Revolutions in Communication

Media History from Gutenberg to the Digital Age

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continuum

8 Radio: the electronic hearth

"It's of no use whatsoever." (Heinrich Hertz, 1888, in response to questions by students about the practical value of his experiments)

"Oh, the Humanity." (Herbert Morrison, radio reporter at the scene of the Hindenburg disaster, 1937)

"This . . . is London." (Edward R. Murrow, 1940, reporting the blitz for CBS)

Auroras and equations

The mysterious forces surrounding electric currents fascinated scientists of the eighteenth and nineteenth centuries—from Luigi Galvani and Alessandro Volta in Italy to Benjamin Franklin in America and Michael Faraday in Britain. When telegraph lines began stretching across continents, the mystery deepened as scientists tried to explain occasional fluctuations in electrical current that seemed to be associated with the Aurora Borealis and solar flares.

Particularly mysterious were the events of September 2, 1859, when the sky filled with auroras of writhing purple and red colors unlike anything ever seen before.

"Around the world, telegraph systems crashed, machines burst into flames, and electric shocks rendered operators unconscious," said Stuart Clark in a book about the auroras of 1859. "Compasses and other sensitive instruments reeled as if struck by a massive magnetic fist" (Clark, 2007).

"I have cut my battery off and connected the line with the earth," tapped out a Boston operator on the morning of September 2. "We are working with current from the Aurora Borealis alone. How do you receive my writing?" The other operator, who had also cut off his batteries, responded "Much better than with batteries on" (*The New York Times*, September 6, 1859).

In New York, a telegraph operator having trouble on the evening of September 3 happened to look out the window and saw "broad rays of light extending from the zenith toward the horizon in almost every direction."

We now know that the worldwide auroras of 1859 were the same as the "northern lights" usually seen in polar regions; the auroras expanded for a few days due to a giant solar flare. We also know that electromagnetic fields travel invisibly through the atmosphere.

At the time, however, scientists wondered how electricity was related to magnetism and how the auroras of 1859 could create electricity in telegraph wires.

One piece of the puzzle was solved a few years later, when James Clerk Maxwell, a British mathematician, published a paper describing how electric and magnetic forces could be carried through space without wires. Maxwell called it displacement current. Another part of the puzzle involved Thomas Edison's observations about the behavior of one electrical circuit when it was near a similar circuit. The phenomenon, when one circuit mimics another without actually touching it, was called the "Edison effect." Some historians think Edison's labs could have created radio, had he not focused on a sound-recording device (the phonograph, patented in 1878) and the electric light (patented in 1879).

In the 1880s, Heinrich Hertz, a German scientist, found a way to test Maxwell's theory by generating electromagnetic waves, detecting them, and measuring their velocity. When he published his findings in 1888, Hertz thought he had simply verified an interesting scientific speculation (Aitken, 1992). "This is just an experiment that proves Maestro (teacher) Maxwell was right," he said. "We just have these mysterious electromagnetic waves that we cannot see with the naked eye. But they are there."

Asked about the value of the experiment, Hertz told students: "It's of no use whatsoever."

Like discovering a new continent

If Hertz saw no practical value in radio telegraphy, others were racing to lay claim to what seemed like a new continent that was just being discovered. In the United States, Nikoa Tesla began giving demonstrations of short range wireless telegraphy in 1891. In Britain, Oliver Lodge transmitted radio signals at a meeting of a British scientific society at Oxford University. Similar experiments were being conducted in Germany, Italy, India, Russia, Brazil, and by the US Navy in New York around the same time, and all faced the same problem: usually the signals would not travel more than a few dozen meters.

An unlikely inventor is often credited with making radio telegraphy practical. Guglielmo Marconi, a 20-year-old from a wealthy Irish-Italian family with little formal education, had become fascinated with electronic waves while attending a friend's scientific lectures at the University of Bologna.

In 1894, Marconi was able to duplicate Hertz' experiments in his home laboratory, but he faced the familiar problem: he was not able to receive a signal over any great distance. At the time, most research was focused on the higher frequency part of the radio spectrum, and physicists hoped to understand the relationship between radio waves and light waves. Marconi moved down the spectrum, using lower

Radio and the *Titanic*

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The *Titanic* was on its first voyage from Britain to the United States, and had just crossed the point where messages from ships at sea could be exchanged from the easternmost North American wireless station in Newfoundland. After sending personal messages from the *Titanic*, the operators were taking down news and stock reports for the passengers to read the next morning.

Just minutes before the *Titanic* hit the iceberg, a wireless operator on a ship eight miles away, the *Californian*, attempted to contact the *Titanic* to tell them they were surrounded by dangerous icebergs. The *Californian* had even stopped in the water. But the *Titanic*'s operators were busy. They rudely told the operator on the *Californian* to "keep off" (the air) so that *Titanic* operators could hear the weaker signals from Newfoundland.

The *Californian*'s Marconi operator took off his headphones and climbed into his bunk, only to be awakened about four hours later by officers on his ship who wondering whether the *Titanic* might be in trouble. By that time, it was too late to help.

Commissions of inquiry were incredulous. "Do I understand rightly then that a Marconi operator . . . can only clearly hear one thing at a time?" a British commissioner asked. Unfortunately, it was true, and as *The New York Times* said a few weeks later: "Sixteen hundred lives were lost that might have been saved if the wireless communication had been what it should have been" (*The New York Times*, May 2, 1912).

The official cause of the disaster was the negligence of the *Titanic*'s captain in ignoring iceberg reports. However, the delayed rescue effort was also a crucial issue, a US Senate committee found. "Had the wireless operator of the *Californian* remained a few minutes longer at his post . . . that ship might have had the proud distinction of rescuing the lives of the passengers and crew of the *Titanic*" (*The New York Times*, May 29, 1912).

One immediate impact of the *Titanic* disaster was the Radio Act of 1912, which required that ships at sea monitor the radio for distress signals 24 hours a day. Another requirement was that no one radio system would be permitted to exclude other radio systems from communication—a problem that had not slowed the disaster relief effort but which had created similarly dangerous problems. In effect, that the airwaves were free to be used by all, and no one company would be allowed to monopolize them.

The *Titanic* disaster also illustrates key issues about broadcasting and the effect of monopolies in the early twentieth century.

The *Titanic* used wireless technology that was rapidly becoming obsolete. Marconi was not a scientist, and when he found an effective system based on previous scientific work and his own trial-and-error results, he used the patent system to freeze the technology into place and buttress his commercial monopoly. While research on better systems was taking place in smaller companies, such as Reginald Fessenden's National Electric Signaling Company, none of these had the commercial power of the Marconi company.

Figure 8.1 Radio entrepreneur—using trial and error techniques, Guglielmo Marconi found a way to transmit radio over long distances. With influential backing, Marconi patented early radio technology and commercialized radio telegraphy (Library of Congress).

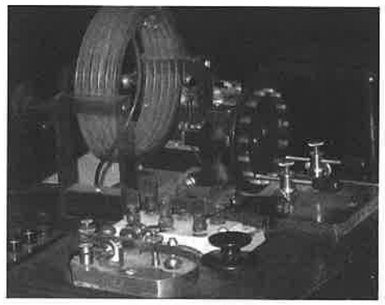

Figure 8.2 Wireless telegraph—this replica of a ship's radio telegraph shows the telegraph key and transmitter coils. Common on ships between 1900 and 1915, radio telegraphy often saved lives but tragically slowed the *Titanic* rescue efforts. (Photo by Linda Burton)

frequency waves. He also used high powered transmitters and larger, grounded antennas.

Marconi was not the first to think of using what we now call a "ground," but he was the first to use it specifically for radio signaling, and he was also the first to fully describe the commercial potential of long-distance signaling. He arrived at just the right time with the right financial and political backing connected with his family's Jamison Irish whiskey fortune.

In 1896, Marconi was introduced to officials in the British Postal Service who, just that year, were finalizing the purchase of the last remaining commercial British telegraph company. This was being done to avoid the information bottlenecks created by monopoly systems like Western Union in the United States. Having nationalized the telegraph system by merging it with the post office, postal officials now saw a duty to fully investigate an entirely new communications system.

In 1897, on a windy day on the Salisbury plains near the ancient Stonehenge monument, Marconi showed government officials a practical radio telegraph system that could send a signal for 6 kilometers (3.7 miles). Over the next few years, the range of Marconi wireless systems expanded with higher power amplifiers, and their value became obvious when radio helped rescue ships crews in distress off the English coast.

As radio began saving lives and money, insurance companies like Lloyds of London ordered ships to install the new devices. By 1900, the Marconi radio telegraph could be found on most large ocean-going vessels. In several cases, Marconi operators saved the lives of many passengers. For example, in 1910, an operator named Jack Binns became famous for using radio to save passengers on the HMS *Republic*—a sister ship of the ill-fated *Titanic*.

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Technically, the problem with the radio telegraph systems on the *Titanic* was that Marconi's "spark" system soaked up large segments of the bandwidth and created interference even when there were only a few ships on the vast ocean. As many engineers were realizing at the time, it was better to use continuous wave radio transmitters (where signals were carried inside the wave) rather than intermittent spark transmissions (where interruptions in the wave *were* the signal). A continuous wave could be "tuned" to allow a variety of frequencies. And it could use shorter wavelength radio transmissions, which carried over long distances by bouncing off the electrically charged outer layer of the atmosphere called the ionosphere—the region where auroras form. This more modern approach uses the ionosphere as a resource, rather than as an obstacle to be overcome, as was the case with Marconi's out-of-date, high-powered low frequency approach.

With large profits from international radio sales, Marconi could have investigated a variety of technical paths to improve radio. Instead, the company focused on a narrow technical path—low frequency, spark transmission, high power transmitters—that was initially successful but not flexible enough in the long run. In effect, said historian Hugh Aitken, the personal stubbornness that made Marconi a commercial success prevented him from envisioning a wider variety of engineering solutions to obvious problems. (Aitken, 1992)

"Now I have realized my mistake," he told an audience of radio engineers in a 1927 speech in New York city. "Everyone followed me in building stations hundreds of times more powerful than would nave been necessary had short waves been used" (Aitken, 1992). After the speech, Marconi laid a wreath at a small Battery Park memorial for Jack Phillips, the wireless operator who had gone down with the *Titanic*, still sending out distress calls to the last. (*The New York Times*, October 18, 1927).

Early radio technology

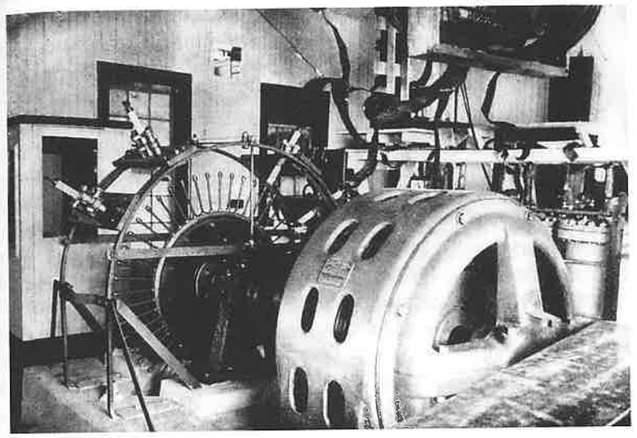
Technical development of radio kept expanding with new abilities to tune frequencies, to broadcast voice and music, and to deliver far more powerful signals.

One of the most startling was the 1906 Christmas Eve broadcasts by radio engineer Reginald Fessenden.

Around the same time, the problem of tuning the radio and broadcasting voice and music was solved with the invention of the "audion" (triode) tube by Lee DeForest, but the device would undergo many improvements before it became part of commercial radio broadcasting in the 1920s.

