15-24	18-34	25-49	25-54	18+	TOT 18+	18-49	18-34	25-49	25-54	12-17
	88	59	80	61	1	2	62	63	64	65	3	4	5	10	11	12	13	14	15	16	17	18	19	20	21	22
▲RELATIVE STD-ERR 25 - 49%	4	4	4	4	1						1		49	55	64	73	67	58	55	63	56	60	73	56	54	73
(1S.E.) THRESHOLDS 50 + %	1	1	1	1	-						-		8	9	16	17	16	12	14	16	8	15	18	14	12	18
THURSDAY																										
8.30P- 9.00P																										
WPIX 8 OCLOCK MOV	1	6	6	2	4	6	7	5	3	3	4	6	270	202	108	26	77	88	108	82	154	86	39	80	95	95
WXTV SHOW GOYA	-	1											26	15	15	5	10	10	10		21	21	15	21	21	
NSTRA HENCIA			-										6	5							4					
HORA CARMITA				-									15	9	9	3	5	6	6		12	11	8	11	12	
--4 WK AVG--										1			51	69	31	2	7	29	42	32	23	20	1	20	23	8
WNJU NOCHE O GALA	1	-	1	-	1	2	2	1	1	1	1	2	4175	3497	1866	732	1117	1350	1645	921	2439	1473	869	1099	1309	909
HUT/PVT/TOT	71	72	69	41	63		71	66	73	69	63															
9.00P- 9.30P																										
WCBS WALTONS	25			11	18	30					18	31	1176	1054	545	213	393	410	485	302	632	448	269	378	400	275
HAWAII 5-0		24	18		21	29					21	29	1385	1106	630	258	369	411	486	282	910	502	293	402	455	168
--4 WK AVG--					20	30	24	21	24	32	19	29	1281	1080	568	232	382	411	486	252	771	475	282	390	427	222
WNBC BEST SELLERS	15	18	17	21	18	27	30	27	29	24	18	27	1167	1086	510	184	316	447	529	352	725	440	217	336	389	169
WNEW MERV GRIFFIN	6	5	7	4	5	8	8	10	8	10	5	8	391	405	97	14	35	88	134	64	236	67	23	56	70	26
WABC TONY RANDALL	22	17	21		20	28					20	28	1272	1004	639	285	389	440	504	262	682	416	287	288	350	312
NCAA FOOTBLL				10	10	20					9	19	643	261							545					
--4 WK AVG--					17	26	27	27	34	28	18	27	1115	818	518	233	313	358	414	210	648	407	274	230	351	261
WOR MILLION $ MY	2		2	2	2	3					2	3	144	78	45	36	26	26	38	23	137	83	61	45	56	39
ISLNDRS HCKY		3			3	4					3	4	196	60							179					
--4 WK AVG--					2	3	3	9	3	3	2	3	160	74	41	27	26	26	41	31	148	93	63	58	77	35
WPIX 8 OCLOCK MOV	2	7	6	1	4	6	7	3	3	3	4	6	281	202	116	27	67	96	116	81	186	114	51	104	119	106
WXTV HORA CARMITA	-	-		-									8	8	8	4	7	4	4		8	7	3	7	8	
NSTRA HENCIA			-																							
--4 WK AVG--							1	1	1				6	6	6	3	5	3	3		6	5	2	5	6	
WNJU MARIAN NOCHE	1	1	2	-	1	2	1	1	3	3	1	2	70	83	43	8	27	35	49	22	24	19	12	19	22	9
HUT/PVT/TOT	71	74	71	49	66		74	67	76	72	66		4471	3754	1999	728	1171	1464	1772	1012	2744	1620	924	1258	1461	828
9.30P-10.00P																										
WCBS WALTONS	25			11	18	31					18	32	1166	1054	538	215	390	413	494	312	661	464	283	401	427	292
HAWAII 5-0		22	18		20	28					19	26	1303	1021	578	215	330	398	465	288	880	501	287	395	446	163
--4 WK AVG--					19	29	24	21	23	32	19	29	1235	1038	558	215	361	402	480	251	771	485	285	398	437	228
WNBC BEST SELLERS	15	18	17	22	18	28	32	27	23	24	18	28	1175	1083	569	178	313	464	546	361	750	453	210	352	415	166
WNEW MERV GRIFFIN	6	5	6	4	5	8	8	10	8	10	5	8	388	396	100	13	39	88	137	69	232	65	19	56	73	19
WABC NANCY WALKER	21	16	22		19	27					20	28	1245	989	614	268	372	431	501	261	676	416	288	269	326	262
[illegible]					8	18					8	17	579	215							518					

Figure 17-10. Arbitron Local Television Ratings.

SOURCE: Arbitron Television: Audience Estimates in the Arbitron Market of New York, Nov. 1976: November 3-November 30, pp. 46, 47. Used by permission of Arbitron and Broadcast Rating Council.

began supplying ratings of network radio programs in 1935, the first firm to offer broadcast audience research. For years the advertising and broadcasting trades regarded the Hooper rating as the most important national research. In 1950, A. C. Nielsen purchased Hooper's national service, and Hooper has since concentrated on local radio ratings. Hooper measures radio audiences in some 150 markets. Trendex was incorporated in 1950 and measures both radio and television audiences. Trendex began its **Radio Monthly Trend** studies in 1971, and its **Syndicated New York Trendex Radio Report Service** in 1974. Trendex conducts television surveys locally, regionally, or nationwide, depending on the needs of clients, and can produce results overnight for delivery the next day.

American Research Bureau or **Arbitron** has been in business since 1948. It uses the diary method and measures radio and television viewing in local markets. Arbitron measures about 160 radio markets at least once each April and May. It measures larger markets up to three additional times each year. The radio survey period may last three or four weeks, but a new sample is drawn each week, so that respondents keep diaries only one week. First radio reports reach subscribers about three weeks after the diaries are returned. Arbitron surveys over 200 television markets each fall, winter, spring, and summer. Major markets are surveyed seven times a year. Arbitron mails out its earliest television reports several weeks after the survey is completed.



Photograph courtesy of A. C. Nielsen Co. Used by permission.

Figure 17-11. First Nielsen Meter, 1936.

In New York and Los Angeles, Arbitron uses two separate samples in each city; one, its regular diary sample; the other, a metered sample of 450, using the automatic retrieval **Arbitron Television Meter.** New York and Los Angeles television subscribers receive daily overnight reports, weekly reports, and monthly reports. Since meters report only set usage, the monthly report, published seven times a year, includes data from the market's diary sample to show what type of people were in the audience. Chicago was to be added to the metered service in 1978, with possibly other markets to follow. The trade press reported Arbitron had long-range plans for a national metered service to compete with A. C. Nielsen in measuring network audiences.[1]

A. C. Nielsen Company measures television audiences at both the local and national levels. Nielsen began in 1934 as a marketing research firm. Several years later the company bought rights to the first mechanical recorder, and by 1940, Nielsen was in the radio audience measurement business. Nielsen added television research in the late 1940s, adapting its recorder for the visual medium, and got out of radio completely in 1964.

At the local level, Nielsen competes directly with Arbitron. Nielsen measures 220 markets in November, February and March, and May of each year. The firm measures larger markets as many as eight times a year. At the local level, Nielsen uses the diary method, and the first of its **Nielsen Station Index** (NSI) reports are ready for the mail in about two weeks after the survey. Niel-

sen has **Storage Instantaneous Audimeter** (SIA, its automatic retrieval meter) local service in New York, Chicago, and Los Angeles, and planned to add San Francisco in 1978. Nielsen also uses two separate samples per city; the metered sample (500 each in New York and Los Angeles, 300 in Chicago) for overnight information on set tuning and a diary sample (1500–2000) for audience demographics.

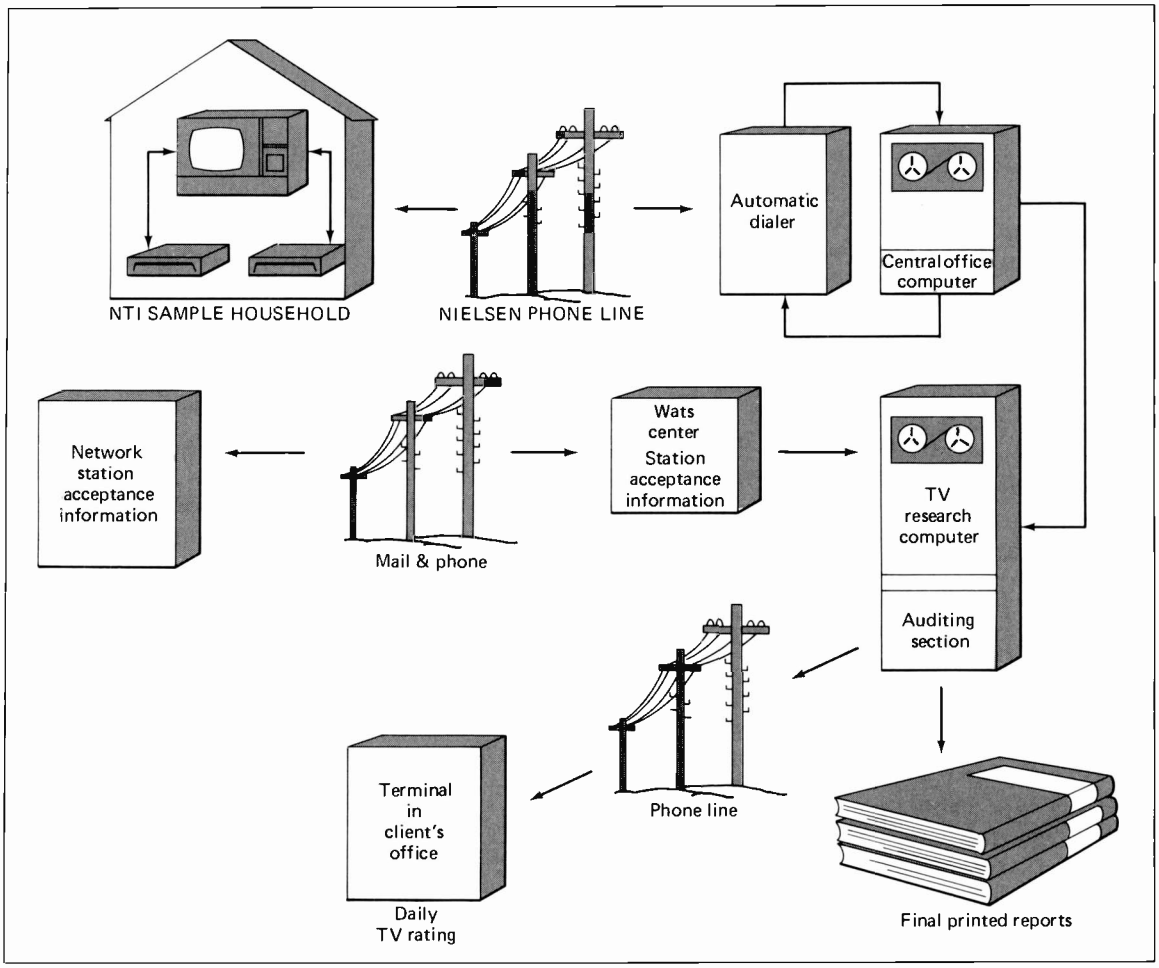


Figure 17-12. The Nielsen Audimeter System. Each Storage Instantaneous Audimeter home unit is connected to a special telephone line used only by Nielsen. At least twice a day a Nielsen computer dials each home unit and retrieves the stored information. The entire process is automatic and requires no work on the part of the sample household. Two backup computers (in two locations) serve as protection against electrical failure.

SOURCE: NTI in Action (Northbrook, Ill.: A. C. Nielsen Co., 1974), pp. 26–27. Used by permission.

The **Nielsen Television Index,** currently undisputed last word in network ratings, is based on data from a national sample of 1200 households equipped with SIAs. Every year the company replaces about 240 households, so that there is a completely new sample every five years.

Nielsen also uses another 2400 households, which it calls the **National Audience Composition** (NAC) sample, to measure *who* was watching. Each NAC household is equipped with diaries and a simple recorder, called a **Recordimeter.** The household keeps the Recordimeter all year but fills out diaries only during 34 weeks, distributed through the four annual viewing seasons. One-third of the sample is used in each NAC survey week, and one-third of the sample is replaced each year. Nielsen has its who-watched report ready in about two weeks.

In 1977, Radio Advertising Bureau developed **TRAC-7,** a method of measuring radio audiences that could serve as an alternative to Arbitron. TRAC stands for Telephone Radio Audience Cumulation, with the 7 representing the number of days each respondent is interviewed during a week. Interviewers call respondents by telephone. Each interviewer has a cathode ray tube (CRT) display linked to a computer. The computer supplies and displays on the CRT telephone numbers and questions. Interviewers enter responses directly into the computer. The sample includes both listed and unlisted telephone homes. One person in each sample household serves as the respondent, and the respondent reports only personal listening, not that of other members of the household. The interviewer contacts the respondent seven days a week for most weeks of the year. TRAC-7 provides information not only on listening patterns, but also on product usage and time spent with newspapers and television. The system could yield monthly audience trend reports for programmers, full demographics ratings reports for sales personnel and advertisers on a less frequent basis, and annual marketing reports showing where each station's listeners shop, their incomes, their occupations, and other marketing characteristics. In 1978, Audits & Surveys Incorporated announced plans to offer the service on a syndicated basis as A&S/TRAC-7 starting in four markets late in 1978.

We have called them "audience research companies," but many of the firms offer other services as well. In most cases these other services are involved with media or market research. Nielsen, for example, offers not only Nielsen Television Audience Research (NSI and NTI), but also Nielsen Retail Index Service (information on selling conditions in retail stores and product movement from stores to consumers), Nielsen Clearing House Services (coupon redemption), Neodata Services (magazine circulation management), Petroleum Information Services (information for oil and gas firms to make exploration and production operations more efficient), and Nielsen Custom Research (research designed to specific needs). Nielsen offers these services in the United States and a number of foreign countries.

POLICING AND PROBLEMS

In the early 1960s, broadcasters and advertisers began to rely increasingly on ratings in evaluating and making decisions concerning broadcast programming. Questions were raised concerning the procedures research firms used and the accuracy of their results. A congressional committee investigation in 1963 and 1964 revealed weaknesses and shortcomings in audience measurement.

The National Association of Broadcasters (NAB) led efforts to form a body to monitor research firms and to ensure that they met certain standards. NAB joined with ABC, CBS, NBC, Radio Advertising Bureau, Station Representa-

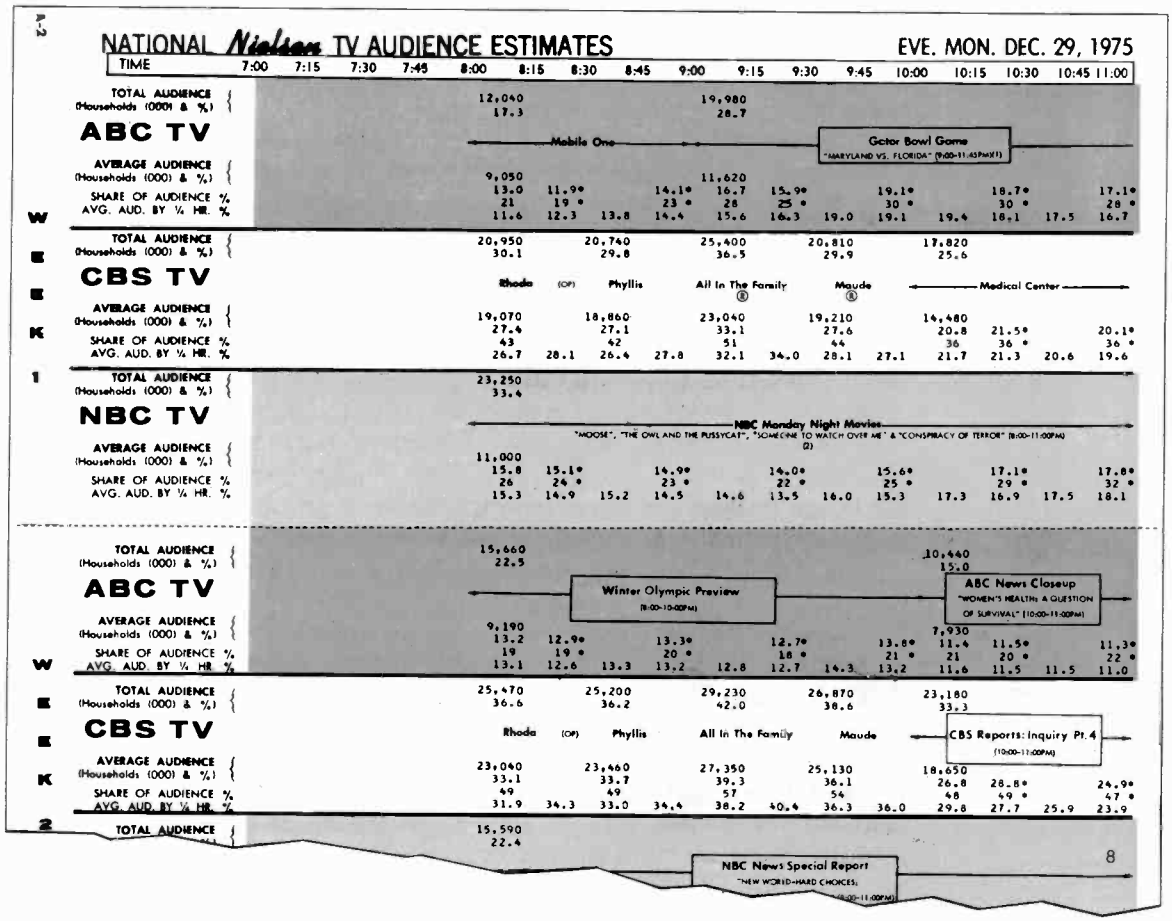


Figure 17-13. Nielsen National Television Ratings.

SOURCE: 1977 Supplement to NTI in Action (Northbrook, Ill.: A. C. Nielsen, 1976), p. 8. Used by permission.

What BRC Accreditation Means

The Arbitron Service hase been accredited by the Broadcast Rating Council since September 1965. To merit continued BRC accreditation Arbitron: (1) adheres to the Council's Minimum Standards for Broadcast Research, (2) supplied full information to the BRC regarding all details of its operation, (3) conducts its measurement service substantially in accordance with representations to the subscribers and the Council and (4) submits to, and pays the cost of, thorough on-going audits of Arbitron operations by CPA firms engaged by BRC. In addition to sizable annual audit charges, Arbitron provides office and file space for BRC auditors as well as considerable staff and computer time involved in various aspects of these inspections.

Further information about BRC's accreditation and auditing procedures can be obtained from Executive Director, Broadcast Rating Council, 420 Lexington Avenue, N.Y.C. 10017.

Figure 17-14. What BRC Accreditation Means.

SOURCE: Arbitron Television: Audience Estimates in the Arbitron Market of New York, Nov. 1976: November 3-November 30, p. iii. Used by permission of Arbitron and Broadcast Rating Council.

tives Association, and Television Bureau of Advertising to form the **Broadcast Rating Council** (BRC) in January 1964. All seven organizations support BRC financially and have memberships on its board of directors.

BRC's prime objective is to monitor independent syndicated broadcast rating firms. It works toward this objective through a voluntary accreditation program. Any rating firm may apply for BRC accreditation. The key aspect of accreditation and of BRC activity is the auditing of ratings services. BRC uses independent accounting firms to check all aspects of a service, from sample design through published reports. The applicant must pay for the audit and, if accredited, wins the right to use the BRC "double check" symbol on all reports. The BRC can withdraw accreditation any time a company fails to meet any of the council's criteria.

In spite of BRC and the research firms' own efforts for speed and accuracy, problems do arise. For example, reports from two different firms may show different ratings for the same time period. The research firms can usually explain disparities, citing differences in elementary units, sampling procedures, statistical treatment of data, and definition of market; in other words, they measure, figure, and report different things in different ways. But while researchers and statisticians may see a 23,000 difference in HUT as being the logical and obvious result of different approaches of two different firms, it does not seem this way to a station manager who must devise a rate card and deal with research-conscious advertisers.[2]

Sometimes there are attempts to tamper with the sample. In mid-1976, the trade press reported a Baltimore woman had seven diaries, all sent to individual members of her family for the spring radio sweep in that city. She offered

to sell them to stations at prices ranging from $1500 to $2500. Several of the stations notified the research firm, which excluded those diaries from tabulation.[3] Later that year, reports described the indictment of a former radio station employee and a former Postal Service employee accused of taking seven diaries for the spring radio sweep in Memphis and using them to artificially inflate ratings of a local station. The research firm published a new Memphis report tabulated without the seven diaries.[4]

Stations may attempt to influence ratings during local sweeps. We have already discussed hypoing in Chapters 6 and 15, but stations occasionally use blatant attempts to influence ratings, airing announcements such as "If you're keeping a rating service diary, you're listening to WAAA" and "If you have a friend filling out a little book, tell him or her about the new WBBB, AM 56."

Another problem with ratings is more subtle, widespread, and long range: their misuse by broadcasters. As ratings go up, so do advertising rates. Therefore broadcasters carefully tune programming to attract maximum audiences. The result is a predominance of inoffensive, middle-of-the-road programming and near total absence of minority taste programming—for example, news documentaries; serious music, drama, and dance; and minority racial and ethnic programs. The result is also programming decisions—decisions made on a regular basis, but nonetheless, preposterous—in which a network program series is canceled because "only" 40 million people watch it. Rarely do such programming decisions mean the difference between profit and loss; usually, their aim is profit and more profit—as much profit as can be squeezed out. (See Chapter 15 for discussion of other ratings-connected problems.)

Notes

1 "Meter Competition Begins on Coasts," *Broadcasting,* Aug. 23, 1976, p. 76.
2 "WFTV Bothered and Bewildered by Nielsen, ARB," *Broadcasting,* Feb. 7, 1977, p. 62; "Seek and Ye Shall Find," *Broadcasting,* Mar. 14, 1977, p. 56; and "Nielsen, Arbitron Had a Skeptic in the Audience," *Broadcasting,* Apr. 4, 1977, p. 67.
3 "Pssst, Wanna Buy a Book?" *Broadcasting,* July 26, 1976, p. 5.
4 "Let No Man Tamper," *Broadcasting,* Mar. 7, 1977, p. 46.

Bibliography

RATINGS

Everything You've Always Wanted to Know about TV Ratings (But Were Maybe Too Skeptical to Ask), (Northbrook, Ill.: A. C. Nielsen Co., n.d.) is just what the name implies. It concentrates, of course, on Nielsen, particularly NTI, but is very readable and does an especially good job explaining sampling theory. More technical, but still an excellent reference tool in figuring out audience research and ratings is *Standard Definitions of Broadcast Research Terms* (Washington, D.C.: NAB, 1973). See also, *Recommended Standards for the Preparation of Statistical Reports in Broadcast Audience Measurement Research* (Washington, D.C.: NAB, 1969); these standards have been incorporated in BRC's "Minimum Technical Standards for Broadcast Rating

Research." Another NAB publication is a do-it-yourself booklet for broadcasters, Joe Belden, *A Broadcast Research Primer,* 2nd ed. (Washington, D.C.: NAB, 1966). Written with a minimum of technical jargon, this primer tells not only how, but also why, and contains many helpful illustrations. The Television Information Office published a series of three booklets on the validity of television ratings, particularly sample size. These get into the technical aspects of rating methodology, but are written in nontechnical language for the purpose of explaining to the public how and why ratings are fairly accurate. They are Martin Mayer, *How Good Are Television Ratings; How Good Are Television Ratings (continued . . .)*; and *Television Ratings Revisited . . . A Further Look at Television Audiences* (New York: Television Information Office, 1966, 1969, 1971).

18 Local Stations

The basic unit in American broadcasting is the local station. In your hometown there is probably at least one radio station, and if you live in a large city, several radio and television stations. Across the United States thousands of relatively low-powered transmitters, owned by hundreds of licensees, broadcast programming to millions of Americans. The local station is the vital link in the system. Networks are useless without the local station. No matter how elaborate, exciting, and vital a network's programming, your community cannot receive it unless there is a station that elects to broadcast it.

Many other countries have opted for more efficient broadcasting systems—a small number of high-powered transmitters that cover the entire country. Programming origination is limited to a few sources or even to a single agency. The American system, with many local stations, seems comparatively redundant and expensive. Yet, the American system allows broadcasting to serve local needs, a capability largely absent from other nations' more efficient systems. The station becomes a vital part of the community it serves—providing entertainment, information, and opinions. The station is an employer—hiring, firing, training, and paying personnel. It is a mixture of show business and marketing, a meeting ground for commerce and the arts. And most important to the commercial station owner, the station is a business, an investment from which to expect a profitable return.

In this chapter we look first at station licensees—types of owners, limita-

tions on ownership, and ownership changes. We examine station income and expenses. We see what a station is like inside and who works there. Finally, we look at the National Association of Broadcasters, the trade organization pledged to protect the interests of the station.

The Licensee

The **licensee** is the person or corporate entity entrusted with operation of the station by the Federal Communications Commission (FCC). While the licensee owns physical facilities—land, building, equipment, transmitter—the frequencies on which the station operates are borrowed, terms of the loan being operation in the public interest. A licensee must sign a waiver disclaiming ownership of frequencies.[1] The license itself is temporary, and the licensee must reapply every three years.[2] Therefore when the words "owner" and "ownership" appear in reference to a licensee, they apply only to physical facilities. However, if the distinction between the two words is understood, "owner" can be used synonymously with "licensee."

PATTERNS OF OWNERSHIP

The owner of a broadcast station may be one person, a partnership, or a group of persons. If more than one person, shares of ownership may be equal or varied. Quite often the official owner is a corporate entity. Even if one individual is sole owner, that owner may incorporate for tax or other purposes. An owner whose sole or main business is one broadcast station is a **single owner.** A **group owner** has two or more stations in different cities. An owner with AM and FM radio stations in the same city is a **single owner with an AM-FM combination,** even when the stations program independently.

A station may be co-owned with other media—a newspaper, a cable television firm, a magazine, or some combination of these. Broadcasting mixed with other media is **cross-media ownership** or **cross-channel affiliation.** Broadcasting mixed with other types of business—say, a trucking line, an airline, a kitchen appliance firm, and a tire company—is **conglomerate ownership.**

LIMITATIONS ON OWNERSHIP

The Communications Act of 1934 and the FCC have set up two general types of restrictions on ownership of broadcast stations—one concerning **who qualifies for a license;** the other, **how many licenses an individual may hold.** Several sections of the Communications Act specify qualifications that must be met before a license is granted: the applicant must be a citizen of the United States or, if a corporation, must be owned by citizens;[3] must never have had a previous license revoked by a court for violating antitrust laws;[4] and must have filed written application.[5] Additionally, the act directs the FCC to grant

a license only after determining the grant would serve the public interest, convenience, and necessity.[6]

The FCC asks for information concerning an applicant's citizenship, character, financial, technical, and "other" qualifications.[7] The commission tends to look with disfavor on any applicant that misrepresents or fails to disclose corporate makeup or questionable background in its application; that willfully, continually, or recently violated state or federal laws; or that took any other action which places its character in question. Every applicant must prove possession of or access to financial resources to build and operate the proposed station. The applicant does not have to be technically qualified personally, but does have to show plans for equipment and staff that reflect adequate technical preparation.

In the event that two or more applicants apply for the same channel, the FCC must select the applicant best qualified to run a station. The commission selects on the basis of **comparative criteria,** awarding the license to the applicant that shows superiority in these criteria. All other things being equal, the FCC prefers applicants who control no other media of mass communication, especially broadcast stations, to those who do; applicants who will run the proposed station themselves to those who will be absentee owners and will hire others to operate it; applicants who have lived in the community of license to nonresidents; applicants whose proposed programming will serve needs and interests of the community substantially better than other applicants; applicants who have previously run stations with unusually good records of attention to public needs and interests; and applicants whose proposed station will make more efficient use of frequencies than other applicants. All other things being equal, applicants in a comparative hearing, who have unusually poor records of previous station ownership or who have unusually poor character qualifications, are at a clear disadvantage. But "all other things" are rarely equal. One applicant will be superior in some areas, another in other areas, and the FCC must weigh all factors before making a decision. Some persons have suggested that the FCC should abandon comparative criteria and use instead a lottery or even an auction to select a licensee from qualified competing applicants.

FCC rules limit the number of stations one licensee may own. Their purpose is diversification—to prevent broadcast stations from being owned or controlled by relatively few individuals and corporations. The commission reasons that such monopoly would reduce the number of origins and outlets for different views and ideas, while raising the number of absentee owners unfamiliar with the needs and interests of the communities in which their stations are located.

For years the FCC has had a rule forbidding common ownership of two stations in the same service (AM, FM, or TV) in the same community. Now, a new licensee is prohibited from acquiring both radio and television stations in

the same city. When this one-to-a-customer policy went into effect, a large number of radio-television ownership combinations already existed; these were **grandfathered in** (allowed to remain). But subsequent sales must be arranged in order to break up the combinations.

The commission limits the total number of stations that may be owned to seven in each service; of the seven television stations no more than five may be VHF.[8] An applicant seeking to acquire more than three television stations (two VHF) in the 50 largest markets must make a "compelling showing" to the FCC that the public would be better served by permitting such ownership concentration.[9] However, this "top-50" policy has never been enforced, and in 1978 the FCC opened an inquiry into the matter of abolishing the rule.

The FCC bans certain types of cross-media ownerships and in some cases has even required divestiture (breakup) through sales. In 1975, the commission adopted a rule forbidding broadcast stations to be co-owned with newspapers in the same market. Most existing newspaper-broadcast combinations were grandfathered in; divestiture was ordered only for cases in which the newspaper was the market's only daily (which was the case in 23 small markets).* The FCC also forbids television stations to be co-owned with cable television systems in the same market. The commission required divestiture only for cases where a cable television system was co-owned with the city's only commercial television station (eight cross ownerships in small markets).†

CHANGE OF OWNERSHIP OR CONTROL

The Communications Act stipulates that any change in ownership or control of a broadcast station must be considered by the FCC before that change takes place.[10] If a broadcast licensee wishes to sell the station, application has to be made first to the FCC. The prospective purchaser must qualify just as though applying to construct a new station. Upon receipt of the application, the commission considers whether the public interest would be served by the transfer. The FCC is prohibited from inviting and considering competing applications, limiting its choice to approval or disapproval of the transfer.

A general rule of thumb is that a station's worth is equal to two and one-half times its annual gross income. But a construction permit (CP) or a license of a brand new station has a certain inherent value, because of its **potential** as a money earner. Some parties have attempted to profit from this value. They apply for a CP or permission to buy an existing station, with the sole intent of selling it for a good return on their investment. This practice is called **trafficking** and was especially rife after the 1952 end of the freeze on television channel licensing. Trafficking negates the concept of licensing a station to serve the public interest, and the FCC works to prevent it.

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* The rule was appealed, and in 1978 the U.S. Supreme Court upheld the FCC's newspaper-broadcast ownership rule in its decision in *FCC v. National Citizens Committee for Broadcasting,* _____ U.S. _____, 98 S. Ct. 697 (1978).

† Appeal for court review of this divestiture order was entered in April 1976.

The FCC is interested in other forms of change of control. For example, the trading of major blocks of stock could alter control of a corporate licensee. The corporate licensee would still own the station, but a new party or group would control the corporation. Such changes require prior written permission of the FCC.

A number of practices, while not prohibited by the FCC, do represent areas of potential loss of control. Some stations sell large blocks of time to a single party—an advertiser who desires to program the entire block or a time broker who resells it to others. Many automated radio stations use syndicated music services whose contracts are very specific about types of program content the station may integrate into the syndicated material. Stations sometimes hire programming consultants who say they can improve ratings only if the stations program in the manner they dictate. A large number of stations broadcast material in languages not understood by the licensee. The FCC requires annual reports on most of these practices. And in all cases the licensee must maintain and exercise control of programming. To do otherwise risks loss of license.

PUBLIC BROADCASTING OWNERSHIP

Most noncommercial stations are owned by nonprofit organizations. Beyond this broad generalization, it is difficult to categorize types of ownership. Public television stations tend to be owned by state educational broadcasting commissions, by colleges and universities, by broad-based nonprofit community corporations, and by school boards and systems. Public radio station ownership is even more diverse. In addition to state commissions, universities, community corporations, and school boards, public radio stations are licensed to organizations such as churches, religious groups, seminaries, high schools, college student government associations, cities, counties, and boys' clubs.

Most public radio stations are in the reserved portion of the FM band. Some licensees, however, operate noncommercial broadcast stations in the AM band. For example, Ohio University operates noncommercial WOUB, Athens, Ohio, at 1340 kHz, and Moody Bible Institute operates both WMBI, Chicago, 1110 kHz, and WDLM, East Moline, Illinois, 960 kHz. (Some nonprofit institutions also operate commercial stations, e.g., University of Missouri's KOMU-TV, channel 8, Columbia, Missouri, and Loyola University of the South's WWL, 870 kHz, New Orleans.)

Limitations on the number of licenses do not apply to noncommercial broadcasting. The School Board of Dade County, for example, operates two television stations in Miami, WLRN-TV, channel 17, and WTHS-TV, channel 2.* The Mississippi Authority for Educational Television operates eight television transmitters across its state, one more than a commercial entity could own. However, under a rule the FCC proposed in 1978, a noncommer-

* Channel 2 is shared on evenings and weekends by noncommercial WPBT, licensed to Community Television Foundation of South Florida.

cial licensee could own only one station in the same service in the same market and a total of no more than seven FM and seven television (no more than five VHF) stations, whether commerical or noncommercial.

Profit and Loss

The primary purpose of any business is to earn a profit. Expenses are deducted from revenues, and the result—the **bottom line**—determines whether or not the business has been successful. Since a commercial broadcast station is a business, the bottom line is crucially important to its owners. Profits make everyone happy; owners get return on investment, employees may get raises or bonuses, capital improvements may be made to the station itself, programming and other services to the community may be expanded, and new employees may be hired. Losses, however, can mean layoffs, continued use of marginal or outdated equipment, and cutbacks in programming. Sustained losses over a number of years can lead to sale of the station or surrender of its license.

A licensee's general economic condition is reflected on a **balance sheet.** The balance sheets sets forth the value of the licensee's **assets** and **liabilities;** the difference between these values is the licensee's **net worth.** Assets include value of land on which the station sits, buildings in which the station is housed; equipment within the buildings; station-owned rights to program materials that have not yet been broadcast; the station's "good will" (e.g., network affiliation, image in the community); and cash on hand, accounts receivable, prepaid expenses, unused inventories, and so forth. Liabilities are what the licensee owes. Liabilities range from mortgages and dividends declared but not yet paid to employee wages and sales taxes. For income tax purposes, stations depreciate (to zero value) equipment over a number of years, usually about five to seven.

A licensee's economic activity through a period of time is reflected on a **profit and loss statement.** A station receives most of its revenue through sale of advertising time. If a network affiliate, some revenues may come from station compensation.* Other sources include talent fees, charges for use of station facilities, syndication or sale of recorded programming, merchandising, and returns on investments. Expenses are divided into four areas—(1) programming, (2) technical, (3) selling, and (4) general and administrative. Salaries, wages, and commissions comprise the greatest expenditure in each of these areas. Television stations spend most on programming; radio stations, on general and administrative, with programming as the second highest area of expense.

When losses occur or profits drop, some managers panic. They cut rates,

* See Chapter 16.

TABLE 18.1
A Broadcast Station Balance Sheet

(Date)	THIS YEAR	LAST YEAR
Assets		
Current assets:		
Cash	$	$
Temporary investments		
Receivables, less reserves		
Inventories		
Broadcasting rights		
Prepaid expenses		
Total current assets		
Fixed assets, less depreciation		
Deferred charges		
Broadcasting rights, noncurrent		
Other assets		
Intangibles		
Total assets	$	$
Liabilities and Capital		
Current liabilities:		
Accounts and notes payable		
Taxes and amounts withheld from employees		
Accrued expenses		
Federal income taxes payable	$	$
Total current liabilities		
Deferred income taxes		
Deferred credits		
Long-term debt		
Other liabilities		
Capital stock		
Additional paid-in capital		
Retained earnings		
Treasury stock:		
Common	( )( )	
Preferred	( )( )	
Total capital		
Total liabilities and capital	$	$

SOURCE: Institute of Broadcast Financial Management, *Accounting Manual for Broadcasters*, rev. in association with Ernst & Ernst (Chicago: IBFM, 1972), "Financial Statement Forms," p. 11. Used by permission of Broadcast Financial Management Association (formerly IBFM).

TABLE 18.2 (A)
Revenue and Expense for the Typical Radio Station, Nationwide, in 1976

Revenue and Expense Items	ALL STATIONS	
	Typical Dollar Figures	*Typical Percent (%) Figures*
Pre-tax profit margin		7.64%
Total time sales[a]	$248,300	100.0%
From:		
Network compensation	0	0.0%
National & regional advertisers	25,800	10.4%
Local advertisers	222,500	89.6%
Total broadcast revenue	239,900	
Non broadcast revenue	2,700	
Trade-outs & barter	7,000	
Total broadcast expense	221,600	100.0%
From:		
Technical	15,300	6.9%
Program	64,100	28.9%
Selling[b]	45,500	20.5%
General & administrative	96,800	43.7%
Selected expense items	115,200	100.0%
Total salaries[c]		
From:		
Technical	7,500	6.5%
Program	43,000	37.3%
Selling	34,500	30.0%
General & administrative	30,200	26.2%
Cost of outside news service	5,100	
Depreciation & amortization	6,200	
Music license fees	11,300	
Interest	5,400	
Profit (before Fed. Income tax)	18,300	

SOURCE: NAB Radio Financial Report 1977 and *NAB Television Financial Report 1977* (Washington, D.C.: NAB, 1977), p. 2. Used by permission of National Association of Broadcasters.

[a] Time Sales plus other broadcast revenues less cash discounts and commissions to agencies, representatives and brokers.

[b] Includes all promotion; excludes agency and rep. commissions.

[c] Includes salaries, wages, bonuses, and commissions.

TABLE 18.2 (B)
Revenue and Expense of the Typical Television Station, Nationwide, in 1976

Revenue and Expense Items	ALL STATIONS	
	Typical Dollar Figures	*Typical Percent (%) Figures*
Profit margin (before tax)		26.78%
Total time sales	$3,207,600	100.0%
From:		
Networks	340,000	10.6%
National & regional	1,360,000	42.4%
Local advertising	1,507,600	47.0%
Total broadcast revenue[a]	2,841,300	
Non broadcast revenue	74,600	
Trade-outs & barter	62,900	
Total broadcast expense	2,080,400	100.0%
From:		
Technical	264,200	12.7%
Program	726,100	34.9%
Selling[b]	301,600	14.5%
General & administrative	788,500	37.9%
Selected expense items		
Total salaries[c]	790,600	100.0%
From:		
Technical	*158,900*	*20.1%*
Program	*311,500*	*39.4%*
Selling	*188,200*	*23.8%*
General & administrative	*132,000*	*16.7%*
Cost of outside news service	*18,200*	
Music license fees	*58,500*	
Depreciation & amortization	*171,700*	
Interest	*10,200*	
Film & tape expense	*160,200*	
Profit (before Federal Income Tax)	*760,900*	

SOURCE: NAB Radio Financial Report 1977 and *NAB Television Financial Report 1977* (Washington, D.C.: NAB, 1977), p. 2. Used by permission of National Association of Broadcasters.

[a] Time Sales plus other broadcast revenues less cash discounts and commissions to agencies, representatives and brokers.

[b] Includes all promotion; excludes agency and rep. commissions.

[c] Includes salaries, wages, bonuses, and commissions.

TABLE 18-3
Number of Broadcast Stations Reporting Profit by Station Type

	TELEVISION							RADIO		
		NETWORK AFFILIATED			INDEPENDENT					
	Total	*Total*	*VHF*	*UHF*	*Total*	*VHF*	*UHF*	*Total*	*Am*[a]	*Fm*
Number Reporting	638	547	430	117	91	30	61	4,947	4,275	672
Profit										
Number	537	473	393	80	64	25	39	3,218	2,875	343
(%)	(84.1)	(86.5)	(91.4)	(68.4)	(70.3)	(83.3)	(63.9)	(65)	(67.2)	(49.2)
Loss										
Number	101	74	37	37	27	5	22	1,729	1,400	329
(%)	(15.8)	(13.5)	(8.6)	(31.6)	(29.6)	(16.7)	(36.1)	(34.9)	(32.7)	(50.1)

SOURCE: Federal Communications Commission, *TV Broadcast Financial Data—1976*, Public Notice 87928 (Washington, D.C.: FCC, Aug. 29, 1977); and *AM and FM Broadcast Financial Data, 1976*, Public Notice 92277 (Washington, D.C.: Dec. 12, 1977).
[a]Includes AM stations and AM/FM combinations.

program cheaply, accept questionable advertising, fire experienced talent, hire personnel that will work cheaply, and drop out of trade associations. This type of action trims losses for a while but may lead to more serious problems in the long run as audiences notice that quality has dropped.

A good manager builds in reserves—extra personnel and prepayment of some long-term obligations are two such reserves—that may be cut temporarily to reduce losses. If a station has a good programming product and acceptable audience levels, the first items to be cut are waste and inefficiency. Some managers actually raise rates when profits fall or losses are incurred. Assured that they have high quality programming that attracts large audiences, they know advertisers will continue to buy time, even if prices are higher. Some managers even spend more, pumping money into programming, promotion, and sales, sustaining greater losses over a short period of time in order to regain the competitive edge that pays off in the long run.

The chances of a station being a money maker vary with the type of station. For example, on the average, television stations bring in more money than radio stations. VHF television stations make more money than UHF stations. Television stations in large markets earn more than those in small markets, in spite of the fact that fewer stations share total revenues in small

TABLE 18.4
Television Station Revenues in Nine Selected Markets

Market	#	Television Households	Total TV Stations Reporting	Total Broadcast Revenues	Average Revenue Per Station[a]
New York	1	6,326,300	9	234,235,145	26,026,100
Los Angeles	2	3,814,500	11	213,349,461	19,395,300
Chicago	3	2,646,500	8	146,608,629	18,326,000
Orlando-Daytona Beach	40	462,200	4	17,429,964	4,357,200
Syracuse	51	406,200	3	14,802,986	4,934,000
Knoxville	61	335,300	4	10,137,666	2,534,500
Salinas-Monterrey-San Jose	86	210,300	4	10,009,617	2,502,400
Tucson	92	191,800	4	8,682,338	2,170,600
Duluth-Superior	109	159,800	3	5,044,495	1,681,500

SOURCES: Broadcasting Yearbook, 1977 (Washington, D.C.: Broadcasting Publications, Inc., 1977), pp. B-80-B-82; and Federal Communications Commission, *TV Broadcast Financial Data—1976*, Public Notice 87928 (Washington, D.C.: FCC, Aug. 29, 1977).
[a] Rounded to nearest hundred dollars.

markets, while large markets are relatively station-packed. Television network affiliates are more profitable than independent stations. Network owned and operated television stations are all VHFs in large markets* and, of course, network affiliates; therefore as a group, they are very profitable, much more so, on the average, than other stations.

While network affiliation does not have the same value in radio, other factors do tend to affect radio earnings as they do in television. On the average, AM and AM/FM combination stations earn more than FM stations. Keep in mind that we are dealing with averages and that you can most certainly find some radio station somewhere that makes more than some television station somewhere, a UHF station that makes more than a VHF station, or some similar situation.

Noncommercial broadcast stations do not earn a profit but must pay attention to balance sheets, nonetheless. Sources of income vary according to the type of ownership, but much of a public station's money comes either from taxes or donations. Those licensed to states, school boards and tax-supported universities depend on tax revenues but may also solicit funds from the public and foundations through membership drives, auctions, solicitation for program underwriting, or just plain begging. Stations licensed to community corporations depend primarily on these latter sources; however, they may also receive grants from the Department of Health, Education and Welfare, Corporation for Public Broadcasting, local school boards (for airing instructional

* See Chapter 19.

programming for in-school use), and state governmental agencies. The ultimate sources for such grants are, of course, taxes.

In most cases, none of these sources provide enough funding for public stations to produce local programming comparable to that done by commercial stations in the same market. In most cases, too, public broadcast stations have less studio space and facilities, lower quality equipment, fewer employees, and lower pay scales than their commercial counterparts. Many public radio stations and even a few public television stations scrounge equipment, seeking donations of outmoded broadcast gear from commercial broadcasters. There are exceptions, however, and some of the larger public radio and television stations have physical facilities and creative staffs that rival those of any commercial station. These are usually the stations that turn out high quality, locally produced programming. But all too often, in a medium to small market, the public station will have to curtail plans to produce, for example, that long-planned, hard-hitting documentary on school busing because there is not enough money and because it would offend the local school board which holds the purse strings. Besides, the transmitter tube will probably blow next week, and all the rest of the year's operating budget would be needed to replace it. And in noncommercial broadcasting there is no way to raise rates or to prod the sales staff to cover the cost.

Station Organization

Two elements, fundamental to any station, are **physical facilities** and **personnel.** These are basic tools with which the station builds programming, audiences, sales, and profits.

PHYSICAL PLANT REQUIREMENTS: RADIO STATIONS

Radio stations come in all sizes. Some fit in small houses or office suites; others, in buildings large enough to house a television station. All radio stations have certain special requirements for which space must be set aside.

Transmitter Room. Central to the needs of any radio station is space for the transmitter. A modern radio transmitter is compact, usually housed in the station building itself. Because of FCC requirements,[11] the transmitter is either located where the operator can see it or has a set of remote controls and instruments that the operator can see. Often an automated station places its automation units adjacent to the transmitter.