The electronics engineer who contributed the most to the development of radio was Edwin H. Armstrong, who devised and patented a new kind of radio tuning circuit in 1914. Bypassing DeForest's audion patents, Armstrong developed as system that took part of the current and fed it back to the grid, strengthening incoming signals. As a young man testing this concept in his house in Yonkers, NY, Armstrong began receiving distant stations so loudly that they could be heard

The Christmas Broadcast of 1906



Figures 8.3 and 8.4 Christmas broadcast of 1906—on Christmas Eve, 1906, operators in the "radio shacks" of ships around Cape Cod were sending and receiving routine messages in Morse code over the airwaves. Suddenly their headphones picked up a strange sound . . . Through the static, they heard a violin, playing O Holy Night. Even more astonishing . . . the voice of Reginald Fessenden reading a passage from the Bible. The Canadian radio inventor and entrepreneur had developed a continuous wave system to broadcast voice and music after years of experimentation in universities and with the US Weather Service. With the help of investors, he built a high-power continuous wave transmitting station in Brant Rock, MA, designed to compete with Marconi's spark transmitting system. Fessenden's financial backers hoped to sell the telephonic radio system to AT&T, but the company was not interested. Marconi, then dominant in radio telegraphy, stayed with spark technology until the *Titanic* disaster of 1912.

Figure 8.5 Exuberant inventor—Edwin H. Armstrong, inventor of FM radio and many other improvements to radio, was fond of climbing radio towers. He is seen here atop the 115-foot tall RCA radio tower in New York on May 15, 1923, opening day of RCA's Radio Broadcast Central.

without headphones, which were necessary until then. The story is that he was so excited he woke up his sister Cricket, shouting "I've done it! I've done it!"

Armstrong later found that when the feedback was pushed to a high level, the tube produced rapid oscillations acting as a transmitter, and putting out electromagnetic waves. He also developed FM (frequency modulation) radio, which had far less static than AM (amplitude modulation) radio.

Although Armstrong developed the electronic key to continuous-wave transmitters that are still at the heart of all radio and television operations, a bitter patent fight with RCA broke out. The fight was one reason that AM radio technology dominated commercial broadcasting until the 1960s.

But commercial radio was still a dream when, in 1914, amateur radio operators across the country formed the American Radio Relay League (ARRL). Soon afterwards, legend has it, a young Marconi employee, David Sarnoff, wrote a "radio music box memo" about the possibility of commercial broadcasting to Marconi:

> I have in mind a plan of development which would make radio a "household utility" in the same sense as the piano or phonograph. The idea is to bring music into the house by wireless. While this has been tried in the past by wires, it has been a failure because wires do not lend themselves to this scheme. With radio, however, it would seem to be entirely feasible.

The new system would be supported with advertising, rather than by subscription or government subsidy, Sarnoff said. While there is some historical controversy about the memo, there is evidence that Sarnoff pushed for commercial radio at the time.

Ideas about commercial radio had to be put on hold, however, with the outbreak of World War I, and all radio operations were suspended. Armstrong donated all his patents and know-how to the government to help fight the war, and served as a captain in the US Army Signal Corps.

The 'radio craze' of the 1920s

They called it the "radio craze," and after World War I, young people put on headphones and tuned into the weak signals from half a dozen major radio stations. The sets were so popular that Radio Corporation of America—the new US company created from American Marconi at the end of World War I—pushed its radio tube manufacturing from an average of 5,000 tubes per month in 1921 to over 200,000 by June of 1922. (By 1930, the number would rise to 125 million per month.)

Radio listeners originally heard a haphazard and eclectic schedule of literary readings, church sermons, foreign news and musical recitals put together at the whim and convenience of local radio stations. Only four station schedules were listed in *The New York Times* "radio section" when it was included in the newspaper in May, 1921, and of these, only one was near New York. The others were in Pittsburgh, Chicago and Springfield MA.

Consumer demand surprised everyone, especially the electronics industry, which was preoccupied with a complicated set of patent lawsuits between Edwin H. Armstrong and RCA, Westinghouse and AT&T. Their original plan was to freely broadcast educational music and high-toned programming, making money by marketing home radio receivers. But since demand for the receivers was already so high, the focus turned to a business model for radio broadcasting.

Some 732 radio stations were on the air in 1927, among them, the two stations owned by RCA in New York and Washington D.C. Other affiliates would form the two networks for RCA's National Broadcasting Company division. The affiliates were either in the Red network, offering commercial entertainment; or the Blue Network, originally to have news and cultural programs without sponsors. Also in 1927, a small group of radio stations formed the Columbia Broadcasting System headed by the young heir of a cigar company, William S. Paley.

Before radio could be a commercial success, the chaos in the airwaves had to be straightened out. After a failed attempt at voluntary regulation, Congress created the Federal Radio Commission (FRC) in 1927 with the idea that radio should serve the public interest, convenience and necessity. But the commission found "public interest" to be an elusive concept, and on August 20, 1928, the FRC issued General Order 40, a set of regulations that split radio licenses up into three classes.

Third class amateur radio operators were not permitted to broadcast news, weather, sports, information or entertainment. The FRC also confined them to an undesirable part of the AM spectrum. Second class medium-sized radio stations were assigned low broadcasting power and limited hours. Many of these were educational stations owned by unions, universities and churches. But they were labeled "propaganda" stations by the FRC.

Twenty-five "clear channel" first class radio stations were given strong frequencies, and of these, 23 were affiliated with NBC. They were not permitted to play recorded music, which meant that all music had to be live on the air. Only a very large company could afford its own in-house orchestra. In this way, radio became a centrally controlled national medium rather than a widely distributed locally controlled medium (McChesney, 1994).

Publicly, FRC commissioners said the educational stations differed greatly in their technical qualities. But privately, they hoped to do away with these "small and unimportant stations" by requiring four license renewals per year and by assigning them poor low-power frequencies. Within a year of the 1927 regulations, 100 radio stations had folded up, and by 1930 only a handful of the original educational stations remained.

Figure 8.6 Radio legend—David Sarnoff was a pivotal figure in twentieth-century broadcasting. According to one legend, now proven false, Sarnoff stayed by his telegraph key for days relaying news of the *Titanic*. Another legend, possibly true, was that Sarnoff envisioned the future of commercial broadcasting in 1915. However, there's no question that, as a longtime executive with RCA and NBC, Sarnoff put his personal stamp on the way radio and television broadcasting developed. (Library of Congress)

WNYC, a station owned by the city of New York, was among those assigned a part-time, low-power channel. The city appealed to the FRC and lost. Other stations, such as a handful of Brooklyn-based Jewish community stations, also lost in the rush to create a large central network.

The US process failed to make the best possible use of the medium, noted legal analyst Philip J. Weiser. In contrast, Britain, Australia and Canada created hybrid systems where both commercial and nonprofit educational stations coexisted and were funded by taxes on radio.

Fear of the power of the new media was one of the reasons that the US government excluded small nonprofit stations, but censorship was already taking place on many levels. Complaints about the treatment of controversial speakers were typical in the early days. Congressman Emanuel Celler of New York noted that speakers had been cut off in mid-sentence, plays had been censored and even political speeches had been edited before air time (*The New York Times*, May 29, 1927). Norman Thomas, a leading US democratic-socialist, warned that radio had lost the capacity for genuine discussion of great ideas in the rush to commercialism (*The New York Times*, March 30, 1934).

In idealizing radio policy, US president Calvin Coolidge, insisted that control remain in the hands of the government:

> "In its broad aspects, radio is a new agency brought by science to our people which may, if properly safeguarded, become one of our greatest blessings. No monopoly should be allowed to arise, and to prevent it, the control of the channel through the ether should remain in the hands of the government, and therefore of the people, as the control of navigation upon our waters; that while we retain the fundamental rights in the hands of the people to the control of these channels we should maintain the widest degree of freedom in their use. Liberty is not license in this new instrument of science. There is a great responsibility on the part of those who transmit material over the radio." (*The New York Times*, November 20, 1938)

But the reality was far from the ideal. The government promoted a monopoly radio network and shoved the small independent educational stations off into a corner, where most just gave up or joined NBC or CBS.

Radio licensing and censorship in the 1930s

It is not surprising that a system favoring tight content control would be the original framework for the new medium. Film, also relatively new at the time, was regulated for similar reasons. No one was sure what the social effects of the medium would be.

Some of the new programs and stations posed serious challenges to the emerging radio system. Licenses for two radio stations were revoked in the early 1930s by the FRC, which said that the stations were "sensational rather than instructive" in nature. John R. Brinkley, a Kansas City surgeon, used his radio station KFKB to advocate medically fraudulent implants of supposedly rejuvenating animal organs. When his medical license was revoked in 1930, the FRC also revoked the radio station's license. He moved the operation to Mexico, where his station was one of the most powerful in North America.

Two years later, the FRC also revoked the license of KGEF, a radio station owned by Rev. Robert P. Shuler and the Trinity Methodist Church. Shuler was a shrill muckraker who mounted extreme anti-Semitic attacks on corrupt politicians in Los Angeles. In denying the church's legal appeal, a federal court said radio was only an "instrumentality of commerce." The First Amendment did not apply to broadcasting, the court said, and the license revocation was simply an "application of the regulatory power of Congress."

This broadcast licensing case stands in sharp contrast with the 1933 newspaper censorship case, *Near v. Minnesota*, in which a state tried to shut down *The Saturday Press* of Minneapolis. The Supreme Court said that printed media, no matter how offensive, could not be censored outright, even though radio could be censored. Even so, as the 1930s progressed, other means of radio censorship would be employed.

The golden age of radio

Radio became the first "electronic hearth," helping bring families—and nations—together to face the crises of the 1930s and 40s. Media theorist Marshall McLuhan saw radio having a "re-tribalizing" effect, creating an electronic return to oral culture and representing a departure from literacy. Radio was also an extension of, and new twist on vaudeville and theater, and during its golden age in the 1930s and 40s, radio attracted the best entertainers in the world.

Originally, the NBC network, led by David Sarnoff, took a high-minded approach to public service. An advisory group of 17 prominent citizens helped shape the programming schedule with lessons in music appreciation, productions of Shakespeare, political debates and symphonies. By 1928, the network made its first profits (Smith, 1990).

Sarnoff "had a vision of what radio and television could become in terms of being informational, educational, cultural, relevant," said his great-nephew, Richard Sarnoff, in 2008. "He said 'OK, we've got radio, let's put Tchaikovsky on!' . . . The reason the

Figure 8.7 Radio clowns—actors Freeman Gosden and Charles Correll created the first big radio hit, *Amos 'n' Andy*, depicting comic slices of life in an African-American taxi company. Although offensive by modern standards, the show also provided occasional glimpses into the real-world dilemmas of American minorities. (Library of Congress)

broadcast media didn't end up being this public trust type of programming . . . is that radio and television is just so good at delivering audiences to advertisers. Business being what it is, whatever you're good at, you concentrate on, you maximize, and that ends up delivering value to your shareholders" (Auletta, 2010).

While "high-brow" symphonic and theatrical productions drew audiences, people were far more interested in popular entertainment. Vaudeville, the variety entertainment genre of theater, became the model for many local and national radio programs, provided a platform for comedians, musical variety and short dramas. Children's and family-oriented programs were also especially popular, and these included Western dramas and comic-book heroes.

The most popular show on radio at the end of the 1920s and all through the 1930 was *Amos 'n' Andy*. The show shamelessly stereotyped two African American taxi cab owners, but the roles were also complex and human. At first in 1926, white actors Freeman Gosden and Charles Correll syndicated the show by distributing recorded episodes. The show proved to be an unexpected hit, within a few years attracting 40 million listeners per episode—far more than any other program at the time. NBC contracted with Gosden and Correll in 1929.

"*Amos 'n' Andy* profoundly influenced the development of dramatic radio," broadcast historian Elizabeth McLeod said.

> Working alone in a small studio . . . (the performers) created an intimate, understated acting style that differed sharply from the broad manner of stage actors . . . The performers pioneered the technique of varying both the distance and the angle of their approach to the microphone to create the illusion of a group of characters. Listeners could easily imagine that that they were actually in the taxicab office, listening in on the conversation of close friends. The result was a uniquely absorbing experience for listeners who, in radio's short history, had never heard anything quite like *Amos 'n' Andy*.