Control Rooms and Studios. The broadcast operations center is the master control room. Here sits the operator, the person on duty licensed by the FCC to operate the station's transmitter. Since the operator often works also as host/disc jockey, the master control room contains, within each reach, audio control board, turntables, microphone, tape machines, telephone, shelf or

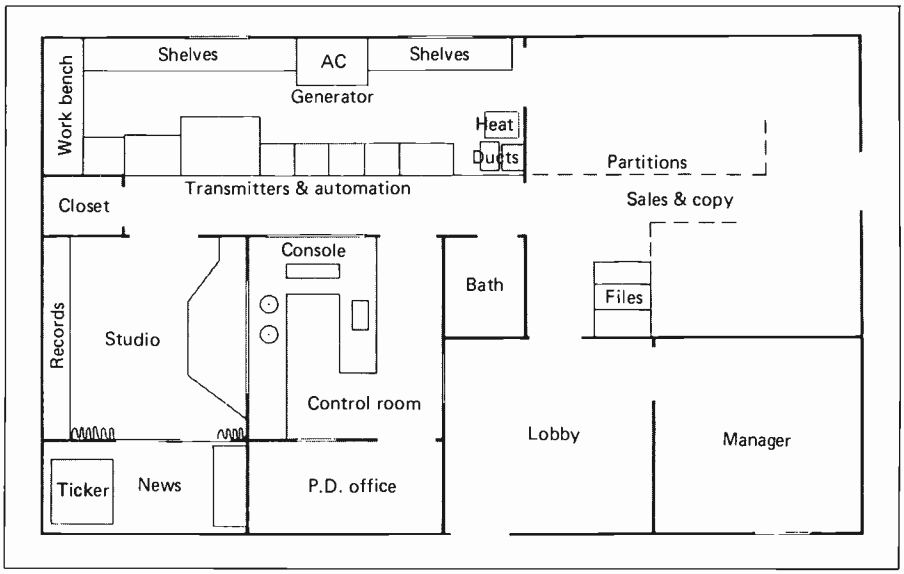


Figure 18-1. Floor Plan for Small Radio Station. The building housing WDDD, a 50 KW FM station in Marion, Illinois, is 26′ × 44′. Note that the operator can see studio, newsroom, automation units, and receptionist in lobby from the control room.
SOURCE: BM/E Broadcast Management/Engineering, Dec. 1974, p. 34. Used by permission of WDDD and BM/E.

holder containing log and copy book, and bins or shelves containing records and tapes. A clock, some charts of the station's format, a bulletin board full of FCC and station notices, several coffee cups, a full ashtray or two, and assorted chairs, trash cans, and so on, complete the usual radio control room. The master control room is built in such a way as to reduce outside noise and to eliminate noticeable echos.

In most stations there is at least one other room similar to master control called the production control room. This is where commercials and special programs are produced. Adjoining the control rooms may be one or more multipurpose studios. These studios are lined with sound-deadening material and contain microphone outlets. They range in size from closetlike announce booths to large rooms capable of seating up to 100 people.

News Room. All stations contain some accommodation for news, the size varying with complexity of the news operation. Full-time news personnel need workspace larger than the usual news wire machine closet—at least one office-sized room equipped with typewriters, police and emergency band radio monitors, telephones, desks, file cabinets, and tape machines and other production gear. Some stations set aside a production control room exclusively for news use.

Office Space. There must be office space for the general manager, the program director, the sales staff, the copy writer, the traffic director, and the accounting or business staff, as well as a workshop/office for the engineer and a lobby area. A receptionist works in the lobby to greet visitors. In very small stations the receptionist may also double in other jobs—manager's secretary, copy writer, traffic manager, or bookkeeper.

Storage and Auxiliary Areas. A radio station needs closets, storage space, places for files, rest rooms, provision for central heating and air-conditioning, and a place for a coffee pot. With the exception of those with classical music or variety formats, few stations maintain extensive record libraries. Larger stations, however, may set aside an entire room for record and tape storage and designate a staff member as music director to keep track of contents. As markets and stations get larger, the physical plant gets larger. It can include conference rooms, snack bar or vending machines, community meeting rooms, observation areas, individual offices for news director, chief engineer, and sales manager, and lounges for off-duty air personnel.

PHYSICAL PLANT REQUIREMENTS: TELEVISION STATIONS

Television involves more complicated equipment than radio and therefore requires a larger physical plant. The television station usually consists of at least two buildings—the main studio and the transmitter building.

Transmitter Building. The transmitter building is adjacent to the transmitting tower. Since a tower should be located as high as possible and central to the region served by the station, the transmitter building may be in remote areas, even on mountains. In these cases the building contains not only transmitter, meters, monitors, and controls, it also contains provision for a transmitter engineer to "live in"—cot, stove, refrigerator, bath facilities—in the event of severe weather.

Master Control Room. In the television master control room, the video signal is finally processed before being sent to the transmitter. To conserve on personnel, duty or residue directing may be done from master control, camera control units for all cameras in all studios may be in master control, and telecine units and videotape machines may be located in or adjacent to master control.

Production Studio and Control Room. Local programming is produced in a production studio. Even small production studios are, of necessity, large rooms—large enough to hold sets and to allow talent and cameras to move around. Because of studio size, sound is not as easily controlled as in a radio studio. Nevertheless, a television studio usually has some sound deadening material inside. A production studio contains cameras, outlets for cameras and microphones, lighting instruments, as well as a grid of pipes near the ceil-

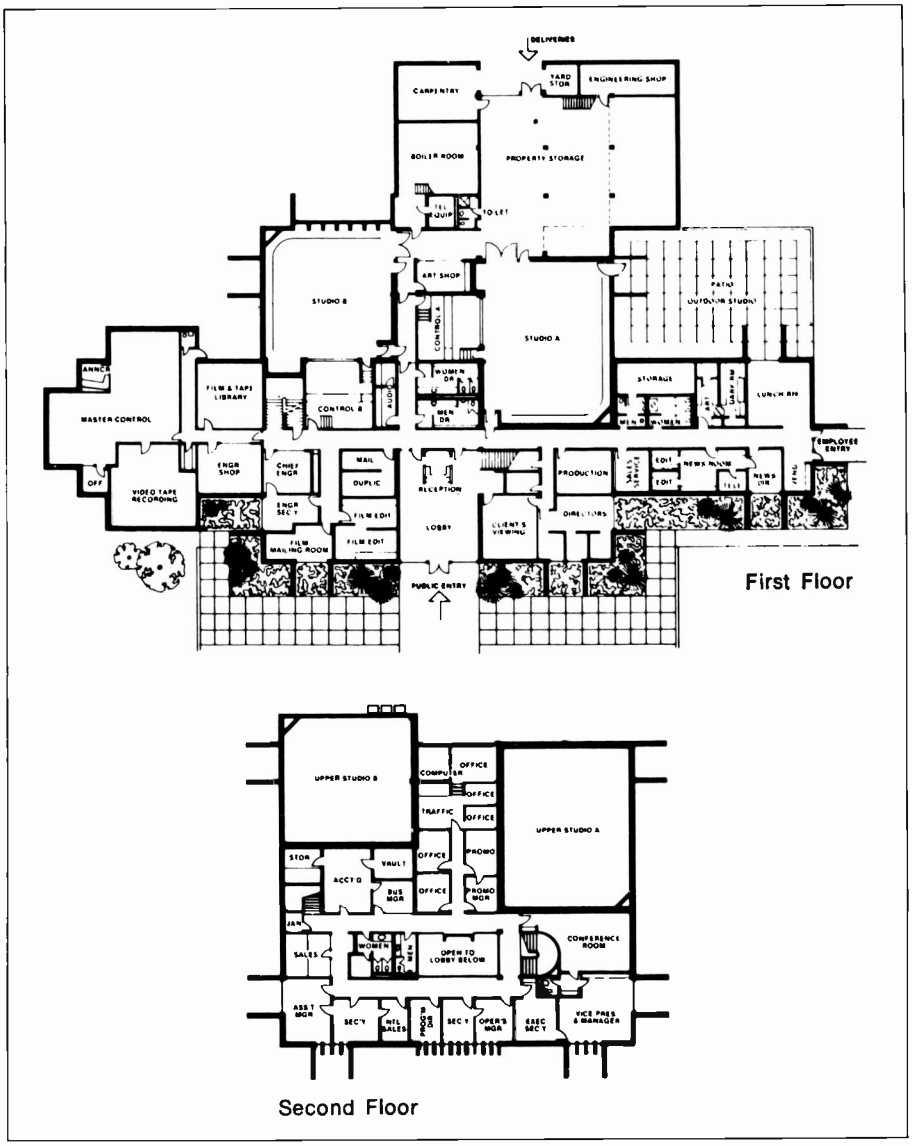


Figure 18-2 Floor Plan for Television Station. KSTW, an independent with strong emphasis on production, operates on Channel 11, and serves the Seattle-Tacoma (Washington) market.

SOURCE: BM/E Broadcast Management/Engineering, Dec. 1976, p. 58. Used by permission of *BM/E and KSTW.*

ing from which to suspend lighting instruments, some electrical outlets, a dimmer board to control intensity of the light, and a crosspatch panel to select which dimmers should control which lights.

A production control room contains video monitors, switching panel, video effects generator controls, remote control for telecine and videotape

machines, audio monitor, audio console, audio tape machines, various clocks and timers, and several communications systems connected with the studio and master control. The director, assistant director, technical director, and audio technician work from the production control room. Sometimes there is a soundproof announce booth just off production control. Ideally, production control should be situated so that the director can see into the studio through a large observation window.

News. The news department in a TV station may include a general newsroom containing staff workspace and two-way radio monitoring equipment, room for several wire service machines, provision for film raw stock storage, equipment storage and checkout room, film and tape editing facilities, film and slide library, and, increasingly, separate space for weather monitoring equipment.

Specialized Areas. A television station needs a large, studio-sized area set aside for scenery construction, painting, and storage. Engineering personnel need a room outfitted for equipment maintenance and repair. Syndication sources provide much programming, so that space must be provided to take

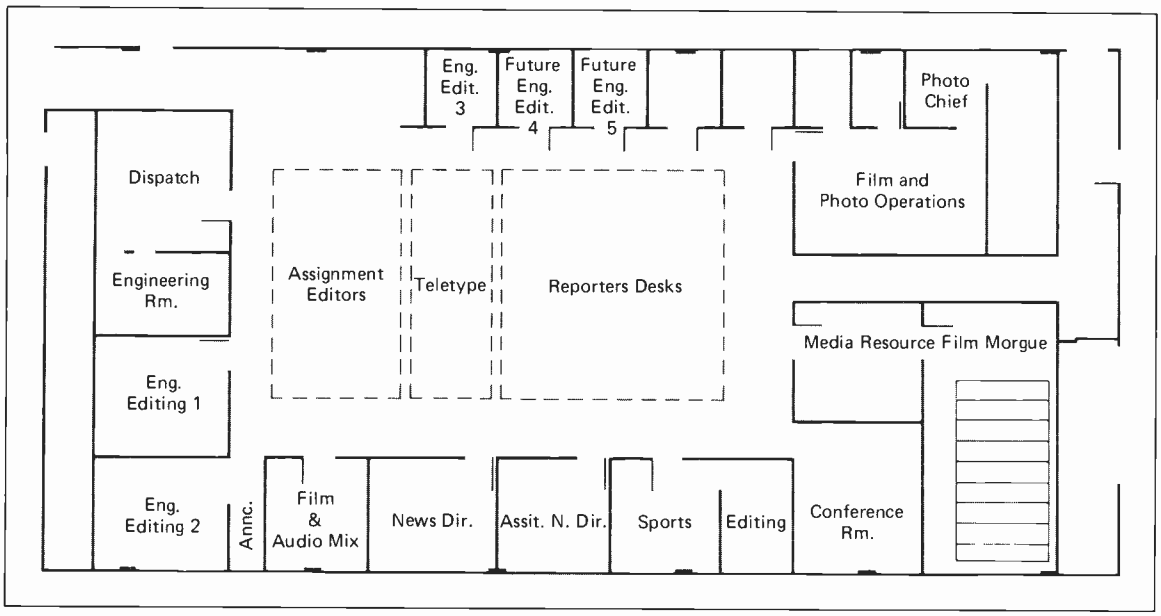


Figure 18-3. Floor Plan of Television Newsroom. KSTP-TV, channel 5, the ABC affiliate for Minneapolis-St. Paul, designed its newsroom for optimum efficiency.

SOURCE: BM/E Broadcast Management/Engineering, Dec. 1976, p. 52. Used by permission of BM/E and KSTP-TV.

care of shipping, receiving, and storage of film and videotape. A station film production unit needs space for its equipment and activities. The film processor must be installed in a room that has water and drain connections, good ventilation, and absolute dark capability. A television station has a dark room for still photography and slides, too. The art department needs a properly equipped area with space for work and storage.

Offices and Auxiliary Areas. Television stations usually provide separate offices for all major department heads and for traffic, continuity, promotion, sales, and accounting departments. Many stations contain a lounge area or even a snack shop for employees and conference rooms. And, of course, a television station must have the usual complement of rest rooms, file areas, general storage areas, and central heat and air conditioning rooms.

PERSONNEL

There are as many ways in which to categorize station personnel as there are stations. We shall use six main categories or departments—management, business, sales, programming, news, and engineering—and a seventh catchall area—operations. Each of these may, of course, be composed of subdepartments, for example, production as part of programming. Larger stations may have more major departments; for instance, some promotion managers report directly to their station managers, putting promotion on a level with sales,

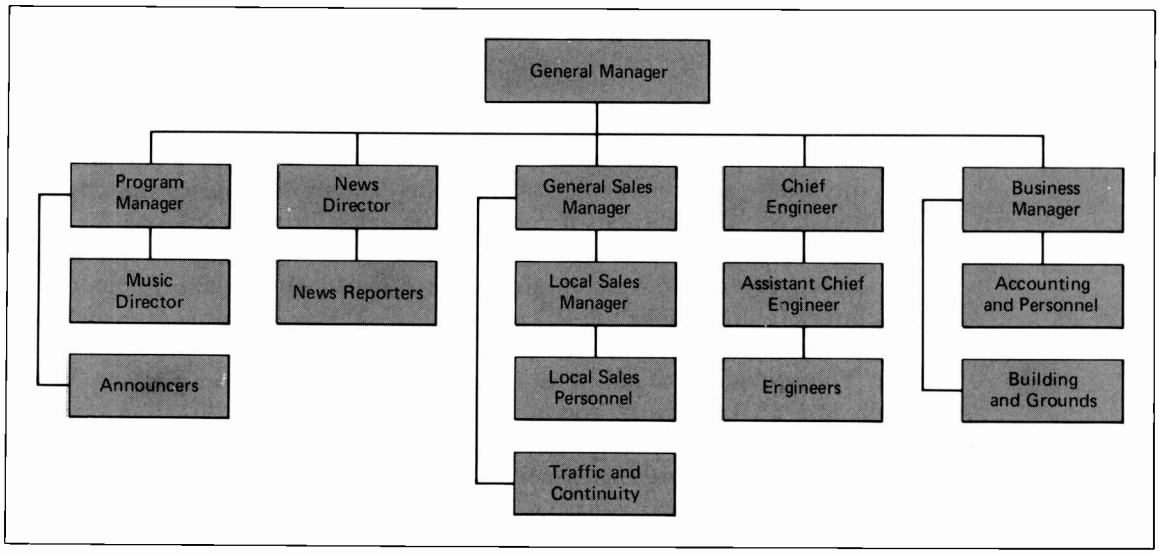


Figure 18-4. Typical Radio Station Organizational Chart.

SOURCE: National Association of Broadcasters, *Radio Station Organization Charts* (Washington, D.C.: NAB, 1969), p. 10. Used by permission.

programming, and news. Smaller stations may have fewer major departments; for example, some news personnel report to program directors, and some station managers head both business and sales areas.

Management. A broadcast station is headed by a general manager (GM). When the licensee is a corporation, the GM may be a corporate officer, most often a vice-president. Station department heads report to the GM who sets overall station policy. Department heads implement policy within their departments. The GM motivates, coordinates, and stimulates. In large operations, separate station managers may carry out day-to-day operations; for example, a radio-television combination may have a radio manager under the GM. Every station also has legal advisors, and some GMs make no move of consequence without first checking with the company's staff lawyers, its local law firm, its Washington, D.C., communications lawyers, or all three.

Business. The business department is headed by a business manager, comptroller, or treasurer. This department handles billing, accounting, payroll, budget, and most other fiscal matters. The business department includes personnel functions, also; and a personnel manager accepts applications from prospective employees and maintains records on current employees.

Sales. The sales manager heads the sales department, which includes local sales staff and liaison with the sales representative firm.* The promotion director† and the traffic manager‡ also report to the sales manager. Public stations (and many commercial stations) often put promotion and traffic under the general manager or the program director.

Programming. The program director (PD) has responsibility for all programming, locally produced, syndicated, and network. The PD may also have continuity (script and commercial copy writing) as part of the programming area, although in many stations it comes under sales. In radio stations the PD is usually directly involved with local production—scheduling announcers, auditioning records, drawing up playlists, and supervising local program efforts. In larger radio stations the PD may have assistants—a music director and a chief announcer.

The television PD puts most time and effort into long-range planning and purchase of syndicated programming and feature films. At a network affiliated station the PD also monitors nonbroadcast previews of network programming and advises management of material that should be delayed or

* See Chapter 16.

† See Chapter 6 for a discussion of the role of promotion.

‡ See Chapters 5 and 16 for duties of the traffic department.

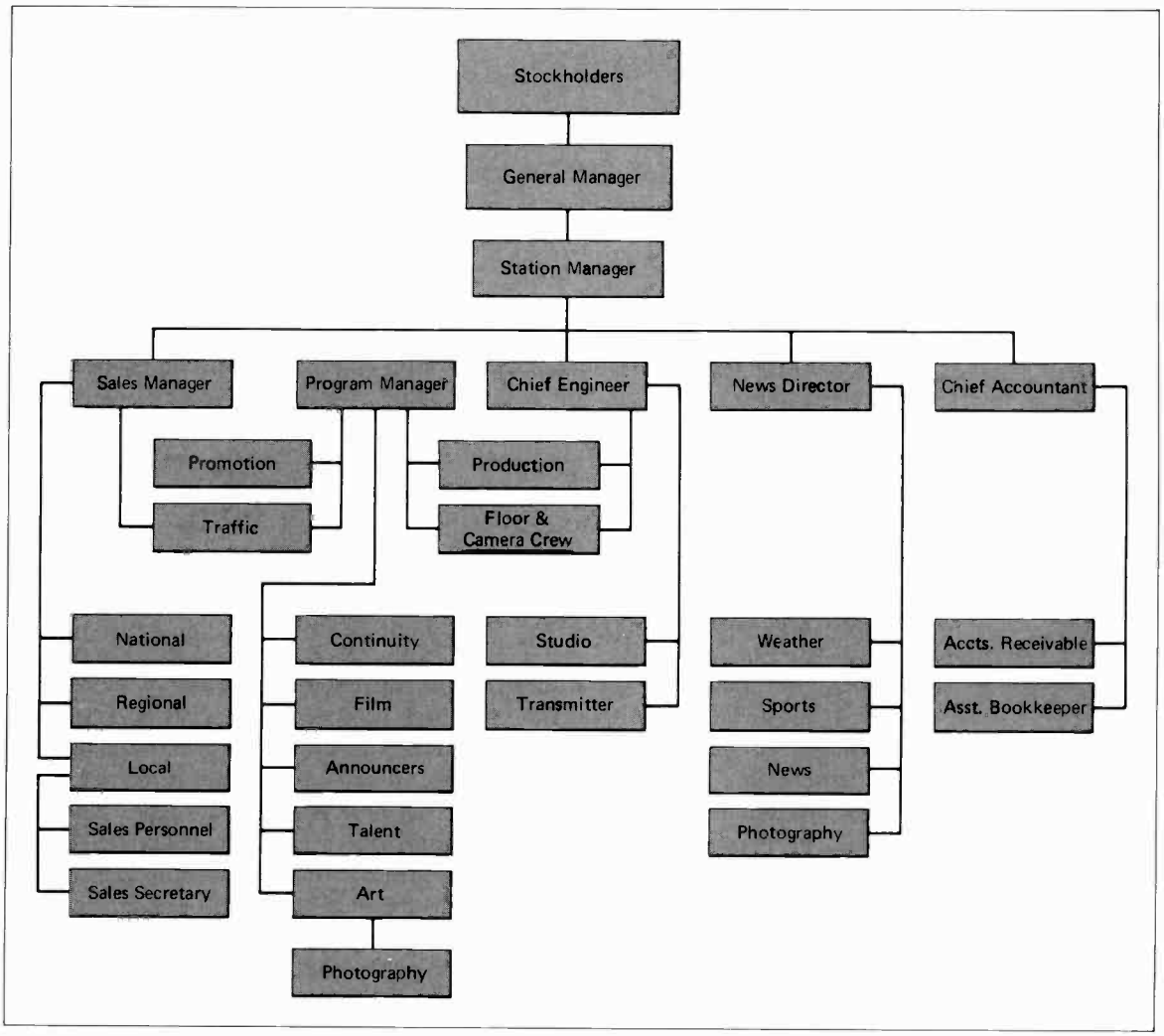


Figure 18-5. Typical Television Station Organizational Chart.

SOURCE: Television Station Organization Charts (Washington, D.C.: NAB, 1968), p. 42. Used by permission of National Association of Broadcasters.

even canceled. The television PD has a production manager to supervise local production. The production manager oversees and schedules studios, directors, production crews, film crews, the art department, and the announcing staff.

News. The news director is in charge of all news and public affairs programming. The news director supervises the regular news, sports, and weather staff,* as well as documentary, special projects, and public affairs units.

* See Chapter 7.

Engineering. The chief engineer, often called "the chief," heads the engineering department. The chief engineer's responsibilities include supervision of transmitter operation, FCC-required checks and reports, maintenance and repair of equipment, purchase of new equipment, and long-range technical planning. In small radio stations the chief is the only engineer and must do everything personally. At the other end of the scale, the chief engineer at a large television station rarely performs actual technical procedures, devoting full time to administration and planning.

Under the television chief are the assistant chief, the studio supervisor, and the transmitter supervisor. The assistant chief oversees day-to-day operations. The studio supervisor schedules engineering personnel and equipment for maintenance, repair, and master control operations. The transmitter supervisor is in charge of the transmitter building and schedules engineers assigned to transmitter duty. The transmitter engineers must be FCC-licensed operators. However, most television engineers, no matter what their duties, hold FCC licenses. Sometimes camera operators, floor personnel, and even building maintenance and custodial services are part of engineering.

Operations. Sometimes a station has an operations manager who reports directly to the GM. The operations manager's duties vary greatly from station to station. In many instances, operations is a crossover between engineering and production. Sometimes both chief engineer and program director report to the operations manager, but usually the three positions are equal and the operations manager supervises such tangential areas as camera operators, floor crew, and studio and personnel scheduling. In other stations the operations manager handles areas that the GM feels are important enough to consolidate into a separate department for special supervision, such as sales promotion and merchandising, audience promotion, publicity, FCC regulations, license renewals, and building and vehicle control.

Small Stations and Large Stations

Although the trend is toward group and corporate ownership, there are still broadcast stations, primarily radio, whose operation is best described by the term **mom-and-pop.** The mom-and-pop radio station is low power, often a daytimer, in a very small town, population usually not over 40,000, and literally run by a family. The husband and wife divide duties—one may manage the station and act as sales manager, while the other may keep books, make out payroll, pay bills, and send bills to clients. One or the other may also take an active hand in programming, auditioning records or doing a daily special interest show. Older children often pull air shifts or work as office help. There are four to ten other employees—two or three air personnel who may double

in news, sales, or engineering; a full-time sales person or two; a secretary who also types logs and acts as receptionist; an engineer; a program director who works an air shift; and a news person who also works a short weekly air shift. Licensee and employees know the townspeople, and the townspeople know them. Quite often the station uses barter or tradeout to get a new car, office furniture, or whatever the station needs.

At the other extreme is the large-market television station. Here the licensee is usually a corporation, often absentee, and has a personnel department to hire, fire, retire, and keep track of one hundred or more employees. Employees at such stations may form unions, believing that as a group they stand a better chance of getting raises, added employee benefits, and improved working conditions than as individuals.

BROADCASTING UNIONS

Primary unions in broadcasting for engineers and technicians (often including camera operators and floor personnel) are the International Brotherhood of Electrical Workers, National Association of Broadcast Employees and Technicians (originally a house union for NBC employees), and International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada (film industry technical union). For performers, primary unions are American Federation of Television and Radio Artists (AFTRA) and Screen Actors Guild (SAG). SAG, film industry performers' union, has jurisdiction in film television; AFTRA, in live and tape recorded broadcasts.

Unionization includes few advantages for the licensee, and most managers do not want unions in their stations. There are advantages and disadvantages for the employee. Unionization gives employees the power of collective bargaining, assuring good wages and benefits. Even the very existence of unions—perhaps at other stations in the market—can mean better pay and hours at a nonunion station, as the owner attempts to keep employees happy and the union out. In a union situation an employee with a complaint can go to the union's shop steward, generally much more sympathetic than the licensee's personnel manager.

On the other hand, many employees regard broadcasting as a creative medium, the studio and control room equipment as creative tools. Many disc jockeys, for example, want to run the audio console, to cue up and spin records, to load and start tape cartridges, as well as to announce; they have a feeling of "playing" equipment as integral parts of the entire presentation. Many television news reporters like to shoot, edit, and write introductions for their own newsfilm. In both cases, unionization would make such integration of functions difficult. A disc jockey would work with an engineer who actually ran the console and associated equipment. A reporter would have a camera operator shoot and an editor cut the film. The argument could also be advanced, however, that such division of labor allows disc jockey and reporter to

concentrate on the essence of their jobs—being an air personality and gathering news—without having to worry about the mechanics of equipment operation.

Trade Associations

As do owners of businesses in other fields, broadcast station licensees band together into trade associations. There are many such organizations in broadcasting. They represent stations in specific geographical areas (e.g., Spokane Broadcasters Association, Rocky Mountain Broadcasters Association, and state associations in nearly every state) and with similar special interests (e.g., Association of Independent Television Stations, Daytime Broadcasters Association, Community Broadcasters Association [class IV AM radio stations], Association of Maximum Service Telecasters [television stations operating at maximum effective radiated power]). As trade associations, their basic purpose is to protect and enhance the ability of members to do business. The National Association of Broadcasters (NAB) is the largest and most comprehensive trade organization in radio and television; as such, it has the greatest resources for achieving its purpose.

Since NAB organized in 1922, it has grown, broadened scope, absorbed several other organizations, and sponsored formation of still others. NAB issued its first code in 1929. Through efforts of NAB, Broadcast Music, Incorporated was formed in 1939; University Association for Professional Radio Education, ancestor of Broadcast Education Association, in 1947; and Broadcast Advertising Bureau, forerunner of both Radio Advertising Bureau (RAB) and Television Bureau of Advertising (TvB), in 1949. NAB also formed the Television Information Office (TIO) in 1959 and the Radio Information Office (RIO) in 1972.* NAB absorbed FM Broadcasters Association in 1945 and merged with Television Broadcasters Association in 1951, changing its name to National Association of Radio and Television Broadcasters. In 1958 it changed back to NAB.

NAB keeps constant watch on and lobbies FCC, Congress, and other government agencies; provides members with literature, conferences, and workshops on matters ranging from bookkeeping to dealing with the FCC; formulates engineering standards; funds research; and, through sponsorship of the Television Code and the Radio Code, develops programming and advertising standards. NAB's annual convention brings together all business leaders

* TIO provides a continuing information service on television to educators, press, government, and others. RIO takes on specific projects, working with radio licensees, NAB, and selected groups to represent, defend, and promote radio's interests.

of radio and television and includes a giant trade fair of broadcasting equipment, as well as seminars, speeches, luncheons, and receptions.

Most broadcast licensees join NAB. A group owner takes out a separate membership for each station. Annual dues are based on the station's income. Licensees elect members to the Board of Directors, NAB's governing body. The board has two divisions, the Radio Board and the Television Board, each with a chairperson and places for network representatives. The chairperson of the joint board is elected, a working broadcaster; the NAB president is an appointed, salaried, full-time staff member. Both work closely with the Executive Committee, a small steering group based on the board. NAB's headquarters and staff are in Washington, D.C. Major NAB concerns are reflected in its operating division structure—Government Relations, Public Relations, Station Services, Community Affairs, Broadcast Management, Membership, and Legal—and its standing member committees—Broadcast Engineering Conference, Engineering Advisory, Radio Information, Hundred Plus Market Television, Small Market Radio, and Television Information.

The codes and the Code Authority are, of course, functions of the NAB.* The NAB-affiliated National Committee for the Support of Free Broadcasting is an anticable television group. Another NAB affiliate is the Television and Radio Political Action Committee, formed to contribute money toward reelection of representatives and senators as part of Washington lobbying efforts.

In addition to worries from external sources—for example, a sometimes hostile Congress, an occasionally truculent FCC, some activist citizen groups, the threat of cable television—NAB has had some internal problems. One major problem stems from the fact that it is one organization trying to protect and enhance interests of two media. Some radio members have felt NAB concentrates on the glamour medium, television, to the detriment of their own interests. This feeling has reached the action stage several times over the last few years, at one point almost resulting in a rump movement to form a separate radio organization.† A major drawback of separate organizations for radio and television, however, is that neither would have the economic and political clout of the present comprehensive organization, representing, as it does, all of broadcasting.

While NAB is an association of station licensees, there are organizations for individuals who work in stations. Some of these include National Association of Farm Broadcasters (NAFB, farm directors), National Association of

* See Chapter 15.

† In fact, the National Association of FM Broadcasters reconstituted itself as National Radio Broadcasters Association (NRBA) in 1975, the feeling being that FM and AM are both the same medium, but different from television. NRBA maintains a Washington, D.C., headquarters and actively recruits member stations.

Television Program Executives (NATPE, television PDs), Radio-Television News Directors Association (RTNDA),* American Women in Radio and Television, Broadcast Financial Management Association (financial personnel), National Association of Broadcast Executives, National Association of Television and Radio Announcers (black air talent), National Academy of Television Arts and Sciences (NATAS, sponsor of the annual Emmy awards for daytime, sports, news, and local [except for Hollywood] programs), Hollywood Academy of Television Arts and Sciences (sponsor of Emmy awards for nighttime and local Hollywood programs and formerly Hollywood chapter of NATAS), and Society of Motion Picture and Television Engineers.

Noncommercial broadcast stations and personnel have their own groups, including, among others, Public Broadcasting Service (PBS), National Public Radio (NPR), and National Association of Educational Broadcasters (NAEB). PBS and NPR are both discussed in Chapter 19. NAEB, founded by and once the organizational home of noncommercial broadcast stations, now consists entirely of individuals who work or are interested in education and broadcasting.

Notes

1 47 U.S.C. § 304.
2 47 U.S.C. § 307(d).
3 47 U.S.C. § 310(a).
4 47 U.S.C. § 313.
5 47 U.S.C. § 308(a).
6 47 U.S.C. § 309(a).
7 47 U.S.C. § 319(a); 47 CFR § 73.24.
8 47 CFR §§ 73.35, 73.240, 73.636.
9 12 RR 2d 1501, 1507.
10 47 U.S.C. § 310(b).
11 47 CFR § 73.93.

Bibliography

(Numbers in parentheses refer to chapter bibliographies containing full citations.)

THE LICENSEE

Arguments rage back and forth over the pros and cons of conglomerate, concentration of, and cross-media ownership. Policy and research are reviewed in Walter S. Baer, *Concentration of Mass Media Ownership: Assessing the State of Current Knowledge* (Santa Monica, Cal.: Rand, 1974). Nicholas Johnson argues against conglomerate ownership in "The Media Barons and the Public Interest," Chapter 2 of *How To Talk Back to Your Television Set* (New York: Bantam Books, 1970).

* See Chapter 15.

PROFIT AND LOSS

The appendix of the latest FCC *Annual Report* (3) contains television and radio financial data, presented in a number of different formats. Chapter 5 of Wood and Wylie, *Educational Telecommunications* (4) is called "The Public Stations" and discusses patterns of ownership, organization, and financing in noncommercial broadcast stations.

STATION ORGANIZATION

Every year, the magazine *BM/E Broadcast Management/Engineering* has a Best Station Award Contest. Each December issue features the nominees and includes narrative descriptions, photographs, and floor plans. These are some of the best station layouts, large and small. In Quaal and Brown, *Broadcast Management* (6), Chapter 2 deals with "Principles of Management and the Station Manager" and includes sample station organizational charts and floor plans; Chapter 3 is "The Management of Personnel" and has a section on unions; and Chapter 7, "Managing for Profit" goes into station assets, liabilities, expenses, and cost controls. Chapter 4 in Edd Routt, *The Business of Broadcasting* (6), contains an extensive discussion of station administration—accounting, staffing, unionization, value of a radio station. The NAB has published a collection of diagrams from stations and markets of various sizes, showing personnel categorization and lines of authority and responsibility as *Radio Station Organization Charts* and *Television Station Organization Charts* (Washington, D.C.: NAB, 1969 and 1968, respectively). Allen E. Koenig has put together a collection of essays and analyses on unionism in broadcasting under the title, *Broadcasting and Bargaining: Labor Relations in Radio and Television* (Madison, Wis.: University of Wisconsin Press, 1970).

TRADE ASSOCIATIONS

Each year *Broadcasting Yearbook* (1) publishes names, addresses, and major officers of national associations, state associations, and unions and labor groups in broadcasting. The *Yearbook* also contains detailed listings for NAB, TvB, RAB, TIO, RIO, NAFB, NATPE, and RTNDA.

19 Networks

The networks—homes of the stars; bright light; glamour; fame and publicity; big money; huge audiences; the Big Time; the ultimate! Networks are big news and big business, no doubt about that. But, what is a network? How and why does it operate? And who are the networks? ABC, CBS, NBC, and PBS certainly; but who and what are these organizations? And are there others?

We have already discussed some aspects of networks: origin and development in Chapters 2 and 3, programming in Chapter 6, news in Chapter 7, regulation in Chapter 13, time sales and affiliate compensation in Chapter 16, and rate cards in Chapter 17. But those discussions took place within the context of other topics. In this chapter we focus specifically on the networks. We first examine the nature of networking, then financial aspects of networking, and then, the existing network organizations. Finally, we review some criticisms of the network system.

Concept of Chain Broadcasting

One dictionary defines *network* as "a chain of transmitting stations controlled and operated as a unit," and *chain* as "a connected series of things or events." From these definitions we may infer several characteristics of a broadcast network: it consists of two or more stations; these stations are interconnected; and

they receive the same programming content simultaneously. By modern standards, however, this definition is inadequate. It deals only with **affiliated stations** (or **affiliates**). And while technically it is still true that a network is simply a group of stations connected for simultaneous program feed, general usage has expanded over the years to include the organizations that procure and feed the programs. ABC, CBS, Mutual, NBC, NPR, and all the others are actually program syndicators who distribute their programming via networks. When we talk about "the networks," we generally mean the syndicators more than their respective groups of affiliated stations.

NETWORKS AND NONNETWORKS

Most permanent, full-time full-service commercial* networks have a relatively stable lineup of stations. Each network organization tries to get the strongest station as its affiliate in each market. Network organizations and stations are tied together legally by an **affiliate contract,** which spells out who does what and for how much. Terms of these contracts vary with individual affiliates. Most television and many radio contracts say, in essence, that the network organization will provide the affiliate with programming, make arrangements and pay to get programming to the affiliate, and share with the affiliate advertising revenues from the programming.† This sounds like a one-sided good deal for the affiliate. Remember, however, that a network television affiliate gives up hours of time but is paid only for those minutes that contain commercials. And even then, it receives just a fraction of its national advertising rate. Stations affiliated with a network band together into an **affiliate council** or **association.** Working as a group, they have more power and are better able to negotiate with the network than as individual stations.

Very few stations affiliate with more than one national network, so these national chains are, for the most part, mutually exclusive. There are some exceptions; in a small market with only one or two commercial television stations, one station may affiliate with more than one national network.‡ An affiliate may refuse to carry a network program or series, in which case another station in the market—an independent or the affiliate of another network—may carry the programming. Many stations, particularly radio stations, affiliate with a national network and one or more regional or special networks.

We said that a network is characterized by simultaneity of reception of

* Noncommercial network-affiliate arrangements are discussed later in this chapter.

† As we shall see, in some cases, affiliates must pay for interconnection, receive no compensation, or even pay for programming.

‡ In this case the station has **primary** affiliation with one network, carrying most of its programs, and a **secondary** affiliation with the other(s), carrying programs as convenience and scheduling allow. One of ABC-TV's problems over the years has been that many stations in its lineup were secondary affiliates.

programming. This excludes so-called **tape** and **film networks,** which send programs to stations on tape or film. In some cases the receiving station is asked to send the program on to yet another station after use; the last station returns it to the originating organization. This is called a **bicycle network,** although not a true network. Yet another type of nonnetwork is the **spot network** devised by national sales representatives and described in Chapter 16.

Live, interconnected **temporary** or **special chains** do qualify for the term "network." These networks have no regular lineup of affiliates and usually do not broadcast a continuous schedule. An organization arranges for a group of stations to carry a one-time broadcast or a finite series of broadcasts. Many such networks are organized to carry sports events. Big league and major university sports are often broadcast via such *ad hoc* networks, affiliated stations changing each season.

In most cases, affiliates broadcast network programming instantaneously, at the same time they receive it. Sometimes, however, they **DB** (delay broadcast), that is, tape a program as it comes over the line and broadcast it at a later time. Those PBS affiliates that produce a great deal of local programming DB network material on a regular basis. Commercial network affiliates may DB certain network programs that conflict with profitable local programming or that management feels more appropriate (for, say, reasons of taste) aired at a later hour. Commercial network affiliates also receive closed-circuit feeds of news stories which they may tape and use in newscasts.* Most networks also hold closed-circuit **conference calls,** in which they advise affiliates of the content and mechanics of handling upcoming network programming.

FUNCTIONS AND PURPOSES OF NETWORKING

Why do people put together commercial broadcasting networks? In most instances they do so to make money through the sale of advertising time to regional and national advertisers. At the same time, the network system has certain inherent advantages for both advertisers and affiliated stations.

For advertisers, networks offer convenience, economy, and quality. In buying network, an advertiser buys a group of stations with one purchase and one bill, at less money than comparable spot advertising rates on the same stations, and has the guarantee that commercials will appear within the context of uniformly high quality programming. All these, of course, come in addition to broadcasting's built-in advantage of impact—a combination of audience attention (because advertising is mixed with program content) and sensory stimulus (sound and, in television, sight).

An affiliated station gets contemporary, well-publicized programming that it could not afford to produce on its own. Network programming allows the affiliate to reduce its own programming efforts. In television, network affiliation almost always increases a station's generalized audience-pulling power

* See Chapter 7.

so that it can charge more for any availability than any independent in its market.

Larger audiences often mean more money for noncommercial networks and stations as well. Underwriting, appropriations, and allocations tend to come more easily when public stations and networks show funding agencies their programs serve large numbers of persons. Larger audiences give stations a broader base from which to solicit public support, contributions, and subscriptions.* The network system provides the means for public broadcasting to produce and share popular, slick, timely, high quality programming, the type needed to attract large audiences.

DISTRIBUTION

The process of getting programs from network organizations to affiliates is called **distribution.** Most of the time, the network arranges and pays for distribution costs, although in some cases the affiliate must pay.

AT&T. American Telephone and Telegraph Company (AT&T) bowed out of broadcast programming and station ownership in 1926. But AT&T left as legacies two dominant characteristics of commercial broadcasting advertising and networks.† The very origins of NBC date from AT&T's plans to link together its toll broadcasting stations. Telephone company patents and research made possible coast-to-coast long distance lines on which radio networking depended for existence. The telephone company also developed and laid a grid of coaxial cable across the country, the technical basis for television networking. Presently, AT&T has a virtual monopoly on long distance communication trunk lines (or **long lines**) and still provides technical facilities for distribution of programming by major national networks.

Microwave. Most network television programming is now distributed by means of microwave relay, a system of radio transmission using waves in the extremely high and super high frequency bands. You have probably seen microwave relay towers, tall metal structures with large, often cone- or wedge-shaped reflectors near the top. A transmission reflector focuses the microwave signal into a narrow beam, aimed at the next tower no more than 30 miles distant. At that distant tower, another reflector picks up the beam and feeds the signal into an amplifier for boosting. The boosted signal is then transmitted to the next tower, and the process repeats until the signal reaches its destination.

Independent Carriers. In addition to AT&T's nationwide system, a number of other companies offer limited microwave relay service. Some serve one or two

* See also Chapters 8 and 16 for a discussion of public broadcasting "commercials" and "time sales."

† See Chapter 2.

stations. Others distribute network television and radio within specific states, for example, American Microwave & Communications in Michigan and CPI Microwave in Texas. Some distribute regional public broadcasting networks, for example, Eastern Microwave serves the Pennsylvania Public Television Network, and Pacific Telatroniks serves northern California stations of the California Educational Network.

Satellites. Another means of network interconnection and distribution is satellite communication. The satellite, small electronic device in orbit above the earth, picks up signals beamed from an origination station on the ground, then beams them down to receiver stations. Launched by rockets, the satellite sits almost 35,200 kilometers above the equator, far enough away that it does not fall to earth, near enough that the pull of gravity prevents it from flying off into space. The satellite revolves around earth in **geostationary** or **geosynchronous** orbit; that is, it travels at the speed the earth rotates, so that it stays above the same ground position. At this height, a radio signal from the satellite covers one-third of the earth's surface. Ground stations send and receive using wide dish-shaped antennas. The satellite contains a number of **transponders,** receiver/transmitters activated by incoming signals. The satellite uses a relatively low-powered transmitter; a relayed signal travels most of the distance from satellite to earth through near vacuum and thus attenuates very little.

International satellite communication developed in the early 1960s.* Broadcast networks, however, looked ahead to domestic satellite communication as perhaps one answer to the problem of network distribution expense. AT&T had a monopoly on distribution; in 1965, radio and television networks paid $65 million for long lines, and the telephone company promised rate increases. ABC petitioned the Federal Communications Commission (FCC) for permission to launch a satellite and said it would distribute noncommercial television for free. The FCC then opened an inquiry into the matter of domestic satellite service, asking interested parties to submit comments.[1] One of the first came in 1966 from the Ford Foundation. The Ford Foundation's plan called for a domestic satellite to carry network television signals; the noncommercial network would ride free, the commercial networks would pay, and proceeds would finance programming, administrative, and operational costs of the noncommercial network.[2] The Ford Foundation plan did not mature into reality but did foreshadow events ten years later.

In 1973, the FCC granted permission to a number of commercial organizations to begin operation of domestic satellite systems. In mid-1976, KPLR-TV, St. Louis, became the first station granted an FCC license for a satellite earth receiver. The station planned to use its receiving unit to pick up distant sports and news feeds from Independent Television News Association (INTA).

* See Chapter 12.

Meanwhile, the public broadcasting establishment had been planning a complete, satellite-based network interconnection system. Public Broadcasting Service (PBS) Corporation for Public Broadcasting (CPB), Western Union Telegraph Company, and 13 noncommercial stations proposed the plan to the FCC. It was approved in February 1977. Under this plan, PBS was to construct a main origination station near Washington, D.C. Western Union would provide three full-time transponders on its Westar I satellite, with its Westar II as backup. The various public television stations in the continental United States, Alaska, Hawaii, Puerto Rico, and the Virgin Islands would own 150 to 165 receive-only earth terminals and up to five transmit-receive terminals. By 1978, some 13 other networks, stations, production firms, cable networks, and other program-distribution entities were using satellite.

Rebroadcast. Some small market radio affiliates which have to provide their own interconnection use rebroadcast. The affiliate tunes a regular radio receiver to another station in a nearby city that carries the same network. When the other station joins the network, the rebroadcasting affiliate picks up and transmits the signal of the other station. This is all done with permission, of course. Quality suffers, and interference can be a problem, but it is cheaper than paying for a telephone line.

SCA. Statewide radio networks often use **SCA** (also called **FM sideband**) distribution. The network feeds a signal to key high power FM stations. The stations transmit network programming on SCA subcarriers,* and affiliated stations use special SCA receivers to pick up and broadcast the signal.

Profit and Loss in National Networking

Generally speaking, national networking† is a profitable business. FCC data show that as a group, radio networks (ABC, CBS, MBS, NBC) lose money (although individual radio networks may actually show profits). Television networks make money, so much money that at ABC, CBS, and NBC they more than make up for any deficit in network radio.

The networks generate the majority of revenues through sale of time for advertising. Out of gross revenues come affiliate compensation, commissions (to advertising agencies, representatives, and others), and any discounts the networks grant for cash payment. The FCC breaks network expenses into the same four categories used for stations—technical, programming, selling, and

* See Chapter 10.

† Here, we refer only to network operations and do not include owned and operated stations or parent corporations (see next section).

general and administrative. In each of these categories, salaries are among the highest expense items for both radio and television networks.

As you might expect, programming is the most costly single expense category. Radio networks are primarily news services, so that costs of news and public affairs account for over 90 percent of their programming expenses. Television network programming is so costly that program purchasing costs account for about 50 percent of total network television expenses, over twice as much as all salary expenses.

Scope of Commercial Networking

ABC, CBS, and NBC are the largest, most visible networks in the United States. They dominate national network programming, and any discussion of individual network organizations should begin with these three.

THE THREE MAJOR NETWORKS

What we usually think of as "the networks" are actually the broadcasting divisions of three diversified firms—American Broadcasting Companies, Incorporated; CBS, Incorporated; and RCA Corporation. All are publicly held,

TABLE 19.1
1977 Corporate Earnings of ABC, CBS, RCA in Thousands of Dollars

	ABC		CBS		RCA	
Revenues by Activity:	Broadcasting	1,283,700	Broadcasting	1,180,300	Broadcasting	1,097,900
	Theaters	81,200	Records	769,900	Electronics (Consumer)	1,499,600
	Records	166,800	Publishing	397,000	Electronics (Commercial)	759,500
	Publishing	55,021	Columbia Group (CBS Retail Stores, Creative Playthings, Musical Instruments)	459,900	Vehicle Renting	837,500
	Leisure	30,128			Communications	289,100
					Government Business	442,500
					Other Products and Services	983,600
			Other	13,800	Other Income	13,700
			Elimination of Intergroup Sales	(42,600)		
Total Revenue		1,616,900[a]		2,776,300[a]		5,923,400[a]
Total Expenses		1,362,500		2,414,700		5,453,000
Before Tax Earnings		$ 254,400		$ 361,600		$ 470,400

SOURCES: Annual reports to stockholders of ABC, CBS, and RCA.
[a] Totals differ from actual sums due to rounding.