The show was not only offensive by modern standards—it was also offensive to some people by the standards of the 1920s. Bishop W. J. Walls of the African Methodist Zion Church said it was "crude, repetitious, and moronic." A petition drive was taken up to have the show taken off the air. But *Amos 'n' Andy* was only mildly controversial in the African American community, since the show's two white

actors were favorite guests at Bud Billekin picnics and parades in Chicago. Nor is there any mention of controversy in several references to the show in *Chicago Defender* (Ellett, 2010).

This may have been because the show provided occasional glimpses into the real world of African Americans. For instance, at one point, the show depicted an innocent Amos undergoing brutal interrogation by police—an event not at all uncommon at the time. The National Association of Chiefs of Police took *Amos 'n' Andy* so seriously that they protested to the network, and the story had to be rewritten to show that it was nothing more than a dream.

Following the success of *Amos 'n' Andy*, high-brow symphonies and educational programs were pushed off the air, and radio comedies and dramas began to dominate. The public, anxious to escape the grim realities of the Depression, bought radios by the millions. NBC and CBS worked hard to keep up with the demand for programming.

One of the favorite and best-remembered radio dramas of the 1930s was *The Shadow*, a melodrama concerning a crime-fighter with psychic powers. Its opening line, delivered with manic and sinister laughter, was: "What evil lurks in the hearts of men? Who knows? The Shadow knows."

Apparently the FCC knew as well. The FCC objected when a Minneapolis, MN radio station allowed "certain words" (damn and hell) to go on the air when they broadcast Eugene O'Neill's play "Beyond the Horizon." And the FCC was "outraged" (even as audiences were "electrified") when, on December 12, 1937, NBC's

Figure 8.8 "Give me trouble"—Mae West got more trouble than she anticipated with a 1937 NBC comedy sketch about the Garden of Eden. (Library of Congress)

Eve: You don't know a thing about women.

Adam: You apparently forget you were one of my own ribs.

Eve: Yeah, I'm ribbed once, now I'm beefin'.

Adam: Me? I know everything about women.

Eve: That's covering a lot of territory. Listen long, lazy and lukewarm. You think I want to stay in this place all my life?

Adam: I do, and I tell you, you're one of my ribs.

Eve: Yeah, but one of your floatin' ribs. A couple of months of peace and security and a woman is bored all the way down to the bottom of her marriage certificate.

Adam: What do you want, trouble?

Eve: Listen, if trouble means something that makes you catch your breath, if trouble means something that makes your blood run through you veins like seltzer water, mmmm, Adam, my man, give me trouble.

Chase & Sanborn Hour carried a skit featuring Mae West and Don Ameche in the Garden of Eden. The skit depicts Eve as adventurous and hoping to "develop her personality." She was seen as bored with life in the Garden and encouraged Adam to "break the lease." At one point Adam asked what's wrong with life in the Garden, and West says, "give me trouble."

These provocative words led the FCC to issue a "stern reprimand" for violating the ethics of decency. The agency began considering how to deal more effectively with content on the radio networks—not just allowing or taking away station licenses, but reaching more into the core of the program development process.

Radio and the news

As radio became more popular, radio broadcasters were able to bring fascinating new sounds to the American public. From the volcanoes of Hawaii to the acoustics of a submarine, the microphone could go everywhere and try everything. Its power was particularly noticed during a prison riot on April 21, 1930, in Columbus, Ohio. A line to the radio station, which had already been installed months before to pick up the prison band, now carried the sound of a prison riot and fire. One prisoner, identified only by number, described the fighting and confusion that killed 317 men. "The microphone was at the heart of the grim tragedy, at times no more than 30 feet away from the crackling flames," said a *New York Times* account (*New York Times*, January 24, 1932).

Radio gained audience and advertising power during the Depression, increasing ad revenues 40 to 50 percent per year as newspaper advertising dropped. American newspaper publishers began to fear radio, fanning the "smoldering fires of opposition" to the new medium, as NBC radio president M. H. Aylesworth warned in 1930. Yet he argued that radio and newspapers are natural allies. "Gutenberg's conception of printing, coupled with Marconi's perfection of the radio, has armed society with its greatest weapon against darkness" (*The New York Times*, April 25, 1931).

NBC's olive branch did not win the friends the network NBC needed, and in 1933, the three wire services (Associated Press, United Press and International Press) agreed with the publishers association to boycott radio news. AP began with lawsuits against radios broadcasting their news without permission the next year.

CBS radio, at that time a far smaller organization than NBC, responded by creating its own news service. William Paley, president of CBS, found a sponsor for a news program and CBS had gathered 600 part-time reporters in major cities across the world. But in December of 1933, CBS and NBC succumbed to pressure from publishers and wire services to scrap individual broadcast news divisions and form a "Press-Radio" bureau. Under what was called the "Biltmore Agreement," the bureau would air two 5-minute broadcasts per day, except when issues of "transcendent" importance came up. The broadcasts would not be in prime time and they would refer listeners to their newspapers for more details.

Local radio stations more or less ignored the Biltmore Agreement, even though they now had no wire service access to national and international news. But the

Figure 8.9 Radio news—Edward R. Murrow and William L. Shirer fought with the CBS bureaucracy to create a news program from European capitols. With Murrow in London and Shirer in Berlin, Americans by 1938 began hearing some of the disturbing developments first-hand. (Library of Congress)

networks held back on news coverage until the 1936 elections. Tensions began running high between the networks and the publishers. For instance, when CBS gave *all* presidential candidates air time—including an unlikely candidate from the Communist Party—the Hearst *Journal-American* ran an editorial cartoon of CBS president Paley on a soap box waving a red flag.

One incident proving the value of radio news involved the May 6, 1927, Hindenburg disaster. Herbert Morrison was narrating the airship's landing, which was being recorded to be broadcast the next day on Chicago's WLS radio station. Morrison talked as the airship, arriving from Frankfurt, Germany, burst into flames as it attempted to land at the Lakehurst, NJ airfield. His exclamation "Oh the humanity" as he helplessly watched passengers die shows the deeply emotional nature of radio. The phrase has become an idiomatic cliché of the twentieth century.

Demand for radio news grew with the rise of tensions in Europe, and one of the talented young CBS news producers, Edward R. Murrow, was tapped in 1937 for the job of heading the network's European offices. Murrow was initially frustrated that his plans for wider coverage of Europe were not supported, but events on the ground were moving quickly. The Nazi takeover of Austria on March 11, 1938 was the first time that Murrow and other correspondents, such as William Shirer, were able to broadcast a full report from the field. NBC also broadcast the event, doing a better job than the CBS team. CBS president Paley, at this point, began to come around to Murrow's point of view, and then claimed to have invented the "World News Roundup" himself. Murrow and Shirer were hardly in a position to argue when they finally got the OK for their project.

As radio proved its worth, cooperation between radio news organizations and the wire services grew. By the 1938, as major events began overtaking minor disputes, AP stopped worrying about whether radio was carrying their news. Now all news organizations started focusing on the increasingly irrational demands of Nazi leader Adolf Hitler. In September, 1938, war was temporarily averted when Britain and French leaders met with Hitler in Munich, Germany and agreed not to intercede if the Nazis invaded part of the Czech Republic. Radio reports were now coming in daily, and audiences were becoming attuned to urgent news announce-

ments for the first time. Yet they were not accustomed to taking a critical view of the media.

Martian invasion panics millions

The whole thing began as something of a Halloween prank by a young theater director named Orson Welles. He had been hired by CBS to present noncommercial dramas such as adaptations of Treasure Island, Dracula, the Count of Monte Cristo, and Huckleberry Finn. CBS management hoped the productions, which had no sponsorship and no advertising, would help ward off FCC concerns about over-commercialization.

Welles and the under-funded Mercury Theater were always under tremendous pressure to present these Sunday night programs, and when the idea for an adaptation of H. G. Wells' *War of the Worlds* came up, Welles and others worried that it would be their least successful program to date. They decided to frame the narrative inside a series of newscasts to make it seem a little more realistic.

The show aired on October 31, 1938. Over the course of an hour, the Martian invaders traveled from their home planet, landed in New Jersey, released clouds of lethal gas and then took over New York. In the end, of course, the Martians were defeated by the humblest of earth's creatures, the bacteria. All within an hour.

Listeners panicked as they heard what seemed to be a news broadcast about an invasion. Without interruptions for commercial sponsors, station identification or even any warning that it was all just in fun, hundreds of thousands of listeners took to the streets, especially in New Jersey, as they attempted to flee the approaching Martians.

Figure 8.10 Martian invasion—radio and theater producer Orson Welles panicked millions of Americans with an hour-long program that used news bulletins to depict an invasion from Mars. Welles went on to produce and direct the movie "Citizen Kane." (Library of Congress)

John Housman later recalled that the script writers for the *War of the Worlds* did not believe the script was quite up to standard. They studied Herbert Morrison's Hindenburg disaster reporting as they rewrote it so that they could achieve the live news effect. "We all felt its only chance of coming off lay in emphasizing its newscast style—its simultaneous, eyewitness quality," Houseman said (Houseman, 1948).

Although no deaths or major incidents were reported, reaction to the prank was fairly strong. Within a month, some 12,500 newspaper articles were written about the broadcast (Hand, 2006). Houseman attributed the press reaction to its disdain for radio itself. "Having had to bow to radio as a news source during the Munich crisis, the press was now only too eager to expose the perilous irresponsibilities of the new medium."

A similar Spanish language radio drama based on the original Orson Welles script was broadcast in 1949 in Quito, Ecuador with a much more serious effect, according to historian John Gosling. The broadcast was interrupted when a full-blown panic emerged in the city streets. Thousands mobbed cathedrals for last rites. When the infuriated listeners realized they were victims of a prank, a mob set the radio station on fire, killing as many as 20 people (Gosling, 2009).

Censoring hate speech on the radio

If radio could convince people of a Martian landing, how much more damage could it do? As Hitler said, "By clever, constant propaganda, a people can be convinced that heaven is hell or that a miserable life is paradise" (Brown, 1939).

One American who attempted to prove Hitler right was Father Charles Coughlin, a Catholic priest with a syndicated radio talk show and 16 million listeners. Coughlin started out as a democrat, a union supporter and a champion of the oppressed working class. But by the middle of the 1930s, he had become so disgusted with Depression-era capitalism that he embraced fascism and anti-Semitic rhetoric, for example, calling FDR's "New Deal" the "Jew Deal." He also repeated German Nazi propaganda nearly word-for-word in his newspaper columns and secretly took money from Nazi front groups (Warren, 1996).

In the summer of 1938, Coughlin threw his arm out in a Nazi salute and told a rally of supporters: "When we get through with the Jews in America, they'll think the treatment they received in Germany was nothing" (Manchester, 1974). The treatment in Germany took a turn for the worse in November 1938, as Nazi party members destroyed synagogues and killed Jewish people across Germany in a pogrom called "Kristallnacht." Coughlin tried to defend it, saying that persecution was only natural since Jews had been "numerous among radical leaders" on the left, and that many Christians had been persecuted by communists in Russia.

It was a moment of truth for many Americans, who reacted with horror. It was a turning point for Coughlin as well, since NBC and CBS networks refused to pass along "errors of fact" and demanded Coughlin's advance radio scripts from that point forward. Coughlin refused, and continued his broadcasts through independent radio stations for another year. The Nazis trumpeted the censorship, saying Coughlin was not being allowed to broadcast the truth, even though censorship in Nazi Germany had risen to totalitarian levels.

While the FCC wondered how to approach content regulation, the National Association of Broadcasters changed the code of ethics to bar the sale of airtime for the presentation of controversial issues except in political races. The effect was to take Coughlin and others like him off the air permanently in 1939. "This new rule closed the one loophole that remained in the networks' and stations' ability to censor controversial opinion: the dollar loophole," said historian Michelle Hilmes. "The ability to pay was no longer [enough] . . . In fact, now broadcasters had an obligation to restrict all those outside the broad mainstream of political views" (Hilmes, 2006).