TABLE 19.2
Number and Locations of Network Owned and Operated Broadcast Stations

	NUMBER OF STATIONS OWNED BY SERVICE				TYPES OF STATIONS OWNED BY CITY										
	AM	FM	TV	TOTAL	New York (1)[a]	Chicago (3)	Los Angeles (2)	San Francisco (6)	Washington, D.C. (8)	Boston (5)	Cleveland (9)	Detroit (7)	Houston (13)	Philadelphia (4)	St. Louis (12)
ABC	7	7	5	19	AFT[b]	AFT	AFT	AFT	AF			AFT	AF		
CBS	7	7	5	19	AFT	AFT	AFT	AF		AF				AFT	AFT
NBC	4	4	5	13	AFT	AFT	T	AF	AFT		T				
Total	18	18	15	51											

SOURCES: Broadcasting Yearbook 1978 (Washington, D.C.: Broadcasting Publications, 1978), pp. D-24, D-25, D-33, D-34, D-36, D-37.
[a] Number in parentheses is television market rank. Based on Arbitron rankings, 1977.
[b] A = AM radio station; F = FM radio station; T = television station. All TV stations are VHF.

and their shares are traded on the New York Stock Exchange. The three corporations share a common thrust; all focus on communication. Broadcasting is more or less the main activity at ABC and CBS; at RCA, NBC is the largest single source of profits,[3] however, broadcasting is but one of a number of major interests of that industrial giant. ABC's nonbroadcasting activities include records and tapes, specialty periodicals (e.g., *High Fidelity, American West,* the Schwann record catalogs, various farm magazines), tourist attractions (e.g., Silver Springs in Florida), a major office-theater-commercial facility in Los Angeles, religious music recordings and publications, and assorted other ventures.* CBS has records and tapes, record and tape mail clubs, hobbies and crafts, musical instruments (e.g., Fender electric guitars and Steinway pianos), children's toys, home audio equipment stores, educational media, and publishing—books (W. B. Saunders and Holt, Rinehart and Winston), paperback books (Popular Library), and magazines (*Road & Track, Cycle World, Field & Stream*). RCA deals in electronics products and services for both consumers (e.g., television receivers, phonograph records and tapes, television and appliance service contracts, citizen band radios) and business (e.g., television picture tubes, solid state electronics, broadcasting equipment), vehicle renting and related services (Hertz Corporation), communications services (RCA Global, RCA Alaska and RCA American Communications; Satcom I and II domestic communications satellites), government contracts, and other products and services (Banquet Frozen foods, Coronet carpets, Oriel foods in England, Random House books).

The three corporations call their respective broadcasting divisions Ameri-

* In 1978, ABC sold off its motion pictures theaters.

can Broadcasting Company, CBS/Broadcast Group, and National Broadcasting Company. Each includes owned and operated radio and television stations (O&Os), O&O spot sales organizations, radio and television networks, and the networks' programming activities—news, sports, and TV entertain-

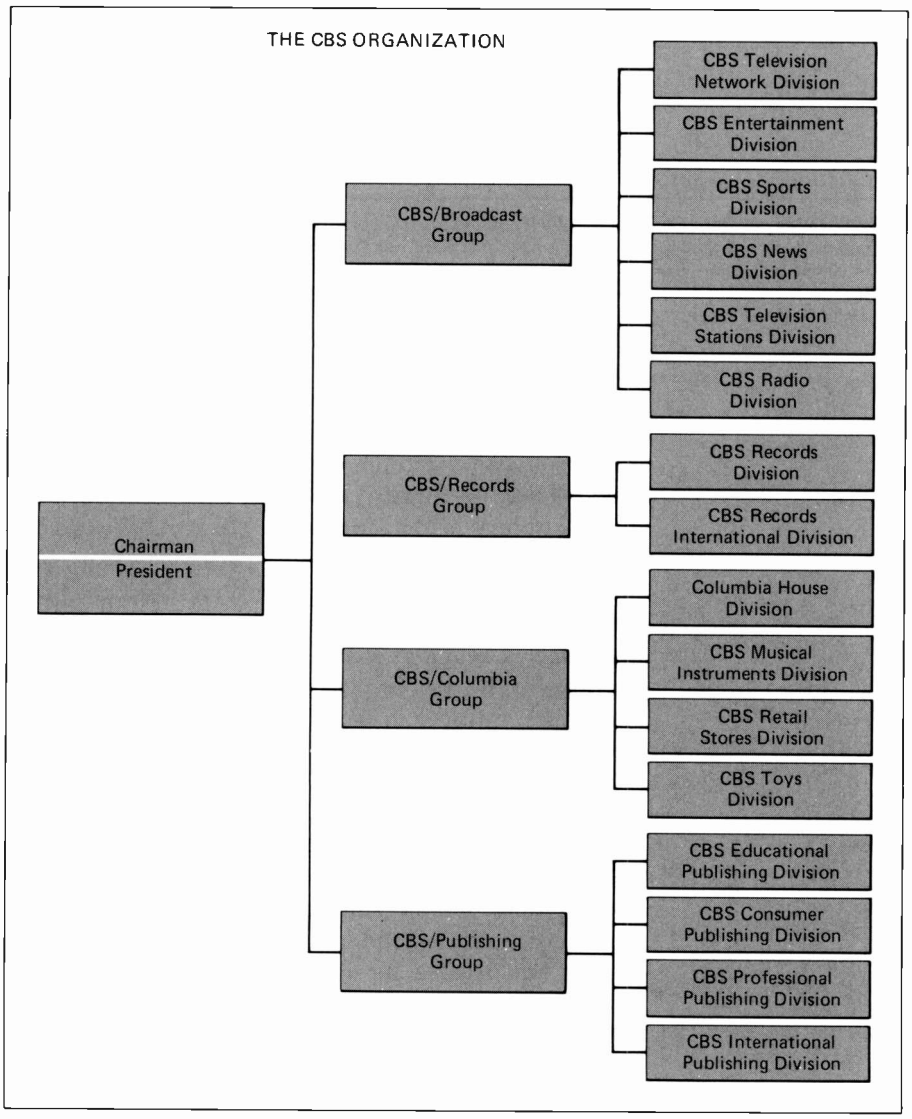


Figure 19-1. The CBS Organization. The organization chart for CBS, Inc., illustrates the diversity of the firms that own the three major commercial television networks.

SOURCE: 1977 CBS Annual Report (New York: CBS, 1978), p. 7. Used by permission.

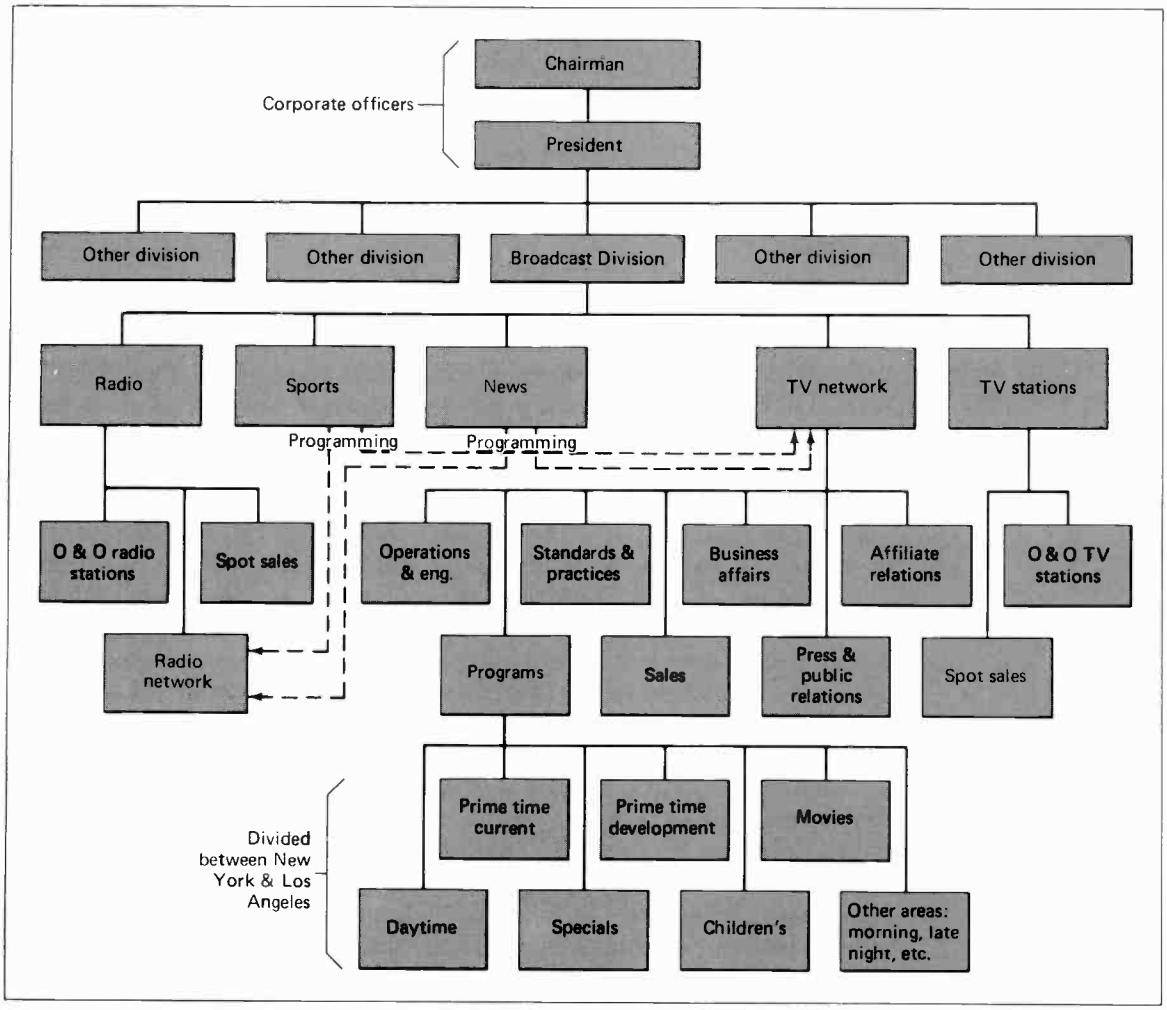


Figure 19-2. Organization Chart for Hypothetical Average National Radio and Television Network. None of the three—ABC, CBS, NBC—are set up *exactly* like this chart. But it was constructed using dominant features and elements from the organizations of all three, so that it does reflect in broad terms the general idea of their structure.

ment. Each TV entertainment department is divided by types of programming—prime time, daytime, children's, and all the rest—and has personnel in both New York and Los Angeles. The networks also have departments of engineering and operations, standards and practices,* business affairs, sales, and affiliate relations. New York headquarters for the networks are situated within

* In Chapter 15, network standards and practices departments are cited as an example of self-regulation.

a few blocks of each other. Each network also has production facilities in New York and executive offices and production studios in Los Angeles.

ABC, CBS, and NBC own a total of 51 broadcast stations in 11 cities. All are in the ten largest markets except for ABC's radio station in Houston and CBS's radio and television stations in St. Louis. Network O&Os compete with each other directly in New York, Chicago, Los Angeles, San Francisco, and Washington, D.C. NBC also owns a cable television system in Newhall, California.

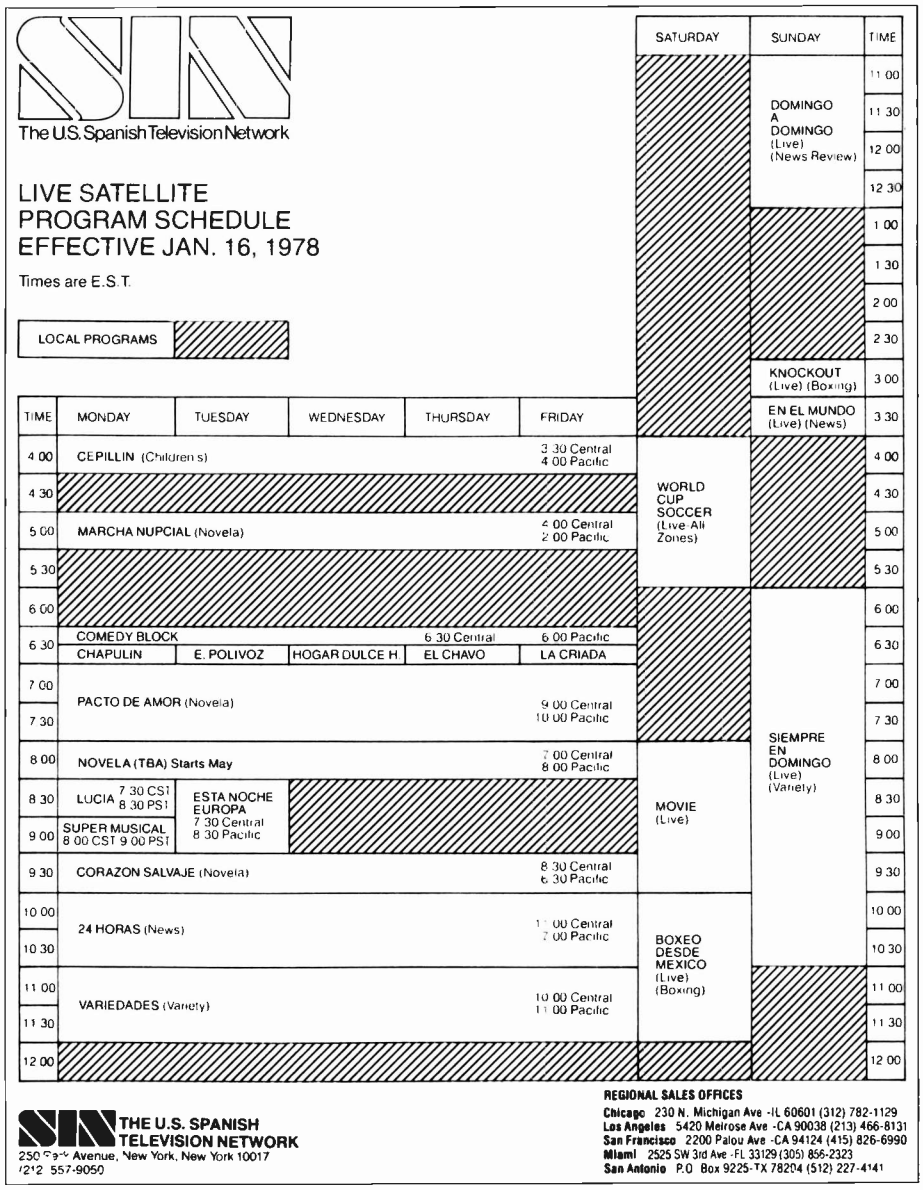
INDEPENDENT NATIONAL NETWORKS AND NEWS SERVICES

Since the demise of the Dumont network in 1955, speculation concerning a fourth regularly scheduled commercial television network arises periodically. A fourth network actually operated for 31 days in mid-1967. Daniel J. Overmyer, UHF station owner and warehouse operator, announced plans for the network in July 1966. By March 1967, a group of western businessmen invested in and gained control of the Overmyer Network and changed its name to United Network. United signed on the air May 1, 1967, to send out the first nightly two-hour program, *The Las Vegas Show* hosted by comedian Bill Dana to about 125 stations. Sales were poor and United could not raise enough money for line charges. On May 31 the month-old network signed off forever.

By late summer 1976, prime-time network television availabilities were all but completely sold out for the entire year, and advertisers, agencies, program packagers, and others revived fourth network talk. Except for a few one-time cooperative programming ventures, the fourth network remained at the talk stage.

Such talk, of course, centers on another ABC/CBS/NBC chain. Actually, there already exists a fourth commercial television network, in fact several fourth networks. For example, Spanish International Network (SIN) distributes 43 hours of weekly programming via satellite to eight affiliates in Florida, New Jersey, Texas, and California. SIN planned to expand satellite programming to 60 hours by mid-1978 and more thereafter.[4] Much of the all-Spanish programming originates in Mexico City and includes international news, live soccer matches, championship boxing, and a Sunday variety show. Other programming comes from Argentina, Brazil, Chile, Colombia, and Venezuela. SIN network operations center is in San Antonio. SIN, also a spot sales representative, is affiliated with Spanish International Communications, licensee of five UHF television stations.

In early 1978, the Christian Broadcasting Network (CBN) announced plans to distribute programming to television stations by satellite. Originally a tape syndication network, CBN's best-known program is *The 700 Club,* hosted by Evangelist and CBN President M. G. "Pat" Robertson. *The 700 Club,* produced at the network's Virginia Beach, Virginia, headquarters, airs on over 100 television stations and on a large number of cable systems. In April 1977, CBN began to serve cable systems by satellite and in January 1978, contracted for the necessary earth stations to feed television stations



Courtesy of Spanish International Network. Used by permission.

Figure 19-3. A Fourth Commercial Television Network. Program schedule for the Spanish International Network.

directly by satellite. All earth stations were expected to be operational by fall 1978. CBN owns television stations in Norfolk, Portsmouth (both Virginia), Atlanta, Boston, Dallas, and Memphis; five FM radio stations in New York State; and a corporate headquarters and college in Virginia Beach. The net-

work airs predominantly religious programming and is supported in large part by audience donations.

Two news services also distribute programming by satellite. The ten member stations of INTA, mentioned earlier, use the Westar satellite for an hour each day to distribute a national news service. United Press International (see below) uses a Satcom transponder for its 24-hour daily video feed.

Another special network is Hughes Television Network (HTN). Sponsors and syndicators who wish to distribute particular programs and events contract with HTN to set up networks on order. HTN has know-how, ability, and experience to deal with common carrier companies and arrange for circuits. HTN was Sports Network, Incorporated, until Howard Hughes, the late billionaire industrialist, bought it in 1968. HTN still does much sports networking. While HTN owns no stations, it does have New York facilities for production of commercials, elaborate tape editing and dubbing equipment, and, of course, expertise in relay by land line and satellite. Talk of HTN expanding into full-time operation surfaces occasionally. Paramount Pictures Corporation bought HTN during the sold-out 1976–1977 network season, and, soon after, was reported studying the idea of HTN programming on a regular schedule.

Special or **temporary networks** range from a one-time lineup of television stations to carry a championship tennis match or golf tournament to seasonal professional sports play-by-play radio networks and the Metropolitan Opera radio network. Many television special networks are set up by HTN.

There are a number of viable regularly scheduled national commercial radio networks. The oldest and largest is Mutual. Amway Corporation, a manufacturer and distributor of household and personal care products, owns Mutual Broadcasting System, Incorporated, which, in turn, operates two networks—the Mutual Broadcasting System (MBS) and, through a subsidiary (Mutual Reports, Incorporated), the Mutual Black Network (MBN). MBS feeds some 700 affiliates; MBN, about 90, Mutual, which had distributed programming primarily through AT&T, planned to begin construction of what would eventually be 500 earth terminals as early as July 1978, in a move to near total satellite distribution.

MBN programs news, sports, commentary, and features for black stations. MBS carries a wide variety of materials for all types of stations—a five-hour late night telephone call-in show, play-by-play of major professional and college sports, religious programs, public affairs programs, as well as newscasts, sports reports, commentary, interpretative material, and features. Affiliates take as much or as little as needed. Mutual pays no affiliate compensation. Most programs are barter—a program contains network commercials and availabilities that the affiliate may sell. Mutual's world headquarters are in Arlington, Virginia, just outside of Washington, D.C., where the network maintains a large news staff. Mutual has exclusive rights in North America to the broadcast services of Reuters News Service. From the time it was formed

in 1934 to 1978, Mutual owned no stations. In April 1978, however, the network signed an agreement to buy radio station WCFL, Chicago.

National Black Network (NBN) is the first live, nationwide, black-controlled and black-oriented news service in the country. From its New York headquarters, NBN feeds its basic service, a five-minute newscast every hour on the hour, to some 68 affiliates covering 75 black consumer markets. NBN also feeds features, sports, and public affairs programs as well as actuality reports for use in local newscasts.

Associated Press operates APRadio; United Press International, UPI Audio. Both operate 24 hours a day, seven days a week, and feed a full schedule of news, sports, features, business and financial news, farm reports, consumer information, and other material. APRadio, based in Washington, has over 400 affiliates; UPI Audio, with headquarters in New York, has more than 900 around the world. These are *services;* stations subscribe to them. Exact cost varies by station, based on factors such as station size and coverage, market, and cost of delivery to the station. Programs come to a station with no advertising, but include slots into which the station may insert commercials. APRadio is transmitted by satellite and high quality land lines; UPI Audio relay is handled by AT&T. In 1978, both applied for approval to begin pilot projects that would lead eventually to total satellite distribution.

REGIONAL NETWORKS

In most cases, television stations group together into so-called regional networks to sell national or regional spot advertising time; they do little or no interconnected programming.* Many of the more than 100 regional radio networks are also actually sales groupings with no common programming. But there are exceptions. The Intermountain Network (IMN), for example, serves 91 stations in 11 western states. IMN maintains four news bureaus—one each in Salt Lake City (IMN's headquarters); Denver; Boise, Idaho; and Helena, Montana. Affiliates receive state and regional newscasts, sports features, and Denver Broncos football. IMN also carries ABC radio network programs; ABC's compensation helps pay for IMN's interconnection. The network distributes via microwave in three states and telephone lines in others. Affiliates take all ABC and IMN programming; IMN, in turn, pays compensation to affiliates. IMN also operates a farm network.

Most other interconnected regional networks are actually state networks, each feeding radio stations in a single state. There is even a National Association of State Networks with member networks in Alabama, Arkansas, Connecticut, Georgia, Indiana, Louisiana, Mississippi, Missouri, Montana, New York, North Carolina, Oklahoma, Tennessee, Texas, and Virginia. Most state networks feed hourly newscasts, sports, and features of state interest. Some also feed farm news. Network-affiliate contract terms are usually barter—affil-

* See Chapter 16.

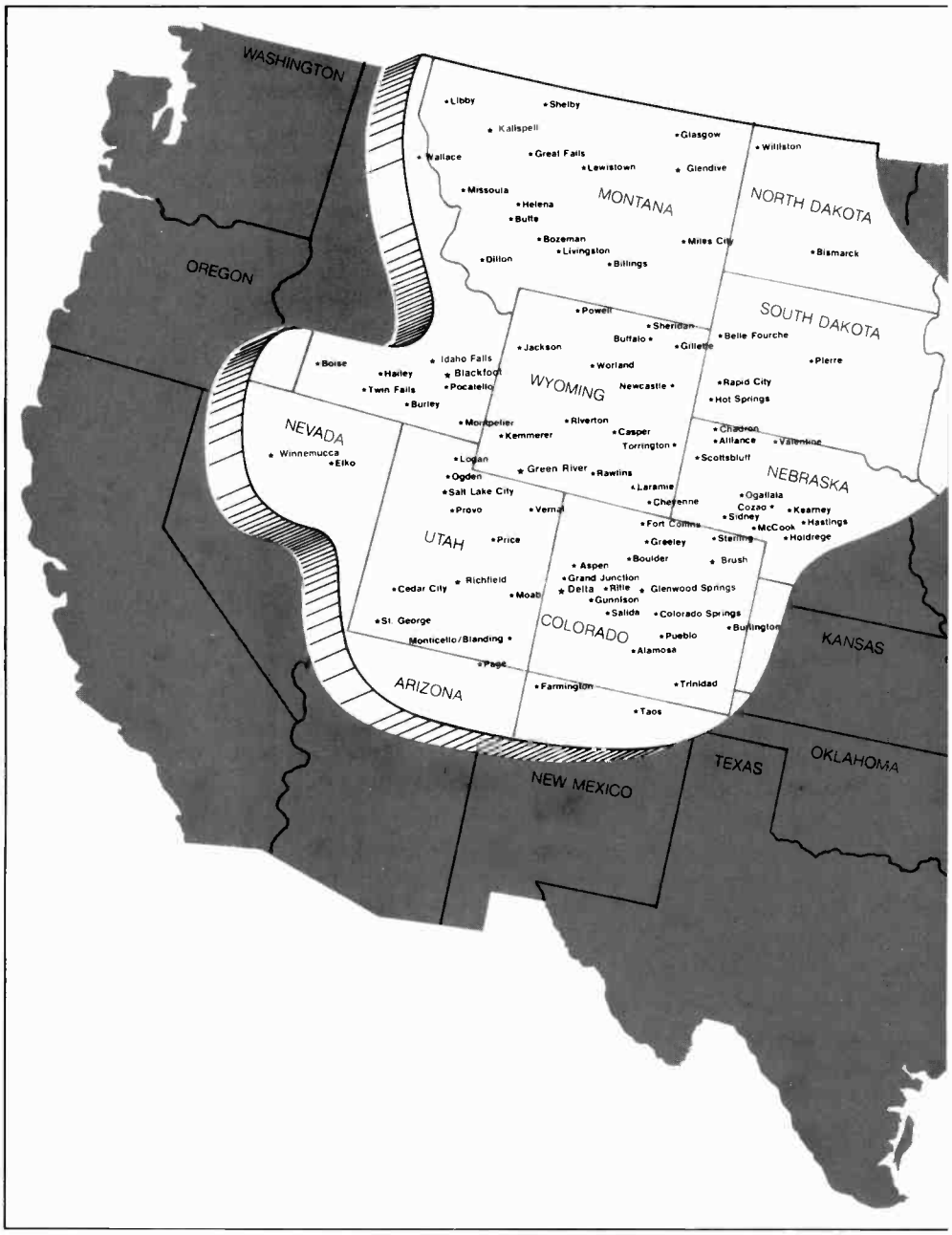
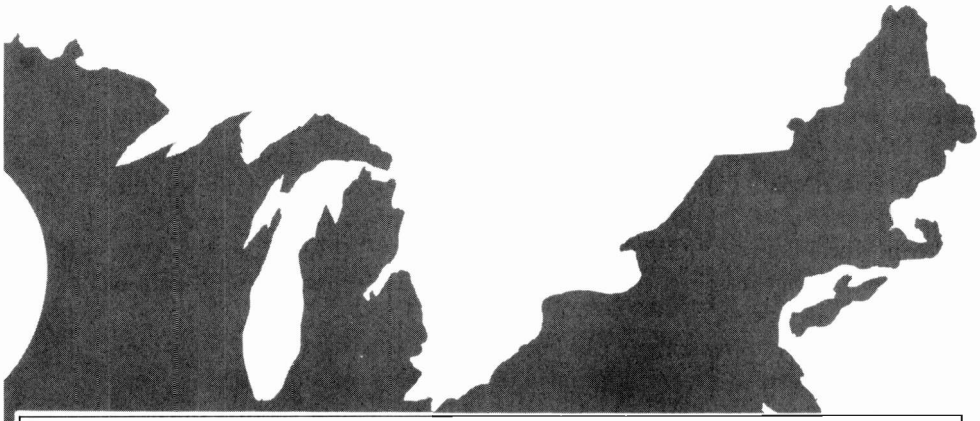


Figure 19-4. Commercial Regional Radio Network. Coverage map for the Intermountain Network. Each town named on the map is served by an IMN affiliate.



UTAH

		FREQ	PWR
KALL A/F	Salt Lake City	910	5000
KLO	Ogden	1430	5000
KFTN	Provo	1400	1000
KVNU	Logan	610	5000
KOAL	Price	1230	1000
KVEL A/F	Vernal	920	5000
KURA	Moab	1450	1000
KUTA	Monticello/ Blanding	790	1000
KDXU A/F	St. George	1450	1000
KBRE A/F	Cedar City	940	10,000
KSVC	Richfield	980	5000

WYOMING

KMER	Kemmerer	950	5000
KUGR	Green River	1490	1000
KVOW A/F	Riverton	1450	1000
KVOC	Casper	1230	1000
KPOW	Powell	1260	5000
KWYO	Sheridan	1410	1000
KRAL	Rawlins	1240	1000
KFBC A/F	Cheyenne	1240	1000
KOWB	Laramie	1290	5000
KASL	Newcastle	1240	1000
KIML	Gillette	1270	5000
KBBS	Buffalo	1450	250
KGOS A/F	Torrington	1490	1000
KWOR	Worland	1340	1000
KSGT	Jackson	1340	1000

IDAHO

KWIK	Pocatello	1240	1000
KLIX	Twin Falls	1310	5000
KGEM	Boise	1140	10,000
KVSI	Montpelier	1450	1000
KBAR	Burley	1230	1000
KSKI	Hailey	1340	1000
KWAL	Wallace	620	1000
KTEE	Idaho Falls	1260	5000
KBLI	Blackfoot	690	1000

MONTANA

		FREQ	PWR
KGHL	Billings	790	5000
KATL	Miles City	1340	1000
KPRK	Livingston	1340	1000
KBOW A/F	Butte	550	5000
KBLL	Helena	1240	1000
KXLO A/F	Lewistown	1230	1000
KMON A/F	Great Falls	560	5000
KYSS A/F	Missoula	930	5000
KBMN	Bozeman	1230	1000
KDBM A/F	Dillon	1490	1000
KLTZ	Glasgow	1240	1000
KLCB	Libby	1230	1000
KSEN	Shelby	1150	5000
KALS FM	Kalispell	97.1	70,000
KXGN	Glendive	1400	1000

NEBRASKA

KNEB A/F	Scottsbluff	960	1000
KSID	Sidney	1340	1000
KCOW	Alliance	1400	1000
KVSH	Valentine	940	5000
KCSR	Chadron	610	1000
KICS	Hastings	1550	500
KRNY A/F	Kearney	1460	5000
KICX	McCook	1360	1000
KAMI	Cozad	1580	1000
KOGA	Ogallala	960	500
KUVR A/F	Holdrege	1380	500

NEVADA

KELK	Elko	1240	1000
KWMA	Winnemucca	1400	1000

COLORADO

		FREQ	PWR
KPUB A/F	Pueblo	1480	1000
KGIW A/F	Alamosa	1450	1000
KVRH A/F	Salida	1340	1000
KSTC	Sterling	1230	1000
KCRT	Trinidad	1240	250
KCOL A/F	Fort Collins	1410	1000
KYOU A/F	Greeley	1450	1000
KPIK A/F	Colorado Sprgs.	1580	5000
KEXO	Grand Junction	1230	1000
KBOL A/F	Boulder	1490	1000
KGUC	Gunnison	1490	1000
KNAB	Burlington	1140	1000
KWSR	Rifle	810	1000
KSNO	Aspen	1260	5000
KDTA	Delta	1400	1000
KMPC	Brush	1010	5000
KGLS	Glenwood Springs	92.7	3000

NORTH DAKOTA

KEYZ	Williston	1360	5000
KBMR A/F	Bismarck	1130	10,000

SOUTH DAKOTA

KIMM	Rapid City	1150	5000
KBFS	Belle Fourche	1450	1000
KOBH A/F	Hot Springs	580	500
KCCR	Pierre	1240	1000

NEW MEXICO

KENN	Farmington	1390	5000
KKIT	Taos	1340	1000

ARIZONA

KPGE	Page	1340	1000

Courtesy of Intermountain Network. Used by permission.

iates pay nothing for programming, must run all network commercials, and may sell designated availabilities during network programs. Distribution is via telephone lines or FM sideband. Sometimes the network pays all line charges; sometimes the affiliate must chip in. Often the network originates from and is owned by the licensee of a radio station in the state's capital or largest city.

The North Carolina News Network (NCNN) is typical of state radio networks. NCNN feeds scheduled daily programming to approximately 70 affiliates in North Carolina via rebroadcast. NCNN programs hourly newscasts that emphasize North Carolina news, twice-daily sportscasts, a daily weather summary, and Sunday public affairs material. Capital Broadcasting Company owns and operates NCNN, and Capitol's WRAL (FM), Raleigh, originates network programming. Financial terms are barter, with small stations having to pay an additional fee.

Other regional and state networks include those of college and professional team sports and special chains organized to broadcast some particular event, for example, a gubernatorial inauguration or state capitol reports during a legislative session. Professional team sports networks are usually regional in scope; college team networks, statewide. Some team networks, however, have national distribution.

Noncommercial Networks

The national noncommercial networks are Public Broadcasting Service (PBS) and National Public Radio (NPR). Both were organized by the congressionally chartered Corporation for Public Broadcasting (CPB). Both have headquarters in Washington, D.C.

Neither PBS nor NPR parallels exactly its commercial counterparts. While PBS arranges for, manages, and sends programs to affiliated stations, it does not exercise absolute control over its own programming. It must share that control with CPB and, through the Station Program Cooperative and the Station Acquisition Market,* with the stations it serves. NPR, on the other hand, does produce and control its own programming.

Both PBS and NPR also act as station membership and representation organizations. Stations join, and PBS and NPR use station dues to provide membership and professional services and to represent the stations' interests before CPB, Congress, the executive branch, and the general public. In other words, PBS and NPR function as networks, as affiliate associations, and as public broadcasting equivalents of NAB. Stations may join only after they qualify for CPB Community Service Grants, that is, they must meet certain minimum criteria in staff, schedule of operation, and size of nonfederal budget. This excludes many low-powered high school and college FM radio sta-

* See Chapter 6.

tions. PBS has over 270 affiliates; NPR uses telephone lines to feed more than 200 stations, but planned to switch to total satellite distribution by 1980.

There are a number of state and regional noncommercial networks. One of the earliest noncommercial networks was the Wisconsin Educational Radio Network (WERN). Created in 1945 as the State Radio Network, it became part of Wisconsin's Educational Communications Board (ECB) when the board was created in 1971. WERN now consists of nine interconnected radio stations, and ECB's Wisconsin ETV Network consists of three interconnected television stations. Another regional radio network is the Eastern Public Radio Network (EPRN). EPRN serves noncommercial FM radio stations in seven eastern states.

State-level bodies own and operate noncommercial television stations in each of 24 states. Many of these state systems are interconnected. Some of the more elaborate state networks include those of Alabama, Georgia, Kentucky, Mississippi, Nebraska, North Carolina, and South Carolina. In most states a specially created state agency operates the system while in others a state university or the state department of education runs the network. There are six regional public television networks; each uses interconnection to distribute programming and organizes conferences and workshops for affiliates' personnel.

Criticisms of the Network System

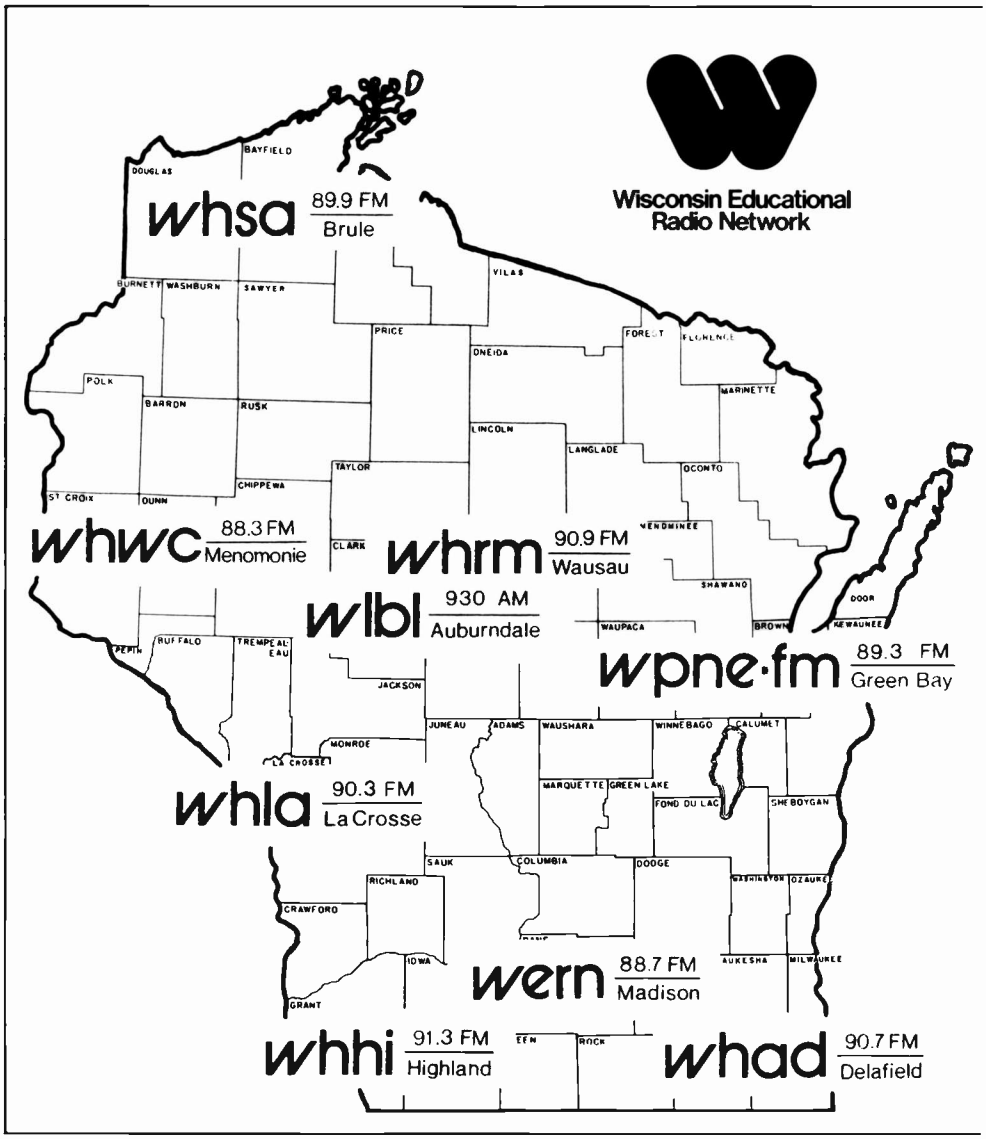
When most persons speak of "the networks," they refer not to PBS, the North Carolina News Network, or Hughes Television Network, but to the three major national commercial television networks—ABC, CBS, NBC. Many of the faults critics attribute to networks are faults of the rest of the trade as well. But the rest of the trade is nearly 10,000 stations in all states and territories, very difficult to focus on. On the other hand, there are the three networks, all headquartered on the same street in the same city. And they do exercise a great deal of influence. So critics aim for the easiest targets, the networks.

Most criticism centers around programming and can be traced to what critics see as the networks' insatiable drive for ever-higher profits. Fred Friendly, himself a former executive with CBS, explained that corporate officers run the networks as "profit machines," keeping stock prices high by keeping profits high.* Higher ratings mean higher profits, thus ratings, not intrinsic value as entertainment or information, determine the worth of a program. As a result, say critics, light entertainment (and not even very interesting light entertainment) fills network channels, forcing out most thought-provoking programming.†

Audience, consumer, and public interest groups complain that network

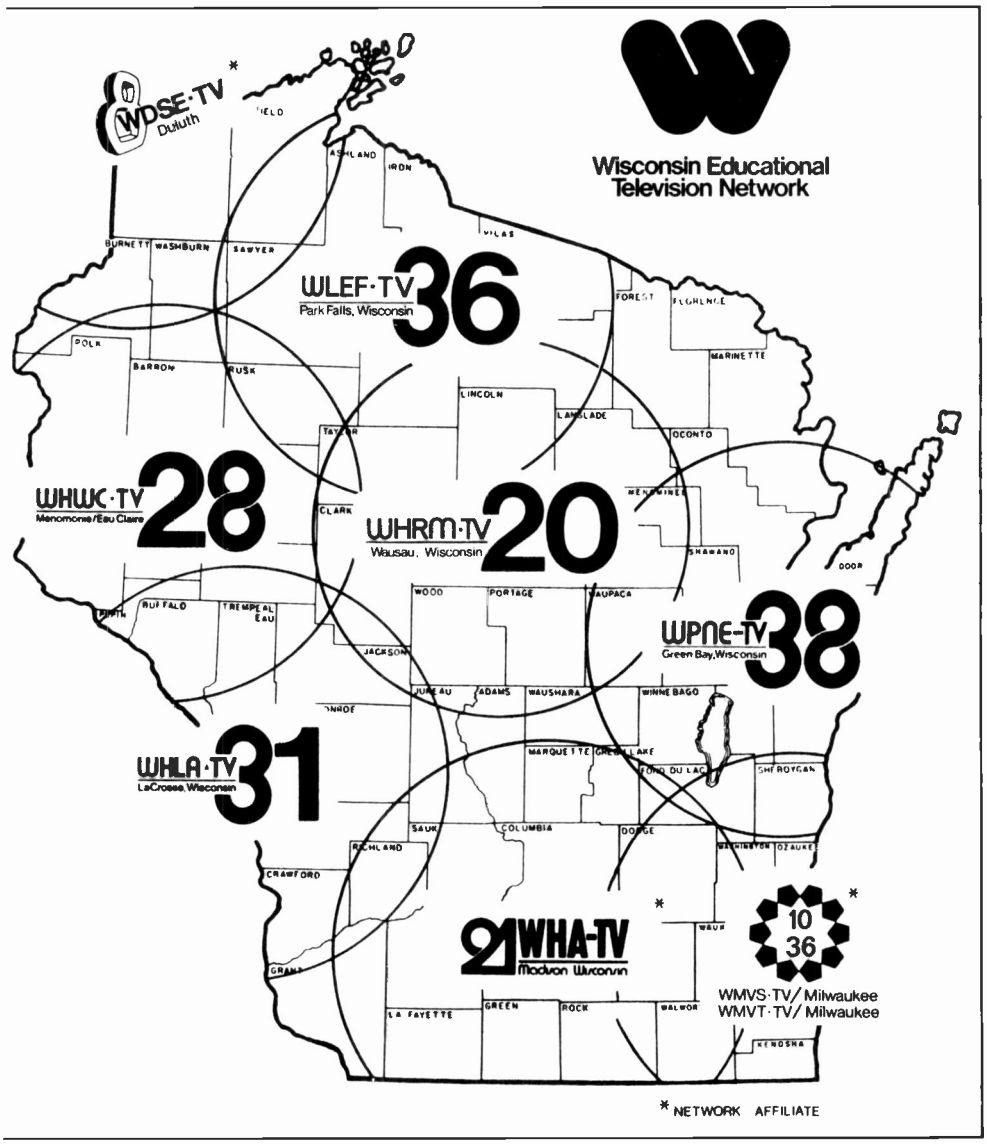
* See Chapter 15.

† See Chapter 17.



(a)

Figure 19-5. Noncommercial State Broadcasting Networks. (a) The Wisconsin Educational Radio Network. (b) The Wisconsin Educational Television Network.



(b) Courtesy of Educational Communications Board of Wisconsin. Used by permission.

programs teach dysfunctional* values and present untrue pictures of society. They contend networks show too much sex and violence. They say depictions of women and various racial and ethnic minorities are unfair, untrue, or unbalanced. They say that commercials (and all advertising) condition us to buy for the sake of acquisition and that programming reinforces such conditioning. Critics are especially vocal about programs children watch, particularly their violent content and commercial orientation.

Congress has investigated the networks for everything from quiz show scandals to bias in news and documentaries. The FCC has accused the networks of taking control of affiliated stations away from licensees and has launched three separate investigations and adopted rules dealing with network-affiliate relations. The FCC and some independent production people have said networks dominate program production, all but curtailing independent (i.e., not produced for the networks) production; the FCC passed rules designed to correct that situation.† The U.S. Department of Justice has filed suit against the networks, charging them with monopoly over prime-time television programming.

Creative people have complained of the prudishness of network censors who order material they feel too politically sensitive, indecent, or otherwise too strong for audience tastes cut from programs. Advertisers and advertising agencies criticize networks for the high prices of advertising time, for commercial clutter,‡ and for violence in programming; indeed, some advertising agencies have advised clients against advertising on popular, but violent programs, and some major advertisers have publicly declared they would not place commercials in violent programs.

Even affiliates have criticized the networks. Strong affiliate opposition led the networks to cancel plans to expand early evening newscasts to one hour. Complaints by Donald McGannon, President of Westinghouse Broadcasting Company, over (among other things) shrinking percentages of station compensation led the FCC to launch in early 1977 its third investigation of the networks.[5]

The frequency and intensity of criticism of networks has increased over the years—increased as television (and thus the networks) has come to occupy more and more of our time and attention. But even as criticism has increased, viewing levels have also risen.

Notes

1 *Notice of Inquiry: Establishment of Domestic Noncommon Carrier Communication Satellite Facilities by Nongovernmental Entities,* 2 FCC 2d 668 (1966).

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* *Dysfunctional* means to be abnormal or impaired in functioning.

† See discussion of Prime-Time Access Rules in Chapter 6.

‡ See Chapter 8.

2 Fred W. Friendly, *Due to Circumstances Beyond Our Control* (New York: Random House, 1967), pp. 308–319.
3 "NBC Is Center of Biggest Profit for RCA in '76," *Broadcasting,* Mar. 14, 1977, p. 62.
4 "What's the Future of Spanish-Language Television," *Media Decisions,* May 1977, p. 71 and "SIN Raises Volume of Satellite Feeds," *Broadcasting,* Jan. 23, 1978, p. 52.
5 "Mr. McGannon Declares War on Network Compensation," *Broadcasting,* May 24, 1976, p. 14; "Group W Asks FCC to Cut TV Networks Down to Size," *Broadcasting,* Sept. 6, 1976, p. 23; and "FCC Takes Up Challenge by Westinghouse," *Broadcasting,* Jan. 17, 1977, p. 19.

Bibliography

(Numbers in parentheses refer to chapter bibliographies containing full citations.)

Each year publicly owned companies, such as the networks, publish annual reports to stockholders. These reports are often slick, beautifully produced booklets filled with photographs, easy-to-read charts, and narratives on company activities, as well as profit-and-loss statements. Usually available on request, the networks' annual reports explain the whole range of corporate operations and, as such, make for fascinating reading. For the story of a national television network that went on the air for 31 days, see C. A. Kellner, "The Rise and Fall of the Overmyer Network," *Journal of Broadcasting,* 13 (spring 1969), pp. 125–130. The resurgence of state and regional radio networks is the subject of "State and Regional News Network Growth Reflects Importance of Small-Town America," *Television/Radio Age,* Mar. 1, 1976, pp. 26–27, 92–97. Noncommercial networks are explained in Wood and Wylie, *Educational Telecommunications* (4), Chapters 5 and 6. More people have probably written more material on CBS than on all other networks put together. See, for example, Metz, *CBS: Reflections in a Bloodshot Eye* (2) and Friendly, *Due to Circumstances Beyond Our Control . . .* (15). Analysis and criticism of all networks, primarily their programming, is found in Barnouw, *Tube of Plenty* (4), Brown, *Television* (6), and Mayer, *About Television* (6). See also, the periodic "Special Reports" in *Broadcasting* that focus on and interview network chairpersons and presidents, for example, "The Winning Way of William S. Paley," May 31, 1976, p. 25; "The Us It's Up To at NBC," June 21, 1976, p. 84; "The Winning Combination at ABC," Jan. 10, 1977.

20 Careers in Broadcasting

Now it is time to talk about you. The fact that you are reading this book means you have at least some interest in broadcasting. In fact, chances are good that you have a very strong interest, may even have in mind to work in broadcasting. That is the subject of this chapter: working, earning a living, making a career in broadcasting. We shall try to answer questions you may have about your place in broadcasting, plus a few that might not have occurred to you but that you should ask. We shall survey first opportunities for a career in broadcasting—types and availability of jobs, pay, advancement. Next, we look at what you can expect over the years if you stay in the trade; that is, how your career will probably develop and mature. Then, we suggest some ways to prepare for a career in broadcasting. Finally, we discuss your first job: how to get it, and how to keep it.

Career Opportunities

First things first: yes, it is possible to get a job and to earn a living in broadcasting. But underlying that statement and all that follows are some assumptions of which you should be aware. First, the place you start in broadcasting—the **career entry level**—is the place where jobs are (1) available (2) for beginners. That place is **not** the networks, **not** a major program

TABLE 20.1
Broadcast Employment as of Dec. 31, 1976*

		Full Time	*Part Time*	*Total*
3	Radio Networks	914	19	933
3	Television Networks	12,074	1,728	13,802
5633	Radio Stations•	64,215	21,178	85,393
680	Television Stations	41,295	4,539	45,834
TOTAL		118,498	27,464	145,962

SOURCES: Federal Communications Commission, *TV Broadcast Financial Data—1976* Public Notice 87928 (Washington, D.C.: FCC, 1977) and *AM and FM Broadcast Financial Data, 1976,* Public Notice 92277 (Washington, D.C.: FCC, 1977).

* If these figures are any indication, the best place to try to break into broadcasting is at a radio station; there are over eight times as many radio stations and they have just under two times as many total employees as television stations. Note also that radio stations hire 3½ times the number of part-time help as the rest of the trade put together—something to keep in mind if you plan to work while going to college or to moonlight in broadcasting before working in it full time.

• Includes network owned and operated stations.

producer or film studio, **not** a big market (such as New York, Los Angeles, Chicago, Dallas, Boston), and **not** a big station. Second, you are reasonably intelligent, reasonably creative, and willing to work hard. It is almost impossible to get in and stay in the trade if you are a dolt, a lout, or a nerd. On the other hand, you do not have to be a prodigy/superstar.

TYPES OF JOBS

By "jobs," we mean a salaried or commission position at a broadcast station, excluding engineering and business. Broadcast engineering is a highly specialized area, requiring interest in and understanding of technical aspects of broadcasting. In most cases an engineer needs an FCC first class license. If you plan to go into broadcast engineering, you must have a definite affinity for it.

The business area is both very general and very specialized. At the lower levels there are jobs found in any type of business office—secretarial, filing, typing, and billing. At the upper levels, jobs are for accountants and bookkeepers and require either a degree or experience.

Most of the time, however, if you hear someone say, "I'm going into broadcasting," that person does not mean engineering or business; "broadcasting" means writing, performance, news, production, or sales. Thus in the remainder of this chapter, we shall concentrate on these particular career aspects.

SPECIAL NOTE ON SALES

Often young persons contemplating careers in broadcasting ignore station sales. They fall in love with production, news, or performance, and see those areas as the ends of the station. If they have any thoughts on the matter at all, they feel sales is a kind of necessary evil, akin to peddling magazine subscriptions door-to-door or to selling used cars—vaguely dishonest, definitely bor-

ing, and noncreative. Wrong on all counts. This is as good a place as any to clear up a few misconceptions.

First, in the eyes of most commercial licensees, production, news, and other areas are important, but they are means to the end of sales. Sales are the lifeblood, the sustenance of a commercial station. They provide the money that allows other areas to exist. Without sales, there is no station.

Second, station sales personnel sell a valid, needed service to the business community. Given the economy that exists in the United States, advertising is a necessity, and broadcast advertising is effective.

Third, as discussed in Chapter 15, sales is potentially the most creative area in the station. Certainly, planning and preparation of an effective sales presentation takes much more creativity than playing records and commercials or pushing a camera.

And fourth, sales is the quickest way to station management. Look at it from the licensee's point of view: production, news, and all other departments generate *expenses;* the sales department earns *revenue.* Naturally, the licensee tends to select one of the people who *make* money to manage the station.

OTHER AREAS

We have purposely left out other employment areas, fields such as music, dance, scenery design and construction, still photography, and graphic art. These are specialized areas, career fields all to themselves. People who do these things at stations, networks, and production agencies usually consider themselves in music, dance, or whatever, not in radio or television.

On the other hand, there are some areas that people tend to overlook as career opportunities. Noncommercial radio and television stations often do more local production and thus afford more occasion to utilize production and writing talent than commercial stations. Many schools, colleges, military and government installations, and large business firms have closed circuit production facilities. They turn out instruction, orientation, and information materials for internal use. Some facilities, particularly industrial television setups, are well-equipped and offer excellent chances to exercise creative skills. A cable television system may originate programming on a nonbroadcast channel.* Cable programming may call for personnel with skills in news, writing, production, performance, even sales. Advertising and public relations firms need people to create, write copy, supervise, and produce for radio and television. A number of advertising agencies have their own production personnel and facilities.

WHY RADIO-TV?

The only reason you should go into radio and television is because you **want to work** in radio and television. You certainly will not make much money in your first job—a living, maybe; count on no more than the federal minimum wage, and be pleasantly surprised if offered more.

* A **nonbroadcast** channel is one on which a cable system feeds to subscribers material other than the signal of a broadcast station.

This is the test by which you can determine if you really want to work in broadcasting: you should enjoy just being inside a station (any station, no matter where it is) doing something (no matter what); the fact that you get paid (no matter how little) would be frosting on the cake. If that is not the case—if making a lot of money or living in a large city or working near home or some other factor is important—then choose another field. In first broadcasting jobs the work is too long, too hard, too low-paid, and too often in the boondocks not to enjoy it for itself.

ATTITUDES: THEIRS AND YOURS

We have said—and repeated *ad nauseum*—that the commercial licensee considers a broadcast station a business, and its purpose is to earn a profit. But it bears repeating here, because many people go into their first jobs thinking the station is a creative medium, and its purpose is to provide them a chance to create and experiment with programming and production. Obviously, these two views clash.

Broadcasting does, indeed, offer the individual employee opportunity for creative development. But that employee will be much happier and find career advancement much quicker by keeping in mind that (1) the station is primarily a business, an advertising medium, (2) the licensee considers all employees—particularly those on the air—as sales persons (even though they may not directly service client accounts), (3) the licensee pays the salaries, and (4) the individual creative development comes within the framework that we just established in points (1) through (3).

AVAILABILITY OF JOBS

If you are a beginner—that is, someone who has never held a salaried job in broadcasting—you begin where beginners begin: in small markets and small stations. Small market station managers would like to hire experienced people but cannot pay the high salaries to attract them. So they hire beginners and train them. After a few years, when no longer beginners, the employees will probably move on to the glamour and higher pay of a larger market. This means that in small markets there is a rather continual personnel turnover and opportunities for a talented newcomer to find a job.

PAY AND ADVANCEMENT

You will not receive much pay as a beginner—$150 per week at most; more often $110 or less.* By your second or third job, however, you will have that important commodity, experience, and should be able to move to and negotiate for a fairly good salary. As to how soon (or even whether) you make one of those big market salaries—$60,000 and above—that is up to you. You rise as fast and as far as your capabilities allow. As in any business, there is always opportunity for the intelligent, hardworking, creative individual to advance—to larger stations, to larger markets, to more responsible positions. At the same time, as jobs get better, competition gets keener.

* Sales personnel tend to earn more in first jobs.

Career Patterns

The usual career pattern is to start in a small station in a small market and move to progressively larger markets. A typical broadcasting career begins in a station serving a city with 25,000 or less population. After two or three years, the individual moves to a medium market of, say, 100,000. After three to five years there, the next stop may be a large market—500,000 to 1.5 million. From there—with luck, talent, perseverance—one goes to Chicago, Los Angeles, or New York.

Most persons, of course, do not go all the way to the superlarge markets. This does not necessarily mean their careers have stagnated. Some enjoy life in a particular locale and decide to stay. Some work up to larger stations, but not necessarily larger markets. Some advance within a station or group ownership organization. Some go into another line of work—for example, advertising, public relations, free-lance production.

While job changing and upward mobility is normal in broadcasting, it is

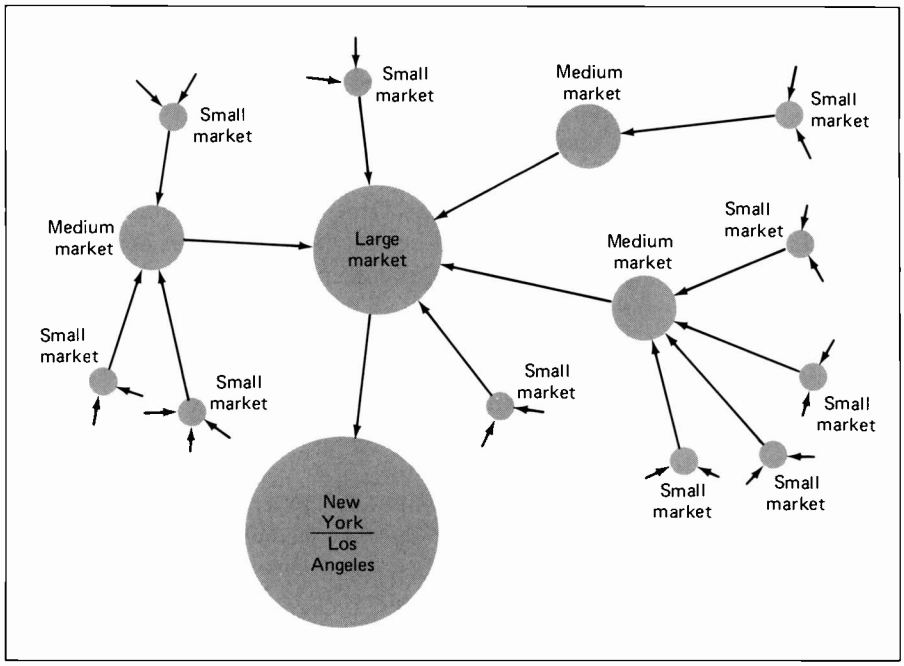


Figure 20-1. Career Pattern in Broadcasting: Advancement to Larger Markets. Most beginners get first jobs in small stations in small markets. When no longer beginners, they often move to medium markets and, eventually, to large markets. The best and the most ambitious go to the biggest markets. A few persons may be able to skip some of the intermediate steps.

important to avoid a spotty employment record. Six months at one station, a year at another, four months at a third—this type of record does not reassure a station manager that an applicant is dependable and steady. Two years is a good minimum to aim for at any one job. The longer at one job, the better the resumé looks to the prospective employer at the next.

Our typical career pattern helps explain why beginners have difficulty getting first jobs in medium and large markets. The people with whom they compete have "paid their dues," as it is called, by starting in small markets and have had at least three years experience. Naturally, station managers hire the experienced people. There are persons who can skip some of the dues-paying years—the exceptionally talented, those whom broadcasters hire because of public pressure or government requirement,* persons who have personal links (e.g., family or friendship) with big market licensees. If you fit one of these categories, take advantage of it. But remember, too, that as a beginner in a big market station you may be at a disadvantage. The small station first job is a training ground, a learning vehicle, an educational process, a place to make mistakes. The big market station is not. You will have to learn in an organization not really prepared to deal with and help beginners.

Career Preparation

Should you wish formal training for a career in broadcasting you have basically three choices: (1) a trade school, (2) a college or university bachelor's degree program with a major in broadcasting or a related field, or (3) a junior or community college associate (two-year) degree program in broadcasting.

Trade Schools. Trade schools offer training in broadcasting skills. They are probably best known for engineering and electronics courses, at the end of which you take and pass the FCC examination for a first class operator's license. But trade schools also teach courses in how to operate a television camera or how to write effective commercial copy or how to be a disc jockey or some other specific job or combination of jobs.

Trade school courses run eight weeks to a year, exact length varying with subject and school. Their curricula contain little or no English, mathematics, foreign language, biology, or other liberal arts courses. They award no academic degrees but usually grant certificates of completion to graduates. Many advertise effective placement services to help graduates get that first job. Most operate for profit.

The best trade schools do an unbeatable job of preparing people for their

* During the late 1960s and early 1970s, broadcasters came under pressure to hire more women and racial minorities, therefore these persons sometimes found it easier to get large market jobs than most beginners.

first jobs in relatively short time and at relatively low cost. The worst are gyps and frauds. If you wish to become a disc jockey or work in some other operational job in a station, you should seriously consider a trade school. There are at least 40, and some have offices in several large cities. Check job placement record, facilities (in person), and opinion of the Better Business Bureau and at least three or four graduates of any trade school you consider.

Colleges and Universities. Colleges and universities offer a general education with a major (i.e., a concentration of courses) in broadcasting. When a student successfully completes the specified course of study (which usually takes four years) the school awards the student an academic degree—generally, a bachelor of arts or bachelor of science.

The college or university academic program in radio and television is, of necessity, schizophrenic. It must provide both a liberal education and teach vocationally oriented subjects such as broadcast news, production, station operations, and law. Increasing numbers of schools add yet a third dimension to their curricula—the study of broadcasting as a powerful informational and cultural force in society.

If you decide to go into a bachelor's degree program, you can save yourself a lot of distress and confusion if you realize from the outset what it is and what it is not. Its primary purpose is to provide a **broad education,** which by definition includes elements of rhetoric and composition, humanities, life sciences, physical sciences, social sciences, and mathematics and logic. In fact, just as there are persons who major in English or history to get a broad education, who have no intention of being writers or critics or historians, there are also persons who major in broadcasting for the same reason—it is a good liberal arts program. It is not vocational training or a so-called "professional program."

Over 200 colleges and universities offer some kind of degree study in broadcasting.* The name and type of department in which broadcasting courses are taught varies from school to school—broadcasting, radio and television, radio/television/film, broadcasting and film, telecommunications, communication, communication arts, mass communication, journalism, journalism and communication, and sundry departments with the word "speech" in their titles.

Both departments and individual professors may join the Broadcast Education Association (BEA). BEA is affiliated with the National Association of Broadcasters (NAB) and holds its national convention in conjunction with

* Another 20 or so colleges and universities offer courses but no degree in broadcasting. And nearly every school offers at least one course in some related field (e.g., a journalism department might teach a course in introduction to mass communication; a sociology department, sociology of mass communication; a political science department, mass media and American politics).

that of NAB. BEA publishes the *Journal of Broadcasting,* primary scholarly journal in the field.

A broadcasting department may apply for accreditation. Accreditation certifies the department has been measured against and met a national standard. In its investigation of an applicant, the accrediting agency evaluates budget, curriculum, facilities, faculty, library holdings, and other such elements. The accrediting agency for broadcasting is the American Council on Education for Journalism, and accredited departments tend to be those affiliated with journalism departments or schools. Many of the largest, most respected broadcasting departments do not seek accreditation.

There are a few factors that you should look for in choosing a school:

1. The school itself. Look into it thoroughly to be sure it is the place you want to spend four years. At the very least, the university or college should have accreditation from a regional association.*
2. The department. Some departments say they offer education for broadcasting, but, in fact, teach courses primarily in speech or journalism or some other area.
3. Faculty. There should be enough full-time faculty members to teach the courses on a regular basis. Beware of schools in which most of the broadcasting faculty is part-time. Look for a faculty with academic achievement (doctorates and scholarly publication) and trade experience. And the faculty should do the teaching; too often students register for a course under a big name or a big department and find a graduate student teaches the course.
4. Curriculum. Look for a mixture of creative and theoretical courses. A department whose curriculum consists primarily of how-to courses might look good to you, but remember (a) it is not a college-level approach, and (b) you can get the same thing at a trade school a lot quicker and cheaper.
5. Facilities. The department should have laboratory production facilities for class use. Some schools have elaborate facilities that rival those of major commercial production companies. Such facilities are nice, but not necessary, since the idea is to teach production concepts and not how to operate a 10-bus switcher or how to use a 24-design effects generator or how to master a 48-channel audio recording console. Besides, the first station at which you work will probably have little exotic equipment, and it will be years before you have an opportunity to direct a five-color camera production with extensive postproduction edit-

* The entire college or university as a whole may seek general accreditation. Various regional agencies have been granted power to accredit the schools in their respective areas. For example, the Southern Association of Colleges and Schools is the accrediting agency in the South.

ing. The school should, however, have some kind of broadcast station—even a 10-watt FM station—so that you can experience going on the air.

6. Placement office. Most colleges and universities maintain a placement office to help students look for employment. The placement office often concentrates on business and education students. But this is only because few other departments work with the office! Their services are available to all senior students, and you should inquire how closely the broadcasting department works with the placement office in preparing students to look for work.

Do not get a graduate degree before you get your first job. A master's degree does not substitute for experience or otherwise make you more attractive to potential employers. In fact, a master's degree can be a hindrance; station managers may consider you overeducated for entry level jobs. Rarely does anyone need a master's degree to work in broadcasting. The primary motivations for master's study are desire for advanced (primarily theoretical) academic work, qualification for the few jobs in noncommercial broadcasting and at junior and community colleges that require them, and as prelude to doctoral study.

The doctorate is, by definition, a research degree. Doctoral study consists primarily of research and theoretical courses, and few or no creative or production courses. Most colleges and universities require faculty to have or be well on their way toward completion of a doctorate.

Junior Colleges and Community Colleges. Junior college or community college programs in broadcasting offer a compromise between trade schools and a college or university education. Like trade schools, they provide a heavy concentration of skills courses, but they do so in an academic environment, usually requiring courses in English, government, history, and other subjects. They grant an associate in arts degree. They require faculty members to have at least a master's degree and some experience in the trade. These schools usually have fairly good facilities, operate a broadcast station, and emphasize good teaching. If you want an academic degree, skills courses, a minimum of other requirements, and a collegiate setting, look into junior college or community college programs in broadcasting.

These junior or community college radio-television programs are called **terminal** programs; that is, they are not designed for transfer to a four-year college or university. If you go to a two-year school with the intention of transfering, take the **general education** (i.e., transfer) **program,** not the terminal program. Take broadcasting courses after you transfer. Many colleges and universities do not give credit for junior college broadcasting courses.

On-the-Job Training. Nothing substitutes for experience—not trade school, not college, not junior college. No matter what your academic background,

(a)

Photographs, courtesy of Robert Fletcher, Black Hawk College, and Jim Threlkeld, College of San Mateo. Used by permission.

(b)

Figure 20-2. Junior College Training Facilities. (a) Students learn television control room procedures during a class at Black Hawk College, Moline, Illinois. (b) A student practices at the audio console, College of San Mateo, San Mateo, California.

your first job will be at the entry level—a small station in a small market. And at this level, you actually need no specific career preparation. Station personnel teach you all you need to know. This is called **on-the-job training** (OJT).

Then why bother with college or trade school? For one thing, it does give a slight competitive edge for that entry level position. Assume a job opening calls for a disc jockey, and the manager has two applicants—the kid who pumps gas at the service station down the street and a recent college or trade school graduate. All other things being equal, the manager would hire the graduate. Having gone through a broadcasting curriculum, the graduate at least knows concepts, nomenclature, and station operations and may have even worked on the school FM station. The graduate would need less OJT than the gas pump attendant. Later in a career, when the individual is ready to move into a position of increased responsibility and authority, a bachelor's degree may again give a competitive edge. Increasingly, management and other key decision-making positions are occupied by persons with college degrees.

The First Job

That first job may be the most important of your career. That is where you get experience. The trick is to get that first job and then keep it.

There is always talk that colleges graduate too many broadcasting majors and that graduates cannot find jobs. One reason they cannot find jobs is because they do not know where to look. This is often the fault of the colleges; they feed students on a verbal diet of "How great it is to work in a large market" and "This is the way the big market stations do it." Naturally, when students graduate, they go to big market stations and look for jobs. Just as naturally, the big market stations do not hire these beginners because they have their pick of experienced people. Meanwhile, entry level jobs go begging.

Additionally, some persons restrict their chances of getting a first job by restricting the geographical area in which they will work. If you insist on working in your hometown, county, region, or even state because that is where home, family, friends, or the action is, then you may have a long wait. If you live in a large city, your wait may be even longer; even though you have lived there all your life, to the stations you are still a beginner. Meanwhile, jobs open up in other parts of the country—in places that could even be nicer than your own, in areas about which you have only heard, full of people who could become your closest friends.

You must apply in person. Most managers have file drawers full of applications. But when they have openings, they hire someone who walks through the door and applies. Resumés, tapes, letters of reference, sample copy—these all support, but do not take the place of, a personal visit. Letters and telephone calls rarely yield job offers. The personal visit method takes plan-

Figure 20-3. First Jobs: A Continuation of Your Education.
SOURCE: Feedback, Feb. 1977, p. 15. Used by permission.

ning—liberal use of *Broadcasting Yearbook,* road maps, and other reference material. At the same time, do not ignore other sources of job leads: classified advertisements in the trade press, jobs wanted/available bulletins printed by some state broadcaster associations, leads from the placement service of your school or college. You must follow up immediately on all such leads; otherwise the job will be gone.

Once you get your first job, you want to keep it until you are ready to move to a larger market and a higher salary. Attitude has a lot to do with keeping the job, and here are a few hints on attitude. First, remember the licensee pays your salary, so do what management says, in the way management says to do it.* Above all, be dependable! Second, consider your first job a continuation of your education. Even if you have graduated from a top urban university and work with a bunch of high school dropouts in a coffeepot station at a wide spot in the road, you can learn from them. Those station

* On the other hand, do not violate laws or regulations. Better to lose your job than your license. But be dead sure you are right—by chapter and verse of the law—before you make any moves or statements.

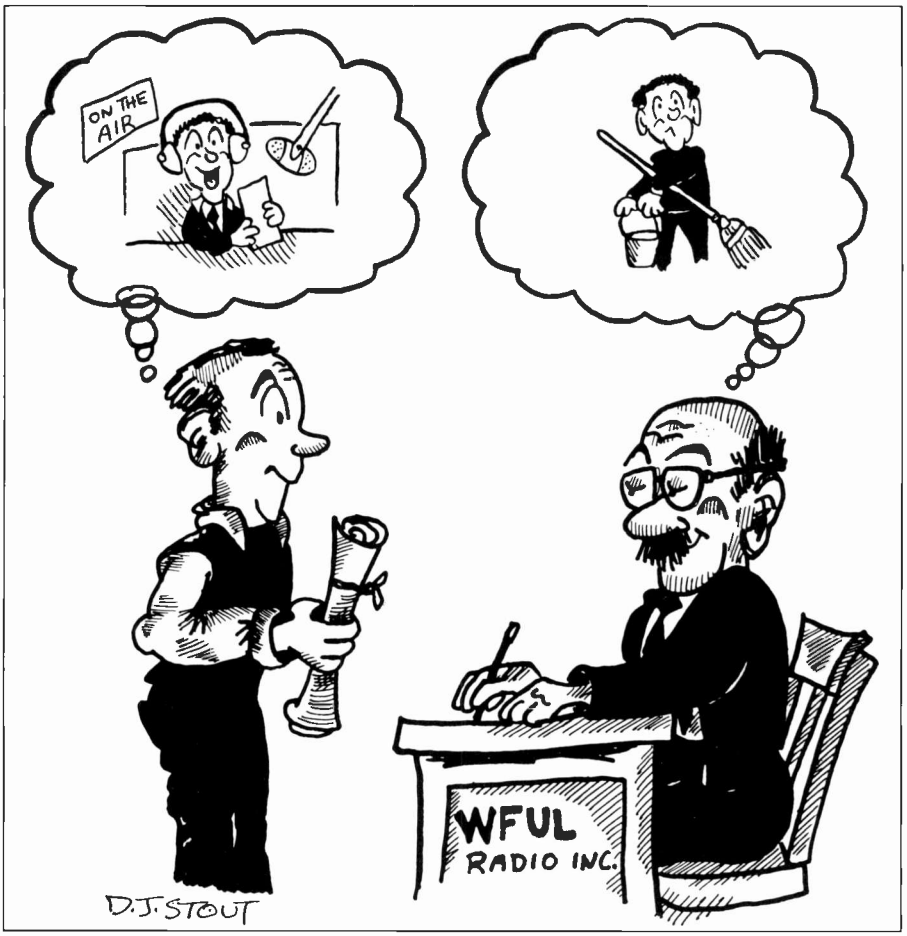


Figure 20-4. First Jobs: Expect the Worst Work Assignments.
SOURCE: Feedback, Nov. 1976, p. 17. Used by permission.

people have worked in the trade longer than you; they know more than you; learn from them. Third, be friendly and courteous; avoid station politics. Stay away from the malcontents. Do your part. Be responsible. Finally, expect the worst shifts, the longest hours, the weekend assignments, the dog client list. You are the new employee. But those things should really not matter; after all you are working in broadcasting, and that is what counts.

Bibliography

CAREER OPPORTUNITIES

The NAB publishes two booklets that explain in detail the hows and whys of working in broadcasting. They are free on request, should be required reading for anyone

considering a career in broadcasting, and are titled, aptly enough, *Careers in Radio* and *Careers in Television* (both 1976). Write: National Association of Broadcasters, 1771 N Street N.W., Washington, D.C. 20036. A companion booklet is American Association of Advertising Agencies, *Advertising: A Guide to Careers in Advertising* (New York: AAAA, 1975); address: 200 Park Avenue, zip: 10017. Career possibilities in an exciting nonbroadcast television setting are explored in William L. Cathcart, "Industrial Television: A Status Report," *Feedback,* 17, No. 2 (1975), 3–6. *Feedback* is a publication of BEA.

CAREER PATTERNS

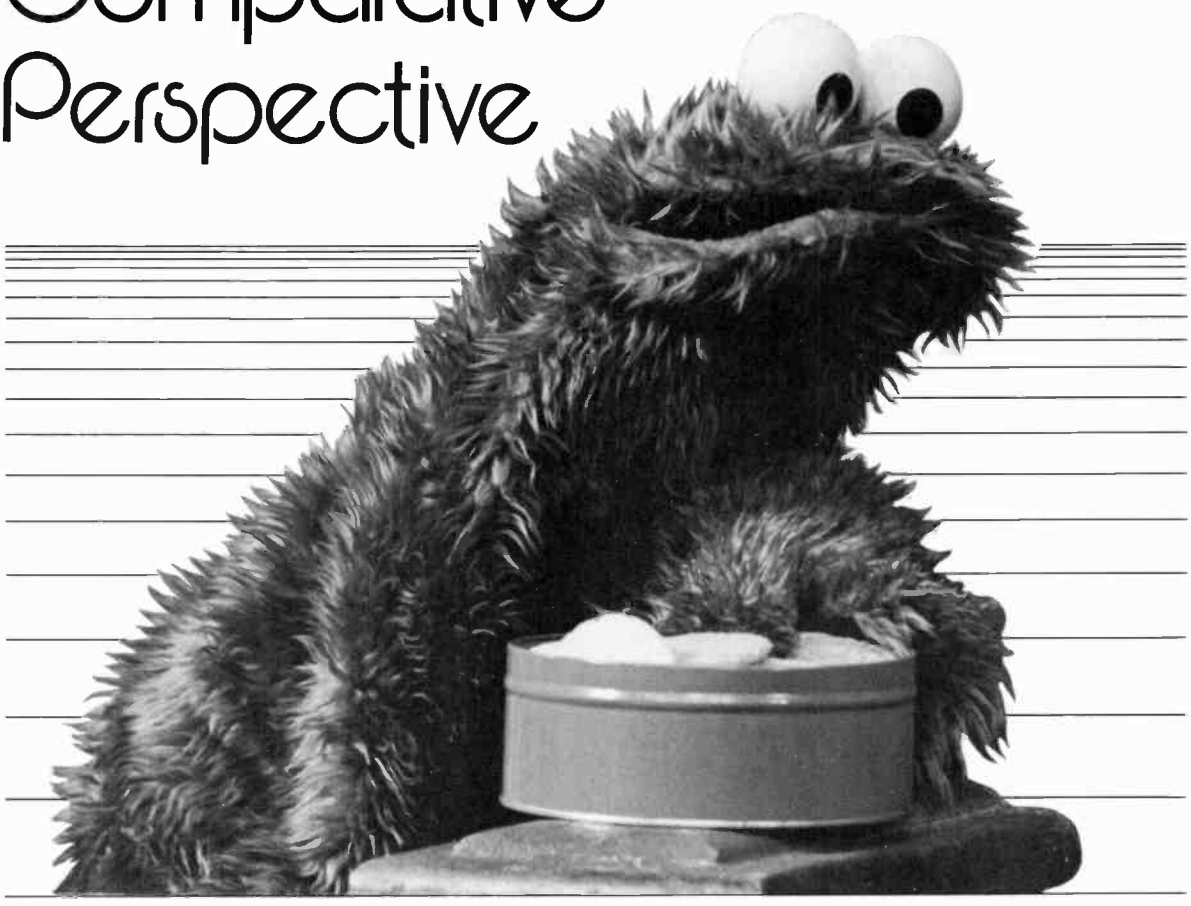
If you want to manage a small market station, take a look at the types of persons who make it in Thomas W. Bohn and Robert K. Clark, "Small Media Management: A Profile," *Journal of Broadcasting,* 16 (spring 1972), 205–215.

CAREER PREPARATION

Each *Broadcasting Yearbook* includes a section on trade schools—who and where they are, what they offer—and a list of colleges and universities that offer academic programs in radio and television. A great deal has been written on college education for broadcasting, what station managers think of it, and what kind of job market reception graduates can expect. For example, see John D. Abel and Frederick N. Jacobs, "Radio Station Manager Attitudes toward Broadcasting Graduates," *Journal of Broadcasting,* 19 (fall 1975), 439–452; and Darrell E. Wibble, "The Indiana Report: What 320 Broadcasters Think About Radio and TV Academic Programs in Higher Education," ED112844 (Arlington, Va.: ERIC). One entire issue of *Feedback,* 18, No. 3 (1976), was devoted to articles on education for broadcasting and the job market. The historical development of broadcasting as an academic field is in Leslie Smith, "Education for Broadcasting; 1929–1963," *Journal of Broadcasting,* (fall 1964), 383–398. First efforts at education for noncommercial broadcasters is the subject of Leslie Smith, "Training Educational Broadcasters Began Slowly," *NAEB Journal,* 25, No. 2 (1966), 60–68. Periodically, Dr. Harold Niven, vice-president of NAB and executive secretary of BEA, surveys and reports on *Broadcast Programs in American Universities* (Washington, D.C.: NAB, various dates; also published in *Journal of Broadcasting*). These reports tell what schools offer what degrees with what facilities and which faculty members. If you contemplate studying broadcasting in college, you would do well to look at the latest Niven report. A 1972 survey asked college broadcasting professors what schools they would recommend to their own children who wished to study in broadcasting; John M. Kittross reports the results in "What Do We Think of Us . . . Now? A Tabulation of Opinions of Broadcasting by Teachers of Broadcasting, 1972," *Feedback,* 15, No. 1 (1973), 5–14.

Six

Comparative Perspective



This is a kind of catchall section. In previous sections, we concentrated on (1) American (2) broadcast (3) radio and television. In this section, we vary somewhat and take a look at other forms of radio and television, at other media, and at radio and television in other countries.

We continue to study American broadcasting. But here we do so by examining alternatives—other uses, other media, other systems. These alternatives provide us with bases for comparison and, as such, help us to better understand American broadcasting. In the process, we also take a guess at the future. We see how other media may change radio and television, and how, in turn, radio and television may change them.

21 Pay Television: Three Forms

In the United States both commercial and public broadcasting are indirectly subsidized by you, the consumer.* You do not pay directly to see programs. In contrast, there are three forms of television for which you do pay directly—cable television (including pay cable), subscription television, and subscription cable.

Cable Television

Originally, it was **community antenna television.** This was a mouthful, so people used the initials **CATV.** Later, the trade began to call itself **cable television,** and kept the same initials. The first CATV systems began during the period 1948–1952, the years of the Federal Communications Commission's (FCC) freeze on new television station construction.† They served residents of

* See beginning of Chapter 6 and Chapter 16.

† One of the earliest CATV systems began in 1949 in Astoria, Oregon. Other pioneer systems started in 1950 in Lansford, Mahoney City, and Pottsville, all in the mountain region of Pennsylvania. E. Stratford Smith, "The Emergence of CATV: A Look at the Evolution of a Revolution," *Proceedings of the IEEE,* 58 (July 1970), 967–982.

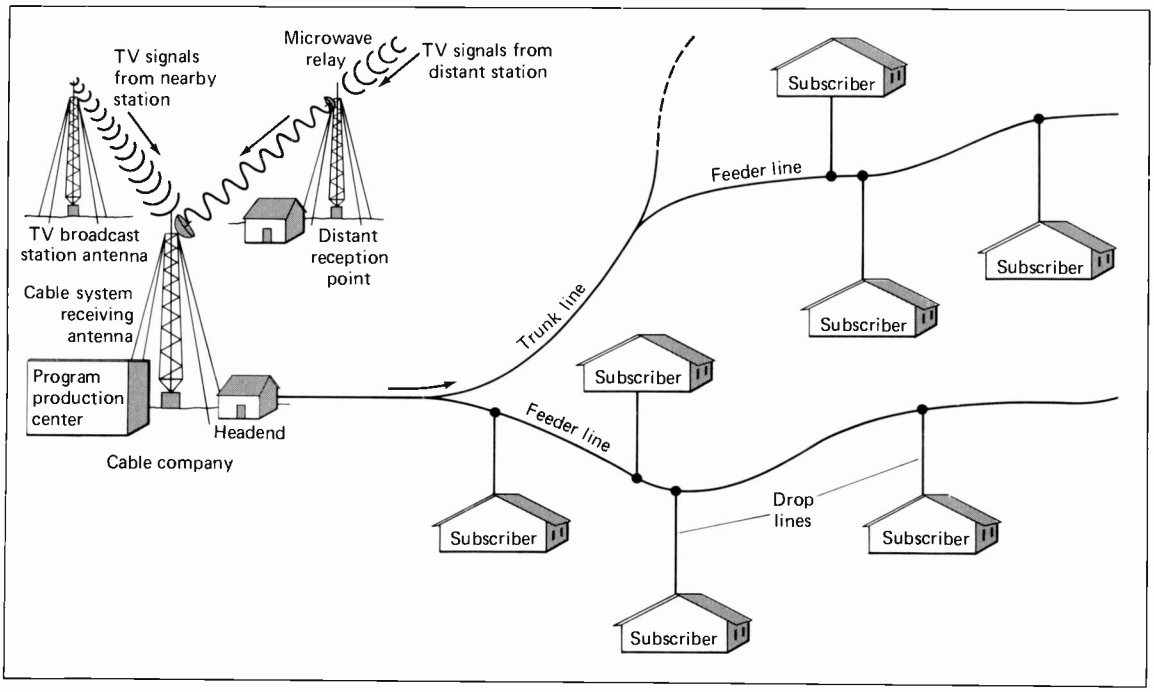


Figure 21-1. Typical Cable System. This system uses a combination of direct off-air reception and microwave relay (i.e., the signals of stations too distant for direct off-air reception are picked up nearer their transmitters, then relayed to the cable company's headend via microwave transmission).

communities where television signals could not be received. An entrepreneur would erect a tower atop a tall building or a mountain. Antennas on the tower would pick up signals of the nearest television stations. The signals were fed into amplifiers for boosting and sent on by wire to television receivers in homes of residents who paid for the service. This is still the basis of CATV: to provide viewers with higher quality and often a greater number of television broadcast station signals than they could normally receive on their own.

Distribution amplifiers, interference filters, multiplex equipment, switching gear, and other devices that process incoming signals are grouped in the CATV system **headend.** After they leave the headend, processed signals spread through individual neighborhoods via **feeder lines,** and into homes via **drop lines.** These lines are **coaxial cable,** potentially capable of carrying an almost unlimited number of channels. They are either mounted on existing utility poles or buried underground. In-line repeater amplifiers keep the signals boosted throughout the length of the system. A CATV customer is a **subscriber.** A subscriber pays an **installation fee** (about $15) when first hooked up and a **monthly fee** (about $5–11) thereafter. Most CATV systems offer

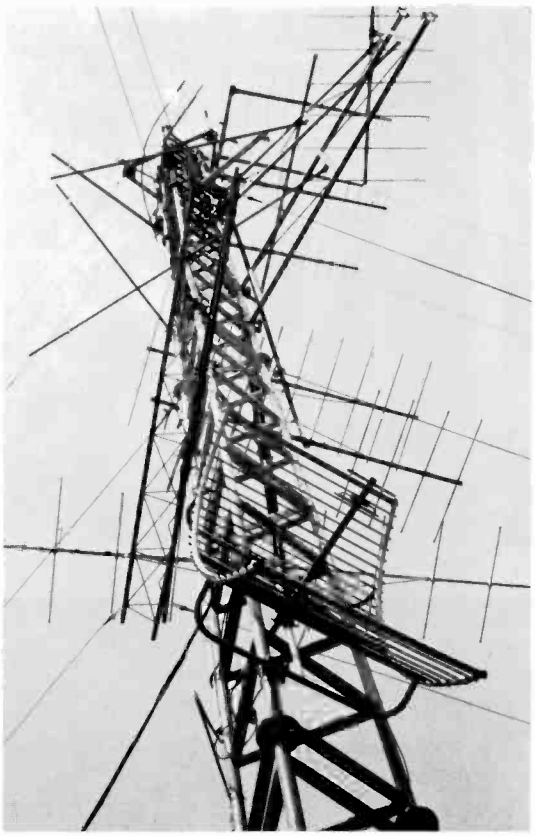


Figure 21-2. CATV Tower and Headend.
Photographs courtesy of National Cable Television Association. Used by permission.

services on 12 channels. In addition to television, many systems also carry signals of FM radio stations.

ADDITIONAL SERVICES

The first television broadcast stations tended to be in large cities. Smaller communities had to wait awhile. Even then they might be able to receive only one or two stations. So CATV originated to serve small towns. But as it grew, CATV investors and system owners began to look toward larger cities. They felt large populations would lead to more subscribers and higher revenues. The major problem was that most large city residents could already receive a full complement of station signals. How could they be sold on CATV? CATV owners came up with four answers:

1. **Signal improvement.** The many electrical devices in a city can cause interference, and tall buildings can create shadow areas and ghosting. A CATV system, on the other hand, can provide consistently strong, interference-free signals.

(a)

(b)

(c)

(d)

Photographs courtesy of National Cable Television Association. Used by permission.

Figure 21-3. CATV Local Origination. (a) A community cable company televises Bob Hope in a local appearance. (b) This cable crew videotapes an interview with a U.S. representative for later playback on a local origination channel. (c) An announcer adds commentary to a cablecast of a Little League game. (d) For more elaborate out-of-studio cablecasts, the cable company uses a remote unit—a control room that travels in a van—the interior of which is seen here.

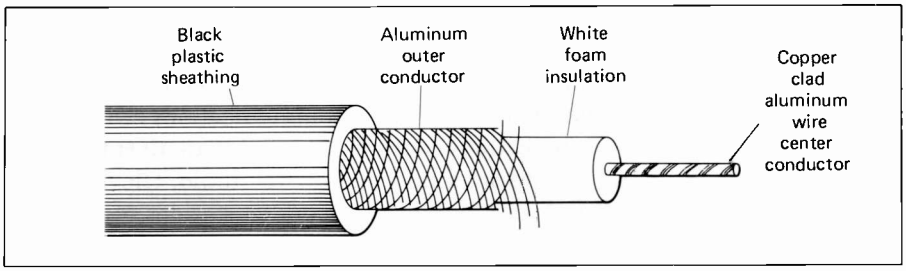


Figure 21-4. Coaxial Cable.

2. **Additional signals.** A CATV system can **import** signals from distant stations, giving subscribers a wider range of viewing alternatives.
3. **Local origination.** A CATV system can originate its own program materials on nonbroadcast cable channels (i.e., those on which they carry the signal of no broadcast station).
4. **Pay cable.** A cable system can program on one or more of its nonbroadcast channels certain events and materials not available elsewhere and charge subscribers who wish to view them an extra fee. The subscribers could then watch the sports event, opera, motion picture, play, or whatever in the comfort of their living rooms and without the bother of commercial interruptions.

TWO-WAY CABLE AND THE WIRED NATION

Coaxial cable is literally coaxial; two conductors share the same axis.* One conductor is a single strand wire; the other, a web of small wires, woven into a continuous hollow cylinder (i.e., the shape of garden hose). The single strand is inside the woven cylinder, separated from it by a spacer, such as plastic foam. A black plastic outer sheath covers the cable. The coaxial configuration allows the cable to carry many more frequencies than could either conductor by itself. For example, a single axis telephone wire can carry frequencies between 300 and 5000 Hz, a total of 4700 Hz. The coaxial cable used in television can carry all frequencies between 40 million and 300 million Hz, a total of 260 million Hz. That is a lot, enough to carry 40 television channels. Repeater amplifier technology, however, limits most CATV systems to 20 or less television channels per cable. That is still a lot. Additionally, with proper equipment, signals can move not only **downstream** (from headend to subscribers), but **upstream** (from subscribers) as well. Cable signals can be switched like telephone signals, sent only to specified destinations. This opens a number of possibilities, one of which is the **wired nation,** also called the **broadband communications network.**

* The axis of a thing is a central line around which the parts of the thing are evenly arranged.

In the wired nation concept, science fiction catches up with fact. The idea of a wired nation got its big boost in the late 1960s. As envisioned, a grid or network of coaxial cables would cover the entire country. Your home and business would contain a communications center connected to the grid. Your communications center would be **interactive;** that is, you could use it to both receive and send information via audio, television, cathode ray tube display (CRT),* and facsimile.† Broadcast stations could be eliminated; all programming and all audiences would be on the cable. The potential for program diversity would increase greatly; the all-cable system could carry 20, 30, or more channels of television programming simultaneously. Broadcast frequencies could be released for other uses and thus lessen crowded conditions in the radio frequency spectrum.

Your communications center would also be a visual telephone. You could use it in all kinds of business dealings, from shopping for groceries at home (then having choices delivered) to face-to-face conferences, with conferees scattered all over the country. On request, police and fire departments could monitor your home while you vacation. You could take all types of courses in your home, yet still enjoy personal interaction with instructors. Facsimile would make possible near instantaneous delivery of mail, magazines, newspapers, books, and photographs. You could dial into a central computer for anything from help with personal income tax to sophisticated data storage and analysis.

Such a system would reduce the need for physical travel of people and things. Small group conferences, fiscal transactions, meter readings, exchange of letters and documents, polling—all could be accomplished through transmission of electrical impulses by wire. You could even work at home, contacting associates, retrieving materials from central files, initiating and responding to correspondence, and doing sundry other duties via the interactive communications center and the coaxial network. With so much physical travel eliminated, traffic congestion would be reduced in air, interurban rail, truck and automotive transportation.

Science fiction after all? Not really. The technology already exists. We now have and are using facsimile, computer sharing, dial access, CRT display, television, and all other elements. Private firms do not find it economically feasible to lay cable to widely scattered residences; however, a government agency could be set up to provide loans to bring cable service to rural dwellers, much as the Rural Electrification Administration has done with

* In CRT display, letters, numbers, and figures show up as patterns of light on an otherwise dark cathode ray (television picture) tube.

† Facsimile works much like television, with three major differences: (1) it is slow scan; (2) it is used for two-dimensional material only (e.g., written, printed, or pictorial matter); and (3) it prints on paper (rather than displaying on a screen) a copy of the transmitted material at the receiving end.

Photograph courtesy of Warner Cable. Used by permission.

Figure 21-5. Interactive Cable Television in Columbus. Is Columbus, Ohio, the test ground for the wired nation? Here, a Columbus family uses Warner Cable's 30-channel home terminal, which makes it possible to participate from the home in a variety of television programs, such as interactive games, educational tests, and registering opinions. The terminal, connected to the subscriber's TV set, is activated by pressing any of 30-program channel choices.

electricity and telephone. The problem of portable and automobile receivers is not so easily solved, although some broadcast stations would probably exist to program for these noncable sets.

BROADCASTERS AND CATV

At first, television licensees thought CATV was a good idea. They were glad to see cable spread their signals to new audiences and to improve signals in poor reception areas. Then cable began to evolve, add services, and move into towns that already had television stations. The broadcasters did not think that was a good idea.

Why not? What had changed? The major change was that CATV had introduced elements of competition to broadcast television and, according to broadcasters, not very fair competition at that. One problem was signal importation. When a CATV system carries signals of distant television stations, that gives cable subscribers more opportunity not to watch local stations. Local stations find themselves competing for local audiences with stations miles away.

Even worse is **leapfrogging.** In leapfrogging, a cable system carries the signal of a distant station instead of that of a local station. For example, if a cable system carries a distant ABC-TV affiliate but not the local one, all cable subscribers are literally deleted from the coverage of the local affiliate.