A few months later, in January of 1940, the FBI raided the secret New York hideout of 17 armed Nazi saboteurs who had been associated with Coughlin's group. Although

Figure 8.11 Fascism on the air—Charles Coughlin, a Catholic priest, ran a syndicated talk show that drew 16 million listeners in the mid-1930s. He began as a pro-labor reformer, but when he openly backed the Nazi party and its treatment of Jews, radio networks pulled the plug. (Library of Congress)

he tried to defend their ideas, it was clear that Coughlin had totally misunderstood American public opinion. He was forced by the church to retire from public life.

Coughlin also inspired counterpropaganda efforts. Rachel DuBois, a New Jersey high school teacher, started an influential radio program on diversity because she was infuriated with Coughlin when he yelled things like "This is a country for White Christians!" She proposed a series, financed by the Dept. of Education, entitled "Americans All, Immigrants all" that described the variety of ethnic streams that made for a diverse and stronger country (Hilmes, 2006).

Coughlin was one of several popular fascist Americans whose views were marginalized and undermined by network regulation during the years before World War II. The process was disconcerting to many who felt, at the very least, that Americans needed to understand what they would soon be fighting. But the security threat was real. German attempts to keep America neutral had been exposed in the Bolo Pasha-Hearst affair in 1917 (see Chapter 3) and similarly well-financed attempts to influence the American public were also taking place in the 1930s (Shannon, 1995).

"To permit radio to become a medium for selfish propaganda of any character would be shamefully and wrongfully to abuse a great agent of public service," said US President Franklin D. Roosevelt. "Radio broadcasting should be maintained on an equality of freedom which has been and is the keynote of the American press." (*The New York Times*, November 20, 1938).

Developing a governing philosophy of broadcasting

By the late 1930s, the power of radio was being seen as far greater than anyone originally imagined. To give First Amendment freedoms to the enemies of the First Amendment took faith in the American public.

On the one hand, many argued for freedom of speech and trust in the public. "The American people are not boobs," as one pundit picturesquely said (Saerchinger, 1940). On the other hand, the FCC had become increasingly concerned about controlling the content of the media. The Coughlin problem, the Mae West episode, the War of the Worlds panic and dozens of other issues provoked calls for outright censorship.

In FCC hearings in 1938, regulators talked about "the right of free speech and liberty of thought." The FCC chairman said censorship was "impracticable and definitely

Figure 8.12 Fireside chats—US President Franklin D. Roosevelt's "fireside chats" were an innovative use of media at the time. Roosevelt used them to reassure Americans during the Great Depression and rally the country during World War II. (Library of Congress)

objectionable," and then called for self-regulation of radio as the only traditional American way to avoid a plague of innumerable and unimaginable evils (*The New York Times*, November 20, 1938). The National Association of Broadcasters responded with changes in its voluntary code of conduct in 1939, effectively taking Father Coughlin off the air and advanced the idea of greater scrutiny of radio programming. While controversial ideas would still be heard on the air, they would be part of news programs or balanced panel discussions.

A formal FCC policy on fairness and objectivity, known as the Mayflower Decision, came in January 1941. The context was a contended radio station license in Boston, MA. Mayflower Broadcasting Corp. challenged the existing license holders because they endorsed political candidates. While not siding with Mayflower, the FCC agreed that the station (WAAB) had made a mistake when "no pretense was made at objective, impartial reporting."

"Radio can serve as an instrument of democracy only when devoted to the communication of information and the exchange of ideas fairly and objectively presented," the FCC said. "A truly free radio cannot be used to advocate the causes of the licensee [owner]. It cannot be used to support the candidacies of his friends. It cannot be devoted to the support of principles he happens to regard most favorably. In brief, the broadcaster cannot be an advocate. The public interest—not the private—is paramount" (*The New York Times*, January 18, 1941).

This policy was the precursor of the 1947 Fairness Doctrine, which applied to both radio and television, as we will see in Chapter 9. Since it was based in part on the idea of the scarcity of radio frequencies, courts upheld the Fairness Doctrine until 1984, when competition from other media made it clear that regulation of the marketplace of ideas was not necessary.

Radio in World War II

The long-expected shooting war arrived in Europe on September 1, 1939, when Nazi Germany's armies invaded Poland, although America would remain neutral for another two years. Radio became the way that Americans best understood what was at stake for the British as they faced the Blitz.

Edward R. Murrow is particularly associated with giving a human and dramatic flavor to news from London during the bombings of the early 1940s. His signature opening, "Hello America: This is London calling," was heard by millions around the world. Murrow would often report from rooftops with the sound of bombs and antiaircraft fire in the background, describing the gritty determination of Londoners and the hardships of the war.

Among the best remembered speeches in history is Winston Churchill's June 4, 1940 address carried on the radio: "We shall defend our island, whatever the cost may be. We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender."

Americans gathered around the radio when, on September 7, 1941, the Japanese bombed the US Naval base at Pearl Harbor, Hawaii. The next day, 81 percent of American homes listened to the radio as Roosevelt asked Congress for a declaration of war. Roosevelt's December 9, 1941 informal radio address the next day—one of a series of his fireside chats— is remembered for its eloquence: "We are now in this war. We are all in it—all the way. Every single man, woman and child is a partner in the most tremendous undertaking of our American history."

The war hardly meant unanimity of opinion in all things. Debates about the best way to go about defeating the Nazis, and how best to mobilize the American public, took place at many levels of society. As Hilmes notes, a group of prominent writers in the Office of War Information resigned in 1943 after objecting to advertising-agency and publicity style tactics that were aimed at manipulating rather than informing the public. They also objected to the way that home-front controversy was censored from news sent to the soldiers through radio and newspapers (Hilmes, 2006).

On the front lines, radio news reporters carried each twist and turn of the war to the home front. Radio news reporters were a brave and storied lot, climbing into bombers and broadcasting from the front lines of the war. Among them were Edward R. Murrow; Walter Cronkite, later to become the famed news anchor for CBS television; Chet Huntley, who became the NBC television news anchor; and William L. Shirer, whose 1960 history, *The Rise and Fall of the Third Reich*, would become a classic.

Cronkite's February 26, 1943 CBS broadcast gives a feel for the air war. Parts of the broadcast were obscured by static, so a full transcript was never made:

> In what should be the peaceful [unintelligible], up where the blue skies begin fading into only a haze, I witnessed a man-made hell of bursting anti-aircraft shells, of burning tracers, of crippled Fortresses, and exploding Nazi fighters, of men parachuting to a [unintelligible] plunge in the North Sea, and of other men not so lucky, plunging to death in fiery planes . . . those who made the supreme sacrifice for their country. For two hours I watched a vicious gun duel, so excited I had no time to be scared. That came later. I have seen what it's like to [unintelligible] in the dark, what it is like to fight German airmen and dodge German flak. We put our bombs just where they were supposed to go, but we paid a price. As you know, seven of our bombers did not come home. I guess we were lucky. Other formations felt the brunt of German fighter blows, and we watched Fortresses and Liberators plucked from formations around us as if an invisible hand had reached out and pulled them to the ground.

Cronkite wrote about the experience for United Press the following day, but the newspaper dispatch had only some of the immediacy and personal drama of the radio report (Walter Cronkite, "Hell 26,000 feet up," *The New York Times*, February 27, 1943).

In an outstanding broadcast at the war's end, Murrow described the notorious Buchenwald concentration camp:

> There surged around me an evil-smelling stink, men and boys reached out to touch me. They were in rags and the remnants of uniforms. Death already had marked many of them . . . As we walked out into the courtyard, a man fell dead. Two others, they must have been over 60, were crawling toward the latrine. I saw it, but will not describe it . . .
>
> I pray you to believe what I have said about Buchenwald. I reported what I saw and heard, but only part of it. For most of it, I have no words . . . If I have offended you by this rather mild account of Buchenwald, I'm not in the least sorry . . .

Figure 8.13 Women in radio—the contribution of women in World War II was as courageous as its depiction in this US Navy poster. (Library of Congress)

Murrow and colleagues had proven the value of radio news in ways that could have hardly been imagined a decade before. Colleagues in the print media did not allow Murrow to join the London Correspondents Club in 1937. By war's end, he had been elected the club's president (Sperber, 1998).

But radio news had its own particular problems that would extend into television. A single company would sponsor a news or entertainment show and expect the show's stars to attend the company's business functions, cut ribbons at factory openings and even invite company executives to their summer homes. Murrow had this relationship with the Campbell Soup Company, and the company followed his work very closely.

In a postwar "Hear it Now" show, Murrow described people in the town of Anzio, Italy, now recovering from heavy combat a few years beforehand. In the course of the report, Murrow mentioned that the mayor happened to be both Catholic and communist. The soup company started getting complaints from American listeners and even threats to boycott company products. A company advertising executive wrote to warn Murrow to be more pro-American in his reporting. "There are comments . . . that you are pink," the man warned, asking him to give "careful thought as to what to do about it." ("Pink" here meant slightly "red," which is to say, sympathetic to communism.)

The postwar Blue Book controversy

The structure of the news media has always been a contentious issue. During the 1920s, under a Republican administration, the FRC helped NBC and CBS networks establish dominance over the airwaves. But under the democratic administration of

Franklin D. Roosevelt, concentration of media power was considered to be a problem by the new Federal Communications Commission. In 1939, following a lengthy controversy, NBC was ordered to sell the Blue Network. It became the American Broadcasting Company (ABC), and the Supreme Court backed the FCC order up in 1943.

Attention turned once again to the structure and performance of radio at the end of the war. Since only a limited number of radio stations could use the publicly owned broadcast spectrum, the question became how well they were serving the public interest.

On March 7, 1946, the FCC issued "Public Service Responsibility for Broadcast Licensees," also known as the "Blue Book" report. The report expressed disappointment in the overcommercialization of radio, high wartime profits, a lack of public service programming, and generally lax quality standards in the industry. The report also insisted that broadcasters had an obligation to serve the "public interest, convenience, and necessity," and that obligation could be enforced by revoking station licenses (*The New York Times*, September 18, 1947).

"Shabby commercialism" and a "listeners be damned" attitude is how *Kiplinger* magazine depicted the issue in 1947. (Kiplinger, 1947) "Wayward" radio executives will not be punished by forcing them to listen to their own programs, said Charles R. Denny, FCC chairman, because that would be cruel and unusual punishment (*The New York Times*, October 24, 1946).

Meanwhile, a report by Robert Hutchins' Commission on Freedom of the Press devoted a chapter to radio (although it had primarily been concerned with newspapers and magazines, as we have seen in Chapter 3). The commission joined the FCC in its concern about commercialism in radio, saying that the networks and electronics companies had a responsibility to do more. "Unless broadcasters themselves deal with over-commercialism, the government may be forced to act. So far this challenge has produced little from the National Association of Broadcasters except outraged cries about Freedom of Speech and suggestions for a new code, which, of course, would not go to the heart of the problem." (Hutchins, 1947).

Broadcasters "howled" about free speech and encroaching communism, and said that a peril to press freedom could emerge when new technologies, such as newspaper-by-fax, allowed newspapers to be delivered via broadcasting (*Washington Post*, June 19, 1947). But newspaper publishers sided with the FCC, saying that broadcasters had to get their own house in order.

The controversy died down when the broadcasters issued a new code and Denny resigned in 1947 to take a job with NBC. But the complex question remained over how much pressure the FCC could put on broadcasters to improve their public service when station licenses were only rarely suspended or terminated.

Another regulatory issue emerged around the same time. Newspapers were refusing to accept advertising from businesses that also advertised on radio. The US Justice Department brought a case against the *Loraine Ohio Journal*, questioning its "refusal to deal" as a violation of antitrust laws. The Supreme Court agreed in the case *Loraine Journal v. United States* (1951), and the principle that advertising had to be accepted in competitive situations was established. Both cases would come up in subsequent media antitrust actions, such as the when the US Justice Dept. sued Microsoft in 1999 over its alleged refusal to deal with competing web browsers (see Chapter 11).