Then there is **siphoning,** a term used primarily with pay cable. In siphoning, pay cable attracts original, first-run programming that would ordinarily be seen on commercial television. Pay cable certainly has the potential to siphon programming. Consider the economics. Let us say that a CATV system leases a film for $1000 for exclusive television rights in its market. If only 1000 homes pay $2.00 each to see that film on the pay channel, the system will still earn back its investment and clear a profit of $1000. A television station would have to attract many times 1000 homes to generate $1000 from advertising. At the national level, a pay cable network could afford to outbid broadcast networks on almost anything—blockbuster films, major sports events, and other popular programming.

Broadcasters did not find wired nation talk very reassuring, either, especially the part about elimination of broadcast stations. But worst of all, CATV was founded on the signals of the broadcasters themselves, signals cable systems got free, then sold to subscribers.

Some broadcasters hedged their bets and got into cable themselves. Others turned to the government and asked for protection from and regulation of CATV. There is a certain irony here since these requests came from a trade that continually stumps for less regulation. Nonetheless, there were some serious problems, and the FCC began to consider CATV.

FCC, THE COURTS, AND CATV

Nowhere did the Communications Act of 1934 say anything about cable television. Much of the signal importation problem, however, involved cable systems that used microwave relay to bring in distant stations. Microwave relay uses radio frequencies and thus is covered directly by the Communications Act and licensed by the FCC. So in 1962, the commission began to apply **carriage** and **nonduplication** rules to CATV systems that used microwave.

The carriage rule required a cable system to carry all local signals so as to avoid leapfrogging. The nonduplication rule prohibited a cable system from importing (from a distant station) a program that a local station ran. At first, the commission worked on a case-by-case basis, but in 1965 it formally asserted jurisdiction over microwave-fed systems.[1]

In 1966, having decided the Communications Act actually did confer au-

thority for CATV regulation, the FCC asserted jurisdiction over all cable systems.[2] The 1966 rules reflected a change of emphasis. Small market broadcasters had begun the fight for FCC regulation of CATV in the mid-1950s. Now, in 1966, the FCC placed severe restrictions on carriage of distant signals in the *100 largest markets.* The commission reasoned that CATV would most likely hurt UHF television stations (which were, as a group, struggling for their financial lives), and new UHF stations would most likely be built in large markets. In June 1968, the U.S. Supreme Court affirmed the FCC's authority to regulate CATV.[3] In 1969, the commission issued rules allowing cable systems to interconnect, to originate programming,* and to carry advertising.[4] In 1970, it effectively eliminated telephone companies as CATV system owners.[5]

As a result of its 1966 rules, however, the commission was swamped with legal papers—cable operators seeking relief from carriage and nonduplication rules, prospective cable operators asking permission to begin operation, and broadcasters seeking protection from cable competition. It became clear that the 1966 rules were not working. From 1968 through 1971, the FCC initiated a series of rule-making proceedings. In the process, the commissioners learned much about CATV. They read statements, heard testimony, and listened to discussion. They heard the whole spectrum of opinion on regulation, from unrestricted cable growth to absolute protection for broadcast television.

On February 3, 1972, the FCC adopted a comprehensive set of CATV rules. The rules have since been modified, primarily to ease some of the restrictions and requirements on cable systems. However, their basic shape and intent remain. They eliminate the 1966 restrictions against signal importation and provide for—even encourage—orderly, controlled growth of cable in cities. At the same time, they give protection to broadcasters, particularly small stations, with provisions for carriage and nonduplication. The rules specify that a cable system **must carry** all local television stations. They also specify how many and what types of distant stations the system **may carry.** The number of may-carry signals decreases as television market size decreases, but systems outside any television market have no importation restriction. If two stations—one local, one distant—on a CATV system air the same program, the local station may request the system black out (i.e., not carry) the program from the distant station (subject to certain limitations). Systems with 3500 or more subscribers must have the capacity to provide 20 channels of service, must have the capacity to provide two-way service, and must provide at least one access channel (available for use by the public).[6] In 1978, however, a federal court decision overturned FCC rules on public access channels and

* In fact, the new rules required systems with over 3500 subscribers to originate programming. This requirement, however, was challenged in court (*United States v. Midwest Video Corp.* 406 U.S. 649, 1972) and, as a result, was in effect for only a short period before the FCC rescinded it in 1974.

threw the 20-channel requirement into question. The FCC appealed the decision.

Another major problem involved copyright. When a system picks up a broadcast program, processes the signal, and relays it to the subscriber for pay, is the system liable for copyright fees? Cable operators said no; the system is passive and simply substitutes for a viewer's own antenna system. Broadcasters and copyright owners said yes; process and payment make CATV carriage another performance of the material. The matter batted around the courts for years. The bottom line in the two principal cases was that CATV systems were not liable for copyright fees.[7] However, the problem became moot in 1976 when Congress passed a comprehensive new copyright law, making cable systems liable for royalty payments. Under this law, a cable operator receives a **compulsory license** to carry broadcast station signals. Every six months the operator pays a percentage of gross receipts to the Register of Copyrights. The Register of Copyrights turns the funds over to a Royalty Tribunal that distributes them to copyright holders.[8]

SLUMP

Meanwhile, the CATV trade had run into serious internal problems. Many centered around Teleprompter Corporation, the nation's largest multiple system owner (MSO, a cable firm that operates more than one system). In 1971, Teleprompter and its chairman, Irving B. Kahn, were convicted of bribing city officials to keep the cable franchise in Johnstown, Pennsylvania. Several years later, Teleprompter got in serious financial trouble. In 1970, it had won a franchise for Manhattan; but the company found the big city difficult to wire, encountering problems ranging from high installation costs and low sign-up rate to vandalism and piracy (i.e., hooking up without subscribing). By the end of 1973, Teleprompter had invested $30 million in the franchise without showing a profit. The company undertook a major cost-cutting program, and officials announced Teleprompter might have to write off $62 million in 22 uncompleted cable systems. The Securities and Exchange Commission investigated.

Shock waves spread through the CATV trade. The financial community viewed cable as investment-intensive, that is, it took a lot of money to start and a long time to pay off. Cable operators found it harder to get money to go into cities. The general economy of the country lurched into recession. Profits were up. But stock prices were down; investment money, scarce; and interest rates, high. Several proposed mergers between large MSOs were called off because of adverse market conditions. The **National Cable Television Association** (NCTA), trade group for cable owners, asked the FCC to ease regulatory controls, which in turn would reduce the investment in equipment necessary to meet technical requirements.

PAY CABLE AND RECOVERY

NCTA was particularly interested in loosening existing pay cable rules. Cable interests felt the rules, adopted in 1970, limited pay cable's ability to attract

programming and thus prevented the medium from growing. In 1975, the FCC adopted new rules. Under these rules, no more than 90 percent of total pay cable programming could consist of feature films and sports events. Generally, only feature films less than three years old, those currently under contract to local television stations and those not generally desired for conventional telecast could be shown on pay cable. Sports events shown on conventional television anytime during the preceding three years could not be used. Additionally, no advertising was permitted.[9]

Cable owners believed the new rules still too restrictive (and broadcasters said they were too lax!). However, in March 1977, the U.S. Court of Appeals for the District of Columbia overturned the FCC's pay cable regulations. The court ruled that the regulations were adopted without evidence that pay cable would adversely affect the public interest or harm conventional television, that the regulations violated the First Amendment, and that the commission had no statutory authority to regulate pay cable. The Supreme Court refused to review, thus allowing the decision of the Appeals Court to stand.

Pay cable represents a source of revenue for cable operators without the high initial investment required to expand a system's physical plant; in other words, low investment and fast return. Home Box Office, Incorporated (HBO), seems to have started the pay cable renaissance in 1975 when it announced plans for a satellite-interconnected national pay cable network. The cable trade reacted with enthusiasm. Within days, two large cable companies said they would build ground stations to pick up HBO signals for their systems in six states. Six weeks later, Teleprompter arranged with HBO for a feed to 81 systems in 21 states. Prices of stock in cable companies started to climb. Cable operators continued to sign with HBO, and the CATV trade began to crawl out of its financial slump.

STATUS

According to NCTA estimates, total CATV revenue for 1977 was $895 million. Cable systems served over 9000 communities and roughly 13 million subscribers. The FCC reports that in 1976 the average system had about 4000 subscribers, revenues of $376,000, and before-taxes net income of $15,000.[10] Local origination efforts range from automated camera scan of temperature, news, and advertising cards to feature films, high school and college sports, and live telecasts of city council meetings. Nearly 530 cable systems operate their own studios, and some produce a full, varied daily schedule of newscasts, discussions, children's shows, educational materials, and other programming. Many run commercials on local origination channels, and in 1976, CATV earned $3.1 million from advertising.

Pay cable programming consists primarily of sports and feature films, although HBO carried programming such as *On Location,* a series of uncensored tapes of nightclub acts (e.g., Robert Klein, George Carlin), and *Standing Room Only,* performances by well-known entertainers (e.g., Sammy Davis, Jr., Raquel Welch, Paul Anka). In some cases the cable system itself programs the

ADVANCE PROGRAM SCHEDULE FOR THE MONTH OF August

Δ Denotes Premiere. This listing is for network feed

1, 3, 5, 6, 7E & 8M

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
EDITORS Please note that programming for HBO's Eastern and Western satellite transponders is different on August 4, 11, 17, 26, 27, and 29 to accommodate live telecasts of sporting events. Programming for the remainder of the month is the same nationwide.	1 6:00 Children's Theatre: CRY WOLF 7:00 THE FRONT (PG 1:34) 9:00 COUNTDOWN AT KUSINI (PG-1:41) 11:00 THE FRONT (PG-1:34)	2 6:30 MURDER BY DEATH (PG 1:34) 7:30 THE DUCHESS AND THE DIRTWATER FOX (PG 1:46) 9:30 SHOOT (R-1:34) 11:30 MURDER BY DEATH (PG-1:34)	3 6:30 RUSSIAN ROULETTE (PG-1:30) 7:00 THE SAMMY DAVIS JR. SHOW Δ 8:00 Foreign Film Premiere TWO WOMEN (Dubbed-1:39) 11:00 DOG DAY AFTERNOON (R 2:05)	4 Eastern Time 6:00 HBO Playhouse: NICHOLAS NICKLEBY (Part 4) 7:00 HARD TIMES (PG 1:37) 9:00 HUSTLE (R 2:00) 11:00 WORLD TEAM TENNIS – Boston Lobsters vs. Phoenix Racquets (L rec) Mountain Time 8:00 HBO Playhouse: NICHOLAS NICKLEBY (Part 4) 7:00 HARD TIMES (PG-1:37) 9:00 WORLD TEAM TENNIS – Boston Lobsters vs. Phoenix Racquets (L rec) 11:00 HUSTLE (R 2:00)	5 9:30 COUNTDOWN AT KUSINI (PG 1:41) 7:30 Standing Room Only: THE PAUL ANKA SHOW Δ 8:00 Premiere: ZORRO (G 1:40) 11:00 Standing Room Only: THE PAUL ANKA SHOW 12:30 COUNTDOWN AT KUSINI (PG-1:41)	6 3:00 THE DUCHESS AND THE DIRTWATER FOX (PG 1:46) 5:00 THE FRONT (PG 1:34) 7:00 THE DUCHESS AND THE DIRTWATER FOX (PG 1:46) Δ 8:00 Premiere: REDNECK (R 1:32) 11:00 THE FRONT (PG 1:34)
7 3:00 ZORRO (G 1:40) 5:00 DRIVE-IN (PG 1:36) 7:00 ZORRO (G 1:40) Δ 9:00 Premiere: MIDWAY (PG-2:12) 11:30 COUNTDOWN AT KUSINI (PG 1:41)	8 6:00 HBO Playhouse: NICHOLAS NICKLEBY (Part 5) 7:00 THE KILLER ELITE (PG 2:03) 9:30 HUSTLE (R 2:00) 11:30 TWO WOMEN (Dubbed B/W-1:39)	9 6:30 THE BLUE BIRD (G-1:38) 7:30 THE FRONT (PG-1:34) 9:30 REDNECK (R-1:32) 11:30 COUNTDOWN AT KUSINI (PG-1:41)	10 6:30 ZORRO (G-1:40) 7:30 MIDWAY (PG 2:12) 10:00 THE BARRY ADVENTURES OF TOM JONES (R-1:28) 11:30 SHOOT (R-1:34)	11 Eastern Time 6:00 ALL SCREWED UP (PG-1:56) 9:00 THE OTHER SIDE OF THE MOUNTAIN (PG-1:43) 10:00 Standing Room Only: RAQUEL LIVE 11:00 WORLD TEAM TENNIS – L.A. Strings vs. San Diego Friars (L rec) Mountain Time 6:00 ALL SCREWED UP (PG-1:56) 8:00 Standing Room Only: RAQUEL LIVE 9:00 WORLD TEAM TENNIS – L.A. Strings vs. San Diego Friars (L rec) 11:00 THE OTHER SIDE OF THE MOUNTAIN (PG-1:05)	12 6:00 HBO Playhouse: NICHOLAS NICKLEBY (Part 5) 7:00 MURDER BY DEATH (PG-1:34) Δ 9:00 Premiere: AARON LOVES ANGELA (R-1:40) 11:00 TWO WOMEN (Dubbed-B/W-1:39) 12:46 REDNECK (R-1:32)	13 3:00 ZORRO (G 1:40) 5:00 LIFEGUARD (PG 1:37) 7:00 ZORRO (G 1:40) Δ 9:00 Premiere: LIFEGUARD (PG-1:37) 11:00 HUSTLE (R 2:00)
14 3:00 THE DUCHESS AND THE DIRTWATER FOX (PG 1:46) 5:00 HARD TIMES (PG 1:37) 7:00 THE DUCHESS AND THE DIRTWATER FOX (PG-1:46) Δ 9:00 Standing Room Only – Premiere. THE HBO MAGIC SHOW 10:30 AARON LOVES ANGELA (R-1:40) 12:30 REDNECK (R-1:32)	15 5:30 MIDWAY (PG 2:12) 8:00 LIFEGUARD (PG 1:37) 10:00 MIDWAY (PG 2:12) 12:18 LIFEGUARD (PG-1:37)	16 5:30 ZORRO (G 1:40) 7:30 THE MISSOURI BREAKS (PG 2:03) 10:00 HUSTLE (R 2:00) 12:00 ZORRO (G 1:40)	17 Eastern Time 6:00 LIFEGUARD (PG-1:37) 8:00 Standing Room Only: RAQUEL LIVE 9:00 AARON LOVES ANGELA (R-1:40) 11:00 WORLD TEAM TENNIS – 1st Round Playoff Mountain Time 6:00 LIFEGUARD (PG 1:37) 8:00 Standing Room Only: RAQUEL LIVE 9:00 WORLD TEAM TENNIS – 1st Round Playoff 11:00 AARON LOVES ANGELA (R-1:40)	18 5:30 HBO Playhouse: NICHOLAS NICKLEBY (Parts 5 & 6) 7:30 GYMNASTICS – USGF Junior National (Women) All Around Championship 8:30 Standing Room Only: THE HBO MAGIC SHOW 10:00 ZORRO (G 1:40) 12:00 REDNECK (R-1:32)	19 5:00 LIFEGUARD (PG 1:37) 7:00 THE FRONT (PG 1:34) Δ 9:00 Premiere: THE NEXT MAN (R 1:49) 11:00 DOG DAY AFTERNOON (R 2:05)	20 2:00 MIDWAY (PG 2:12) 5:30 RUSSIAN ROULETTE (PG 1:30) 7:00 BREAKHEART PASS (PG 1:36) Δ 9:00 Premiere: On Location: NORM CROSBY 10:00 MIDWAY (PG 2:12) 12:30 AARON LOVES ANGELA (R-1:40)
21 3:00 LIFEGUARD (PG-1:37) 6:00 GYMNASTICS – USGF Junior Nationals (Women) All Around Championship 8:00 HBO Playhouse: NICHOLAS NICKLEBY (Part 6) 7:00 LIFEGUARD (PG 1:37) Δ 9:00 Premiere: THE BINGO LONG TRAVELING ALL STARS AND MOTOR KINGS (PG 1:51) 11:00 THE NEXT MAN (R-1:49)	22 5:30 Standing Room Only: THE HBO MAGIC SHOW 7:00 THE MISSOURI BREAKS (PG 2:03) 9:30 TWO WOMEN (Dubbed-B/W-1:39) 11:30 Standing Room Only: THE HBO MAGIC SHOW	23 5:30 LIFEGUARD (PG 1:37) 7:30 MIDWAY (PG 2:12) 10:00 AARON LOVES ANGELA (R 1:40) 12:00 HARD TIMES (PG-1:37)	24 6:30 Children's Theatre: CRY WOLF 8:30 RUSSIAN ROULETTE (PG 1:30) 8:00 On Location: NORM CROSBY 9:00 THE NEXT MAN (R 1:49) 11:00 THE BARRY ADVENTURES OF TOM JONES (R-1:28)	25 Eastern Time 6:00 The Bingo Long Traveling All-Stars And Motor Kings (PG-1:51) 8:00 GYMNASTICS – USGF Junior Nats. (Women) Indiv. Championship 9:00 AARON LOVES ANGELA (R-1:40) 11:00 WORLD TEAM TENNIS – Playoffs (Finals) Mountain Time 6:00 The Bingo Long Traveling All-Stars And Motor Kings (PG-1:51) 8:00 GYMNASTICS – USGF Junior Nats. (Women) Indiv. Championship 9:00 WORLD TEAM TENNIS – Playoffs (Finals) 11:00 AARON LOVES ANGELA (R-1:40)	26 5:30 THE KILLER ELITE (PG 2:03) 8:00 On Location: NORM CROSBY Δ 9:00 Premiere: END OF THE GAME (PG-1:43) 11:00 HUSTLE (R 2:00)	27 Eastern Time 2:00 Standing Room Only: THE HBO MAGIC SHOW 4:30 Children's Theatre: CRY WOLF 5:30 DRIVE-IN (PG 1:36) 7:30 S.R.O. – THE HBO MAGIC SHOW 9:00 BLUME IN LOVE (R 1:57) 11:00 WORLD TEAM TENNIS – Playoffs (Finals) Mountain Time 2:00 S.R.O. – THE HBO MAGIC SHOW 4:30 Children's Theatre: CRY WOLF 5:30 DRIVE-IN (PG 1:36) 7:30 S.R.O. – THE HBO MAGIC SHOW 9:00 WORLD TEAM TENNIS – Playoffs (Finals) 11:00 BLUME IN LOVE (R 1:57)
28 3:00 END OF THE GAME (PG 1:43) 5:00 GYMNASTICS – USGF Junior Nationals (Women) Individual Championships 8:00 HBO Playhouse NICHOLAS NICKLEBY (Part 8) 7:00 END OF THE GAME (PG 1:43) Δ 9:00 Premiere: TWILIGHT'S LAST GLEAMING (R-2:24) 11:30 On Location: NORM CROSBY	29 Eastern Time 6:00 THE BLUE BIRD (G-1:38) 7:00 THE BINGO LONG TRAVELING ALL-STARS AND MOTOR KINGS (PG 1:51) 9:00 BLUME IN LOVE (R 1:57) 11:00 WORLD TEAM TENNIS – Playoffs (Finals) Mountain Time 6:00 THE BLUE BIRD (G-1:38) 7:00 THE BINGO LONG TRAVELING ALL STARS AND MOTOR KINGS (PG 1:51) 9:00 WORLD TEAM TENNIS – Playoffs (Finals) 11:00 BLUME IN LOVE (R-1:57)	30 5:30 PROFESSIONAL WRESTLING FROM MSG 8:00 Standing Room Only: RAQUEL LIVE 9:00 DOG DAY AFTERNOON (R 2:05) 11:30 THE NEXT MAN (R-1:49)	31 5:30 DRIVE-IN (PG 1:36) 7:30 Standing Room Only: THE HBO MAGIC SHOW 9:00 BREAKHEART PASS (PG-1:36) 11:00 BLUME IN LOVE (R 1:57)	SEPTEMBER 1 6:00 END OF THE GAME (PG 1:43) 8:00 On Location: NORM CROSBY 9:00 THE NEXT MAN (R-1:49) 11:00 TWILIGHT'S LAST GLEAMING (R 2:24)	SEPTEMBER 2 6:30 MIDWAY (PG-2:12) Δ 9:00 Premiere: LIPSTICK (R 1:30) 10:30 On Location: PHYLLIS DILLER 11:30 BLUME IN LOVE (R 1:57)	SEPTEMBER 3 3:00 THE BINGO LONG TRAVELING ALL-STARS AND MOTOR KINGS (PG 1:51) 5:00 END OF THE GAME (PG 1:43) 7:00 THE BINGO LONG TRAVELING ALL STARS AND MOTOR KINGS (PG-1:51) Δ 9:00 Premiere: I LOVE YOU ALICE B. TOKLAS (1:32) 11:00 THE NEXT MAN (R-1:49)

Editors: Below are synopses of HBO's premiere movies for the coming month and a background story on a program of special interest. We suggest you retain the program information since most films and specials will be repeated in future months as "encore" performances. Black & white glossy 8x10 production stills are available for most movies and specials on request. Call (212) 556-3405

HBO
HOME BOX OFFICE FROM TIME/LIFE

PROGRAM DESCRIPTIONS

PREMIERES

MIDWAY

Stars: *Charlton Heston, Henry Fonda*
Distributor: *Universal*
MPAA Rating: *PG*
Synopsis: The attack and defense of Midway Island (one of the great U.S. naval victories of World War II) is recreated on the screen. Characters on both sides of the conflict — plotting attacks, deciphering intercepted broadcasts and dealing with personal dilemmas — give another dimension to the battle. Heston and Fonda lead a star-studded cast.

THE BINGO LONG TRAVELING ALL-STARS AND MOTOR KINGS

Stars: *Billy Dee Williams, Richard Pryor, James Earl Jones*
Distributor: *Universal*
MPAA Rating: *PG*
Synopsis: A warm comedy set in 1939 about two black baseball players (Jones and Williams) who leave the segregated Negro National League to form their own team and share in the profits. Numerous setbacks follow — their meager funds are stolen and their star players ambushed. But the the underdogs stage a winning comeback. Pryor is hilarious trying to pass himself off as Cuban to get into the white major leagues.

TWILIGHT'S LAST GLEAMING

Stars: *Burt Lancaster, Richard Widmark, Charles Durning*
Distributor: *Allied Artists*
MPAA Rating: *R*
Synopsis: A gripping suspense thriller set in 1981 when a dishonorably discharged Air Force General (Lancaster) leads a small band of escaped convicts in an invasion of an atomic missile silo. Using nuclear blackmail, and eventually holding the President as hostage, they press for revenge against the establishment.

ZORRO

Stars: *Alain Delon, Stanley Baker*
Distributor: *Allied Artists*
MPAA Rating: *G*
Synopsis: An all-new version of the adventure classic, Delon plays the avenger of the poor in this exciting, fast-paced adventure film for the entire family. The super swordsman starts out as a Mexican Spanish lover, but who, upon witnessing the evil doings of the military governor, is compelled to undo them. A magnificent stunt-filled swordfight between Zorro and the menacing military governor climaxes the film.

AARON LOVES ANGELA

Stars: *Kevin Hooks, Irene Cara*
Distributor: *Columbia*
MPAA Rating: *R*
Synopsis: Teenage romance in the ghetto between a black youth and a Puerto Rican girl makes this film a 1970's West Side Story. Their secret affair runs well until three dope peddlers show up at their rendezvous spot in a deserted tenement. Hooks and Cara give excellent performances as the young couple.

THE NEXT MAN

Stars: *Sean Connery, Cornelia Sharpe*
Distributor: *Allied Artists*
MPAA Rating: *R*
Synopsis: When a middle eastern oil magnate (Connery) threatens to withdraw his country from OPEC and reach an accord with Israel, he becomes the target of foreign assassins. Sharpe co-stars as a jet-set spy and Connery's mistress.

END OF THE GAME

Stars: *Robert Shaw, Jacqueline Bisset*
Distributor: *Twentieth Century Fox*
MPAA Rating: *PG*
Synopsis: Shaw plays a successful industrialist — with a lot to lose — in this intricately plotted suspense drama directed by Maximilian Schell. 30 years earlier, Shaw committed a crime that he thought he had gotten away with — but not if a swiss detective (Martin Ritt) can help it. Bisset plays a pretty mistress and a pawn in the puzzler.

REDNECK

Stars: *Telly Savalas, Franco Nero, Mark Lester*
Distributor: *Art Greenfield*
MPAA Rating: *R*
Synopsis: Savalas stars as an American in Italy — who is also a jewel thief, kidnapper and psychopathic killer. A violent action drama that pits Savalas against Nero (originally a partner in crime) and Lester (the kidnapping victim).

LIFEGUARD

Stars: *Sam Elliott, Anne Archer*
Distributor: *Paramount*
MPAA Rating: *PG*
Synopsis: Elliott gives a fine performance as an aging 32-year-old lifeguard. No longer part of the youth culture, he is still unprepared to make a marital commitment to his old high school sweetheart, settle down and get a conventional job.

FOREIGN FILM

TWO WOMEN

Stars: *Sophia Loren*
Distributor: *Avco Embassy*
MPAA Rating: *None — "adult film"*
Synopsis: Loren won both the American and British Academy Awards for her moving role as the mother in this intense drama about the wanton brutality of war. It is World War II Italy and mother and daughter survive the ravages of war in the mountains. As the Germans begin their retreat the two women head back for the city. On the way, they are brutally raped by Moroccan troops — the daughter suffers severe psychological trauma and her mother desperately struggles to bring her daughter back to reality.

SPECIALS

THE HOME BOX OFFICE MAGIC SHOW

Producer: *Home Box Office*
Location: *Ed Sullivan Theatre, New York*
Synopsis: "Standing Room Only" features the finest collection of contemporary magicians performing in America. Hosting is Dick Cavett with headliners Harry Blackstone, Jr., Mercer Helms, Carl Ballantine, Ricky Jay and the Great Blydini. Two TV firsts include: slow motion photography of a magic act and the first 360 degree view of a "Grand Illusion."

NORM CROSBY: ON LOCATION

Producer: *Home Box Office*
Location: *Hilton Head, South Carolina*
Synopsis: Malapropisms, double entendres and hilarious misapplications of words abound when "Mr. Malaprop" himself takes the stage and assaults the English language for a full 60 minutes.

BACKGROUND INFORMATION

NORM CROSBY — BIOGRAPHY

Norm Crosby, "The King of the Malaprops" comes by his comedy honestly. A frustrated advertising copywriter for a Boston shoe company, Crosby was hard of hearing as a result of a war injury, and found to his delight that his pronunciation problems — suitably exaggerated — could be made into a winning comic turn. In 1963, he took off for the local cafe circuit, and hasn't been idle since. His monologues became a riotous mix of malapropisms and improvisation. He achieves instant "rapport" with an audience, which may turn to "evolustion" before the evening is up.

By 1968, Crosby had become a favorite on the Johnny Carson show, and had moved from occasional standup routines to a regular guest. "I try not to do (nightclub) material on the air," says Crosby. "When I first started with Johnny Carson I was a newcomer and I'd come out, do my monologue and then disappear behind the curtain. But Johnny dug me, and after my second or third appearance he called me over to join the panel. Then I was no longer a statue for the audience, but an individual with a chance to make them like me."

And like him they did. Norm has since appeared regularly as a TV talk show host and guest and has appeared with virtually every major singing star on the nightclub circuit. His regular partners have included Robert Goulet (also a personal friend), Tony Bennet, Tom Jones, Olivia Newton-John and Lisa Minnelli. He is known in the business as one of the few comedians who is so much in demand that he works continuously before live audiences, sandwiching TV shows and commercials (remember Norm saying "Glab a Gab, or Gab a Grab, or Gab a Glab . . .") between nightclub turns.

Norm's monologues are always topical and tasteful. He has dark chats by fellow Bostonians Jack and Robert Kennedy, and finds a natural "rapoport" with politicians who defer to his double-talking style. Hubert Humphrey autographed a picture of the two of them: "To the only fella who can properly explain our policy in Vietnam." In the fall of 1968, Epic records released an album of his fractured English.

Success has permitted Norm to turn his attention to one of his favorite causes — hearing problems. He wears a hearing aid, and often uses his own background as material for humorous comments about hearing impairment, putting the audience at ease with his disability. He is Honorary Chairman of the Better Hearing Institute, a trustee of the U.C.L.A.'s Hope for Hearing Foundation, and in 1973 was honored as "Man of the Year" by the Eddie Cantor Foundation in Los Angeles. In 1968, he received the "Annual Golden Ear" award from the Hearing Association of California.

Now a resident of Hollywood Hills, 49-year-old Norm's latest project is the annual Norm Crosby Celebrity-Amateur Golf Tournament, being run in his honor for the benefit of U.C.L.A.'s Hope for Hearing. He lives with his wife Joan, a former Latin Quarter dancer (Robert Goulet gave the bride away at his wedding in 1966) and his two sons, Daniel and Andrew.

Norm's full nightclub routine will be taped by Home Box Office during his appearance at the Hyatt hotel's Palmetto Dunes nightclub in the Hilton Head S.C. resort complex for presentation as part of HBO's "On Location" series premiering August 29, with additional performances Aug. 24, 26 and 28.

Figure 21-6. Pay Cable Network. This illustration shows both sides of a Home Box Office program schedule.

pay channel; in others, a separate entrepreneur leases channels from the cable system and programs them for pay operation. Various methods are used to deliver pay programming to subscribers and to charge them for it.

Networks have been organized to provide cable systems with both pay and nonpay programming. HBO, a division of Time, Inc., is the largest. By 1978, it had over 350 cable affiliates in 46 states with 800,000 subscribers. HBO sells pay programming to affiliated systems. Cable subscribers may rent an adapter on a monthly basis, and the adapter gives access to the entire month's programming.

By mid-1977, a nonpay cable network of sorts had grown up based on independent television station WTCG, Atlanta. The station programmed 24 hours a day, primarily sports and feature films, and was carried on 139 cable systems around the country, 35 receiving it by satellite. Several other organizations use satellites to distribute various types of programming and even television station signals to cable systems. A number of companies distribute cable and pay cable programming by tape and by microwave.

Subscription Television

Subscription television (STV), also called **pay TV,** operates somewhat like pay cable, except that the signal comes in over the air instead of by cable. A nonsubscriber receives a scrambled signal, that is, unintelligible video and audio. A subscriber's receiver is equipped with an electronic decoder. To unscramble the picture, the subscriber activates the decoder. Billing methods vary; for example, flat-rate monthly decoder rental, monthly issue of subscription cards to activate the decoder, recording STV use on a tape inside the decoder. Again like pay cable, the selling point of subscription television is special programming not available on commercial television and absence of commercial interruptions.

HISTORY

Over-the-air STV tests began about the time the first CATV systems got under way. During 1950 and 1951, three stations in New York, Los Angeles, and Chicago tested STV systems using a limited number of special receivers. The FCC felt a full-scale public test was needed before it could establish STV as a regular broadcast service, so in 1959 it began accepting applications for trial STV authorizations. It granted the applications of WHCT, channel 18, Hartford, Connecticut, in 1961, and KTCO, channel 2, Denver, in 1964.

The Denver project never materialized, but the Hartford experiment began in 1962 and lasted seven years. RKO General owned the station, and Zenith's Phonevision system was used for STV programming. As a result of the experiment, the FCC authorized regular STV service in 1968 and established technical standards in 1969. Its purpose achieved, WHCT ended STV operations in January, 1969.

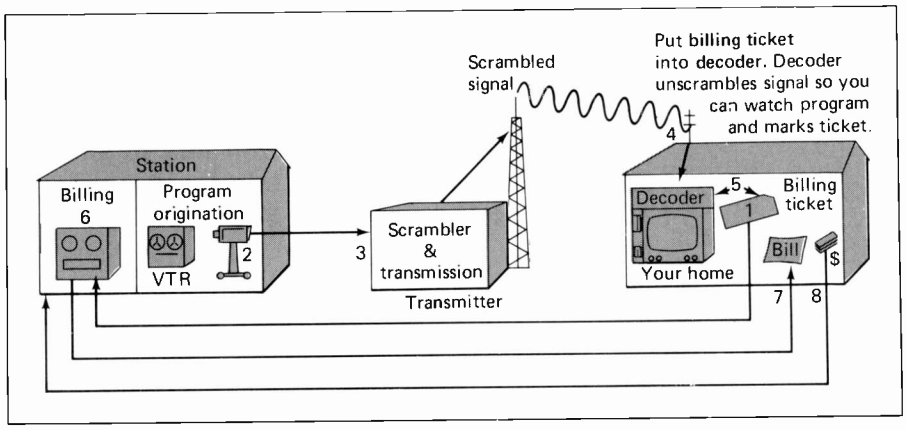


Figure 21-7. Broadcast Pay Television. (1) You receive a packet of billing cards, good for all the programs you may wish to see. (2) The program is originated at the station. (3) The signal is scrambled and transmitted. (4) You receive the scrambled signal. (5) You put the proper billing ticket into the decoder, if you wish to see the program. The decoder unscrambles the signal so that you can watch the program and marks the ticket. You send all tickets, used and unused, back to the station. (6) The computer figures how much you owe, based on your cards. (7) You get a bill. (8) You pay the bill.

OPPOSITION

Commercial television interests and motion picture theater owners opposed STV. Both feared siphoning and loss of audience. They intensified opposition in 1957 when the FCC first announced plans for a public test of STV. They lobbied Congress and aimed a massive anti-STV campaign at the public.

The Hartford experiment seemed to prove theater owners' worries well founded. Based on observation of WHCT and on other information, the FCC concluded that about 85 percent of STV programming would be feature films. If the public could pay and see commercial-free movies at home, STV could become serious competition to theaters. The theater owners appealed the FCC's 1968 STV rules, but the court upheld the commission.[11]

STV RULES

An STV operation is **licensed** as a commercial television broadcast station and **granted authorization** to offer STV programming. It must program a minimum 28 hours per week of nonsubscription (no charge) programming, but may run commercials during this time. The FCC grants STV authorizations only in communities served by four or more other commercial television stations and to only one station per community. The station licensee must retain control over all STV programming and subscription rates.[12]

STATUS

There was no great rush to sign on STV stations. By late 1976, only five had STV authorizations. Three of the five were not on the air; two were on, but

had not begun STV operation. However, about this time STV seemed to undergo a kind of rejuvenation. Wometco Enterprises, Incorporated, had bought controlling interest in WBTB, Newark, one of the two on-the-air permitees and began STV programming in March 1977.* A station near Los Angeles began STV programming the next month. In July, 1978, a station in Los Angeles began pay programming, bringing the total to three. By mid-1978, the FCC had granted nine more STV applications and some 18 more were pending.

Subscription Cable

The first public experiments with pay television were carried out over cable. Technically, the systems were similar to CATV, except subscribers received only subscription programming (primarily movies), no broadcast signals. **Subscription cable** aroused excitement in the 1950s and early 1960s; popular magazines carried a number of articles on its possibilities. Subscription cable experiments were conducted in the 1950s in Bartlesville, Oklahoma; Palm Springs, California; and Chicago. None survived. One of the largest experiments took place in Etobicoke, a Toronto suburb. The Etobicoke system peaked at 5800 subscribers in 1962, then declined steadily. It shut down in 1965, having lost over $6 million during four years of existence.

A California group planned a subscription cable system for San Francisco and Los Angeles. They called it "Subscription Television" and brought in Pat Weaver,† former president of NBC, to head the operation. Weaver had ambitious and innovative plans, and the system began service in July 1964. Movie theater owners waged an aggressive battle against it. They forced a referendum to outlaw pay television, and California voters passed it in November. Later, the California Supreme Court declared the law unconstitutional. But by this time, the operation had been dismantled and was not revived. After that, subscription cable seemed to be a dead issue.

Competition

The question of whether any form of pay television can successfully compete with commercial broadcast television is debatable. The commercial broadcast trade feels the answer is yes; it has fought all forms of pay television.

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* Wometco owns a large chain of motion picture theaters. Its president, Mitchell Wolfson, had played a major role in the theater owners' fight against FCC plans to authorize STV experiments.

† See Chapter 4.

Cable TV began in 1948 when John Watson could not get TV pictures from Philadelphia on his TV set in Mahanoy City, Pa., because there was a mountain in the way. So John put an antenna on top of the mountain and ran a wire down to his TV set. Presto! TV, just like the big city. Soon his neighbors asked if they could clamp on to his cable . . . and he let them.

His neighbors loved it because they were able to get Milton Berle, Hopalong Cassidy and the Roller Derby. The television stations loved it because more people saw their programs. John Watson loved it because he was regarded as a man of some genius by his neighbors.

Soon other people who lived in places where they got poor TV reception or none at all began to do the same thing. There had to be a charge, of course, to pay for the antenna and the wires. But there was no charge for the programs themselves.

So over-the-air broadcasting and cable TV grew up side by side. Oh, there were a lot of problems . . . there still are . . . but the problems are being worked out by the FCC, the broadcasters and the cable operators.

Now, however, something is being attempted that we don't think is in your interest – whether you receive your television off the air or by cable.

An all out attempt is now being made to take the most wanted programs from cable TV and free over-the-air TV and put them on pay TV.

If this were going to bring you *better* programs or *different* programs that would be one thing . . . but the result would be that you would have to pay for the same type of programs you now get *free*.

Pay TV operators want to charge you for movies, college and professional football, baseball, basketball and hockey, and for the kind of entertainment shows now on free TV. They are asking the FCC to change its rules to permit them to do this. If the FCC changes its rules, your TV program schedule could eventually look like this:

- Bonnie and Clyde $1.50
- Redskins v. Dolphins Super Bowl VIII $6.00
- Olympics $3.00 per day
- World Series $3.00 per game
- Knicks v. Lakers $1.50
- Boston Bruins v. Chicago Black Hawks $1.50
- Patton $1.50
- College Football (every Sat. in the fall) $2.50 per game

Obviously that can add up to a lot of money for the average family. At least $25 a month – maybe $50. What would happen to free over-the-air TV and cable TV?

Programs would move from free TV to pay TV. All of these popular programs would not disappear overnight from free TV, but over a period of time they would be siphoned away. Eventually those programs and sports events would be gone – to be watched exclusively by the people who could afford to pay for them. Those who could not pay would go without . . . whether they received their TV over the air or by cable.

What can you do about it?

- If you want to continue to receive sports, movies and entertainment shows without charge . . .
- If you oppose allowing pay TV operators to lock up those programs for the exclusive use of those who can afford to pay . . . then –
- Send this to your Congressman and Senators:

Dear Congressman,

We oppose allowing pay TV to siphon away the type of programs we now see on free TV and cable TV and charge for them. Please do not allow this to happen.

Name_____

Address _____

City _____

State _____ Zip _____

Used by permission of National Association of Broadcasters.

Figure 21-8. Broadcasters Fight Pay Television. This advertisement ran in the *Washington Post* on Nov. 29, 1973.

As we have seen, pay television can earn as much or more revenue as commercial television with many fewer viewers. Because of this, pay television seems to have the potential to sustain minority taste programming, particularly on a national or network level. As each form of pay television has come along, critics, academics, and others, seeing it freed from the necessity of attracting maximum audiences, have praised and encouraged it, holding out visions of opera, serious drama, and other cultural programming. Such has not been the case. Perhaps pay television has not yet been tried on a scale large enough to contain the requisite number of persons who would pay to see such programming. At any rate, pay television thus far has been primarily movies and sports, programming now on commercial broadcast television. At this point, then, the commercial broadcasters are correct: pay television competes directly—competes for the same type of audience and with the same type of programming.

Broadcasters see CATV and its derivatives, pay cable and the wired nation, as the most viable competitors. They insist that cable should supplement, not compete with, conventional television. Through the National Association of Broadcasters, they have mounted a campaign to sway the public, Congress, and the FCC to their view. They call their medium "free television" and warn that its displacement by cable would disadvantage viewers. They downplay their real worry—financial disadvantage to themselves.

Trade association rhetoric aside, there would be some disadvantage for you if all television went on a pay basis. To get the same programming now on commercial television, you would have to subsidize it by paying directly to the programmer, rather than indirectly by buying advertised products. And the price of those products would probably not decrease.

Some would see the prospect of programming uninterrupted by up to nine different messages at a time as worth the charge. Of course there is every possibility that if all television moved onto cable, the whole commercial-interruption concept might move right along with it. Even now CATV systems can run advertising on local origination channels; only the extra-charge pay cable channels are commercial free.

On the other hand, the argument could be made that *you* own the receiver, and if there is some alternative to conventional television, *you* should have the opportunity to try it, to judge for yourself. But television broadcasters look back at the history of their own medium, at the drastic changes its coming wrought in radio and motion pictures, and fight the chance that any other medium might do the same to television.

Notes

1 *First Report and Order,* 38 FCC 683 (1965).
2 *Second Report and Order,* 2 FCC 2d 725 (1966).

3 *United States v. Southwestern Cable Co.,* 392 U.S. 157 (1968).
4 *First Report and Order,* 20 FCC 2d 201 (1969).
5 *Final Report and Order,* 21 FCC 2d 307 (1970).
6 47 CFR §§76.5–76.253.
7 *Fortnightly Corp. v. United Artists Television, Inc.,* 392 U.S. 390 (1968); *Teleprompter Corp. v. Columbia Broadcasting System,* 415 U.S. 394 (1974).
8 Public Law 94–553, October 19, 1976, 90 Stat. 2541, at 2551.
9 47 CFR §76.225.
10 FCC, "CATV Industry Financial Data for the Period Nov. 1975–Oct. 1976," Washington, D.C., 10 June 1977 (mimeographed).
11 *National Association of Theater Owners v. FCC,* 420 F. 2d 194 (1969), cert. denied 397 U.S. 922 (1970).
12 47 CFR §§73.641–42.

Bibliography

(Numbers in parentheses refer to chapter bibliographies containing full citations.)

CABLE TELEVISION

Two general sources of current information on CATV, including statistics and listings of individual systems, are the current editions of *Television Factbook* (1) and *Broadcasting Cable Sourcebook* (Washington, D.C.: Broadcasting Publications, annual). Also, see the FCC informational booklet, *Cable Television,* Washington, D.C., 1976 (mimeographed). *TV Communications Magazine* (1900 West Yale, Englewood, Cal. 80110) is a monthly publication devoted entirely to CATV, with articles on system management, promotion, financing, and engineering and a section on general cable news. A great deal of information—brochures, article reprints, and the like—is available (usually for the asking) from NCTA, 918 16th St. N.W., Washington, D.C. 20006. To understand more about how CATV works, see Carl Pilnick and Walter S. Baer, *Cable Television: A Guide to the Technology* (Santa Monica, Cal.: Rand, 1973). CATV system operation is explained in *CATV Operator's Handbook,* 2nd ed. (Blue Ridge Summit, Pa.: Tab, 1973) and Charles C. Woodward, Jr., *Cable Television: Acquisition and Operation of CATV Systems* (New York: McGraw-Hill, 1974). CATV's major issues and how they came to be are explained in Ralph Lee Smith, *The Wired Nation; Cable TV: The Electronic Communications Highway* (New York: Harper & Row, 1972). Sources of the wired nation concept seem to be Harold J. Barnett and Edward A. Greenberg, *A Proposal for Wired City Television* (Santa Monica, Cal.: Rand, 1967), and Electronic Industries Association, Comments on F.C.C. Docket No. 18397, Part V, Washington, D.C., 1969 (mimeographed). Broadcasters' view of the relationship between CATV and television is set forth in *Free Television: How It Serves America* (Washington, D.C.: NAB, 1973). Development of CATV's legal and regulatory status is the focus of Don R. LeDuc, *Cable Television and the FCC: A Crisis in Media Control* (Philadelphia: Temple University Press, 1973). A more recent work that sorts out cable's legal and regulatory problems is U.S. House Commerce Committee, Communications Subcommittee Staff, *Cable Television: Promise versus Regulatory Performance* (Washington, D.C.: GPO, 1976).

SUBSCRIPTION TELEVISION

Historical and legal development of subscription television is summarized in Chapter 7, Jones, *Cases and Materials on Mass Media* (12) and in the FCC booklet *Subscription Television (STV-Pay TV)*, Washington, D.C., 1976 (mimeographed).

SUBSCRIPTION CABLE

Take a look at "First Customers for Pay Television," *Life,* Oct. 14, 1957, pp. 63–64, to see what a subscription cable system was like.

COMPETITION

The potential of cable to encourage new production sources and to develop new mechanisms for distributing programming in the humanities and performing arts is the subject of a collection of essays edited by Richard Adler and Walter Baer, *The Electronic Box Office: Humanities and Arts on the Cable* (New York: Praeger, 1974).

22

Radio and Television: Other Forms, Other Uses

Radio and television are used for a variety of purposes besides commercial and public broadcasting. In the last chapter we examined pay programming. In this chapter we survey still other forms and uses—over-the-air, closed circuit, and some difficult to classify forms lumped together as "additional applications."

Over-the-Air

We use the term "over-the-air" to mean radio and television distributed via radio waves. This category includes instructional broadcasting, citizens band radio, and highway radio.

INSTRUCTIONAL BROADCASTING

Noncommercial educational broadcasting takes two basic forms. We have discussed one of these, public broadcasting, in some detail. However, we have done little more than mention the other, instructional broadcasting. **Instructional broadcasting** refers to the use of public airwaves for formal instruction. Instructional broadcasting is done primarily by television. Radio could be used to teach many different things, many of the same things for which television is now used and at a fraction of the cost. However, instructional radio is not widely used in the United States, so our discussion deals mainly with instructional television.

The public television station and the instructional television station are often one and the same. The station broadcasts general interest public programming evenings and weekends and instructional materials weekdays. Sometimes the organization that initiates or uses the instructional programming is the station licensee, as in the case of a station owned by a public school system. Usually, however, instructional programming involves second parties, often school districts. School districts contract with a station to air instructional material, each district paying a share based at least in part on the number of students in that district who use the programming.

Uses. Some instructional broadcasts are designed for use **in the classroom.** Instructional broadcasting can be used at any and every level of schooling, from kindergarten through college postgraduate. It is most often used in grades one through twelve. Instructional broadcasting may be used to **teach an entire subject,** to **teach part of a subject,** or to **provide supplementary material.** Instructional broadcasting may also be used to **allow study at home.** Probably the best-known example is the Chicago TV College program, in which students may earn a complete associate in arts degree from Chicago City Junior College by taking courses offered over WTTW (TV).

Sources. Sources of instructional programming include institutions (schools, colleges, school districts, etc.) that sponsor or give credit for the broadcast courses, stations themselves, state and regional organizations (e.g., South Carolina Educational Television Commission and the Northeastern Regional Instructional Library of the Eastern Educational Network), and national production centers and libraries (e.g., Children's Television Workshop, Great Plains National Instructional Library in Lincoln, Nebraska, and Agency for Instructional Television in Bloomington, Indiana).

CITIZENS BAND RADIO

Citizens band radio (CB) is a point-to-point service, not broadcasting. We discuss it here for two reasons. First, it has the potential to affect radio listening habits of the American public. Second, with practically no encouragement from any quarter, it has become the people's medium, a means of personal expression and public participation via the airwaves. In fact, it is not unusual to hear CB transmission referred to as "broadcasting."

The citizens band consists of 40 channels in the 27 MHz range set aside by the FCC for a personal communication system. The commission requires that transmitters be licensed, but not operators. An applicant does not have to pass an examination. Part 95 of the FCC rules govern CB.

Transmitters are limited to 4 watts of power, good for an average range of four to ten miles. The majority of **transceivers** (transmitter/receivers) are in vehicles; these are called **mobile units.** Others are **base stations.** CB radio transceivers are moderately priced, averaging about $80–140.

History. Citizens band radio has been around for over 30 years. The FCC first reserved the 450–460 MHz band in the mid-1940s at the urging of Commissioner E. K. Jett. In 1958, the commission shifted the CB service to its present position. Businesses began to use CB to communicate with their trucks. Long distance truckers installed CB radios to exchange information on weather, road conditions, and traffic.

In 1973, the speed limit on U.S. highways was lowered to 55 miles per hour, but truckers continued to drive at higher speeds, using CB to avoid highway patrols. Suddenly, CB erupted into a major fad. Motorists all over the country installed CB radios. CB radio sales shot up and became a major source of revenue for electronics manufacturers. License applications flooded the FCC, peaking at a rate of 500,000 to 600,000 per month in 1976 and creating an administrative nightmare for the understaffed commission. During January 1977, the FCC received 1,000,000 CB license applications. By summer 1977, over 9 million licenses had been issued, more than all other radio services combined. But many persons operated transmitters with no license, and estimates of the number of CB radios in the United States ran as high as 22 million.[1]

Impact. A CB subculture grew up almost overnight. Truckers developed a special CB slang which they used along with the police code-10 Signals (e.g., "10-4" is the code for affirmative, acknowledgement, or okay). They used "handles" (nicknames) to identify themselves over CB. Other CBers adopted the slang, used the code, and took on handles. The CB fad inspired popular songs, books (both fact and fiction), and motion pictures. CB was written into scripts of television programs as diverse as *The Rockford Files, Movin' On,* and *One Day at a Time.* It got on television in other ways, too. Every month thousands complained to the FCC that CB transmissions interfered with television reception as well as radio reception, public address systems, stereo amplifiers, garage door openers, and other devices containing sensitive electronic circuitry.

CB and Broadcasters. CB popularity has already caused some broadcasters concern. In spring 1976, one Indiana radio station manager called CB "a new monster."[2] Certainly, the potential exists for CB to compete with broadcast radio for audiences. Much CB communication occurs in moving vehicles. If you fiddle with CB, you are not listening to radio. CB may have even drained off advertising revenue. Reports have circulated of CB use to promote political candidacy.[3] And broadcasters at a fall 1976 regional trade conference complained that merchants used CB to advertise goods and services.[4] Both practices violate FCC rules.

HIGHWAY RADIO

In **highway radio,** low power roadside radio transmitters give information to travelers concerning hazards, directions to airport parking lots, availability of

food and lodging, and other such information. In June 1977, the FCC formally authorized such a service, providing for operation of Travelers Information Stations (TIS). These stations were to transmit on 530 and 1610 kHz, the extreme ends of the AM band. Only a governmental agency could operate a TIS, and only as a noncommercial station with its service area restricted to the immediate vicinity of air, train, and bus terminals, public parks, historical sites, interstate highway exchanges, bridges, and tunnels. Broadcasters opposed the concept, and the National Association of Broadcasters asked the commission to reconsider its action.

Closed Circuit

Closed circuit means that signals are distributed in a way that limits access to reception. Closed circuit includes closed circuit television, commercial systems, and what we shall call people's television.

CLOSED CIRCUIT TELEVISION

The uses of **closed circuit television** (CCTV) are almost endless. They range from video observation systems used in banks, retail stores, and other places to the cameras and monitors used in space, atomic, medical, and biological research; from taping and playback of date bureau clients to aid partner selection to recording of trials to help deliberating jurors review testimony. To illustrate CCTV's diversity, let us take one field, education, and look at some of the ways in which CCTV is used there.

Like instructional broadcasting, nonbroadcast television may be used to teach an entire subject, to teach part of a subject, or to provide supplementary material. It can be used to teach almost any number of persons, from one to as many as viewing facilities permit. It is used by public and private schools, colleges, and universities; by industry; by the military; by every level of government. Why use CCTV in education? There are many reasons. Here are some of the more common ones, good and bad: to make a superior teacher available to many students; to make up for a lack of qualified teachers; to save money (i.e., buy equipment and make reusable tapes rather than hire more teachers); to preserve a one-time event (via videotape) for repeated use; to show small items or processes to a large group (through use of the close-up view); to integrate media (i.e., to combine information from several different media—slides, film, videotape, still photographs, models, etc.—into one smooth televised presentation); to present information not available from other media (e.g., to show a videotape documentary); to allow self-study and self-criticism (e.g., videotape a student giving a speech, then play back the tape for the student to view); for problem-solving, role-playing, and discussion stimulation (e.g., show a videotape of a dramatized incident or situation and ask the student to analyze or solve it); to bring certain material into the classroom (e.g., use a portable television camera to videotape scenes of wildlife,

geologic formations, places of business and commerce, or ways of life); for preparation of individual learning modules that students view and study independently and at their own rate; to teach techniques of broadcast production (through use and manipulation of production equipment); to demonstrate techniques (e.g., surgery, teacher training, counseling, equipment operation, procedures); to videotape material off the air for classroom use; to make and play back instructional materials; and to play back instructional materials made by others. If there is any one overall trend in instructional CCTV, it is away from the lock-step, mass instruction, substitute-for-a-classroom-teacher use of the 1950s and 1960s and toward use (1) as one of a number of media (2) controlled by student and classroom teacher (3) in moderate size class, small group, or individual learning situations.

Origination and production systems vary in size and complexity. At the simplest level are audio-visual arrangements, in which cameras and monitors are used for purposes such as enlargement, overhead views, and observation. At the next level is the person-portable system, a hand-held camera with built-in microphone connected to a backpack videotape recorder. A common small system found in many schools is a monitor, video cassette machine, microphone, and one camera with a lightweight tripod, all on a movable cart. The system is rolled into a room and plugged in to a normal AC outlet for use. By adding a simple switcher and another camera, on-line real-time editing (cutting between cameras) is possible. By adding another videotape recorder, postproduction editing is possible. More sophisticated production requirements call for more sophisticated equipment. Some elaborate CCTV facilities rival those of television stations.

The simplest **distribution** system is one camera connected to one monitor. A small videotape recorder increases flexibility; it may be carried from place to place for repeated playbacks. In a wired distribution system, the video signal originates at a central point and is sent via coaxial cables to monitors in other rooms. Some wired systems on military posts and college campuses are elaborate, capable of feeding a dozen or more different programs simultaneously to a number of buildings.

When reception points are spread out and at some distance from the origination point, the video signal may be distributed by use of microwave relay.* For example, the Texas Educational Media Project uses microwave to exchange instructional video materials among colleges and universities.

An alternative to microwave distribution is the **Instructional Television Fixed Service** (ITFS). ITFS is a wireless system for short range relay that operates on frequencies high in the UHF band (2500–2690 MHz). Both trans-

* See Chapter 19. It is also possible to use satellite relay and even FM radio. An FM SCA subcarrier can carry slow-scan video signals, about one picture every ten seconds.

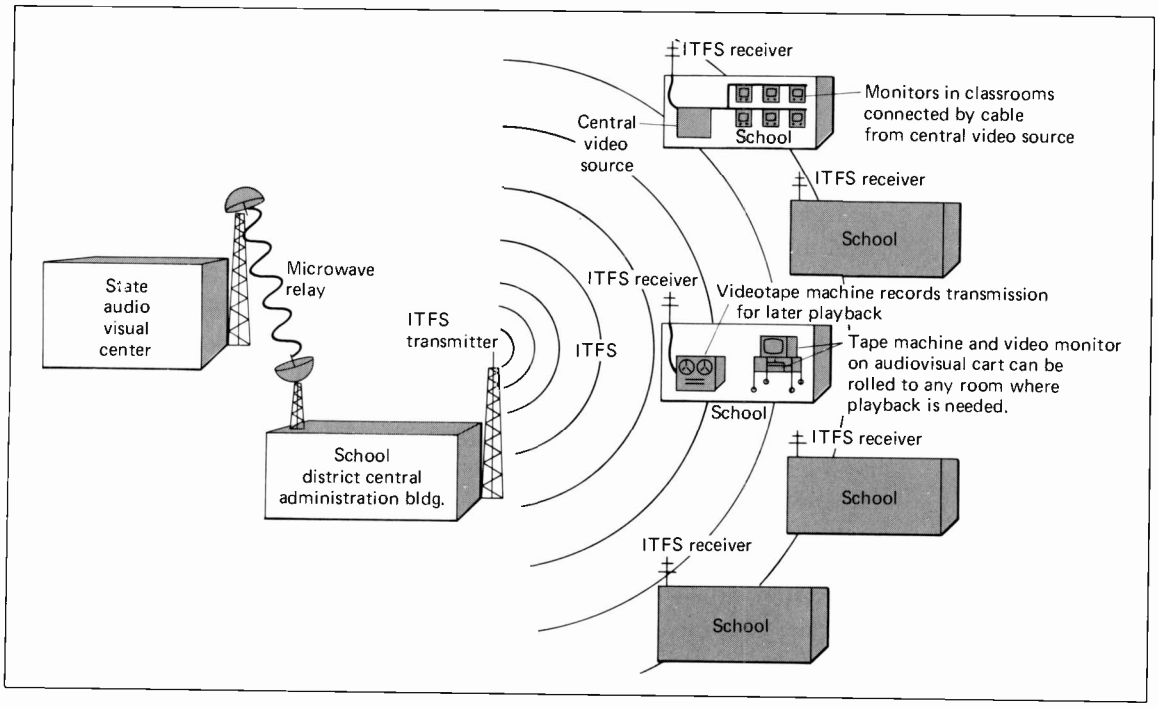
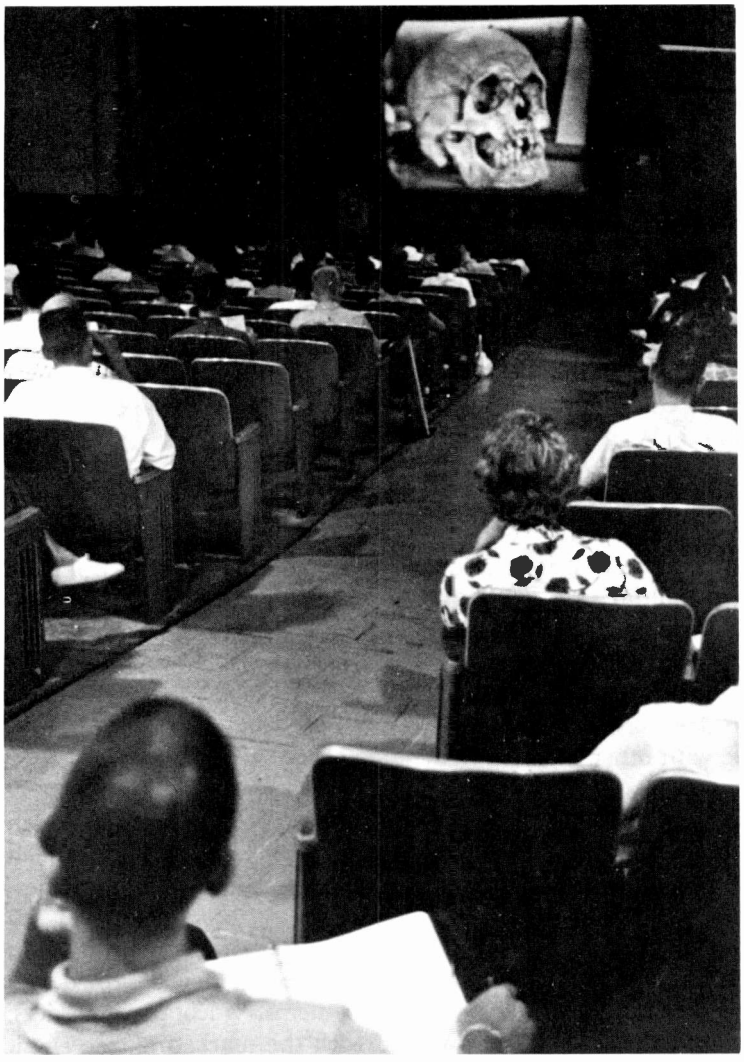


Figure 22-1. Combination of CCTV Distribution Methods. Program material is sent by microwave relay from state audio-visual center to the headquarters of a school district. The school district transmits the material to each of its schools via ITFS. One school feeds it directly by coaxial cable to each video monitor in the building. In another school, a videotape machine records the material for later playback, perhaps using a portable videotape machine and monitor to deliver it to rooms where needed.

mission and special reception equipment must be licensed, and one licensee may apply for up to four ITFS channels. One example of an ITFS user is The Association for Graduate Education and Research (TAGER). TAGER, centered in Dallas, uses ITFS to distribute instructional video to schools and industrial and commercial buildings for school classroom use, teacher in-service training, adult education, and professional continuing education.

While ITFS is available only to educational users, private and commercial interests may apply for licenses in the similar **Multipoint Distribution Service** (MDS). MDS is used for transmission of all types of material, from computer data to industrial television and hotel/motel programming.

Display (i.e., viewing by users) to small groups and individuals can usually be achieved with one monitor. Two methods of large group display involve **multiple monitors** and **large screen projection.** In the first method, the viewing room contains a number of monitors, and the CCTV material shows up on all of them simultaneously. The monitors are so located that each viewer can see at least one clearly and at a normal television viewing distance. In the



Photograph courtesy of Ed Cenedella, St. Petersburg Junior College. Used by permission.

Figure 22-2. Large Screen Television. Biology students in a large auditorium section watch a videolesson via large screen projection. Some companies now offer large screen projection for the home.

second method, the video signal feeds a television projector, which displays the CCTV material on a big screen, motion picture style.

COMMERCIAL SYSTEMS

Commercial systems of closed circuit radio and television include hotel/motel pay television, theater television, and wired radio. Most hotels and motels have master antennas that pick up television and some radio station signals and feed them through a distribution system to receivers in guest rooms. In **hotel/motel pay television,** feature films are programmed on nonbroadcast channels of the distribution system, and guests may view them for a fee. The

films come either from in-house playback equipment or from a central source via microwave, MDS, or coaxial cable.

In **theater television** an entrepreneur purchases rights to an event—often a championship boxing match—and televises it, relaying the signal to motion picture theaters in various cities. Patrons go to the theaters, pay admission, and view the event as it happens, projected on the big screen.

Wired radio takes two forms: cable radio stations and carrier current stations. The idea of **cable radio stations**—the delivery of radio programming to the public by wire—has been used in a number of other countries for years. In the United States, cable television provided both impetus and means for renewed interest. In April 1977, the Booker T. Washington Foundation helped inaugurate cable radio station WRKB, Knoxville, Tennessee. WRKB programs to the black community through facilities of Athena Cable Company. Another example is WDIX, Central Islip, New York. Two college students planned WDIX, and it began operation in June 1977 over a local cable system.[5]

Carrier current (also called "wired wireless") **radio** operates primarily on the campuses of educational institutions. The signal goes by wire from the studio to campus buildings. A special transmitter feeds the signal to the electrical wiring of each building. The entire wiring system radiates the signal, and receivers near the wiring pick up the station when tuned to its frequency. Neither cable radio nor carrier current radio is licensed by the FCC. However, the commission does have regulations to ensure carrier current transmissions do not interfere with other radio services.

PEOPLE'S TELEVISION

People's television is just what the name implies: forms of television in which programming arises from the people—us—rather than from any established commercial or educational institution. People's television includes underground television and CATV public access channels.

Underground television, also called "guerilla television," got started in the late 1960s, a result of two revolutions. One was technological—the development of low-cost, truly portable television cameras, videotape recorders, and other production gear. It began in 1968 with the marketing of a small camera-videotape recorder combination, designed and manufactured by the Sony Corporation for use in industry and education.

The other revolution was sociological—the discovery that now anyone could use television. Groups of innovative, imaginative young people began to experiment with the new equipment, using it for fun, for social comment, for analysis, for archival purposes, for documentaries and documenting, for a dozen and more other purposes. Influenced by the fast-fading so-called "counterculture" of the 1960s, they gave themselves names such as Videofreex, Videopolis, Optic Nerve, and Global Village. They showed their efforts privately, in public storefront showings, through videotape exchanges, on college campuses, on cable public access channels. As talent and technique im-

proved, some groups began to receive financial support from foundations, cable companies, and public television stations, and their efforts reached wider audiences. Some of their products have been commissioned and broadcast by television stations.

Until overturned by a federal court,* FCC rules required **CATV public access channels.** A cable television system with 3500 or more subscribers was to make a channel available for use by anyone for free (although it could charge for use of production facilities). New York City required access channels even before the FCC. When Manhattan's two cable companies opened the country's first public access channels in 1971, underground television groups helped awaken citizens to the potential of the channels. They provided not only programming, but also encouragement, facilities, and advice for others.

Additional Applications

One of the most interesting and unique applications of television is its use as an **art form.** Video as art ranges from electronic generation of abstract images to multiple screen presentations, from creative tape editing to integration of video with other media, from electronic picture distortion to creation of large-scale walk-in video environments that feed back to observers their own images. Television has been integrated into other art forms, becoming part of creative works in drama, music, and dance. All uses of video as art are very personal expressions of the individuals who create them. In this respect, video as art overlaps underground television.

Television is used in some **individual learning situations.** A **video carrel** is a small desk equipped with a television monitor, earphones, and a dial or group of buttons. A student sits at the carrel, dials or punches the code number of a particular lesson, and then watches its playback on the monitor. Another device that holds promise for education is the **video disk.** Paper thin, the video disk can store 100,000 single picture frames or up to an hour of programming on one side. Still pictures and full motion can be mixed. Video disks are not eraseable, but could cost as little as one cent per minute.

In 1976, several developments demonstrated the potential flexibility of the home television receiver. Two involved marketing successes—**video games** and the **home videotape recorder.** Video games are generated by small electronic consoles. When attached to a television receiver, the console turns the screen into a cathode ray tube display* on which appear small game symbols. Two players manipulate the console's controls to move the symbols competitively.

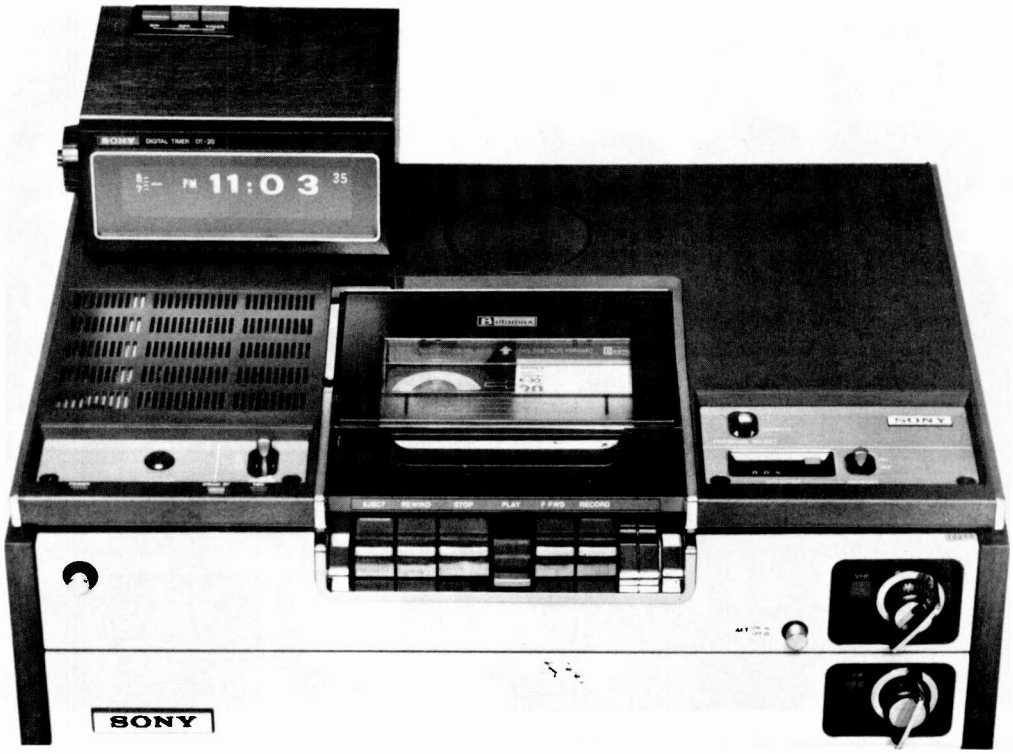
* See Chapter 21.

Photograph courtesy of RCA. Used by permission.

Figure 22-3. Video Game. Newer devices generate a number of different games; some are cartridge loaded, and each cartridge produces a different game. One combines computer and game circuitry in one device, allowing the user to use the TV screen for work, as well as play.

The home videotape recorder allows you to schedule programs at your convenience. You can watch one channel while recording from another, can set the machine to record when no one is home or after bedtime, and can delete commercials while recording favorite movies for permanent storage.*

* The home recorder raises copyright questions. In 1976, Universal City Studios and Walt Disney Productions brought suit against Sony (whose Betamax started the whole home recorder boom), Sony's advertising agency, some Sony dealers, and a Betamax owner for copyright violation.



Photograph courtesy of Sony Corp. of America. Used by permission. "Sony" and "Betamax" are registered trademarks of Sony Corporation.

Figure 22-4. Home Video Recorder. First introduced in 1975 by Sony, prices of (relatively) low-cost home video recorders began to drop as other manufacturers entered the market. Software companies now offer for sale already recorded cartridges, containing favorite feature length films.

Also in 1976, the FCC approved use of the vertical blanking interval* of line 21 of the television frame for transmission of coded **captions.** When a station transmits coded captions, viewers with special decoders see printing superimposed over the regular picture. Other viewers see only the regular picture. The Public Broadcasting Service, which pushed the plan, envisioned coded captions as an aid to the hearing impaired; it would allow program dialogue to be printed on the screen.†

Coded captioning could also be used for other purposes. British television, for example, used the same principle to offer a **newspaper of the air.** British broadcasters inserted coded data in the vertical interval of the spare lines of

* See Chapter 11.

† No broadcaster has to transmit coded captions. Commercial networks say that encoding dialogue into captions is too expensive and benefits too few people. So do not expect coded captioning on commercial television any time soon.


ceefax

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CEEFAX 138 Wed 12 Jan 16:23/22
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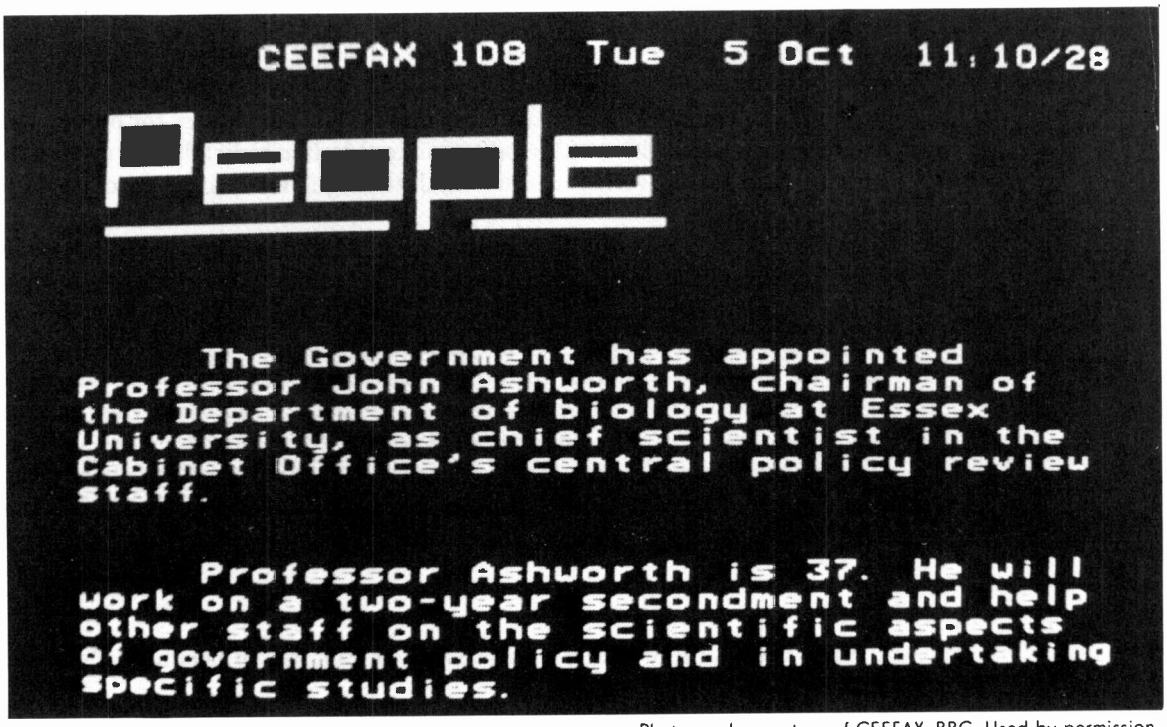

(c)

Photographs courtesy of CEEFAX, BBC. Used by permission.

Figure 22-5. Video Newspaper. (a) General view of CEEFAX newsroom at BBC. (b) and (c) CEEFAX "pages" on-screen.

the television picture, that is, the black bar at the bottom of the frame. People with special decoders could replace regular programming with a printed-on-screen table of contents, choose an article, and program the decoder to show that article on the screen. The experiment began in 1975 with some 500 participants. Later, an electronics firm announced plans to begin marketing decoders by the end of 1977. In 1978, U.S. interests began studying and experimenting with similar systems. The FCC gave a Salt Lake City television station permission to conduct over-the-air tests, and a Philadelphia firm announced that it was accepting orders for a video-plus-print system.

It would be tempting to say that video games, home video recorders, and encoded captions signal the start of the television receiver's evolution into a home communications center.* Video game technology, for example, could serve as the basis for a home computer, with the television receiver screen as its display unit. As with pay television, however, most of these developments are inimical to the interests of commercial broadcasters. These devices take you out of the broadcast audience and disturb viewing patterns. During commercial breaks you might check the video newspaper instead of viewing sales messages.

Other developments that make broadcasters uneasy include **direct satel-**

* See Chapter 21.

lite-to-home communication and **fiber optics.** The technology for home satellite reception exists, but its introduction could alter radically the role of the station. National advertisers using satellite might have little need for local television outlets.

Fiber optics is potentially a much greater threat to commercial television than home satellite reception. An optical fiber, also called an "optical waveguide," is a flexible strand of glass. It can carry a beam of light, even around curves and corners. Light, of course, is electromagnetic energy. Radio frequencies can be modulated up to the visible light spectrum and carried via fiber. A single 0.005 inch fiber can carry 167 television channels. Mass production could lower its price below that of coaxial cable. Already cable systems have begun to experiment with fiber optics, and predictions have been made that the wired nation will be wired with small, inexpensive glass fibers that carry hundreds, even thousands of channels.

Notes

1 Penny Girard, "U.S. Suffers Offensive Fallout from the CB Boom," Dallas *Times-Herald,* Aug. 3, 1977, p. 2-H.
2 Murray J. Green, "CB as Monster," *Broadcasting,* Mar. 22, 1976, p. 17.
3 E. Z. Strange, "Citizens On Radio," Denton *Record-Chronicle,* June 13, 1976, p. 10A.
4 "Selling On CB," *Broadcasting,* Nov. 8, 1976, p. 46.
5 "Overview: How Tomorrow's Radio Looks from Today's," *Broadcasting,* July 25, 1977, p. 36.

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OVER-THE-AIR

Wood and Wylie, *Educational Telecommunications* (4), discuss instructional radio and television, both broadcast and CCTV. See Saettler, *A History of Instructional Technology* (4) for development of instructional radio and television. Wilbur Schramm reviews literature on effectiveness of various educational media, from radio and slides to sound film and television, in *Big Media, Little Media: Tools and Technologies for Instruction* (Beverly Hills, Cal.: Sage Publications, 1977). There are a number of books on CB; see, for example, Staff of CB Magazine, *Most Often Asked Questions and Answers about CB Radio* (Rochelle Park, N.J.: Hayden, 1976).

CLOSED CIRCUIT

Several *TV Guide* articles illustrate the disparate uses to which CCTV is put: John Weisman, "Justice Isn't Blind . . .," Aug. 5, 1977, pp. 20–22, describes use of videotaped confessions in criminal cases, and Ralph Schoenstein, "Zooming in on Love," June 26, 1976, pp. 20–22 tells of a date bureau that uses videotape. Books on television teaching and closed circuit production include Mary Lynn Crow, *Teaching on Television* (Arlington, Tex.: Faulty Resource Center, Univ. of Texas-Arlington,

1977); John Quick and Herbert Wolff, *Small-Studio Video Tape Production;* 2nd ed. (Reading, Mass.: Addison-Wesley, 1976); and Bob Westmoreland, *Teleproduction Shortcuts: A Manual for Low-Budget Television Production in a Small Studio* (Norman, Okla.: Univ. of Oklahoma Press, 1974). Read about underground television in Michael Shamberg and Raindance Corporation, *Guerilla Television* (New York: Holt, Rinehart and Winston, 1971), Videofreex, *The Spaghetti City Video Manual* (New York: Praeger, 1973), and Peter Weiner, *Making the Video Revolution* (New York: Macmillan, 1973). New York's experience with public access is the subject of David Othmer, *The Wired Island: The First Two Years of Public Access to Cable Television in Manhattan* (New York: Fund for the City of New York, 1973).

ADDITIONAL APPLICATIONS

For more on use of television to create visual art, see Ira Schneider and Beryl Korot, eds., *Video Art: An Anthology* (New York: Harcourt Brace Jovanovich, 1976). Two more *TV Guide* articles explain the television newspaper and optical fibers, respectively: Mason Smith, "Tune in Today's Newspaper," July 2, 1977, pp. 34–35, and David Lachenbruch, "On a Wave of Light . . . ," Dec. 25, 1976, pp. 2–6.

23 Print, Film, and Other Nonelectronic Media

In this chapter we look at print, motion pictures, and a number of other media. These media compete with radio and television for our time and attention. Most compete for content and advertising revenue as well. We shall sketch in the broad outlines of each as a business and as a medium, so that we have some idea of how it compares to radio and television.

Print

The printing press is one of the most significant and influential inventions in history.* It helped initiate the major political and social revolutions of the eighteenth and nineteenth centuries. It made literacy popular and possible for the masses and inspired and sustained the rise of universal education. In addition, it provided initial technology for mass communication and modern advertising. Here we are concerned with three offspring of the printing press: books, newspapers and magazines.

BOOKS

The **book** is unique among media. It is relatively permanent; we keep books—including many paperbacks—as long as we can. The book is not as

* See Chapter 7.

limited by time and space as other media; an author may develop a subject in depth. Book publishing is supported almost entirely by circulation, that is, by sales of books; most other media rely at least in part on advertising revenues. Book publishers do not require mass circulation to the same degree as broadcasting, newspapers, and magazines; fewer than 5 percent of trade hardbacks sell more than 5000 copies. These factors free an author to treat themes and institutions in ways that would be difficult in media dependent on advertising revenues and mass circulation.

While books have the lowest average circulation of any medium, they are also probably the most influential. They are still the basic teacher-aid medium in education. Textbooks relay basic principles and great ideas to each generation. But most of us do not read many books after we leave school. And those few we read do not deal in great ideas. Yet most great ideas are first disseminated, not by television, radio, newspapers, or magazines, but in books. As Sandman, Rubin, and Sachsman note, "In the long run, the climate of American opinion is greatly influenced by the book industry because the opinion-leaders and trend setters are readers. Regretfully, they are the only readers."[1]

We used the term "trade hardbacks." This is the type you probably think of when you hear the word "book"—those sold to the public by general bookstores. They include fiction, poetry, humor, how-to books, and biography. The trade hardback is one type in a broad category called **general books.** Other general books include book club books, trade paperbacks (same general content as trade hardbacks), mass paperbacks (printed in large numbers to sell quickly and cheaply), juvenile books, religious books, and most reference works. The two remaining categories are **professional books** and **educational books.** Professional books include those written especially for physicians, professors, attorneys, engineers, scientists, business and financial personnel, and other specialized fields. Educational books include textbooks, collateral reading books, workbooks, and laboratory manuals designed for use in formal courses at all levels. Textbooks generate the largest revenues, about 30 percent of total sales.

There are about 1500 publishers scattered across the country. Some 350 account for 90 percent of all books produced; most publishers are in New York, Boston, and Philadelphia. The heart of a publishing house is its **editorial staff. Managing** or **sponsoring editors** select subjects, manuscripts, and authors, and specify packaging and promotion. They receive most suggestions for general books from would-be authors. Managing editors who specialize in professional and educational books, however, often solicit manuscripts from experts in the field. **Project** or **production editors** carry out the complicated process of getting the book ready for production. The **production** department maintains liaison with the printer. Most houses do not own their own printing plant, but contract with independent firms. Some smaller houses contract for all services—design, copy editing, illustration and art work, even sales. After

the book is published, it must be sold. The **distribution** department is responsible for advertising, promoting, distributing, and selling.

In 1976, 39,372 new books and new editions were published in the United States. In 1976, total retail book sales were $4.815 billion.

NEWSPAPERS

In 1976, there were 1762 daily newspapers in the United States. They circulated* more than 60.9 million copies per issue, about one for every 3.5 persons. The *New York News* had the largest circulation, 1,925,643 (2,759,182 on Sunday). Additionally, there were 7500 weeklies that circulated to 38 million persons.

Most of today's newspaper is *not* hard news, which is just as well because most readers do not read all the hard news that it contains. About 60 percent of a newspaper is advertising; all news—local, state, national, and international—totals only about 20 percent. Unlike the broadcast audience, the newspaper reader controls the situation, skimming some stories, reading others in depth, skipping whole sections, looking at some advertisements and not others, rereading parts.

Unlike other major media, newspapers have no national distribution system. Feature and news wire services supply a common product, coast to coast. However, a newspaper tailors material from the services to its own needs and format. It trims some stories, adds local details to others, and discards many completely. Some other countries have newspapers edited for and distributed to a nationwide audience. The United States has no real national newspaper, although *The New York Times* is widely distributed, as are the *Wall Street Journal* and the *Christian Science Monitor. The New York Times* has also gained a reputation as the newspaper of record; it prints major speeches and important documents in their entirety.

Newspapers earn the majority of their revenues from advertising. Advertising rates are based on circulation. While television attracts more national advertising, local advertisers prefer the newspaper. Newspapers attract so much local advertising that it pushes them into the lead over all other media for total advertising revenues. In 1976, daily newspapers earned over $5 billion, some 85 percent of which came from local advertising.

Over the years several trends have become apparent in newspaper ownership. The first is **stabilization of the newspaper population.** From a high of 2200 in 1910, the number of dailies declined over the next 35 years to 1749 in 1945. At that point the decline seemed to stop, and in succeeding years the number has averaged around 1760.

A second trend is the **dwindling number of competing newspapers** (i.e., two or more separately owned papers serving the same market). In 1910, 689

* Keep in mind that circulation refers to number of **copies** distributed. Two or more persons can read each copy, so **readership** figures total several times those of circulation.

cities had competing daily newspapers. By 1968, the number had shrunk to 45—hardly conducive to the free marketplace of ideas envisioned in the First Amendment. Broadcasters and others point out that radio and television stations can act as competing media voices in one-owner newspaper towns. However, as we found in Chapters 7 and 15, broadcast stations rarely approach local news, investigative reporting, analysis, and editorial writing with the same degree of effort as most newspapers. Broadcast stations compete with newspapers primarily for advertising revenues, rarely over issues and excellence of news coverage.

A third trend is the **increasing cost of ownership.** At one time you could start a newspaper for next to nothing. Now, it would cost millions to start and sustain or buy even a small town daily.

A fourth trend is **concentration of control.** In the mid-1970s, the big chains bought independent newspapers at a rate of over 50 per year. One study concluded that by 1997 nearly every daily in the United States would be owned by as few as two dozen corporate entities.[2]

The chief officer at a newspaper is the **publisher.** Activities involved in producing the newspaper can be grouped into five areas: **advertising** (the sales staff), **circulation** (sale and delivery of newspapers to the public), **production** [printing the newspaper (most have their own printing plants)], **business** (supervision of the entire operation), and **editorial.** The editorial department gathers and prepares nonadvertising content—news, entertainment, and opinion. The **managing** or **executive editor** heads the department. Editorial functions are so important that sometimes the publisher takes a direct hand, assuming the title "editor and publisher."

The so-called **underground press** represents a different concept of the newspaper and news reporting. Born in the 1960s to support protest and political activism, underground newspapers contained writing, layout, and pictorial matter designed to shock. The publishers were small groups of persons who worked in concert, doing everything from writing stories and preparing illustrations to selling the finished product. They contended objectivity was impossible and filled each issue with subjectively written criticism of any and everything—politics, society, the military, sexual mores, and particularly that which they called "the establishment."

Although considered a new medium, the underground press really continued a tradition of bias and dissent that had American roots in the colonial and revolutionary press, flavored by two even older traditions—pornography and poor writing. By 1975, the heyday of the underground press had passed. However, there are still underground newspapers being published, especially around large cities and university campuses.

In the meantime, underground and mainstream have each affected the other. Magazines and the daily press have adopted reforms initiated by, and hired writers who started in, the underground press. At the same time, the older, more successful underground outlets have become just that—older and

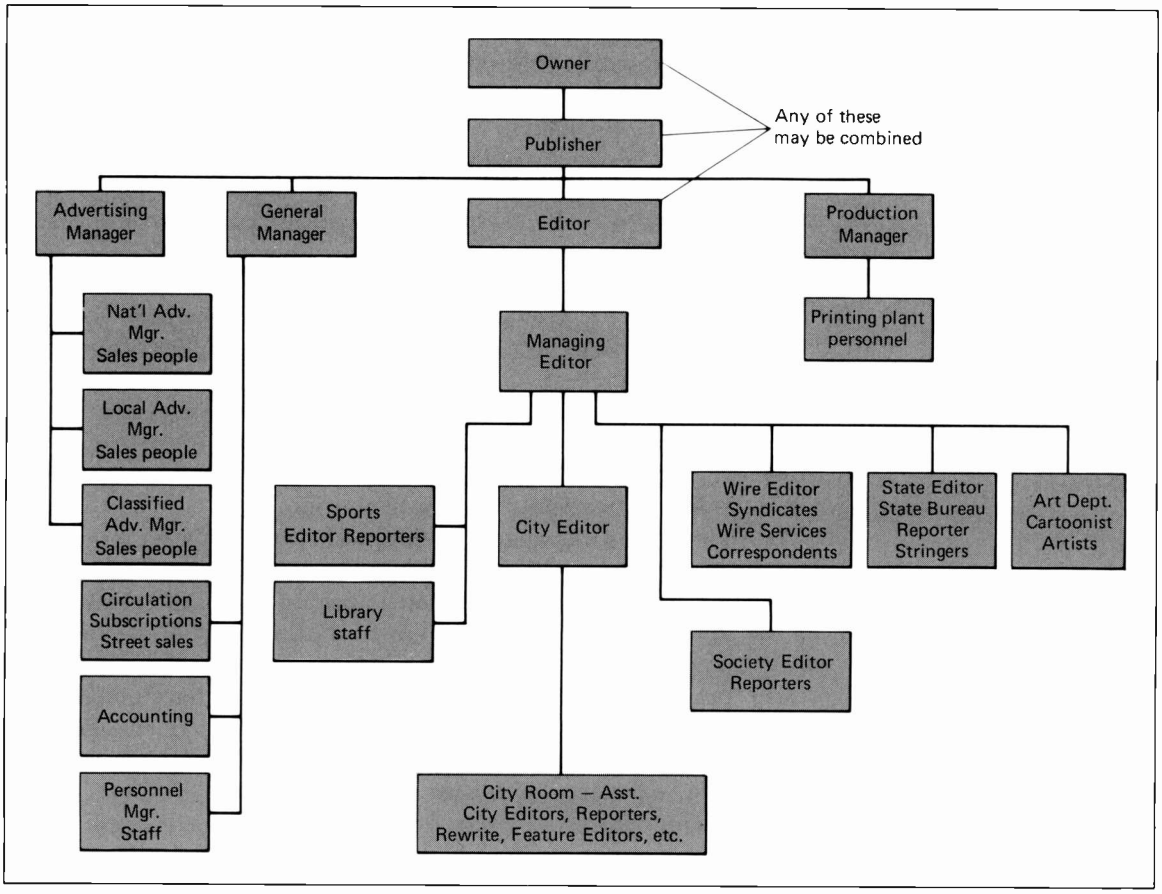

Figure 23-1. Organization of a Newspaper.

successful. Some have built large circulations (and all the responsibilities these entail) and have even acquired their own buildings and facilities, that is *things*—a situation the early underground papers would never have condoned.

MAGAZINES

Magazines represent a midpoint between daily newspapers and books. Magazines can go into more depth and analysis than a daily, yet they are more timely than a book. Magazines can deal with fewer items and issues and take more time and care in preparation than newspapers. Magazines are more permanent than newspapers; indeed, some readers keep and bind special interest magazines.

Which brings up an important feature of magazines: their diversity. The big mass circulation magazines began to die off in the 1950s, victims of net-

work television's ability to deliver tens of millions of viewers for national advertisers—*Collier's, Coronet, Look, Saturday Evening Post, Life:* all major magazines that folded. Meanwhile, however, hundreds of target audience publications were born. Publishers would select a particular target audience, then custom design a magazine, aiming every bit of editorial content toward capturing the highest possible percentage of that audience. Then they would sell space to advertisers interested in reaching that particular audience.

The strategy of the publishers of these new magazines paralleled somewhat that of radio stations*—that is, they rejected the mass audience by tailoring content to one group. But magazines chose target audiences nationwide.† Whereas Liberal, Kansas, does not have enough bicyclists to support a bicycle-oriented radio station, there are enough bicyclists nationwide to support a slick, monthly publication called *Bicycling!* which the pedal pushers of Liberal and every other community across the country can purchase. So it goes: there is a magazine for almost every hobby, diversion, and concern.

Even mass circulation magazines have been tailored to reach particular markets. For example, *Time* has divided its circulation list by regional and target audiences. Each audience receives a different edition, and each edition contains advertising aimed at its particular audience. Thus regional and large market local advertisers can use *Time* to reach specific groups.

In 1976, there were 9872 magazines published in the United States. Nearly 42 percent were monthlies and 19 percent, weeklies. Their circulation totaled over 863 million, about 1.7 for every adult. An average of 3.8 persons saw each copy. Magazines earned $1.69 billion in advertising. They are published in every state, but over 25 percent are published in New York. Other leading publication centers include Chicago, Los Angeles, Philadelphia, and Washington, D.C.

Magazines are classified as either **general interest** or **specialized.** The general interest or consumer category includes most magazines sold on newsstands. Specialized magazines include trade journals, children's magazines, scholarly and literary periodicals, comics, religious magazines, and research and scientific journals.

Because magazines are so varied, there is no typical staff organization. *Time, Newsweek,* and *U.S. News and World Reports* have large newspaper-type staffs. The staff of many a scholarly quarterly consists of a university faculty member, a graduate assistant, and borrowed secretarial time. Overall, most magazine staffs are small, relative to newspapers, television stations, and book publishers. Magazines usually have one person designated as **publisher** who supervises specialists in **editorial, circulation, production,** and **advertising**

* See Chapter 6.

† There are, however, city magazines tailored to interests of persons living in those cities to which the publications pertain.

departments. The **editor** is in overall charge of content, and **departmental editors** work on individual sections. On smaller magazines, departmental editors may have to write their own material. Many magazines use material submitted voluntarily by authors; however, most larger ones do not accept unsolicited manuscripts. Other staff members handle layout, copyediting, photograph selection, and design. Many noneditorial functions are contracted to independent jobbers. Few magazines have their own printing press, and many even contract for circulation services.

Film

After print, the motion picture was the second medium to develop into mass communication. Like newspapers and magazines, it was profoundly affected by the coming of television.

HISTORY

Film industry origins date back in 1895. Subsequently many persons helped develop the narrative film, but the contributions of David Wark Griffith have earned him the title, "father of motion pictures." His 1915 film, *Birth of a Nation,* is considered the most influential in film history.

By 1920, the shape of the American film industry was complete: the three functions of **producer, distributor,** and **exhibitor** were developed; the **feature-length film** was the basic product; the **star system** had been established; **Hollywood** was the national production center; the **United States dominated world film trade;** and the **major studios** were in business. Movie attendance caught on with the American public. It became a habit much like television viewing today. The film industry began to add **sound** in 1927, and by 1930, average film attendance per household had risen to three a week.

The great economic depression reached film in 1933. The trade took a number of steps to lure patrons back to theaters. It introduced the first formal moral code, the double feature, and lottery-type games the audience could play for prizes between films. By 1935, the trade was on the road to economic recovery.

CHANGING ECONOMICS

The next crisis came in 1948. That year the American motion picture industry suffered a double blow. It has never been the same since. The first blow was application of antitrust laws. The five major film companies* were **vertical monopolies;** they not only produced films, they also distributed them and, through large chains of theaters they owned, exhibited them. Additionally, they practiced **block booking;** an independent theater owner wishing to lease hit film A could do so only by also leasing films B, C, D, and E, sight unseen. The chains and block booking guaranteed a market. They allowed the majors

* Paramount, RKO, 20th-Century Fox, Warner Brothers, and MGM.