New competition for markets

Radio was at the center of news and entertainment during the war years, but afterwards, the rise of television meant that radio's original role as the "electronic hearth" and prime source of news and entertainment was becoming obsolete.

At this point, radio reverted to more local content as networks focused their efforts on television. Sometimes the local content focused on news and sports, but increasingly, radio turned to music that could be heard while driving or doing other things. It was inexpensive to program and, station owners found, it was increasingly appreciated by the post-World War II baby boom generation.

With universal technical standards for what was called high-fidelity music in the 1950s, a market for record sales began driving the content of a new kind of locally produced radio. The radio format was called Top-40, and its theme was a kind of competition between music artists to see whose record could become the best-selling top of the charts hit.

Typically, radio DJs (disk jockeys) would "count down" from the top 40, inserting commercials, announcements and wise-cracking commentary between three-minute songs. Some DJs became celebrities on their own right; probably the most famous in the 1960s was New York DJ, Murray the K (Murray Kaufman).

As the recording industry income grew, the pressures to promote records to teenagers grew as well. Underpaid DJs began taking various kinds of bribes to promote records, especially when a particular band would be coming to their city. Investigations in the 1950s and 60s led to criminal prosecutions for what was nicknamed "Payola" (Hilmes, 2006).

Congressional hearings looking into radio and television programming practices also found that television quiz shows had been rigged. Stronger regulations against bribery for music promotion or programming followed.

The recording industry, boosted by radio, doubled in size between 1960 and 1970 from $600 million to $1.2 billion in the United States and more than doubled again by 1980. Similar acceleration was seen in Britain, France, Germany and Japan (Gronow, 1983).

But as the radio audience grew, in part because of the postwar baby boom, content fragmented into a multitude of formats.

By the 1970s a fair-sized city might have a dozen separately owned radio stations, each with a distinct approach to music and culture, including Top 40, heavy metal, classic rock, golden oldies, middle of the road and classical symphonic music and "talk radio" programming.

This broad variety of programming was expensive to maintain locally, and in the 1980s and 90s, station owners turned to syndicated radio shows. Starting around 1981, radio stations could buy music program packages delivered by satellite at costs geared to market sizes. While this produced profits in the short term, over the long

term, radio again drifted into national syndication and began losing its local following and advertisers.

Ownership rules for broadcasting changed during the 1980s and 90s as well. Under the original FCC rules, ownership of radio and TV stations was limited to the "rule of sevens"—seven AM, seven FM and seven TV stations. The idea was to keep ownership local and thus encourage local broadcasting.

Then, in the 1996 Telecommunications Act, ownership regulations were lifted almost entirely as part of a sweeping reform of telephone, satellite, cable and broadcast industries. In theory, the act was supposed to allow a better efficiency of scale for radio. Dozens of aggressive radio companies would own several hundred stations each, and that would create more competition. But "merger mania" took over, and within five years, two major companies—Clear Channel and Viacom/CBS's Infinity Broadcasting—bought up several thousand radio stations and controlled all of the major radio markets. In some cities the entire radio spectrum was owned by only two companies (Boehlert, 2001).

The stations did not always play it safe—Infinity got into repeated trouble with the FCC due to indecency from "shock jocks" like Howard Stern—but the commercial and non-local orientation did not help make their media offerings more appealing.

And as it turned out, the Telecommunications Act of 1996 consolidated radio ownership and changed the landscape of community oriented broadcasting. There was hope at one point that low-power FM stations would be able to serve individual communities, but regulatory barriers remained throughout the first decade of the twenty-first century, according to the Prometheus Radio Project, one of the top advocates for low-power community FM.

Emergence of talk radio

One of the most important developments in radio during the late twentieth century involved the distribution of "talk radio" shows to older AM radio stations and mainstream FM stations. With 400 radio stations around 1990, talk radio grew to nearly 3,000 stations by 2010 (Pew, 2010).

A typical talk radio show would last from one to three hours daily and focus on political issues, often with telephone call-ins from listeners. Research by the Pew Center in 2004 showed that 17 percent of the public were regular talk radio listeners and tended to be male, middle-aged and conservative.

The talk radio format had partisan precursors in Father Charles Coughlin's Sunday talks, but also in the more balanced panel programs such as "America's Town Meeting of the Air," put on by NBC from 1935 to 1956. The end of the "Fairness Doctrine" in 1987 gave a green light to partisan political radio shows that became popular in the 1990s, when passionate conservative viewpoints connected with a popular market.

One of the first of the conservative talk radio success stories was Rush Limbaugh, whose show was carried on 600 Clear Channel network radio stations. Other conservative talk show hosts included Bill O'Reilly, Michael Savage and Glenn Beck.

Liberal talk radio is relatively rare in comparison, with hosts such as Ed Schultz, Stephanie Miller, Randi Rhodes and Bill Press. A network designed to carry liberal talk shows, Air America, started in 2004 but went bankrupt by 2010, partly because overall radio revenue fell by 20 percent or more per year in the economic recession. But Air America itself had problems. It was based on a broader and more expensive concept of audience service, business observers said. Another liberal talk radio program, Ring of Fire, relies mostly on a podcast subscription service to circumvent radio networks. Conservative talk radio programs are sold to individual radio stations and have their own individual following. Progressive radio "remains a solid business proposition" said Bill Press, but it takes business and radio experience first, and not ideology (Press, 2010).

Satellite radio

The idea for direct satellite radio service for consumers dates back to the 1980s, when new telecommunications satellite link-ups allowed programs produced in Los Angeles or New York to be broadcast through local radio stations. Bypassing the "middle man"—the small local radio station—seemed like an attractive business strategy.

Broadcasting directly to the consumer was technically feasible by the early 1990s, and the idea attracted great hopes. "A new technology will eventually compete with local stations," said media writer Edmund L. Andrews (*The New York Times*, January 13, 1995). But it was not until 1997, over the strong opposition of the National Association of Broadcasters, that the FCC finally approved satellite radio, with the condition that the two major entrants in the field—XM Radio and Sirius—never merge.

Within a decade, competition from other digital media was so strong that both satellite radio companies were on the brink of bankruptcy, and the FCC allowed the two companies to merge into one monopoly service that would compete against traditional radio. Despite a wide variety of programming, with hundreds of channels ranging from shock jocks to sports to all kinds of music genres, consumer barriers included the need for a specific satellite radio receiver in the car or at home, and the monthly subscription costs were relatively high.

Meanwhile, in the rest of the world, satellite radio became significant for its ability to promote development and international interconnections. Radio is the only accessible medium in many rural and developing areas, and several low-earth orbit satellites carry development and peacekeeping information programs from the United Nations to rural Africa, Asia and Latin America. Peacekeeping missions involve a mix of terrestrial and satellite transmissions for the Congo, Kosovo, Liberia, Haiti, Timor-Leste and other conflict regions.

Internet audio and radio streaming

Digital audio file exchanges were possible early in the history of the internet (see Chapter 11), but they were slow. In the early 1990s improvements in network connection speeds and file compression formats made audio exchanges possible.

For example, before the new compression format, a Mac or Microsoft audio file three minutes long might be 50 megabytes in size. Using networks common in the early 1990s, such a file might take two hours to transfer.

After new compression formats were introduced, the same file could be compressed to the size of about 5 MB with no apparent loss of quality. This new software format standard was set by the International Standards Organization's Motion Picture Experts Group (MPEG) (a similar group set the JPEG standard, as we saw in Chapter 4). The MPEG compression technologies were effective because they first removed the data in audio ranges that were not audible to the human ear.

The speed and ease of audio file exchanges, especially music downloads, became appreciated in the late 1990s when digital versions of popular music were exchanged through services like Napster (see Chapter 11). This free exchange of copyrighted music was opposed by the Recording Industry Association of America, and Napster was out of business in 2001.

Around the same time, Apple computers offered digital audio files that could be played on a small player called the iPod. They also introduced a network that allowed the sale of copyrighted music at reasonable prices. The iPod freed audiences from passive roles and allowed them to create their own playlists and even send their own podcasts back into the system. It was an instant hit.

As people began using iPods and other MP3 players more and more, radio audiences started shrinking, cutting revenue for both traditional radio stations and satellite broadcasters. In the US between 2008 and 2009, the percentage of people who spend less time with radio because of their iPods has increased from 37 percent to 42 percent and will probably keep rising.

Since nearly two-thirds of radio audiences are listening in their cars on any given day, the introduction of iPods or other programmable digital audio technology as standard in cars is having a major impact on radio audience size.

Other mobile devices, such as cell phones, are also allowing consumers to receive both live "streaming" and stored audio files in their cars and cell phones, wherever they go. These developments probably spell the end of the traditional radio broadcasting station. The people formerly known as the "audience" will now have the technology to easily pick and choose their own music playlists and talk programs without the intervening broadcast medium. Once again, a circumventing technology was used to undermine a monopoly.

The future of radio

From its earliest days, predictions about the future of radio involved many ideas that today seem impractical or even absurd. Some predicted that radio would help speed up crops growing in fields with a kind of fertilizing effect. Others predicted that radio microwaves could be used to send electric power over long distances without wires, an idea that is possible in theory but extremely dangerous in practice.

Over a century after the birth of radio, it turns out that its enduring value is its ability to accompany people as they do other things, such as walking, driving and working, in situations where video would be too distracting.

To the extent that music and talk programs are now available through new wireless technologies, the connection between telephones, cars and home computers will allow people to program a wide variety of music, news or educational experiences before or during these activities.

And so, one frequently made prediction for radio is coming true. The future of radio, Guglielmo Marconi said in 1928, involved its ability to avoid the expense of cable wiring. "The value of the cables has been very great," said the man who helped create wireless, "but I would hesitate to express an opinion about their future" (*The New York Times*, February 25, 1928).

9 Television: a new window on the world

If there are any historians about 50 or 100 years from now . . . they will find recorded in black and white, or color, evidence of decadence, escapism and insulation from the realities of the world in which we live . . . This instrument can teach, it can illuminate; yes, and it can even inspire. But it can do so only to the extent that humans are determined to use it to those ends. Otherwise it is merely wires and lights in a box. There is a great and perhaps decisive battle to be fought against ignorance, intolerance and indifference. This weapon of television could be useful. (Edward R. Murrow, 1958)

Television embodied the dream

As the central source of information and entertainment since the 1950s, television has reflected and shaped the hopes and fears of the age.

From its crude beginnings in the 1920s, television electronics rapidly improved with color, high definition, cable and satellite delivery systems in the late twentieth century. Through this electronic cornucopia came stories of conflict and reconciliation, reports of war and peace, parades of comically low-brow stuff, and, occasionally, works of genius.

Television embodied the dream of universal international communication more than its electronic predecessors. And yet when these dreams did come true, it exposed and compounded the clash of cultures as much as it contributed to peace and understanding.

In 1954, the United States had only three television channels (NBC, CBS and ABC) and Britain had two (BBC and commercial ITV). The range of programming and possibilities for television seemed limited. Nevertheless, the American radio industry threw everything it had into television, from talent to engineering, while the British held back, and retained radio as a medium for news and entertainment well into the twenty-first century.

But as the television medium crossed the millennia mark, longstanding trends undermined its once central position in the political world, while new digital technologies fragmented its channels, empowering its audiences—and its critics.

Early concepts of television

Advances in telegraphic and radio technology in the late nineteenth century led visionaries to imagine that, like electricity, light itself would soon be sent through wires. The "telephonograph" was just around the corner, and French artist Albert Robida, among others, imagined flat screen televisions that would soon be entertaining Parisians in their living rooms.

In 1898, British science fiction writer H. G. Wells wrote about a man waking up 200 years in the future and being introduced to new technology. "There is an optical contrivance we shall use . . . It may be novel to you. You stand in a very bright light, and they see not you but a magnified image of you thrown on a screen—so that even the furtherest man in the remotest gallery can, if he chooses, count your eyelashes" (Wells, 1898).