(a) (b) Photographs courtesy of Anthony Slide. Used by permission.

Figure 23-2. Griffith and *Birth of a Nation*. (a) D. W. Griffith, father of motion pictures, and (b) a scene from his famous 1915 epic, *Birth of a Nation*.

to keep production high (350 to 500 pictures a year) and to support vast sound stage complexes, extensive back lots, hordes of staff and crew personnel, and a year-round payroll full of expensive creative people—actors, writers, directors, producers. However, in 1948 the government won a landmark court case[3] which led to the demise of block booking, and eventually to the major film companies divesting their theater chains. The guaranteed market had ended.

The second blow was **television.** Average weekly attendance dropped rapidly as audiences deserted large screens for small. The film trade fought back by banning television use of Hollywood films and stars and by doing things television could not do—three-dimension effects, wide screens, color, spectacular productions, and treatment of daring and controversial themes. Attendance continued to drop. The film trade, like radio and magazine publishing, had to change, to adjust to the reality of television.

The changes were radical. Old, ornate downtown movie palaces closed. New theaters were built as drive-ins or as smaller, simpler structures in suburban shopping centers. More and more films were made by independent (i.e., not on the staff of a studio) producers. Much feature film production moved out of Hollywood, out of the United States, to foreign countries with lower

labor costs. The studios curtailed production, released staffs, leased or sold sound stages and real estate. And the production code was revised to allow films to treat mature topics.

The old Hollywood was gone. Its former mass audience was now watching television, so the film trade aimed at a new, smaller audience, one seeking more than formula plots and stereotyped characters. The motion picture had become less of a mass, increasingly an elitist, medium.

One of the biggest changes was the trade's accommodation to television. In the early 1950s, the studios began producing television programs. Within a few years the majority of prime-time network programming was produced on film in Hollywood.*

In 1956, the studios relaxed their feature film ban and released pre-1948 titles to television. In succeeding years they released more and more recent films, until now many start theatrical rounds one year and go to television the next. Meanwhile, television networks had come to depend on feature films as a staple of competitive programming. To ensure a continuing supply, they invested in theatrical film production and eventually in movies made especially for television.

STATUS

The United States does not dominate film trade as it once did. Even within the United States, foreign films often compete successfully with domestic ones. Actually, the line between foreign and domestic films is blurred; a film may be shot by an internationally mixed crew in two different countries, processed and edited in a third, and distributed in yet a fourth. Nonetheless, some 60 percent of films shown around the world still come from the United States.

In 1976, U.S. companies began or released 153 feature films. There were 127,000 theaters in the United States, and they took in $1.83 billion at the box office, a figure highly inflated by drastic rises in admission prices. In 1977, motion picture theaters began running specially created commercials for national advertisers.

The film business is diverse. In addition to theatrical and television film, it also includes production, distribution, and exhibition of art, documentary, educational, exploitation (also called pornographic), foreign, persuasive (including advertising, political, promotional, propaganda, and public relations), and vanity (financed by the subject) films.

Other Media

Sound Recordings. Sound recording media are disc and tape. Discs are plastic and come in two formats: **long-play** [12″ diameter, small center hole, designed to play back at 33⅓ revolutions per minute (rpm), capable of 20 min-

* See Chapter 4.

utes and more per side] and **single** (7″ diameter, large center hole, 45 rpm, no more than 5 minutes per side). Tape comes in three formats: **open reel, cartridge,** and **cassette.*** Most recordings are produced in New York, Nashville, or Hollywood. In 1976, record companies put out recordings on 276 labels.

Records and tapes carry little advertising besides promotion for other recordings printed on containers. The trade derives revenues almost entirely through sales to the public. In 1976, retail sales totaled $2.2 billion, over two-thirds of which went for discs. CBS Records, Warner-Electra-Atlantic, MCA, RCA, and Arista generated 38 percent of all sales. About one-third came from overseas sales. Music accounted for 82 percent of all recordings sold; popular music, 67 percent.

Direct Mail. Direct mail consists of mass distribution of messages through the U.S. Postal Service. You receive them and call them "junk mail." The direct mail business has become very sophisticated. Some companies specialize in compiling and selling audience mailing lists. Others prepare and distribute messages. The more successfully contrived examples look individually typed, are addressed to you personally, greet you by name, mention names and addresses of your neighbors, are signed in ink, and may even have inked postscripts, insertions, and corrections. In 1976, 21,342 companies mailed out 85 billion pieces, and the direct mail industry billed $562 million.

Outdoor Advertising. The outdoor advertising industry consists of firms that rent out large signboards called **billboards.** Advertisers pay the firms to paste up and maintain posters that contain commercial messages. Outdoor advertising is the most conspicuous and unavoidable of all major media. Even broadcasting, with its interminable commercial announcements, can be switched off. But billboards usually face busy highways, and there is no way a motorist can avoid them.

Minor Media. Minor media include car cards (on buses and other public conveyances), matchbook covers, signs not owned by outdoor advertising firms, telephone solicitation (which now utilizes automation to dial numbers and play back taped commercial messages), giveaways (e.g., pencils and pens imprinted with a firm's name), product packaging (How many times have you read the cereal box at breakfast?), point-of-sale displays, bags and sacks (e.g., paper grocery sacks imprinted with a supermarket's name), skywriting, bumper stickers, special displays and exhibits, posters, standardized audio-visual presentations (e.g., slide and tape sales presentations), brochures and pamphlets, wearing apparel (T-shirts were popular in the mid-1970s), free samples, newsletters, and shoppers or advertisers (publications that look some-

* See Chapter 5.

what like newspapers and are delivered door-to-door, but contain mainly advertising). Over $6.5 billion was spent on miscellaneous forms of advertising in 1976.

Blurring Boundaries

For the sake of explanation, we have discussed each medium as a separate entity. Such is not really the case. No one medium operates in isolation. In Chapter 3, for example, we saw the effect of radio on the newspaper extra.* We have also seen how the rise of television in the 1950s forced changes in radio,† magazines, and motion pictures.

Media reinforce and feed off each other through **content.** For example, newspapers publish television station schedules. Newspapers and magazines profit from records, books, movies, and television programs by reviewing them, by running paid advertisements for them, and by carrying articles on their personalities, gossip, and inside workings. A number of consumer magazines deal specifically with film and television, including the nation's largest seller, *TV Guide.* Television stations, record companies, newspapers, book publishers, and magazines all advertise on radio. Radio exposure helps sell popular music recordings. Corporations underwrite programming on PBS, then advertise the programs on commercial television and radio, in magazines and newspapers, and with posters and cards at their retailers. Prominent authors, recording artists, and film personalities are interviewed on radio and television. Books and short stories are made into television programs and films. Films and television programs are published as books. Films inspire television programs; television programs inspire films. Film and television music is recorded and sold on disc and tape. Popular music recordings suggest films. And so on and on.

The relationship between film and television is especially involved and intricate. Television production provides the steady income that studios need to underwrite production of theatrical releases. The networks, in turn, look to the studios for a steady supply of programming. They try out many new series as made-for-TV movies. They lease theatrical films, vying with each other to get box office successes.

Ownership crosses media lines, too. For example, Metromedia, a New York-based company, owns 18 large market broadcast stations, Foster & Kleiser (outdoor advertising), Metro Transit Advertising, and Metromail. The Atlanta-based Cox communications empire includes 17 large market broadcast stations, 20 newspapers, 16 magazines, and Amphoto photographic books. Cox is also the nation's fifth largest CATV owner, between fourth largest Warner and sixth largest Viacom (a television program distributor). As we

* See discussion of the press-radio war in Chapter 3.

† See Chapter 4.

saw in Chapter 19, the three major network organizations own book publishing houses, magazines, and record companies. Motion picture interests involved in broadcasting and cable include Avco (Avco Embassy Pictures), RKO, Twentieth Century-Fox Film, United Artists, Columbia Pictures, and Wometco (theaters). Over 200 book, magazine, and newspaper publishers own broadcast stations, including most of the nation's largest newspaper chains.

Finally, there is increasing overlap in **technology.** Television stations show feature films. Pay cable and subscription television stations show feature films without commercial interruption for a fee—just like theaters. In England the television receiver doubles as a viewer-controlled newspaper.* Cable television systems carry both broadcast and locally originated television and radio signals. Many systems use one channel to show a news service wire machine grinding out news stories. Motion picture production crews use television gear along with film cameras for videotape's immediate playback and ease-of-editing capabilities. Videotape production techniques increasingly resemble those of motion pictures. Wire service editors use CRT display to write, edit, and put on line news stories.

How far will this go? Where will the confluence of content, ownership, and technology end? As we saw in Chapter 22, technology and content could be integrated into one delivery system and one consumer unit. Ownership, however, is another matter. Many persons view media ownership conglomerates as inimical to the First Amendment.† They argue that fewer entities controlling more media outlets result in fewer independent voices, which decreases the opportunity to hear diverse opinions and conflicting ideas. In other words, the free marketplace of ideas features a reduced inventory. If this is the case, the trend toward combination of ownership should be watched carefully and continually.

Notes

1 Peter H. Sandman, David M. Rubin, David B. Sachsman, *Media: An Introductory Analysis of American Mass Communications* (Englewood Cliffs, N.J.: Prentice-Hall, 1972), p. 317.

2 William H. Jones and Laird Anderson, "Newspapers: America's Third Largest Industry," St. Petersburg *Times,* Aug. 7, 1977, p. 1-D.

3 *U.S. v. Paramount Pictures, Inc.,* 334 U.S. 131 (1948).

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General information on all media may be found in books such as Eldon, Ungurait, and Bohn, *Mass Media* (16); Sandman, Rubin, and Sachsman, *Media: An Introductory*

* See description of CEEFAX in Chapter 22.

† See Chapters 14 and 18.

Analysis . . . (7); and Agee, Ault, and Emery, *Introduction to Mass Communication* (16). Three yearly publications provide information on their respective businesses: for books, *The Bowker Annual Library and Book Trade Information* (New York: Bowker); for newspapers, *Editor and Publisher International Yearbook* (New York: Editor & Publisher); for books and magazines *Ayer Directory of Publications* (Philadelphia: Ayer). A complete, concise history of motion pictures is Gerald Mast, *A Short History of the Movies,* 2nd ed. (Indianapolis: Bobbs-Merrill, 1976).

24 Foreign Radio and Television

Now we move out of the United States to examine radio and television in other countries. Because nations organize broadcasting in many different ways, we begin this chapter by summarizing national systems of mass communication. Then, we examine the broadcasting systems of four nations. Finally, we see that the development of radio and television in many foreign countries has been influenced by American business and American broadcasting.

Alan Wells[1] has noted five key requirements, which he calls **dimensions,** that are shared by all national systems of mass communication. For each dimension he has listed several **options.** The options represent methods that he found nations employ to meet these requirements. So if we look at Wells' key dimensions and the options for each, we should have a fair idea of the variety of national broadcasting systems and the alternatives countries employ to deal with radio and television.

Wells' dimensions are control, finance, programming goals, target audiences, and feedback mechanism (i.e., how audience response to programming is determined). Options for **control** include: direct operation by the government, but operating more or less autonomously; operation by a private corporation in which the government has stock interest; operation by private companies, with government regulation in varying degrees; and operation by sponsoring institutions (e.g., churches, political parties, listeners). Wells lists five options for **finance** of systems: a tax or license fee paid by owners of receiv-

TABLE 24.1
Key Dimensions of Media Systems

Dimensions	*Options*
Control	State-operated, public corporation, partnership, private enterprise (with varying degrees of government regulations), institutionally sponsored
Finance	License fees, general taxation, advertising and taxation combination, advertising, private subsidy
Programming goals	Entertainment, education, sales, culture, political ideology, cheapest possible operation (utilizing foreign material)
Target audience	Elite, mass, specialized
Feedback mechanism	Reports from field workers, audience participation, polls and ratings, reports from critics and sponsors

SOURCE: Alan Wells, *Mass Communications: A World View* (Palo Alto, Cal.: National Press Books, 1974), p. 8. Used by permission.

ers; subsidization from general tax revenues, sale of advertising time; subsidization by private organizations or individuals; and subsidization through combination of advertising and taxation. **Programming goals** include one or a combination of: entertainment; education; sales; culture; political ideology; or operation as cheaply as possible. **Audience** options are: elite (e.g., the wealthy, the educated, the literate); mass; and specialized (e.g., workers in a particular factory). **Feedback mechanism** options include: reports from field workers; audience participation and local control; polls and ratings; and evaluation by critics and sponsors.

National Systems: Four Examples

At this point we go from theory to practice to find out how some of these options translate into actual operation. As examples, we examine the broadcasting systems of four countries: United Kingdom, Union of Soviet Socialist Republics, India, and the Netherlands. These systems do not represent the total spectrum of options across each dimension; they do, however, show how four quite different countries use broadcasting to serve local and specific needs.

As in all systems of mass communication, each of these four is dependent on the money available for operation. Relatively, India has a much more lim-

ited system than the other three. Nations in the underdeveloped world do not have money to provide more extensive broadcast service.

UNITED KINGDOM

The United Kingdom (UK) is a highly industrialized nation with whom the United States shares a common heritage of language and democratic political institutions. In the UK, broadcast licenses are issued by the Minister of Posts and Telecommunications for ten-year periods. Two organizations hold licenses: the **British Broadcasting Corporation** (BBC) and the **Independent Broadcasting Authority** (IBA).

The BBC was established in 1927 by royal charter. The Queen appoints its board of governors. The board sets policy and appoints a director-general to carry out that policy and to run the corporation. The director-general appoints the BBC staff.

For years the BBC had a monopoly. Its noncommercial programming largely reflected the taste of the upper-class British individuals who set its policy. There was little audience research, and the BBC purposely programmed slightly above the perceived level of the public in an effort to raise taste. However, a number of factors militated against the status quo—a carefully organized campaign to introduce commercial television, off-shore radio competition, demand for local service, and sociopolitical activism in Scotland, Wales, and Northern Ireland. As a result, British broadcasting underwent sweeping changes in the 1950s and 1960s, beginning with the Television Act of 1954, which created the BBC's first competition in 27 years, the organization now known as the IBA.

The BBC now operates four national radio channels (using a series of high-powered transmitters), local radio stations, and two national television channels. Each of the four radio channels carries a different type of programming: popular music, light entertainment (music, serials, sports), cultural programming (primarily classical music), and news. In Scotland, Wales, and Northern Ireland, they also carry special regional programming. Local radio stations work with local radio councils to produce a full range of programming by and for their communities. Nearly one-third of all programming on the BBC's two television channels consists of documentary and information programs. Feature films and light entertainment account for another one-third.

The BBC runs **no commercials.** Owners of radio and television sets pay **license fees,** and Parliament makes grants out of the fees to the BBC. **Parliament exercises no direct control** over programming. The Minister of Posts and Telegraphs, however, through the licensing power, does have some control over both BBC and IBA programming. This control has been exercised rarely and with restraint.

The Minister of Posts and Telecommunications appoints members to the IBA. The Authority, in turn, chooses a director-general, approves program plans, and controls advertising. The IBA has set up both radio stations and

television service areas, but does no broadcasting itself. Instead, it chooses **independent companies** to do the programming. These companies support operations and earn profits through the **sale of advertising time.** They may broadcast an average of six minutes of commercial messages per hour; however, these messages must be carried **between programs,** not during. Each company pays a rental fee to the IBA and a levy, based on net advertising revenues, to the Exchequer (the UK treasury). They exchange programs among themselves and have set up Independent Television News, a nonprofit company that produces news programming which they all may use. Altogether, IBA companies devote about 60 percent of broadcast time to plays, drama, serials, entertainment, music, sports, and feature films, and about 18 percent to news and documentaries.

Both BBC and IBA televise educational programming. This programming includes in-school and continuing education material. An individual can earn a degree entirely by television through Open University courses. The BBC provides educational radio programming.

USSR

The Union of Soviet Socialist Republics (USSR) is vast, containing many varied peoples and dialects, a country in which mass media play a far different role from those in Western nations. Most of us would feel that Soviet press, radio, and television are pedantic and boring; that Soviet newspapers, for example, carry little news and lots of socialist sermonizing. The Soviets, in turn, feel that our media are filled with escapism and are guilty of objectivism, that is, presenting facts without placing them in the proper context of social and class evaluation.

In the Western world, mass media entertain, inform, and in many cases, advertise. In the Communist world, they **educate the masses, prod them to collective action, reinforce Communist values,** and serve **other functions as assigned** by party members in government.

Soviet media must **interpret general government policy** in terms of what that policy means and how it applies to their particular audiences. And there are specialized media for every level and sphere of Soviet life.

Soviet media serve as **vehicles for criticism**—criticism from the top (especially the party) and from the bottom (individuals, collectives, unions, etc.). The criticism aims not at the system or the policies, but at the way individuals, government agencies, factories, districts, and so on, fail to reinforce the system and carry out the policies.

The **Communist Party** plays a dominant role in Soviet media, ensuring that key media personnel are also loyal party members. A **state censorship agency** checks all media.

Soviet radio and television follow this pattern. Broadcasting is **state operated.** Radio and television are guided by a **Union Republic State Committee** of the USSR Council of Ministers.

The Central Radio Service in Moscow broadcasts seven national program

services, all in Russian. Their emphases and approaches vary, but overall they focus on news, talks, and culture and fine arts. There are also radio services and stations in all political units that make up the USSR, as well as in factories and collective and state farms. Each station is the responsibility of a **local radio and television committee.** These regional and local operations both relay programming from Moscow and originate their own programming in one of the USSR's 67 national languages. Many local operations use a **wired distribution network,** that is, programming goes to individual receivers by wire, rather than over the air.

Central Television (CT) broadcasts five program services: three serve the Moscow area (two educational and one with local news, information, and features); a fourth (news, talk, music, and arts programming) reaches most of European USSR and certain parts of the East; and the fifth is especially prepared for, and transmitted by satellite to, the remote reaches of the country. Some 126 television studios are in operation, each the responsibility of a local committee. All studios can originate local programming; 27 transmit two channels—one for CT and the other for locally produced or locally exchanged programs. Two CT and all regional program services **accept advertising,** which is aired during special pauses between programs. Both radio and television are **subsidized by the state** and by **income from the sale of announcements and programs.**

INDIA

India is an Asian country—vast, with many different peoples and languages, and a population that is largely poor, illiterate, and tradition-bound. As one of the underdeveloped nations, India is a strongly influential member of the third and fourth worlds.

India's only broadcasting organization is **All-India Radio** (AIR; which includes television), **controlled by the government** Ministry of Information and Broadcasting. AIR is financed by **Parliamentary grants, receiver license fees,** and **advertising.**

AIR broadcasts a national radio program service from a number of transmitters around the country. This national service features popular music, light features, and some commercial advertising. AIR also maintains four regional services, plus Radio Kashmir, a separate network. Each carries a national program service, produces its own programs, and runs programs produced by individual stations within the region. These regional services broadcast in nine national or regional languages, 51 local languages, and 82 tribal dialects.

India has five television transmitters, including Television Centre in New Delhi, with four more planned. Television also accepts advertising.

India has enlisted the broadcast media in the fight against ignorance and illiteracy. Radio is used extensively in **schools** and for **adult and continuing education.** India encourages **supervised group attendance** to radio and television programming; thousands of villages have community radio receivers for

collective listening, and Delhi television transmits programs especially for farmers' teleclubs. In 1975, an experiment was carried out in which educational television programs were transmitted by satellite to 5000 villages.

THE NETHERLANDS

The Netherlands is a small, prosperous European democratic monarchy. The Minister of Cultural Affairs, Recreation and Social Welfare has **overall responsibility and broad supervisory authority** over broadcasting. However, the minister rarely has to exercise these powers, due to the high caliber of organizations licensed to program.

The broadcasting organizations are **associations of listeners and viewers** who share particular cultural, religious, or political interests that are beneficial to the community. For example, one group is Catholic, another Protestant, one is Social-Democratic, another independent. To gain regular time on the schedule, an association must have as members at least 100,000 radio and television receiver license holders. Broadcast time is then divided among the groups proportionately based on membership. Some time, however, is reserved for groups with fewer members to help them attain the requisite 100,000 needed for full participation.

The groups work together through the **Nederlandse Omroep Stichtiny** (NOS, or Netherlands Broadcasting Foundation). The NOS governing body consists of 24 members; the broadcasting organizations appoint half, certain recognized cultural organizations appoint a quarter, and the Queen appoints a quarter plus the chair. NOS **coordinates program schedules, manages studios and technical facilities,** and **produces special programming** for the various provinces. The broadcasting groups must program jointly for a certain amount of time, and NOS **supervises the joint programming.** Transmitters are owned by a company whose shares are held jointly by the broadcasting groups and the post office.

The groups receive programming funds from a number of sources. First, they sell **broadcast advertising.** Commercial announcements are allowed only just before and after scheduled news programs, for a total of 24 minutes per day on radio, 15 on television. Additionally, they receive money from the **government,** based on budgets they submit and derived from **receiver license fees.** They also receive **dues and contributions** from members. And they sell advertising in their **printed program guides.**

Radio in the Netherlands consists of three national program services. The groups use about 70 percent of total time for individual programming; joint programming accounts for another 25 percent; and other approved organizations, school broadcasts, and advertising use the remainder. Television consists of two program services. Both operate only during the evening. About 40 percent of all television programming is joint. A little over six hours each week is educational.

International Broadcasting Organizations

A number of organizations promote cooperation among broadcasters across national boundaries. Most are regional. One of the most important, however, goes beyond both broadcasting and regionalism. This is the **International Telecommunications Union** (ITU).

Attached to the United Nations, ITU deals with all uses of radio waves and includes 148 nations in its membership. This is the organization that says which nations get to use which frequencies. Additionally, ITU maintains a registry of who uses which frequencies in each country, works with nations to eliminate interference and to make the best use of radio frequencies, and fosters cooperation among members to keep common carrier rates reasonably low.

At ITU's Geneva, Switzerland, headquarters, a secretary-general heads a permanent staff that deals with day-to-day operations. Member nations meet every five years in a Plenipotentiary Conference to make ITU policy. Regulations covering radio, telephone, and telegraph are made in Administrative Conferences. At the 1979 World Administrative Radio Conference, for example, ITU member nations were expected to make spectrum allocations that would govern frequency use for the next 20 years, and the U.S. Federal Communications Commission and other government agencies had worked for the preceding several years to help prepare U.S. proposals. ITU also has mechanisms for planning and dealing with shorter range and immediate problems.

Geneva also hosts headquarters for the **European Broadcasting Union** (EBU). EBU consists of broadcasting organizations in 30 countries within the ITU's European Broadcasting Area. There are also associate (nonvoting) members from 44 other countries. EBU promotes **study of common problems** and **exchange of information,** assists in **development of broadcasting,** and fosters **cooperative production** and **exchange of programs** among members. EBU leases facilities full time for exchange of programming. EBU's technical center in Brussels, Belgium, serves as master control for incoming and outgoing programs.

The **International Radio and Television Organization** (OIRT) is basically the Communist bloc version of EBU. Member broadcasting organizations must be either state-owned and operated or under control of the state. Organizations in 25 countries belong to OIRT, including seven European Communist countries, six of the USSR's independent republics, the USSR itself, seven other Communist countries around the world, and six non-Communist countries. OIRT's purposes and technical facilities are similar to those of EBU. Headquarters and technical center are in Prague, Czechoslovakia.

EBU and OIRT cooperate with each other and with other regional broadcasting organizations. EBU's **Eurovision** network and OIRT's **Intervision** network provide technical facilities for exchange of television program-

ming not only among their own respective member countries, but also with those of each other. They also exchange with **Nordvision,** a separate television network formed by EBU members in the five Scandinavian countries. On both Eurovision and Intervision, 70 to 90 percent of program exchanges involve news and sports.

Other regional broadcasting organizations include **Asian Broadcasting Union, Inter-American Association of Broadcasters** (open to radio and television organizations in North and South America), **Ibero-American Television Organization** (organizations from South America, Spanish-language countries in North America, Portugal, and Spain), **Caribbean Broadcasting Union, Arab States Broadcasting Union,** and **Union of National Radio and Television Organizations of Africa.** Some include very poor countries. Some include countries separated by vast distances. For these and other reasons, none has the scope of facilities and operations of EBU and OIRT. Nonetheless, all work toward cooperative international program sharing.

U.S. Broadcasting as Competition

We discussed international broadcasting efforts of the United States in Chapter 10. The Voice of America, Radio Free Europe/Radio Liberty, even overseas stations of the American Forces Radio and Television Service—all compete for listeners not only with external services, but also with the home services of other countries. A much more pervasive and successful form of competition, however, is the very concept of **American commercial broadcasting.**[2]

For years the United States was the exception; broadcasting in most other advanced industrialized nations was noncommercial. Yet American business needed to advertise on foreign television. The economy of the United States is based in part on continuing economic expansion and sustained increase in profits. By the 1950s, the United States was a relatively product-saturated market. The obvious next move was to increase foreign marketing operations, to go into other countries and create consumer demand for U.S. products.

Advertising is a key ingredient in marketing, and television had already proved a superior advertising medium. If noncommercial television were the rule in foreign countries, then American business would be deprived of its most effective, efficient advertising medium. So American business and advertising interests set about to ensure that commercial television came to foreign countries.

Their first success was the United Kingdom. The campaign there was based not on any advantages that commercial television might offer, but on ending the monopoly of the BBC. A Popular Television Association was set up to enlist grass roots support, and the association urged people to write letters to newspapers supporting introduction of "Competitive Television." A small

number of backbenchers, all elected to Parliament in 1950 on the Conservative ticket, lobbied long and hard for commercial television. They made no effort to hide the support they received from commercial interests. Supposedly, the London branch of a large New York advertising agency coordinated the whole campaign. The result was passage of the Television Act of 1954 and introduction of commercial television in England.

Other countries followed. So did American television programming. American syndication companies moved in and sold program series to the newly commercial systems. These series had already generated healthy profits through network use and syndication back home. Thus syndicators were willing to grant nationwide rights for next to nothing—at first. Initial series were all but free; as the population became addicted to American cowboys, cops, and comedians, prices edged up. By 1977, about 24 percent of all U.S. syndicators' sales were *outside* the United States,[3] sales representing probably more than $200 million.[4]

In addition, a sort of domino effect set in. One country would adopt commercial television and program American series. Residents in neighboring countries soon discovered the programming and tuned to it. Thus pressure was on these neighboring countries to program competitively. Since they could not hope to finance productions as slick and popular as that provided by American programming, they eventually adopted commercial practices and used American series themselves.

The opening of commercial television in a country was often followed by a full-scale invasion of American media and marketing interests: distributors, advertising agencies, program syndicators, transmitter and equipment sales personnel. Nor was television the only front of attack. During the late 1950s and 1960s, **pirate** (i.e., unlicensed in any country) **radio stations** operated off the coast of Europe. The pirates set up just outside territorial limits of countries and transmitted an American-style mix of Top-40 music, disc jockey chatter, and commercials (often for American products). There was even a pirate television station in the North Sea, aiming British and American programs at the Netherlands. The television pirate was closed down after a few months in 1964, but the passions it aroused over commercial television led directly to the resignation of a Dutch government.

Critics say the tactics used in the international commercialization of broadcasting are bad enough, but the results are even worse. Third and fourth world countries battle ignorance, poverty, disease, tribal animosities, illiteracy, overpopulation. At the same time, they attempt to develop an indigenous industry, to promote a sense of national unity, and to preserve their cultural heritage. Yet television and radio transmitters tell their populations that the real concerns of life are sexy smiles, lemon odors, whiter-than-white washes, flavored pet food, and panty hose; that the key to happiness is consumption, buying and having *things*—things that wear out and are thrown away, things that will be outmoded next year when the new, new models come out; that the

important values in life are sexual attractiveness, wealth, dominance by any means.

Such messages are irrelevant and counterproductive. They distract from the real problems. They encourage the sale of foreign products, which takes out needed capital and stunts local manufacture. They occupy time that could be used to promote education, family planning, and national pride. They wrench people loose from the moorings of native cultures—often rich and ancient—and cast them adrift in a sea of canned baby formula and Elton John records.

In any given country, the American model of broadcasting competes with the local national system. But in many cases the competition is overwhelming. Indigenous efforts at program production are stillborn—even the most advanced countries cannot produce slick escapist programming as cheaply as U.S. syndicators can supply it. When one side has such a crushing, steamroller-type advantage that it completely annihilates the other, can we really call it "competition"?

Some countries have put quotas on importation of foreign programming; such programming simply appears on the broadcast schedules from neighboring countries. Understandably, third and fourth world nations worry about satellite-to-home broadcasting. On the one hand, it could be their means for mass education; on the other, it could spell the end of control over their own destiny.

Competition to U.S. Broadcasting

Most countries operate **international shortwave broadcast stations.** Like the United States and its Voice of America (VOA), these stations tell the story of their countries to the people of other nations and thus compete with VOA. Within the borders of the United States they offer little competition to domestic stations.

In television, program producers in other countries compete with those in the United States to sell products on the world market. The flow of **foreign programming** into the United States is limited primarily to a few British series, most of which appear on PBS.

Some **Canadian and Mexican radio and television stations** send signals into the United States. Canadian stations program much like U.S. stations. Mexican broadcasting, however, includes so-called "border radio" stations. Using powerful transmitters (up to 500,000 watts), these AM stations often broadcast English language programs aimed at the rural poor of the southern United States. These programs, many taped in the United States, feature fundamentalist preachers who call for donations or sell religious curios, interspersed with commercials for pyorrhea cures, penny-a-day burial insurance, and engraved tombstones. U.S. radio and television stations, of course, also attract audiences in Canada and Mexico.

Notes

1 Alan Wells, ed. *Mass Communications: A World View* (Palo Alto, Cal.: National Press Books, 1974), pp. 7–9.

2 Erik Barnouw has written a concise, readable analysis of the history and impact of U.S. programming in foreign markets. This section is based in large part on Barnouw's analysis "Bonanza World," in his *The Image Empire,* Vol. II of *A History of Broadcasting in the United States* (New York: Oxford University Press, 1970), pp. 108–117, which appears slightly condensed as "Bonanza Globe," in his *Tube of Plenty: The Evolution of American Television* (New York: Oxford University Press, 1975), pp. 229–238.

3 "The U.S. as TV Programmer to the World," *Broadcasting,* Apr. 18, 1977, p. 48.

4 "Who Will Pay What for U.S. Programs Abroad," *Broadcasting,* Aug. 15, 1977, p. 34.

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NATIONAL SYSTEMS

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INTERNATIONAL BROADCASTING ORGANIZATIONS

Several regional organizations publish periodicals that deal with developments and problems in national and international broadcasting, for example, *EBU Review* and OIRT's *Radio and Television.*

U.S. BROADCASTING AS COMPETITION

The cultural penetration of foreign countries via mass communications is examined in Herbert I. Schiller, *Mass Communication and American Empire* (New York: Augustus M. Kelley, 1969), and William H. Read, *America's Mass Media Merchants* (Baltimore: Johns Hopkins University Press, 1976). H. H. Wilson examines the siege on BBC monopoly in *Pressure Group: The Campaign for Commercial TV* (New Brunswick, N.J.: Rutgers University Press, 1961). Paul Harris describes the UK's battle with pirate radio—from the pirates' point of view!—in *When Pirates Ruled the Waves* (London: Impulse, 1968).

Seven

Sociopsychological Perspective

Our final perspective is radio and television as factors in human behavior. We conclude with this section to make you aware that broadcasting means more than show business and what Bill Paley said to General Sarnoff in 1952. Chances are, you welcome radio and television into your life for hours during most days. Now it is time to find out what that means to you and to the society of which you are part. More than the last entry on the P & L statement of any broadcast station, *this* is the bottom line.

Bibliographical materials for Chapters 25 and 26 follow Chapter 26.

25 Factors in Effectiveness

You have probably read or heard that television is a near-omnipotent vehicle of persuasion. Yet researchers have found it difficult to establish a direct cause-effect relationship between mass media messages and human behavior. Historically, they have had better luck in controlled experiments.* They would lead subjects into the laboratory, hold constant all variables (i.e., those factors than can change a situation) except those under study, and presto—yes, a television (or radio or film or whatever) message does have the power to persuade. However, field studies fail to show such a direct relationship. In most field studies (which examine mass communication *in situ,* i.e., where it occurs) the other variables cannot be held constant, and these other variables mitigate effects of the message.

You live in the real world, not in a laboratory. These other variables are present and affect the way you react to a televised message. For example, say that you are watching television, and a commercial comes on for a particular brand of beer. Do you inevitably and immediately get up, leave the room, open a can of that beer, and begin to swig it down? Perhaps—if (1) you are thirsty, (2) like beer, and (3) happen to have that brand available. But you probably do not. You may be diabetic, on a diet, or allergic to beer. You may

* See Chapter 27 for a discussion of experimental studies, field studies, and variables.

own stock in a rival beer company. Your religion may forbid use of alcoholic beverages. Your family or friends may frown on it. You may react negatively to that particular commercial or to commercials in general, to that beer company or to big business in general. There may be none of that brand immediately available, and you do not feel like taking the trouble to get any. Or, you may not have even noticed the commercial; you may be so inured to the almost continual flow of television advertising that you automatically tune out most commercials.

The lesson here is that television—or any mass medium—does not work in isolation. It is part of an environment of factors that affect your behavior. Television must usually interplay with these other factors. That interplay determines whether there will be an effect and, if so, what it will be. These factors include **you** (i.e., your mental makeup), **other persons, conditions of reception, medium, message,** and **communicator.**

You

You have certain **attitudes** and **opinions.** You did not adopt them; you acquired them. You acquired them unconsciously and gradually as a result of experience. You are, in large part, the product of all that you have ever experienced. You learn from experience, and the learning is called **socialization.** Formal agents of socialization include parents, teachers, and religious leaders. Friends and other peers are also agents of socialization. Even places, things, and strangers with which or with whom you come in contact play a part in attitude formation.

Your experiences have been different from anyone else's. Thus what you have learned is also different from anyone else. This is called **differential learning.** As a result of differential learning, you have a particular and special-to-you way of making sense of the world, of mentally dealing with the objects, things, persons, messages, situations, and so forth that you encounter. This "making sense/dealing with" is called **cognition,** and it includes the many processes of assimilating experiences and relating them to previous experiences, of attaching meaning and value to them, and of ordering them into organized patterns of knowledge and feeling. You are not a passive receptacle for a television commercial or any other persuasive message. You do things to it. You receive the message and put it through the cognitive processes—trim it down, add to it here and there, reshape it to make it fit into your system of order, your beliefs, values, and attitudes.

Attitudes affect behavior. They **predispose** you (i.e., make you susceptible) to act certain ways. Your predispositions determine in part what you do with a televised message, whether or not you even expose yourself to it in the first place. You tend to watch or notice those messages that are **congruent** (i.e.,

correspond) with your opinions and interests, and to avoid those that run counter to them. This is called **selective exposure.** For example, suppose you watch television one evening during the political season and a campaign program comes on featuring the Republican candidate for some office. You are more likely to watch the program if you are a Republican than if a Democrat.

In addition to selective exposure, there is **selective perception.** The cognition process makes you hear, see, and mentally emphasize some elements of a message, and ignore or de-emphasize others. This is selective perception, and it explains why two people perceive and interpret the same message different ways. A Republican is likely to perceive that Republican candidate's television speech as reasoned, logical, and eloquent; a Democrat, as distorted, inconsistent, and flatulent.

Perception can be so selective that an individual may actually interpret a message in a way that is exactly opposite from its intent. This is called the **boomerang effect.** For example, if, during that televised speech, the candidate tells a joke to illustrate the absurdity of bigotry, a racially prejudiced supporter might actually interpret the story as advocating bigotry.

Finally, there is **selective retention.** This simply means you tend to remember messages that jibe with your opinions and interests and to forget those that do not. You are much more likely to remember the name of that Republican candidate who spoke on television if you are a Republican, than if you are a Democrat.

Selective exposure, selective perception, and selective retention (sometimes referred to collectively as **selective perception**) are not inevitable; they are tendencies. So, yes, you may find yourself paying attention to messages that deal with matters outside your interests or that run counter to your opinions.

PERSONALITY

Some persons are more persuasible than others, irrespective of issue or type of influence. If you are one of these persons, it is likely that television could affect you more than someone who is not so persuasible. Factors that affect persuasibility include **self-esteem, intelligence, age, sex,** and **degree of authoritarianism.**

If you have a high level of self-esteem and regard for your own abilities, you tend to resist persuasion and propaganda. Intelligence seems to affect not so much the degree of persuasibility as the kinds of persuasive appeals that are most effective. If you are highly intelligent, inconsistent and illogical arguments probably do not work as well on you as on persons of lower intelligence; whereas complex, difficult arguments usually do not work well on persons of lower intelligence. And the younger you are, the more persuasible you are.

If you are female, the averages say you tend to be more persuasible than if you were male. This probably has nothing to do with heredity or biology; it is more likely a product of differential learning. The traditional feminine role in Western society has stressed passivity and yielding, so historically, as little

girls were socialized into their roles, they were trained to yield. The rise of the feminist movement and the breakdown of previously held sexual stereotypes will probably diminish this sex difference in the United States.

Finally, the more authoritarian you are, the more likely you are to be persuasible. This is even more likely to be true if you feel it proper to respectfully submit to any authority figure.

Interpersonal Relations

The effect any given televised message has on you is determined in part by your relations with other persons, persons whose acquaintance and opinions you value. In social psychological terms, these persons serve as your **psychological reference group.** A reference group is any group of persons with whom you share a very personal and defensive sense of belonging. These groups are not necessarily formal organizations (although they can be), and you probably have a number of different reference groups, perhaps even one for each major facet of your life.

The particular reference group that comes into play in any given situation depends on the nature of that situation and on you as an individual. The group can be large, small, inclusive, exclusive, formal or informal. It can be your family, your social club, your religious group, people who live in your neighborhood, your political organization, members of your racial or ethnic group, people in your occupation, your Friday afternoon drinking buddies, or someone you meet at the laundromat. You adopt the group's norms—its behaviors, values, priorities—as your own. The group, in turn, reinforces and validates your adopted opinion.

The content of a televised message may be perceived, discussed, and approved by the group as meeting its norms—usually informally, of course. It may be as simple as a discussion among friends after Sunday mass, a discussion condemning the proabortion stand taken by a political candidate in a recent televised campaign speech, condemning that candidate for advocating the murder of unborn children. Or it may be as elaborate as members of your civil rights organization at a meeting one evening favorably discussing that same stand because the candidate defended the individual woman's right to freedom of choice. Group approval increases the chances that your attitude or behavior will change toward the direction of the televised message. Disapproval lessens that chance.

Even if the group does not discuss the message, you may be familiar enough with group norms to know what the group *would* say, and that influences you, just as though the group actually had discussed it. For example, if you were a member of the National Rifle Association and you saw that political candidate speak on television in favor of gun control legislation, you would probably resolve right then to vote against the candidate, no matter how

sound the arguments for gun control; you would assume (from past experience) the NRA's opposition to the candidate.

So far in this chapter we have used examples primarily from the area of political broadcasting. But the same principles apply in all areas—news, information, entertainment, and advertising. Product advertisers make positive efforts to take advantage of the various factors in effectiveness. Many commercials, for example, attempt to provide surrogate reference groups. Thus you see commercials that feature one young mother telling a slightly younger mother which disposable diaper to use, or one laundromat patron telling another which detergent or bleach to use, or a manicurist telling a customer which dishwashing liquid to use.

The young mother, the laundromat patron, the manicurist—these represent advertisers' attempts to depict **opinion leaders.** As originally conceived, the relationship between mass media and interpersonal communication consisted of a **two-step flow of communication.** Within the group, certain individuals were thought to be more sensitive to media messages. These individuals, the opinion leaders, would bring up the messages for discussion by the group. Thus the flow of information and influence went from media to opinion leaders in one step, and from opinion leaders to the group in a second step. In reality, this two-step model is probably much too simple to describe the actual flow of communication. There are many steps and many opinion leaders involved at all levels. Nonetheless, interpersonal communication and influence do affect television's effectiveness.

Conditions of Reception

Where and how you view affect television's effectiveness. Consider a scary movie on television. It will have much more effect on you if you watch it at home by yourself late at night than if you watch it while others are present, while carrying on a conversation, or during the daylight hours.

Medium

The medium of television itself helps determine effectiveness. You probably watch television primarily for relaxation and entertainment. You switch off your critical faculties. Yet precisely because you do not have up your guard of critical awareness, you may be more vulnerable to messages—both intended (e.g., commercials) and unintended (themes, values, and depictions of society emphasized in programs and commercials)—than at other times. Additionally, as mentioned in Chapters 1 and 7, polls by the Roper Organization show that people feel television to be the most believable news medium by more than two-to-one over the next most believable medium, newspapers.

Your own previous experience with the medium also bears on television's effectiveness. You know, for example, the difference between commercials, entertainment, and information programs. From the first you expect puffery; from the second, fantasy; from the third, fact. And that is how you judge messages in each of those categories.

Message

The message itself is a factor in television's effectiveness. Any or all of the following aspects of a message may affect your reaction to it: amount of discrepancy between your opinion and that advocated in the message, whether the message presents one side or all sides of an argument, whether or not the conclusion to a particular line of argument is stated, novelty of information contained in the message, whether or not the message arouses fear, and the message's style of presentation.

Communicator

The nature of the individual who delivers the message affects your reaction to it. This is, in large part, a function of the communicator's prestige, what you perceive as the communicator's intent (to sell, to entertain, to report, etc.), how much you like the communicator, and the degree to which you empathize with or perceive yourself as similar to the communicator. Television advertisers attempt to take advantage of this factor. They make commercials that feature persons who are well known, who appear to be members of the professions, who radiate sincerity, who look like or may actually have been newscasters, who look like what Madison Avenue thinks you look like, and who look like what Madison Avenue thinks you want to look like.

26 Effects

In the previous chapter we examined major factors in television's effectiveness. Here we look at the effects themselves, that is, what research says the effects of television are.

Modification of Attitudes and Values

Television's role in changing attitudes and values is governed in large part by selective perception.* As a result, television is most successful at **reinforcing existing attitudes.** Reinforcement is by far the most common effect; after all, since you continually expose yourself to messages congruent with your existing interests and opinions, then you continually affirm those interests and opinions.

Creation of new opinions is the next most frequent effect, although not nearly as frequent as reinforcement. If you have formed no opinion on a subject, a televised message may be able to win you to its point of view.

Television's rarest effect is **conversion.** If you believe one way, television alone will usually not convince you otherwise. If you change your mind on a subject after exposure to a television message, other factors have probably

* See Chapter 25.

worked in favor of the change as well. These other factors "softened you up," so to speak, for the conversion. Yes, the television message triggered your change, but you were ready to change; the message itself probably could not have caused the change

CANALIZATION

Most product advertising therefore does not aim for conversion. Television commercials do not attempt to convince you to use a particular product; what they try to do is—if you already use a product—convince you to use their brand. The key here is that you probably do not make meaningful deep-seated cognitive commitments to specific brands of laundry detergent, toothpaste, bath soap, and shaving cream. But you do have certain attitudes, values, and opinions concerning personal cleanliness, appearance, and health which lead you to wash clothes, brush teeth, and bathe. Commercials attempt to **canalize** these attitudes, that is, channel them toward a particular brand.

MONOPOLIZATION

An advertiser would stand a much better chance of achieving conversion if that advertiser could dominate the mass media. All media (not just television) would feed commercial messages only about that advertiser's product; those would be the only advertising messages you receive, and you would have no alternatives to consider. This would be **monopolization.** Monopolization is economically unfeasible in most Western countries. However, the term "monopolization" was actually developed within the context of political propaganda. If a political regime controls all media of mass communication in a country, it can program the media to carry only its propaganda and to modify attitudes in the population. All mass media in the Peoples Republic of China, for example, carry the same ideological themes. The Chinese reinforce these themes at the interpersonal level; the people must meet in groups to discuss ideology. The Chinese attempt to condition the minds of their people so that they not just accept, but actively support the dictates of the Communist party.

Effects on Individuals

Public concern over and research into television's effects seem to focus on two levels: effects on us as individuals and effects on society. We look first at the individual and effects that involve violence, children, sexual material, and life patterns.

VIOLENCE

Violence in television has been a major public issue since the 1950s. Various organizations have protested it, and politicians have investigated it. The assumption is that televised violence causes aggressive behavior in viewers and leads them to commit violent acts. Social scientists, however, are not so sure.

Some researchers have even concluded that televised violence may reduce aggressive tendencies. They theorize that television acts as a **catharsis;** the viewer participates emotionally in screen violence and thus releases aggressive tendencies vicariously.

In 1972, the surgeon general of the United States released the report of a year-long program of federally funded research into the effects of television violence on children. The report noted that the bulk of studies indicated no catharsis effect. Instead, they seemed to point to a "preliminary and tentative" conclusion that viewing of televised violence **can lead to aggressive behavior.** However, any such violence-aggression relationship operates **only on some children** who are already **predisposed to be aggressive.** Additionally, such a relationship operates **only in some contexts.** Various elements seem to alter effectiveness, elements such as parental explanations, favorable or unfavorable outcome of the violence, and whether it is perceived as fantasy or reality.

Since 1972, additional research has established ever-closer links between televised violence and aggression, particularly in children. Several studies were financed by the networks. An ABC-sponsored study reported in 1976 showed that under certain conditions, normal children exposed to television violence increased aggressive tendencies. CBS sponsored a British study, reported in 1977, which concluded that children who watch television violence for long periods commit 50 percent more rapes and other aggressive acts than those whose viewing is limited.

CHILDREN

Disturbing research results, such as those from the network-sponsored studies, are still in the minority. The bulk of research shows that an emotionally balanced child suffers little, if any, long-lasting negative effects from television.

A number of factors influence what programs and how much television the child watches—age, intelligence, social level, personality, example of parents. Most children are selective viewers, and television does not dominate their existence. A child's taste in television reflects taste in other areas; for example, interest in monster movies, monster toys, and monster magazines will show up as a preference for television programs featuring monsters. The child's cultural tastes are determined much more by parental example and home environment than by television. And the emotionally healthy child will develop no antisocial behavior from viewing adult programs.

On the other hand, an emotionally disturbed child or one who is predisposed toward antisocial or aggressive behavior patterns may suffer negative effects from television. Some children are more likely to believe that what they see on television is the norm and that what they see in real life (that which does not jibe with television depictions) is the exception.

Very young children often cannot distinguish between fiction and nonfiction on television. However, even children as young as six years recognize

commercials for what they are, and by eight or nine they are skeptical about advertising claims. Nonetheless, repeated exposure to a television commercial can move the child from skepticism toward persuasion.

Parental interaction with the child concerning television content can counter most such effects. Therefore, in the matter of your child and television, factors of the child's own **mental and emotional state,** your **example** and **interaction** with the child, and the home **environment** you provide seem to **outweigh television** as an influence.

Television viewing does not adversely affect school work. It may even help young viewers get a head start before they begin school. This is particularly true with viewers of *Sesame Street,* although differences between viewers and nonviewers seem to even out after a few years. Television has not had much effect on children's bedtime.

SEXUAL MATERIAL

By and large, radio and television stay free of pornography, a result of federal law and trade self-regulation. Yet, times and programming concepts have changed. In the 1950s, we watched Lucy and Desi retire to separate beds. In 1977, the first episode of the prime-time ABC-TV series *Soap* included a scene of a married woman with another man; he made her dress and leave because he had another sexual appointment—with the woman's daughter. *Soap* stirred up controversy. Various church and citizen groups protested and tried to have *Soap* canceled even before it premiered. *Soap,* however, was merely the most obvious manifestation of a programming trend toward frankness and explicitness in sexual themes. Some members of the public are concerned over this trend. In fiscal 1977, the FCC received 77,844 complaints about broadcast programs; nearly 26 percent dealt with obscenity.

Certainly, you could object to the increase in sexual openness—just as to any other aspect of broadcast programming—on the basis of taste. But what about effect? Large percentages of the American public believe that sexual materials in general lead to moral breakdown, to rape, and to loss of respect for women. There is little evidence specifically on the effects of televised sexual material. However, some research has been done concerning effects of erotic stimuli in other media, for example, textual material, photographic slides, and motion picture film.

In 1967, Congress established a commission to investigate effects of pornography and obscenity on the people of the United States. The commission released its report in September 1970. Three members of the commission protested the report on moral grounds and questioned various aspects of it. The Nixon administration objected to its findings. The results had not turned out the way many people thought they should. According to the report, yes, **erotic stimuli produce sexual arousal** in most men and women. But when men and women follow up stimulation with sexual activity, they do so **within the framework of individual preexisting patterns of sexual behavior.** In other

words, if a man's normal sexual behavior patterns do not include rape, exposure to a skin flick movie will not be sufficient by itself to make him commit rape. Additionally, the report points out exposure to erotic stimuli appears to have **little or no effect on existing attitudes** concerning sexuality or sexual morality; that is, you do not become a dirty old man or woman simply from looking at dirty pictures. Finally, exposure to explicit sexual materials seems to bear **no relationship to delinquent behavior.** If these findings can be generalized to television, they mean that while televised sexual material may lead to sexual arousal, the material by itself does not produce antisocial attitudes or deviant behavior. As with studies on violence, future studies of pornography and obscenity may result in different conclusions.

LIFE PATTERNS

Television, by its very existence, affects the way you live. When television first appeared in the American home, people adjusted their lives to it. They reduced time spent with magazines, radio, books, movies, and other media. They also reduced nonleisure activities and coordinated viewing with routine household duties (e.g., they watched television while ironing). If you are like most persons, you spend more time watching television than any other activity, except sleeping and working. Television brings your family together physically, but you interact or converse little with each other because you are all watching the programming. Television does not make you passive unless you are already predisposed toward passivity. How-to programs (e.g., *French Chef, Crockett's Victory Garden, Sew Easy*) may pique your interest, but not beyond viewing; that is, you watch the program but do not take up cooking, gardening, or sewing. On the other hand, a televised movie or program based on a novel may inspire you to read the novel.

INACTIVITY, WITHDRAWAL, AND ESCAPE

Some social scientists contend that television and other media may **cause** you to be inactive, to withdraw attention from contemporary affairs, and to escape from reality. For example, if you watch television news and information programs, you may feel that you are interested and informed. You may even discuss public issues with acquaintances. Yet, you may also take no action to affect the issues—a result, perhaps, of your assumption that, since you know about the issues, "they" must be "doing something." In this case, television works as a narcotic, lulling you into a false sense of security. This effect, if it exists, is **dysfunctional** since one of the prerequisites for a democratic society is a politically active and alert electorate.

Another dysfunction is **privitization.** News, by definition, features primarily aberrant behavior, that is, events that deviate from the norm or from what most people believe to be right and true. In privitization, you feel overwhelmed by all the bad news television and other media feed and frustrated by your inability to deal with it. You therefore turn away from these public affairs over which you have no control to focus completely on matters in your

own life over which you do have a degree of control. You concern yourself with personal appearance, family, interpersonal relations, homemaking, or whatever to the exclusion of social, political, and economic reality.

On the other hand, some social scientists say that you **use** television for the very purpose of escape. You use it to get away from daily problems and worries. You may also use it to relax, to stimulate imagination, to be able to discuss programming with others, for emotional release and vicarious interaction, or just to kill time. If you overuse television for escape, it is a dysfunction. In most cases, however, television's escape function serves you in a positive fashion, giving your critical and creative processes a rest, allowing your mind to lie fallow, helping recharge your mental batteries.

Effects on Society

Society is more than an aggregate of individuals. It is also the customs, morals, values, standards, and institutions shared by these individuals. We now look at the effects of television on society in the United States, effects that involve culture, politics, and social change

CULTURE, STYLE, AND TASTE

At various times, critics have charged that television degrades public taste by pandering to the lowest common denominator. They contend that television could be used to raise the cultural level of the population. Taste, however, is much more influenced by social, personal, educational, and family determinants than by television. You probably come to television with your tastes already formed and seek out programming congruent with them. Therefore if *Hee Haw* plays against the Boston Symphony Orchestra, you watch the program that best reflects your customary taste.

As for television's ability to raise the general cultural level, there are doubts about that. For years the British Broadcasting Corporation (BBC) had a monopoly in the United Kingdom. The BBC's policy was to program slightly above the level of cultural taste for the population. Yet when foreign, pirate, and indigenous commercial stations began to feed American-style programming to the British Isles,* large percentages of the population switched over to these new sources. On the other hand, concentrated use of appropriate programming in emerging nations has led many of their citizens to show increased interest in their cultural heritage.

Television can also bestow prestige and enhance authority. This comes close to being a tautological situation: that which you see on television must be important *because* it is on television; the very fact that it appears on television makes it important. Examples abound. Merchandisers take advantage of television-granted prestige by paying performers to endorse products. The

* See Chapter 24.

name of Johnny Carson, a stand-up comedian and television talk show host, appears on a line of men's clothing. This phenomenon of bestowed prestige occurs in other media. In many cases, big name disc jockeys at successful Top 40 radio stations can make a rock music recording popular by playing it as though it were popular. Newspapers and magazines have long spread the word on style, taste, and manners.

Motion pictures have a history of influencing style and manners: Jean Harlow's popularity started the bleached blond fad that exists to this day; a scene in *It Happened One Night* (1934) showed that Clark Gable wore no undershirt, and the sale of men's undershirts dropped nationwide; the roles played by Marlon Brando in *The Wild One* (1953) and James Dean in *Rebel Without A Cause* (1955) spawned a whole cult of thin-skinned, inarticulate young men; Brigitte Bardot's film portrayals inspired thousands of young women to affect bee-stung lips and tight dresses. The same thing happens in television: in 1976–77, the program *Charlie's Angels* brought actress Farrah Fawcett to national prominence; soon her photograph became a merchandising cliché, and millions of girls began wearing the loose-curled hair style she made famous.

POLITICS

Politicians have known instinctively for years that television alone will not change anyone's mind. A good political campaigner writes off areas where most voters favor the opposition; no amount of media persuasion will change their minds. So the campaigner "goes where the ducks are" and **concentrates advertising on areas where the voters favor the candidate.** The campaigner seeks to reinforce the voters' positive feelings to the point where they go to the polls and vote.

Increasingly, the modern election campaign features two opposing candidates who have near equal support among the active, politically aware portion of the electorate. The balance of power then lies with the third group—the uncommitted nonvoters who neither know nor care about the campaign. These persons are characterized by high use of one medium above all others—television. If you wish to arouse these people, to get their vote, you use television advertising. But television time is expensive. Therefore the candidate must either have great personal wealth or must make the compromises necessary to attract large contributors.

Because nonvoters usually do not respond to issues, the campaigner attempts to short circuit reasoning processes, to harness existing prejudices and opinions long enough to get them to the polls. Heavy use is made of slogans and catch phrases. Expensive political advertising specialists are hired to research public preferences and to create an image* of the candidate to meet those preferences.

* "Image" in this case means the concept of the candidate held by the public. The word "create" is appropriate; these specialists often attempt to give the public a concept of the candidate that bears little relation to reality.

All this presents a rather chilling spectacle: public office available only to those of great personal wealth or beholden to large contributors, who run on slogans and catch phrases, who are packaged and merchandised like soap and dog food, and who owe election to a constituency that does not know and does not care. Luckily, elections do not always work that way. Some of the most expensive campaigns have failed. And the overall record of success for professional political image makers is about 50 percent—the same percentage you get on a chance basis.

Politics are also affected by television's ability to **confer status and prestige.** It can transform a relatively unknown politician into a national political figure. Veteran television performers, particularly news and weather reporters, have used television-granted fame and prestige to make successful bids for elective office. Former film stars, such as Ronald Reagan, George Murphy, and Shirley Temple Black, have entered politics after gaining fame first through motion pictures, then through subsequent television exposure of those pictures.

Social scientists suggest that the greatest effects of television on **voter preference** come not during, but **between, campaigns.** As discussed in Chapter 7, television news, by its very nature, must select, edit, and order. Even live and on-the-scene, a camera operator must select specific portions of the scene to send on to us. Therefore television does not merely transmit messages, it structures (what you perceive to be) reality by selecting, emphasizing, and interpreting events. Television does this all the time; so small, but cumulative changes may take place between campaigns. Your political disposition (e.g., party preference or candidate preference) may change, or you may acquire a new perspective within which you perceive, interpret, and respond to the campaign. For example, in the 1965 U.S. presidential campaign the war in Southeast Asia was not an issue; by 1968, television and other media coverage had made it an issue. The media had not told us what to think, but they did tell us what to think about. Social scientists call this the **agenda setting function** of the media.

Television campaign coverage and candidate advertising seem to **help to turn out the vote.** Researchers find **no evidence,** however, that national television coverage of **voter returns influences those who have not yet voted.** Some critics had expressed concern that televised reports of presidential returns from early time zones, along with computer-generated projections of who would probably win, might influence people in later time zones who had yet to cast ballots. But several studies of the 1964 election failed to find any such effect.

SOCIAL CHANGE

Stations and networks try for the largest possible audiences; therefore they program material that they hope will not offend you (so that you will not turn away from the programming) and that tends to reflect and promote universal

values and attitudes (so that they have a better chance—on the average—of attracting you in the first place). Television also exposes deviations from established and normal behaviors. By bringing deviation to public attention, television forces people to take a stand on it, and the net effect is to force some public action against what may previously have been privately tolerated. Thus television programming both **enforces,** and **exposes deviations from, normal attitudes and behavior patterns** in society. It would be logical to assume that such effects obstruct social change, promote conformity, weaken individualism, and decrease tolerance of differences. Yet, television has played a significant role in, for example, publicizing the problems and complaints of women, blacks, and other minorities. For years, however, it also played a significant role in reinforcing stereotypes: the woman's place is in the home, blacks are shiftless, and so forth.

On the other hand, television and other media seem to help new ideas and products gain acceptance. In adopting a new concept, you probably go through five overlapping stages: (1) you become aware of the concept; (2) you become interested, which leads you to seek out, or at least expose yourself to, additional information; (3) you evaluate the information; (4) you try or test the concept; (5) you adopt it; that is, you make a decision on continued use. During this process, you talk to other people about the concept; but you also get much information from the media.

Long-Range Effects

Most of the effects we have discussed so far are short-range. For example: by itself, exposure to a violent television program normally will not lead you to commit a violent act. Or: by itself, a televised persuasive message will not change your mind. Where we dealt with long-range effects, we used hedge words—"seem to," "probably," and the like. This is because researchers find it difficult to test for long-range effects. The research studies themselves must be long range and cover a span of months, even years. Therefore we have little research results concerning overall, long-range effects of American commercial television on the general public.

We do know, however, that commercial television does not depict what most perceive as the true nature of the world. It emphasizes certain themes and values—those which draw the largest audiences and sell products—violence; sexual innuendo; conformity; high adventure; absurd situations; sharp demarcation between good and evil; absolute resolution of all problems within a time frame of 30 to 60 minutes; the glamour of a life of crime and the ease with which laws are broken; stereotyped roles and behaviors for men, women, and various racial groups; beauty, youth, and sexual desirability as important goals; acquisition for the sake of acquisition; the importance of

winning; and worship of the Cult of Number One. Critics contend these themes and values are dysfunctional, that is, undesirable from the point of view of the welfare of society.

Of course we learned in Chapter 25 that certain other factors usually militate against television having an effect on "normal" people. Foremost among these other factors were agents of socialization and interpersonal contact. But there are situations in which other factors are largely absent. For example, in many families parents use the television set as a combination sitter, companion, and opiate for their young children. The children watch anything they want, as long as they keep quiet and out of the way. The parents have little time to interact with their children; the children have no religious training; they do not attend school. In effect, **a high percentage of their total sensory input**—their experiences that help form attitudes for life—**come from television, unchecked, in the most critical, formative years of their lives.** Television has become their principle means of socialization, the process by which they learn the norms, values, and behavior patterns of society. And what they learn is what they see on the tube.

But, of course, that cannot happen to you or to your children. You care, and television viewing is regulated in your home. Besides, who has time to watch that much television?

Maybe. But there are a few facts you should keep in mind. First, one of the conditions that determine the effectiveness of television is **exposure pattern;** the greater the repetition of a message, the greater its chance to be effective. Second, as discussed above, American commercial television continually **stresses certain themes and values,** and we **expose ourselves to them for long periods of time.** Each of us averages over 40 hours per week of viewing activity, the majority of which is commercial television. That means we spend over one-third of our waking hours, over 2000 hours per year, exposing ourselves to these themes and values. Third, **other media stress the same themes and values.** In fact, many of the effects we have attributed to television alone actually apply to that whole group of institutions and products we call "mass media." Fourth, social scientists tell us that the mass media **represent a new force in the socialization process,** partially supplementing parents, teachers, and other direct authority figures.

True, television and the other media do not mirror society. Contrary to what some prominent reporters contend, not even television news mirrors society; it focuses on the deviant, the aberrant, the exception. But, of course, neither did *Hamlet* mirror early seventeenth century English or Danish society. And it, too, is full of violence, greed, immorality, and all that other stuff critics say television carries. Yet *Hamlet* is held up to us as "good literature." Is that fair?

Perhaps not. On the other hand, *Hamlet* is not available in your living room at the flick of a switch 24 hours a day.

Bibliography

Most books that deal with effects do so from the perspective of all media, rather than broadcasting alone. If you wish to read further in the area, you may find the following a good place to begin because of its informal style: W. Phillips Davison, James Boylan, and Frederick T. C. Yu, *Mass Media: Systems and Effects* (New York: Praeger, 1976). A short, well-written, easy-to-use explanation of many of the concepts introduced in this and the previous chapter is found in Reed H. Blake and Edwin O. Haroldson, *A Taxonomy of Concepts in Communication* (New York: Hastings House, 1975). A concise summary of effects research through the end of the 1960s is the extended article by Walter Weiss, "Effects of the Mass Media of Communication," in Gardner Lindzey and Elliot Aronson, eds., *The Handbook of Social Psychology,* 2nd ed. (Reading, Mass.: Addison-Wesley, 1969), V, 77–195. Congressionally financed studies are summarized in two publications: Surgeon General's Scientific Advisory Committee on Television and Social Behavior, *Television and Growing Up: Televised Violence; Report to the Surgeon General* (Washington, D.C.: GPO, 1972); and *The Report of the Commission on Obscenity and Pornography* (New York: Bantam Books, 1970). Two summaries of television effects research are George Comstock, *et al., Television and Human Behavior* (Santa Monica, Cal.: Rand Corp., 1975), and Grant Noble, *Children in Front of the Small Screen* (Beverly Hills, Cal.: Sage Publications, 1975). Many principles and concepts discussed in this and the previous chapter come from social psychology. Two of many introductory books in the field are John W. McDavid and Herbert Harari, *Psychology and Social Behavior* (New York: Harper & Row, 1974), and Jonathan L. Freedman, J. Merril Carlsmith, and David O. Sears, *Social Psychology,* 2nd ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1974). The first includes handy, indexed summaries of relevant research; the second is exceptionally well written.

27 Research and Theory

Mass communication is the field within which radio and television research is done. Mass communication also includes research into advertising, newspapers, magazines, sound recordings, motion pictures, and other media and uses of mass communication. Note that the singular form is used, viz. mass *communication.* Scholars study the social and psychological *process,* not telegrams, letters, and the technical aspects of equipment. They believe the plural form "communications" connotes the latter, so they use the singular to describe their field.

Research

Research begins with a question. Usually, it asks what causes some particular phenomenon.

METHODS

Mass communication scholars use a variety of methods to find answers. In the **historical-critical method,** the researcher examines documents and firsthand reports contemporary with the era, event, or phenomenon under investigation. For example, a scholar who wished to find the root causes for the 1971 congressional controversy over the CBS-TV documentary *The Selling of the*

*Pentagon** would certainly wish to study a copy of the documentary itself, its script, and the records of hearings and reports of the congressional committees involved.

In the **case study method** the researcher examines in detail a mass communication situation or a series of such situations for underlying principles. Two classic case studies are those by Warren Breed on social control in the newsroom* and David Manning White on the gatekeeper functions (selection of news items) of a newspaper wire editor.[1] Examples of case studies in broadcasting include those by Lynch and Ravage cited in the bibliography for Chapter 5.

Empirical Research. Most scholars who investigate effects use **empirical** research. "Empirical" means the researcher relies solely upon **direct experience** or **direct observation.** In empirical research the question often asked is: What, if any, relationship exists between two entities? The entities are **variables;** if alteration in one causes a corresponding change in the other, they are **independent** and **dependent** variables respectively.

In the **field study,** the researcher does not alter conditions but studies the mass communication process as it occurs in real life. The researcher administers tests and surveys to (usually) relatively large groups of people, then examines their responses for relationships between variables, for example, between prolonged television viewing and social isolation among children.

The **experimental method,** on the other hand, is used most often in the **laboratory.** In one of its simpler forms, the researcher exposes two groups of subjects to conditions that are identical in all respects save one, then tests both groups to see if any differences show up in the expected areas. For example, a researcher might expose each of two groups of children to different versions of a television program. The two versions would be exactly alike except that one contained violence and the other, none. After exposure, the children of each group would be allowed to play, and the researcher could watch and count the number of aggressive acts (e.g., one child pushing another). If children in the violent action exposure group commit a significantly greater number of aggressive acts than those in the other group, the researcher could probably attribute the increase (the dependent variable) to televised violence (independent variable).

Experimental laboratory research has the advantage over field study research with respect to **control.** In the laboratory, the researcher can use a carefully constructed research design to hold constant (i.e., ensure sameness of) all variables except those under study. Given positive results, our laboratory researcher could conclude, with a fair degree of assurance, that exposure to televised violence increases the number of aggressive acts children commit

* See Chapter 7.

during play. But our field researcher—even with results that show a positive relationship—cannot draw such an unqualified cause-effect conclusion. There was no control, thus there were probably multiple other variables at work in addition to television—parents, peers, other media, and so on.

Yet the field study has an advantage precisely because of these multiple other variables. After all, they are present in **real life.*** And besides, the laboratory study is a contrived situation. Subjects are taken out of the real world and know that something is expected of them. Much laboratory research is done on university campuses, and the subjects are college students, hardly a representative sample of the actual population.

One further method combines the best aspects of both experimental and field studies. In the **field experimental method,** the researcher uses laboratory controls in the real world. As you can imagine, the ideal of control over mass communication content is difficult to coordinate and put into effect. Relatively few large-scale field experiments have been conducted.

SCIENTIFIC RESEARCH

Empiricism is one important criterion of **scientific research.** Scientific research is also **objective, systematic,** and **quantitative.** The researcher strives for objectivity by using certain methods designed to minimize personal bias. The researcher ensures that the work will be systematic by specifying procedures—the design and methodology—in advance, then following them to the letter. During actual execution of the research, the researcher methodically observes and records previously selected categories of information, called **primary data.** In quantitative research, the researcher uses statistical techniques to deal with the data. Based on this data, the researcher draws certain conclusions concerning the relationship of variables.

We said that research begins with a question. When that question is formally stated, it is a **hypothesis.** In our example of experimental research methodology, the hypothesis might well have been "Exposure to televised violence causes children to increase the number of aggressive acts they commit during immediately subsequent play."

We live in the age of the computer, and it has become easy for a researcher to utilize these electronic aids as nets in **fishing expeditions,** seining data in the hope of catching results. Here the researcher is interested in a particular variable but has no clear hypothesis on the effect of the variable. In these cases the research question is a broad one, for example, "What other factors **correlate** (i.e., have mutual relationships) with increased aggressiveness following exposure to televised violence?" So in addition to numbers of aggressive acts committed, other data are gathered—perhaps a personality test is administered, demographic information (e.g., age, race, sex) are gathered, and estimates of weekly hours of TV viewing are recorded—and put into the computer. The computer is programmed to sift through the data using vari-

* See Chapter 25.

ous statistical tools. And the researcher examines the results to see if any relationships appear.

Hypothesis-testing research may be **based in theory.** The researcher examines a general principle or theory, then derives a hypothesis from that theory. The primary goal of theory-based research is to evaluate the theory—to determine whether it makes accurate predictions, whether it has limitations, whether it is correct. Most hypothesis-testing research in mass communication is *not* theory-based, one reason being there is not much theory in the field. However, in formulating a hypothesis or research question, the mass communication researcher does review and take into account previous and related research.

HISTORY

The origins of mass communication as a field for empirical research go back to World War I. Governments of the combatant nations used propaganda to mobilize their populations. They described the enemy as subhumans whose primary aims were to rape, pillage, and kill. These were the first formal widespread government uses of propaganda in modern times, and they worked. Whole countries threw themselves into the war effort.

After the war, reaction set in. The public learned of the techniques by which they had been manipulated. They began to fear propaganda as some omnipotent force against which they were powerless to resist. As a result, psychologists became interested. They began to analyze propaganda and to research the process of persuasion.

Mass communication research soon spread beyond inquiry into propaganda. Social scientists from sociology, social psychology, political science, and other disciplines began to conduct research in mass communication. They left behind a residue of results from the perspectives of, and based on principles and theories in, their respective disciplines. Faculty members in university schools of journalism adopted methodologies from the social sciences and launched their own research. Here, for the first time, were scholars who considered their primary research interests to be mass communication. University speech departments added the word "communication" to their titles. They, too, adopted social science research methodologies. During the 1950s, journalism and speech areas graduated from their doctoral programs a new generation of scholars who considered themselves to be social scientists and their research field, mass communication.

Theory

In our discussion of scientific research we slipped in the term **theory** and brushed by it with a few remarks about usefulness and scarcity. However, theory is a rather important subject. So at this point we need to backtrack and take a closer look at theory—what it is, what it does, and what forms it takes in mass communication.

INTERVENING VARIABLES

"Theory" has a special meaning in research. In the natural sciences a proposition must meet rigorous criteria and serve specific functions before it can be labeled a theory. However, it is difficult for theories in the social and behavioral sciences to meet these criteria. In most natural sciences—physics, for example—a scientist can *see* the variables; the scientist can observe what goes on, can measure precisely the values and quantities involved, and so can account for all occurrences. Not so in the behavioral and social sciences. For example, two people react to the same stimulus in different ways: how do we account for the difference? There being no obvious explanation anyone can see, psychologists suggest the existence of **intervening variables.** Two classes of intervening variables seem to play large roles in the effect of message stimuli on people—**psychological makeup** (attitudes, beliefs, values, etc.) and **interpersonal relationships** (influence of other persons).*

Let us use an example involving psychological makeup to illustrate the difficulty of dealing with intervening variables. A communication stimulus encounters a different set of attitudes in each person. These different attitudes result in different perceptions of the stimulus. And different perceptions lead to different reactive behaviors. But of course no one can *see* an attitude. It is not an organ, a gland, a particular part of the brain; it is something psychologists have posited (i.e., supposed to be a fact) to explain differential behavior. Since it cannot be seen or located, there is no way to measure it directly. Instead, psychologists measure **overt behavior,** under the assumption that attitude (*if* it exists) underlies behavior and therefore behavior reflects attitude. They use all kinds of measurements, from pencil-and-paper personality tests to counting the number of times a button is pushed. But these are all *indirect.* They measure behavior, not attitude, and so are at best only indicators of what *might* be going on in what they *believe* to exist.

So it goes with social and behavioral sciences. Any time you deal with human beings, you deal with variables that cannot be measured to the same precision achieved in the natural sciences. A theory in physics or chemistry yields hypotheses that predict exact results that can be measured in number of foot-pounds, molecules, degrees centigrade, atoms, electrons, or what-have-you. A theory in psychology or sociology can yield hypotheses, but it cannot, for example, predict that attitude A will move X degrees in direction Y.

NATURE OF COMMUNICATION THEORY: AN EXTENDED EXAMPLE

Miller and Nicholson† define a **communication theory** as a set of logically related propositions that permit the deduction of some outcome or characteristic of a particular communicative transaction. They illustrate, with **cognitive consistency theories,** a family of psychological theories that a number of communication researchers have borrowed. All theories in this family rely on the same set of logically related general propositions:

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* See Chapter 25.

† See bibliography.

(1) You prefer a state of **cognitive consistency,** that is, one where all your beliefs, attitudes, and values are consistent with each other.
(2) You find **cognitive inconsistency** an **unpleasant** state, for example, when you receive information that puts one belief, attitude, or value at odds with the others, you do not like it.
(3) When in a state of cognitive inconsistency, you are motivated to behave in such a way as to **restore consistency,** that is, you do something—change beliefs, values, or attitudes—so that they are not at odds.

Here is an example of how your behavior in a particular situation could be analyzed in terms of consistency theory. After dreaming, scrimping, planning, and saving for years, you finally manage to finance a brand new Porschuar 320X sports car ($1000 down and $300 a month for the rest of your life). You pick it up from the dealer and drive it home just in time to watch your all-time greatest hero Ralph Nader appear on television. And Nader takes this occasion to pronounce the new Porschuar 320X "the most dangerous pile of automotive misengineering on the road and a gas guzzler, the driving of which, during this time of dwindling fuel supplies, ought to be considered an act of malicious destruction of national resources. It will pass everything on the road but the gas station." This probably puts you into a state of cognitive inconsistency. On the one hand, you have made a tremendous financial and emotional commitment to a particular automobile; on the other, an individual whom you hold in highest esteem labels this very automobile "dangerous" and a "gas guzzler."

Consistency theory predicts that you will behave in some way to restore consistency. Alternatives include reevaluating your opinions of the car ("Maybe it's not as great as I thought" or even "Can I get back my down payment?"), of Nader ("Well, he might know about a lot of stuff, but he sure misses on sports cars"), or both (i.e., liking both Nader and the car a little less).

Consistency theory predicts degree of change. If you have a greater cognitive investment in the car than in Nader, the greater change would probably be in your opinion of Nader. If there had been less inconsistency—for example, if Nader had only mentioned that the Porschaur 320X burns a lot of gas—your change of opinion would not have been as pronounced.

Consistency theory also predicts the possibility of two other alternatives: to distort in your mind what Nader actually said, or to avoid the program in the first place. You might distort the message by not hearing it all, or by hearing only the last part of it ("Nader said it burns gas, but that it passes everything on the road"). Or perhaps you read in the morning newspaper that Nader would appear on television to criticize some of the world's fastest sports cars by name. Therefore in order to steer clear of what would probably be discrepant information, you simply do not watch the program. If the newspaper had said Nader would have kind words for sports cars, you would not have missed it.

Do those last alternatives sound familiar? They ought to. We discussed

them in the last chapter under the heading "selective perception." Now, using the consistency propositions, we have a coherent theory of intervening variables to explain selective perception. Additionally, we saw that consistency theory could predict certain behaviors. Therefore two prime functions of a communication theory are **explanation** and **prediction.** A theory should be capable of explaining and accounting for a number of different behaviors, and it should be capable of predicting future behaviors.

THEORIES OF MASS COMMUNICATION

For years mass communication had no central, unifying thematic structure, no central theories or general principles. The little bits of research results scattered about by the psychologists, sociologists, political scientists, and others who first opened the field were too disparate for successful integration.

Borrowed Theories. Some mass communication researchers borrowed theories from other fields. The cognitive consistency theories, developed in psychology, have proved especially interesting to communication researchers.

Specific Effects Theories. Some researchers have developed short-range theories to account for specific mass media effects. Two of these are **utility theory** (also referred to as the **uses and gratifications approach**) and **play theory.**

Somewhat similar to a theoretical framework called **functionalism,** utility theory suggests yet another explanation for selective perception. According to utility theory, you attend, perceive, and remember communication that is pleasurable or that helps satisfy you in some way. The communication itself does not have to be in accord with your existing ideas. If you think the communication will be useful or will give you satisfaction, you will expose yourself to it; if not, you will try not to expose yourself to it, or you will disregard or forget it.

Play theory distinguishes between work (i.e., reality, earning a living) and play (largely unproductive, except for self-satisfaction). According to play theory, the central concern of mass media is to allow people to throw off social control and withdraw into play. Note that both utility theory and play theory avoid the helpless-audience/all-powerful-media situation that the word "effects" seems to imply. Both posit a **psychologically active audience.**

There are at least four theories concerning effects of televised violence. The **catharsis theory*** suggests that when you watch televised violence you drain off aggression-causing frustrations and thus decrease the probability that you will act violently. The **aggressive cues** (also called **stimulating effects) theory** assumes that exposure to televised violence increases your level of physiological and emotional arousal, thus increasing the probability that you will act violently or aggressively. The **observational learning theory** assumes that you

* See Chapter 26.

can learn aggressive behavior by watching it on television and, under certain conditions, will copy aggressive television characters. **Reinforcement theory** posits that exposure to televised violence reinforces existing patterns of behavior. If you are normally a nonviolent person, you selectively perceive a program so that it reinforces your nonviolent norms and attitudes; if a violent person, you selectively perceive to support that inclination.

Dependency Theory. *Theories of Mass Communication** is a widely read book in the field. In its first two editions, the various research results on effects had been pulled together into several coherent formulations called, for the sake of convenience, "theories." But they were not really theories in the formal sense. In the third edition, however, authors Melvin L. De Fleur and Sandra Ball-Rokeach integrated these formulations with other major factors, variables, and relationships into a **general theory** of the effects of mass communication on individuals and society.

De Fleur and Ball-Rokeach call theirs a **dependency theory of audience-media-society relations.** They posit that when informal communication channels outside the immediate group† begin to be disrupted, people start to depend on mass media for information. The degree of dependency varies: as the media serve more information-delivery functions and as societal change and conflict increase, people become more dependent on the media. Under these conditions the mass media achieve a broad range of cognitive (i.e., how we perceive things), affective (i.e., how we feel about things), and behavioral (i.e., what we do about things) effects. However, these effects are not entirely one-way. The relationship among audience, society, and media is actually **tripartite;** the alteration of audience cognitive, affective, and behavioral conditions feeds back and, in turn, alters both society and the media. This relationship is depicted in Figure 27.1.

De Fleur and Ball-Rokeach have constructed a model of their theory to show how effects are generated. They admit the model (Figure 27.2) is complicated, but of course, the process of mass communication itself is complicated. As with every integrated theory, the dependency theory is developed at a very high level of abstraction (i.e., the qualities and attributes of the individual elements—for example, you as a member of the audience, your local radio station, a particular custom or habit—have been separated from the elements themselves, considered in the collective, and generalized).

Support or rejection of the dependency theory will come with time and with generation of specific hypotheses that can be tested with empirical data. Nonetheless, De Fleur and Ball-Rokeach point out that the study of mass communication has advanced to the point that formulation of such an integrated theory can at least be attempted.

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* See bibliography.

† See Chapter 25 for a discussion of the importance of the group.

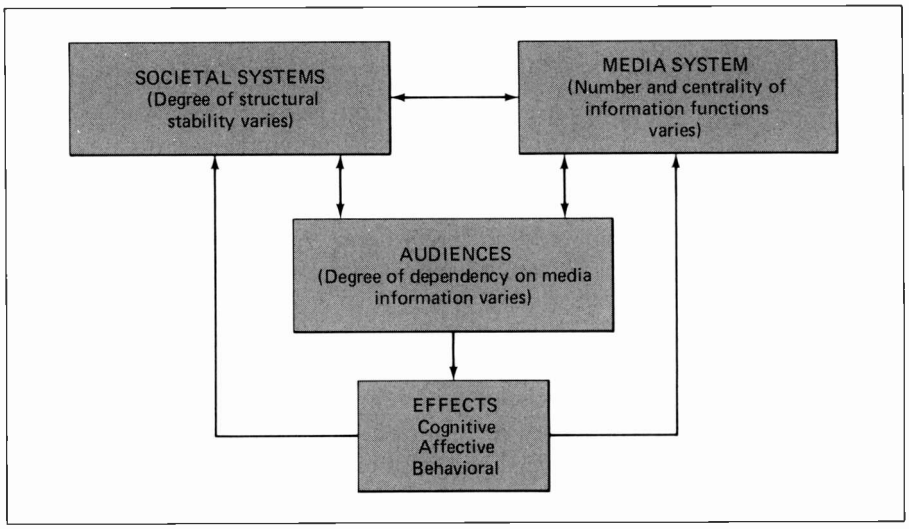

Figure 27-1. Tripartite Relationship in the Dependency Theory.

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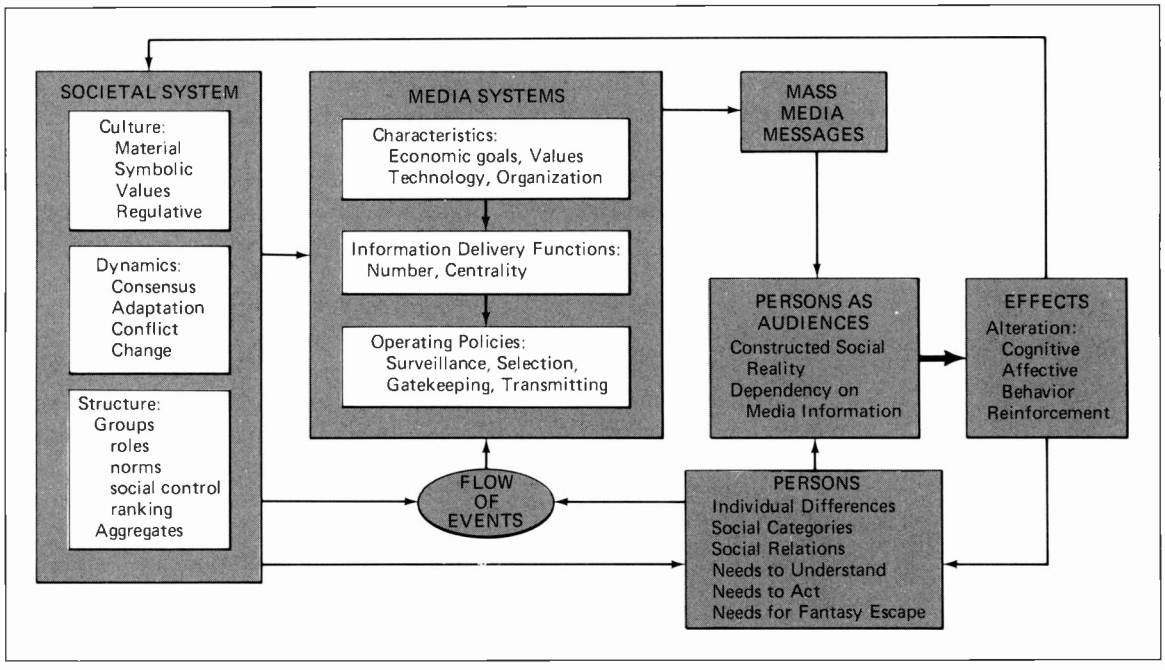

Figure 27-2. Dependency Theory: A Model of Effects Generation.

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Other Approaches

Historically, the bulk of empirical research has dealt with effects—what the mass media *do to* people. However, there are other ways to study mass communication.

Claude E. Shannon's 1948 paper, "The Mathematical Theory of Communication,"[2] opened important new insights on the subject of human communication. In the article, he dealt with communication by analogy; he identified a few key elements and relationships present in every communication system—a **model** of the communication process (see Figure 27.3). He focused on mechanical and electronic systems such as telegraphy and telephony; but scholars found the idea of using models useful to illustrate and study the process of human communication. Model building has since become almost an end in itself. Scholars have constructed a number of interesting models that depict their concepts of the process of mass communication.

One of the simpler, more universal models appears in Figure 27.4. Note that it applies equally well to either interpersonal or mass communication. As noted above, the majority of research in mass communication has focused on the **decoder and receiver,** that is, effects on audience.

A second line of research has concentrated on the **message.** Here, scholars use content analysis, a research technique that employs scientific methodology (i.e., orderly procedures) to describe the message—for example, number of violent acts in a television program, number and types of portrayals of ethnic minorities in television commercials, and so on.

A third line of research centers around the **encoder,** for example, media organizations and their personnel. The narrative-style case study has been used most often in describing encoding activities, but researchers have also begun to use empirical and quantitative methodology.

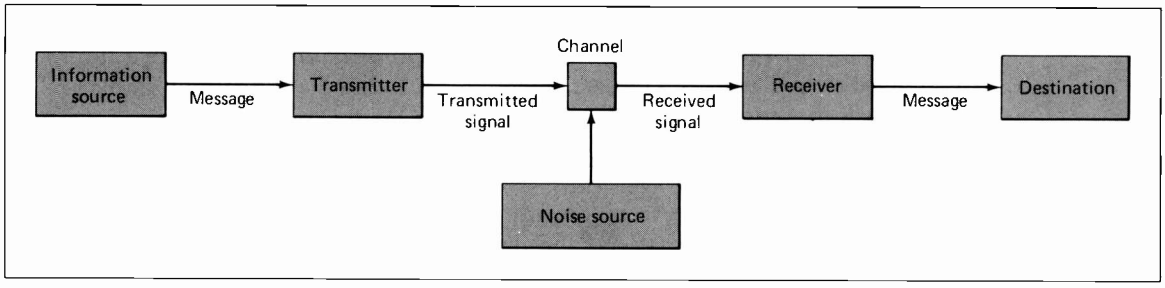

Figure 27-3. Shannon's Model of Communication Process.

SOURCE: Claude E. Shannon and Warren Weaver, *The Mathematical Theory of Communication,* 11th printing—1967 (Urbana, Ill.: University of Illinois Press, 1964), p. 34. Used by permission.

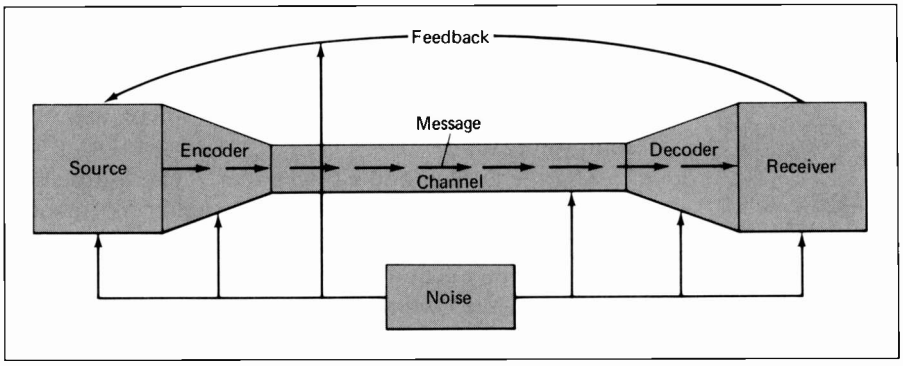

Figure 27-4. Communication Model. A model such as this can be used to represent almost any level of human communication. For example, the present discussion. My mind is the source, and I have a message about communication models to get to your mind, the receiver. I encode my message by committing it to writing. It travels through the channels of this book and the light rays that enter your eyes as reflected from the printed symbols on this page. You decode the message by reading it, and your mind assimilates it. Feedback could be as direct and specific as a letter from you, or as general as sales of this book. Noise may enter at any point in the model: my inability to explain, your watching television while trying to read, a poor printing job on this page and so on.

One type of **feedback** research is part and parcel of the very system of commercial broadcasting—the ratings.* But feedback also includes unsolicited letters, telegrams, and telephone calls to networks, stations, and individual performers; some content analysis has been done on this type of feedback as well.

Researchers have studied **channels,** that is, the media themselves. Often these studies take the form of surveys, designed to determine public attitudes toward a particular medium. During the 1950s and 1960s, considerable laboratory research was carried out to determine television's suitability as a channel for education.

Quite a different approach gained popularity in the 1960s. In a number of books and articles, Herbert Marshall McLuhan,† a Canadian scholar of English literature, advanced the theory that media content really does not matter. The structure of information (i.e., the way it is presented) on the dominant (i.e., the one from which most people get most information) medium of a culture affects the way members of that culture perceive reality. If you lived when print was the dominant medium, you viewed the world in terms of the printed page—that is, linearly, with the cold logic of the eye, each part in its right place at the right time.

* See Chapter 17.

† See bibliography.

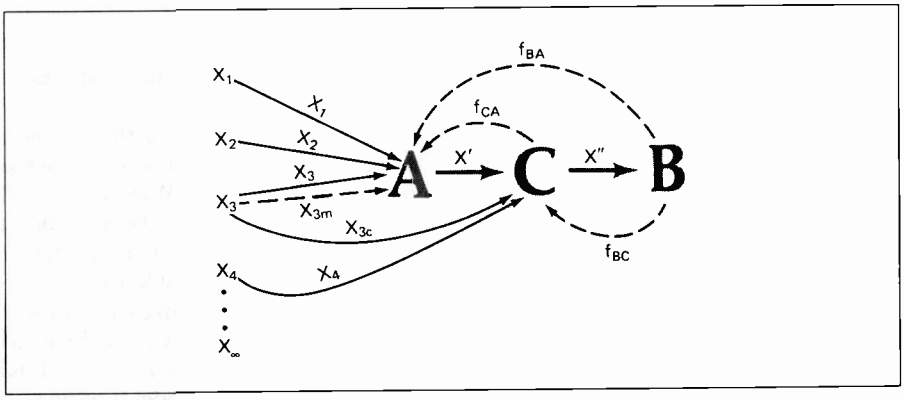

Figure 27-5. Westley-MacLean Model of the Mass Communication Process. This model depicts the gatekeeper functions (i.e., culling and selection of news items) of editors. Westley and MacLean explain it as follows:

> The messages C transmits to B (X") represent his selections from both messages to him from A's (X') and C's selections and abstractions from Xs in his own sensory field (X_{3C}, X_4), which may or may not be Xs in A's field. Feedback not only moves from B to A (f_{BA}) and from B to C (f_{BC}) but also from C to A (f_{CA}). Clearly, in the mass communication situation, a large number of Cs receive from a very large number of As and transmit to a vastly larger number of Bs, who simultaneously receive from other Cs.

SOURCE: Bruce H. Westley and Malcolm S. MacLean, Jr., "A Conceptual Model for Communication Research," *Journalism Quarterly*, 34 (Winter 1957), 35. Reprinted by permission.

Now, television is the dominant medium. According to McLuhan, since the television picture is a mosaic (bits of information) rather than a solid visual ground, you must fill in the spaces between the bits (you do this unconsciously), and—a big jump in logic here!—in the process you become involved in the medium with *all* your senses. So you view the world in all-sensory terms.

McLuhan's thesis that the **medium is the message** proved popular with two disparate groups—commercial television and advertising people and the so-called "counterculture" young people of the 1960s. Although McLuhan's theory had to do with effects, social scientists found it difficult to test empirically. Most academics and researchers tended to reject it out of hand. By the mid-1970s the popularity of McLuhan's approach seemed to have died down considerably.

Notes

1 Reported as "The Gatekeeper: A Case Study in the Selection of News," *Journalism Quarterly*, 27 (fall 1950), 383–390.

2 Reprinted along with exposition and comment by Warren Weaver in book form as *The Mathematical Theory of Communication* (Urbana: University of Illinois Press, 1949).

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(Numbers in parentheses refer to chapter bibliographies containing full citations.)

For a concise, easy-to-read explanation of theory and research in communication, see Gerald R. Miller and Henry E. Nicholson, *Communication Inquiry: A Perspective on a Process* (Reading, Mass.: Addison-Wesley, 1976). Consistency theories are discussed by Miller and Nicholson and by Davison, Boylan, and Yu, *Mass Media* (26). The latter also discuss utility theory. For the play theory, see William Stephenson, *The Play Theory of Communication* (Chicago: University of Chicago Press, 1967). Melvin De Fleur and Sandra Ball-Rokeach review the four theories concerning effects of televised violence, as well as explain their own dependency theory, in *Theories of Mass Communication,* 3rd ed. (New York: McKay, 1975). Many of the models from the first galvanic decade of model-building are reviewed in Ronald L. Smith, *General Models of Communication,* Special Report No. 5 (Lafayette, Ind.: Department of Speech, Purdue University, 1962). Marshall McLuhan has written a number of books expounding and extending his theory; most are difficult to read and understand. See his *Understanding Media: The Extensions of Man* (New York: McGraw-Hill, 1966).

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