Even in 1925, with television on the threshold of feasibility, futurists were trying to imagine life with television. A British college professor A. M. Low drew this scenario in *The New York Times*: "At breakfast, which may come up by tube from a communal kitchen, a loud speaker will take the place of a morning paper, giving him all the news, while a 'television' machine will replace the daily pictorial newspapers . . . "

Science fiction was not that far ahead of reality, as it turned out. Building on work involving the light-sensitive properties of the element selenium, German inventor Arthur Korn developed a way to scan photographs and send the signal through wires—an early fax machine. A series of demonstrations around Europe in 1907 convinced police departments to use the device to exchange photographs of wanted criminals. "We can now send a not-too-complicated photograph over very long distances in six or seven minutes," Korn said. "The problem of television is not yet solved . . . the great difficulty is the speed required" (*The New York Times*, November 24, 1907).

"Now that the photo-telegraph invented by Prof. Korn is on the eve of being introduced into general practice," said *Scientific American*, "we are informed of some similar inventions in the same field, all of which tend to achieve some step toward the solution of the problem of television" (*Scientific American*, June 15, 1907).

The principles Korn developed would be tried in a dozen different ways before a gifted Idaho high school student named Philo Farnsworth conceived of a television system using an electronic scanning principle that lit up phosphorous on the back of a glass screen. Farnsworth demonstrated the television in 1928, but found he was in competition with Westinghouse engineer Vladimir Zworykin. A patent fight between RCA, Westinghouse and Farnsworth was eventually decided in Farnsworth's favor, but he is sometimes seen as

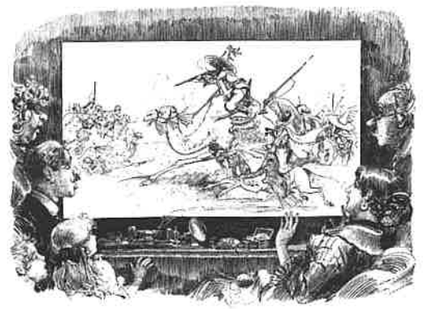


Figure 9.1 Future television—Albert Robida, a French artist, imagined the future of television in the 1880s with this sketch of Parisians watching a battle in the desert.

Figure 9.2 Inventor of TV—Philo T. Farnsworth (right) is seen directing a television production around 1928. (Photo courtesy University of Utah)

the last of the lone inventors in the mold of Thomas Edison. Invention now was becoming a group effort and a company product, especially in electronics.

Originally, Zworykin estimated that it would cost $100,000 over a year and a half to develop commercial television. Ten years later, after an engineering team spent $50 million, Sarnoff announced the "birth of television" at the World's Fair in New York on April 20, 1939:

> Now we add radio sight to sound . . . [Television is] a new art so important in its implications that it is bound to affect all society. It is an art which shines like a torch of hope in a troubled world. It is a creative force which we must learn to utilize for the benefit of all mankind. (Sarnoff, 1968)

Zworykin's RCA team developed four models that were first put on sale at the fair. Westinghouse, General Electric and other manufacturers also had competing versions, but prices were high—about the equivalent of a new car. Few of these television sets sold, and marketing plans had to be put on hold with the outbreak of World War II. Newspapers, radio and newsreels would inform the public during the war, but television audiences had to wait for the duration.

The transition from radio to television was not an easy one. The earliest programs simply radioed a view of an announcer or live theatrical productions staged for the camera. News was particularly difficult. "The notion that a picture was worth a thousand words meant, in practice, that footage of Atlantic City beauty winners, shot at some expense, was consid-

Figure 9.3 Torch of hope—David Sarnoff announces the birth of television at the World's Fair in New York, April 20, 1939, calling it a "torch of hope in a troubled world." (Library of Congress, LC-USZ62–91145)

ered more valuable than a thousand words . . . on the mounting tensions in Southeast Asia," said historian Eric Barnouw (Barnouw, 1970). Television news broadcasters also had to cope with network expectations of high profits to cover the costs of developing television technology.

FCC and the structure of post-World War II television

At war's end, the question of how to deal with controversial issues in the content of broadcasting was revived. The FCC's Mayflower decision of 1941 banned radio broadcasters from taking sides in controversies (see Chapter 8). Radio was seen as a neutral forum for the views of others, not a vehicle for the owners' political viewpoints. This changed somewhat as the war ended. One influence was the 1947 report from the privately funded Hutchins Commission. The report said that the underlying theory of media regulation should involve the duty of social responsibility in general. Especially important was the broadest possible access to information with fair representations of minorities. (Also see Chapter 3.)

Following this reasoning, the FCC reversed the Mayflower decision in 1949, allowing TV and radio broadcasters to take sides on issues so long as they also gave audiences a balanced presentation from all sides. This "Fairness Doctrine" became, until the mid-1980s, the guiding philosophy for rationing the publicly owned broadcast frequencies. The Fairness Doctrine was upheld by the courts through the years, for example in the 1969 *Red Lion Broadcasting v. FCC* case, but fairness proved difficult to enforce in the 1970s as contentious new issues emerged. Particularly difficult were demands by environmentalists to secure equal access to the airwaves and counter advertising claims of the oil and automotive companies.

The FCC also disagreed with the Hutchins commission recommendations in another area—how to deal with the scarcity of broadcast frequencies for television. The Hutchins commission recommended that more stations be licensed to prevent

Figure 9.4 First Lady's first show—former First Lady Eleanor Roosevelt hosted a weekly forum in the early years of television. Shown here on February 11, 1950, discussing "what to do with the hydrogen bomb" were, left to right: Senator Brien McMahon, Hans A. Bethe, Mrs. Roosevelt, David E. Lilienthal and J. Robert Oppenheimer. (Photograph by Leonard McCombe, Library of Congress)

the concentration of ownership. Instead, the FCC took the opposite approach in the 1940s and 50s, continuing a policy from the 1920s that constrained the number of broadcasters with the idea of producing higher quality content. Critics countered that the strategy had not worked with radio and probably would not work with television (Hilmes, 2006).

As prosperity increased in the postwar years, television programming and home television set sales boomed. By 1948, the United States had 108 television stations under construction or on the air, and most were affiliated with the big three networks or a few independent startups like the DuMont network. At this time, the FCC froze television station licensing in order to reexamine the technology. Yet at the same time, manufacturers kept churning out television sets that were not compatible with possible new higher quality technologies.

By 1952, one-third of all homes, or about 15 million, had television sets. Color television technology could have come online at this point, but the problem of "backward compatibility" meant that existing television sets would have to be considered. The technical problem, although somewhat arcane today, meant that the FCC had to choose between two rival systems—one advanced by NBC and the other advanced by CBS. The NBC system, with lower quality but high-powered lobbying, eventually gained the upper hand.

Confrontation on television: Murrow and McCarthy

The most important global political development of the post-World War II era was the start of the "cold war" between Western democracies and communist China and Russia. While communist leaders embraced a totalitarian ideology that suppressed freedom of speech, the Western democracies, including the United States, France, Britain and the Commonwealth nations, were determined to preserve individual human rights and free market economies.

Communism had an appeal to liberal-minded reformers in the 1920s and 30s, before its dark side was appreciated, but it was not particularly popular in the United States. Even so, the reaction to the communist military threat grew into a media-fueled national witch-hunt in the postwar years. One of the first of episodes was the 1947 investigation of communist influence in Hollywood movies by the House Un-American Activities Committee, as we have seen in Chapter 5. While no actual communist conspiracy was found, the political atmosphere had become highly charged with partisanship.

Amid growing tension, a relatively unknown US Senator named Joseph McCarthy (R-WI) catapulted to national fame in February 1950 when he claimed to have a list of communist spies operating in the US State Department. The reckless accusations were widely repeated in the media, but a Senate investigation led by Democrats that year labeled McCarthy's charges a "fraud and a hoax." The committee said that McCarthy's charges did nothing but "confuse and divide the American people [. . .] to a degree far beyond the hopes of the communists themselves." Republicans backed McCarthy and responded to the committee report with accusations of treason.

Radio and print media exposure fueled McCarthy's continued accusations during the early 1950s. Specific accusations were usually made from the safety of the Senate floor. But two major instances of television exposure dramatically changed public opinion about the corpulent, beetle-browed senator, in part because few had ever seen McCarthy up close or heard his arguments for more than a few minutes at time.

Figure 9.5 Seeing it now—Wisconsin Senator Joseph McCarthy speaks in front of a CBS camera in 1953. (Library of Congress)

McCarthy's first major television exposure involved 32 days of Senate hearings concerning charges that McCarthy had used his influence to obtain favors for friends in the Army. During April 1954, ABC television carried the hearings live from the US Senate, and many previous charges by McCarthy about spies in the Pentagon were exposed as fabrications that damaged innocent individuals. The high point of the hearings was the moment when the legal counsel for the US Army responded to a McCarthy charge by saying: "You've done enough. Have you no sense of decency, sir, at long last? Have you left no sense of decency?"

The second instance of extended television exposure was a classic confrontation between a journalist and a politician. CBS news broadcaster Edward R. Murrow, famed for his radio reports from London during World War II, had made the transition to television with a program called "See it Now." In one episode of "See it Now," Murrow told the story of a young Air Force officer named Milo Radulovich who had been classified as a security risk simply because his sister and father read a Serbian-language newspaper. In another, Murrow focused on McCarthy himself and the lack of substance behind most of his allegations.

Murrow concluded:

> We must not confuse dissent with disloyalty. We must remember always that accusation is not proof and that conviction depends upon evidence and due process of law. We will not walk in fear, one of another. We will not be driven by fear into an age of unreason, if we dig deep in our history and our doctrine, and remember that we are not descended from fearful men.

Figure 9.6 Murrow responds—CBS News editor Edward R. Murrow responded to Sen. Joseph McCarthy's reckless charges by urging Americans not be driven into an age of unreason. (Library of Congress)

McCarthy demanded equal time, and Murrow was happy to oblige, turning over the entire half-hour program. McCarthy directly attacked Murrow for friendships with left-of-center figures and supposed ties to communist groups. With no evidence and astonishing bluster, McCarthy succeeded only in exposing himself as a political bully. Conservatives with genuine concerns about communism began to see him as a liability,

and in December, 1954, the US Senate passed a motion to censure Sen. McCarthy. He died in 1957, abandoned by his party and his supporters.

Murrow, hailed as a champion of free speech, also came to be regarded as a liability by CBS network executives. News stories about cigarettes and lung cancer, about segregation and schools, about apartheid in South Africa were controversial. Some entertainment-oriented higher-ups thought Murrow was trying to "save the world every week" (Friendly, 1967).

In 1956, "See it Now" lost its sole sponsor (Alcoa Aluminum) and was transformed into an irregularly scheduled documentary series. By 1958 the program had been taken off the air. Simple controversy was one problem, but another factor was the profitability of easily produced quiz and game shows on other networks in adjacent time slots. "It was as though an highly successful amusement park had gone up across the street from a school, said CBS producer Fred Friendly. "Suddenly the property values had changed" (Friendly, 1967).

Murrow went on to work in the Kennedy administration as head of the US Information Agency. When he died in 1965, a colleague said "We shall live in his afterglow a very long time . . . we shall not see his like again" (Emery 1997).

Sputnik builds bridges among world "archipelagos"

The news on October 6, 1957 that Russia (the former Soviet Union) had launched a satellite around the world came as a shock to the United States and Western Europe, long accustomed to seeing themselves in the vanguard of science. The feat was hailed as a triumph of the communist system but denounced in the Western press as "political rather than scientific" (*Washington Post*, October 10, 1957).

Figure 9.7 Sputnik crisis—a Russian technician prepares the Sputnik satellite for launch in 1957. The launch was a wake-up call for US science. It led to the space race, promoted international telecommunications and inspired the defense computer networks that formed the technical foundation of the internet. (National Aeronautics and Space Administration photo)

The "Sputnik crisis," as it was called, revealed cutbacks in scientific research programs and gaping deficiencies in American scientific education. The reaction to the crisis in the late 1950s and 60s led to a chain of events and initiatives that had a profound international impact. Among the best known initiative was President John F. Kennedy's goal of sending astronauts to the moon by 1970. Others included the creation of the National Aeronautics and Space Agency (NASA) in 1958, new federal funding for science education, and new investments in computer hardware, software and networks that would, in time, form the basis of the internet (see Chapter 11).

The most visible side of the US space program was the competition with the Russians to put astronauts in orbit around the earth (the Russians were first with the spaceflight of Yuri Gagarin on April 12, 1961) and to land on the moon (which the United States accomplished in July, 1969). Also fairly visible were non-defense satellite projects such as the 1958 SCORE satellite and the Telstar communications satellite, launched in 1962 as a cooperative venture between the United States, Britain and France.

The first geostationary satellite was launched in 1964 and was used to send television broadcasts to the United States from the Summer Olympics held that year in Japan. The advantage of geostationary satellites, as first conceived by British science fiction writer and mathematician Arthur C. Clark in 1945, was that they were ideal telecommunications relays. Rather than pushing a signal through thousands of miles of wire, a broadcast signal could be sent through a dozen miles of atmosphere, and then through space without interference.

An important milestone was the 1964 formation of the International Telecommunications Satellite Consortium (INTELSAT), an international satellite organization with 143 member countries.

By the 1970s, satellites were being routinely launched to help broadcast unions and networks around the world uplink and downlink programs to affiliates. These allowed consumer television offerings to expand in the United States with Cable News Network, the Weather Channel and Home Box Office, and also allowed regional broadcasters to exchange programs at far lower cost than ever before.

These satellites allowed the exchange of broadcast information from all over the world for the first time. They also had an important secondary effect in that they required international cooperation in all kinds of standard formats for information interchange through United Nations groups (such as the International Telecommunications Union and the International Standards Organization). Some of these standards, such as those for photos and motion pictures, had an important influence on computer networks that are well known today. These included picture files called JPEGs (from the Joint Photographic Experts Group) and audio and video files called MPEGs (from the Motion Picture Experts Group).

"Young people today find it difficult to imagine how far we were . . . from the global view that now seems so familiar," said Raymond Frontard of the International Standards Organization in Geneva, Switzerland. "The earth did not yet shake at the slightest tremor in its most remote region. It was, instead, an archipelago of distinct worlds" (Frontard, 1997).

Television culture: golden age or vast wasteland?

The popular myth is that television of the 1950s and early 1960s reflected a golden age of a prosperous and contented time in American life. Yet the same complaints once vented about radio were heard once again, with more force, about television.

These included the lack of quality, overcommercialization of the public airwaves, under-representation of minorities and the unwillingness of the networks to sacrifice any profits for public interest programming in return for their use of a public resource.

An early platform for television critics involved hearings by Sen. Estes Kefauver (D-TN) on juvenile delinquency, starting around 1955. A host of witnesses testified about the many negative social influences on young people, including comic books, movies and violence on television. Network executives defended themselves by pointing to the National Association of Broadcasters Code of Conduct, most of which had to do with avoiding controversy over moral issues. The code also limited commercials to 6 to 10 minutes per hour at night and 10 to 14 minutes per day, but these limits were not always observed, especially among segments of the television industry that were less profitable.

Controversy continued over the effects of having single sponsors for television programs, one prime example being the impact on CBS News when Alcoa dropped its sponsorship of "See It Now." Eventually, the networks stopped the decades-old practice of having one sponsor per program and sold advertising by the time slot rather than on a single program basis.

Quiz show scandals

The most serious crisis for network television in the 1950s came with the quiz show scandals. In a 1959 Congressional investigation, witnesses testified that the shows had been fully scripted and that contestants had been coached to give right or wrong answers. Americans were shocked. Even President Dwight Eisenhower said it was "a terrible thing to do to the American public."

Figure 9.8 Quiz scandal—quiz show "21" host Jack Barry turns toward contestant Charles Van Doren in 1957 as fellow contestant Vivienne Nearine looks on. Two years later, Van Doren would confess to a Congressional Committee that he was "deeply involved in deception." (Photo by Orlando Fernandez, Library of Congress)

One of the contestants, Charles Van Doren, confessed to the Congressional committee: "I was involved, deeply involved, in deception . . . I realize that I was really giving a wrong impression of education. True education does not mean the knowledge of facts exclusively. I wrote articles trying to express this feeling but few were interested. Instead, I was referred to as a 'quiz-whiz, a human book of knowledge, a walking encyclopedia'" (*The New York Times*, November 3, 1959).

No federal laws had been broken by the deception, although that soon changed as the FCC wrote new regulations to enforce a more honest approach in such shows. But it was also the abundance of cheap, easy to produce, yet highly profitable quiz and game shows that bothered media critics.

Vast wasteland

Most of what television presented to the public over the first few decades of its life was not memorable or even significant for its time. An endless parade of trivial entertainment was enough to capture eyeballs and boost network profits. But there were notable exceptions.

Perhaps the most popular entertainment program of the age was *I Love Lucy*, a situation comedy that concerned Hispanic band leader Desi Arnaz and his ditzy but loveable wife Lucille Ball. The show's themes often verged into controversial areas, such as alcohol content in medicine (which made Lucy drunk when she filmed a commercial) or sweatshop labor (in a scene where she couldn't keep up with the conveyor belt, much like a similar scene in Charlie Chaplin's *Modern Times*). Other comedies of the time, such as *Gilligan's Island* and *Donna Reed*, reflected white American values but not much in the way of substance.

Westerns were popular venues for social commentary, and shows like *Bonanza* and *Gunsmoke* (which evolved from a radio series) frequently involved themes of justice and the treatment of minorities and women. Still, violence was the usual solution for problems and minorities were badly stereotyped. While mild controversy was tolerated and sometimes even celebrated, real social issues and serious change were rarely considered until the 1970s, when programs like Archie Bunker and MASH went on the air.

The idea of television as a "vast wasteland" came up in a speech by a newly appointed FCC commissioner Newton Minow as he addressed an audience of the National Association of Broadcasters on May 9, 1961. The phrase became a cliché for television critics who advocated more public interest programming. Minow said:

> "When television is good, nothing—not the theater, not the magazines or newspapers—nothing is better. But when television is bad, nothing is worse. I invite each of you to sit down in front of your own television set when your station goes on the air and stay there, for a day . . . until the station signs off. I can assure you that what you will observe is a vast wasteland. You will see a procession of game shows, formula comedies about totally unbelievable families, blood and thunder, mayhem, violence, sadism, murder, western bad men, western good men, private eyes, gangsters, more violence, and cartoons. And endlessly commercials—many screaming, cajoling, and offending. And most of all, boredom."

Television executives worried about the speech, saying that while there was always room for improvement, having the chair of the FCC as their chief critic was uncomfortably close to government censorship. "At what point does criticism become coercion?" asked NBC president Robert Sarnoff in 1961. "Where does freedom leave off and interference begin?" (*The New York Times*, December 8, 1961, p. 1). Despite the protests, broadcast journalism as a public service expanded greatly by 1962, with over 400 documentaries produced that year by the three networks (Hilmes, 2006). By 1963, the 15-minute evening news programs had expanded to half an hour.

Minow was happy but not entirely satisfied with the scope of the improvements in public service programming. However, the only tools the FCC had were license revo-

cations (extremely rare) and the ability to encouraging competition. One way to boost competition was to expand the available channels to UHF, and under Minow, the FCC passed a regulation that new television sets would have to be capable of picking up the higher-frequency channels. Many of these independent television stations would, by the 1970s, be linked together in satellite and cable television systems that Minow also championed.

Another form of competition was the introduction of a public education channel. The Corporation for Public Broadcasting was first authorized in 1967, and PBS went on the air in 1970.

Television and the US presidency

Television was not taken too seriously in its early days, and advertising for the 1952 Eisenhower presidential campaign featured a cartoon of Uncle Sam and an elephant leading a brass band in a parade with a catchy musical jingle. His opponent, Adlai Stevenson, took a dim view of campaign ads on television. "The idea that you can merchandise candidates for high office like breakfast cereal is the ultimate indignity to the democratic process," he said. He had the same idea in 1956, when he ran, and lost, again.

Television became a serious factor in the 1952 campaign when vice-presidential candidate Richard Nixon was accused of taking $16,000 in bribes for campaign expenses. Eisenhower was just on the verge of replacing Nixon, six weeks before the election, when, on the advice of aides, Nixon bought a half hour of prime time TV.

From the well-lit set of a Los Angeles theater, Nixon explained that the fund was legal and intended for campaign expenses. He also spent time explaining his personal finances and work-ethic background and praising Eisenhower. The speech was remembered because, to clinch public support, Nixon said that he had only taken one gift—a cocker spaniel dog named Checkers that had been sent to his children. Most Americans were impressed by the sentiment of the speech. Public opinion overwhelmingly shifted to Nixon, but the huge wave of support was, to Walter Lippmann, "disturbing . . . with all the magnification of modern electronics, simply mob law" (Morris, 1990).

After a few years in office, Eisenhower opened the doors to television cameras at press conferences. The print and radio media were not happy, because the presence of television tended to formalize meetings that had been relatively informal until then. The new realities of television also meant that important political announcements had to be made by 2.00 p.m. eastern standard time in order to be reported on the evening news. "After Eisenhower, television was no longer a novelty, but a central premise in all political logic," said Roderick P. Hart (Hart and Triece, 2010).

Although he was one of the first politicians to effectively use television with his "Checkers speech," Nixon performed poorly during television debates with John F. Kennedy during the presidential campaign of 1960. It was the first time that candidates of the two major parties faced each other on TV, and the contrast between Kennedy's calm demeanor and Nixon's apparent unease on camera was apparent. The series of four nationally televised debates moderated by members of the press would

Figure 9.9 Confrontation in Moscow—then US Vice President Richard Nixon (right) pokes a finger at Russian Soviet Premier Nikita S. Khrushchev in 1959 at a US exhibit in Moscow, Russia depicting the average American home with a stove, washing machine, radio and other appliances. With television cameras rolling, Khrushchev said he didn't think the average American could afford such a home. Nixon responded: "Diversity, the right to choose, the fact that we have 1,000 builders building 1,000 different homes is the most important thing." (Photo by Thomas J. O'Halloran, Library of Congress)

Figure 9.10 Presidential debate—the first presidential debates on television took place in 1960 between Richard Nixon and John F. Kennedy. The debates were crucial in the election, and most people believed that Nixon did not come across well on television. Nixon avoided debates in the 1968 and 1972 presidential campaigns. (Library of Congress)

not be repeated until 1976, but the presidential debate has become a fixture of presidential races ever since.

The significance of television as the central medium of the post-World War II era came into sharp focus with the assassination of President John F. Kennedy on November 22, 1963. CBS news anchor Walter Cronkite was eating lunch at his desk when a wire editor burst in with the news that Kennedy had been shot in Dallas. Someone must have asked him what he would write, because he yelled: "The hell

with writing, just give me the air." When Kennedy's death was confirmed an hour later, Cronkite choked up on the announcement and paused to wipe away tears, quietly expressing the profound sense of grief and shock shared by the nation and the world. People gathered around television sets, finding not only news but also a sense of social cohesion and resilience in the face of catastrophe. "Before that, TV had been a theater and a sports stadium," said CBS producer Don Hewitt. "All of the sudden it became a sort of chapel where Americans went to hold hands with Cronkite. He was everyone's anchor, and everyone's clergyman" (Garvin, 2009). Similar scenes, where people gathered for days around their television sets, would be repeated world-wide in subsequent disasters, such as the September 11, 2001 attacks that destroyed the World Trade Center.

If television could be a chapel, it could also be a political wrestling arena, as President Lyndon Johnson proved with one of the first negative campaign ads aired briefly during the 1964 presidential campaign. It only aired once, but the publicity surrounding the ad brought it to everyone's attention, and it was a factor in President Lyndon Johnson's victory over Barry Goldwater. The ad was targeted at Goldwater's idea of using nuclear weapons in Vietnam. It begins by depicting a young girl picking the petals off a daisy and counting. But when she reaches nine, she looks up in the sky as an ominous male voice counts down to a nuclear explosion. Johnson's voice says: "These are the stakes! To make a world in which all of God's children can live, or to go into the dark. We must either love each other, or we must die." Another voice then says: "Vote for President Johnson on November 3. The stakes are too high for you to stay home."

A similar ad attacking Democratic candidate Hubert Humphrey in 1968 had positive images and bandwagon music dissolving into headache-inducing reverb effects and photos of riots and the Vietnam War. Attack ads in other campaigns included the infamous "Willie Horton" ad of the 1988 campaign, in which Democratic candidate Michael Dukakis was attacked for being the governor in a state where a convicted murderer got out on parole; and the "swift boat" ads that attacked the military record of presidential candidate John Kerry in the 2004 campaign.

Overall spending on political campaign TV advertising reached an estimated $2.5 billion in 2008, up significantly from $1.6 billion in 2004 and about $800 million in 2000. Television advertising consumes about 80 percent of overall campaign resources and has become the dominant factor in political campaigns.

Vietnam—the first living room war

The impact of television on public opinion during the Vietnam War remained a contentious issue well into the twenty-first century. The traditional myth was that the "living room war" proved too horrible for sensitive Americans and had a morale-sapping effect. Then-president Richard Nixon said: "Our worst enemy seems to be the press" (Hammond, 2007). "Public support for U.S. involvement in Vietnam declined drastically once the television networks began suggesting that the war was a stalemate" said media critic Stephen J. Farnsworth (Farnsworth and Lichter, 2007).

The idea that the press "lost the war" through its negative coverage has an eerie similarity to the Dolchstoss "stab-in-the-back" myth that Germans used to explain their defeat in World War I. "The entire vernacular of American politics has been altered" by the use of the Dolchstoss myth about Vietnam, observed Kevin Baker in 2006 (Baker, 2006; Lembcke, 1998).

Closer studies of television and public opinion in the Vietnam era show a far more complex picture, and the steady drop in public support for the war seems unrelated to any one set of events or images, but rather, to highly public national debates about its overall purposes and conduct which were carried in the media as a matter of course.

One controversial incident involved a 1965 report about the burning of the small village of Cam Ne. CBS news correspondent Morley Safer watched as American soldiers burned thatched-roof huts while elderly Vietnamese stood by helplessly. "This is what the war in Vietnam is all about," Safer said to the camera, as a soldier set an old man's roof on fire in the background. "The marines are burning this old couple's home because [gun] fire was coming from here. The day's operation burned down 150 houses, wounded three women, killed one baby, and netted four prisoners." The incident sparked immediate public controversy and an outraged phone call to CBS president Frank Stanton from then-President Lyndon Johnson, indicating the important role that television images had taken on in the national debate over the war.

Other dramatic television and photographic images from the war included a napalm attack on a village that resulted in injuries to children and the street execution of a suspected Viet Cong insurgent. Television news tended not to broadcast more serious images of the US massacres, such as My Lai, and tended to support the US position on the extent of Viet Cong atrocities such as the Hue massacres of 1968.

Historians Daniel Hallin and William Hammond reviewed years of television coverage of the war and found that most television news was upbeat in the early years. The occasional negative report, although inevitable in war coverage, was greatly outweighed by the sympathetic light in which American soldiers were invariably seen (Hallin, 1986).

Hammond, a military historian, challenged assertions that the media lost the war by swaying public opinion. In an encyclopedic set of books, Hammond said the media tended to follow rather than lead public opinion. While government and the press shared a common vision of containing communism in the early years of the war, upbeat government press releases were challenged by journalists' experiences in the field. As public sentiment shifted, Presidents Lyndon Johnson and Richard Nixon each tried unsuccessfully to manage the news media to project an image of success even though the military and strategic picture was discouraging.

One turning point in the war was the 1968 in-depth report from experienced World War II correspondent Walter Cronkite, then anchor of CBS news. While nuanced and respectful, Cronkite concluded that the military was not winning or losing the war, but rather the "bloody experience of Vietnam is to end in a stalemate." Johnson took Cronkite's disaffection with the war so seriously that he told advisor Bill Moyers that if he'd lost Cronkite, he'd lost middle America (Halberstam, 1979; Murray, 1999). Was this a factor in Johnson's decision not to run in the 1968 election?

Figure 9.11 Bowing out—President Lyndon Johnson makes a surprise announcement that he will not run again for president in 1968. The impact of the televised Vietnam War was a factor. (Courtesy Lyndon B. Johnson Presidential Library)

Some historians say the influence of television was exaggerated, and Johnson had other things on his mind (Campbell, 2010).

Civil rights and television

Television was the medium that the civil rights movement needed to get its message to the American people. Although gruesome photographs of Southern brutality had been widely circulated, nothing caught the conscience of the world like the televised images of snarling police dogs turned on demonstrating children in Birmingham, AL, or the cruel clubbing of civil rights demonstrators amid clouds of tear gas at the foot of the Edmund Pettus bridge in Montgomery, AL on March 7, 1965. Meanwhile, churches, homes and shops with ties to the civil rights movement were being bombed, and television carried the stories.

At a time when American soldiers were fighting communism in Vietnam, the images of embattled civil rights demonstrators were deeply embarrassing for the administration of President Lyndon Johnson. A renewed commitment to civil rights, and national legislation stiffening laws against voter intimidation, were among the direct results of the new awareness brought about by television.

"The ascendancy of television as the new arbiter of public opinion became increasingly apparent at this time to civil rights leaders and television news directors alike," according to the Museum of Broadcast Communications. Yet the television audiences in the South closest to events of the civil rights era were often kept in the dark. Many southern TV stations routinely cut national network feeds of civil rights coverage, often pretending that they were having technical difficulties. Newspapers were also neutral or quite often hostile to civil rights in the 1950s and 60s, and usually omitted wire service coverage of civil rights issues unless there was a white "backlash" angle. (Important exceptions included the *Atlanta Constitution* or the Greenville, MS, *Delta Democrat-Times*).

While newspaper publishers were free to do as they pleased under the First Amendment, broadcasters had an obligation to fairness under Fairness Doctrine, and their station licenses were controlled by the federal government. Broadcasting offered more opportunity to force change than the print media.

The WLBT–United Church of Christ case

Beginning in 1954, a group of civil rights activists began studying the pattern of racially biased news and public affairs programming on television in the South. The Jackson, Mississippi chapter of the NAACP filed repeated complaints with the FCC about one particularly racist television station, WLBT in Jackson. Requests for a public hearing when the station license came up over the years were consistently turned down by the FCC.

In May, 1963, the pressure led WLBT to make one small concession. The station allowed a charismatic civil rights leader, Medgar Evers, on the air to speak about the need to end segregation. Three weeks later he was assassinated at his home in Jackson.

Around this same time, the United Church of Christ, a liberal national church from the Congregational tradition, met with Martin Luther King, Andrew Young and others to work on methods for challenging the southern broadcast media. Dr Everett Parker, a professor at Yale Divinity School, became involved because he had developed a method of content analysis that would hold up under the FCC review process.

"I really looked at stations throughout the (region), from New Orleans to the East Coast, and found that it was a very bad situation," he said in a 2008 interview. "When Thurgood Marshall won Brown v. Board of Education and was on NBC, [WLBT] put up a sign—'Sorry, cable trouble'—and blamed it on the telephone company. But anyway, I hit on WLBT, simply because of the terrible things that it was doing" (Goodman, 2008). WLBT also blacked out an award-winning three-hour NBC documentary on civil rights, "The American Revolution 1963."

When WLBT applied for what it thought would be a routine renewal of its broadcasting license in 1964, the church and a coalition of Civil Rights leaders formally challenged the license. They charged that the station blacked out nationally produced civil rights news about nearby events; had promoted race-hating points of view without balance or regard for the Fairness Doctrine; and refused to feature African American speakers in any context, even on Sunday morning church service broadcasts.

The WLBT response was typical for stations whose licenses were challenged: It ginned up a list of all its public service activities from its log books, including service to the African American community. Usually complaints would stop at this point, and in effect be buried in red tape. But the coalition had an ace up its sleeve—it responded that the

Figure 9.12 Television and civil rights—the impact of television on the civil rights movement was profound, not only from the standpoint of live coverage of the 1963 "I have a dream" speech by Rev. Martin Luther King at this March on Washington, but also in terms of conveying the suffering and brutality of white Southern resistance. The civil rights movement also changed television, at least to the extent that reformers who challenged television licenses could finally get a hearing before the Federal Communications Commission. (National Archives)

station's log books were highly inaccurate, and presented evidence from Parker's content analysis, which had been kept secret up until that point.

The back story behind the content analysis group is that white faculty members at nearby Millsaps College kept detailed logs and recordings of WLBT's programs. The group met in secret and kept their names confidential; even Parker could not reveal their identities if he were to be captured by the white power structure of Mississippi. "Don't forget, this was almost immediately after the murder of Medgar Evers," Parker once told an interviewer.

In a formal hearing, the FCC denied the United Church of Christ "standing" in the case, meaning that they had no formal right to come into the agency's legal process and argue their case. Without remarking on the facts of the case, the FCC renewed the WLBT license for one year. Usually, the bureaucratic procedure at this point would be for the station to show evidence that it was mending its ways, but the WLBT management had a deep ideological commitment to segregation and remained defiant (Horwitz, 1997).

The church appealed the decision to a federal court. The UCC attorneys did not really expect to win both the case and the much larger battle over FCC's regulatory procedure. Yet in 1966, the appeals court ruled that the FCC would conduct public hearings on the license and that the citizens would have standing before the FCC. The court decision, written by Judge Warren Burger (who would later become the Chief Justice of the US Supreme Court) eloquently restated the longstanding tradition of broadcast regulation:

> "A broadcaster is not a public utility . . . but neither is it a purely private enterprise like a newspaper or an automobile agency. A broadcaster has much in common with a newspaper publisher, but he is not in the same category in terms of public obligations imposed by law. A broadcaster seeks and is granted the free and exclusive use of a limited and valuable part of the public domain; when he accepts that franchise it is burdened by enforceable public obligations. A newspaper can be operated at the whim or caprice of its owners; a broadcast station cannot. After nearly five decades of operation the broadcast industry does not seem to have grasped the simple fact that a broadcast license is a public trust subject to termination for breach of duty . . .
>
> Under our system, the interests of the public are dominant. The commercial needs of licensed broadcasters and advertisers must be integrated into those of the public. Hence, individual citizens and the communities they compose owe a duty to themselves and their peers to take an active interest in the scope and quality of the television service which stations and networks provide and which, undoubtedly, has a vast impact on their lives and the lives of their children . . . The 1964 renewal application (for WLBT) might well have been routinely granted except for the determined and sustained efforts of Appellants (the civil rights church coalition) at no small expense to themselves. Such beneficial contribution as these Appellants, or some of them, can make must not be left to the grace of the (Federal Communications) Commission." (*United Church of Christ v. FCC*, 1966)

The public hearing ordered by the court took place in May, 1967, in a small room in the Jackson, Mississippi Post Office, because state officials refused access to other public buildings. The room was overflowing with WLBT supporters waving Confederate flags, and the FCC hearing examiner treated the church coalition with obvious contempt.

In the face of this official prejudice, Charles Evers testified that WLBT had created the atmosphere that led to the assassination of his brother Medgar four years beforehand (Horwitz, 1997). After considering the evidence from the hearing, the FCC commissioners renewed WLBT's license in a bitterly split 1968 decision. But the decision made the Court of Appeals furious, and in a 1969 ruling, the higher court said the FCC's conduct was "beyond repair."

In an unprecedented move, the Court of Appeals ordered the FCC to vacate WLBT's license and hold hearings to consider new applicants. The coalition organized an integrated group, Communications Improvement Inc., and proposed a unique arrangement, splitting station profits between public broadcasting in Mississippi and Tougaloo College in order to teach communications to African American students. Communications Improvement Inc. got the license, although the continuing legal battles would not be resolved until 1983.

The success of this one case in which a license was revoked for public interest reasons did not lead to long-lived reform, said communications scholar Robert B. Horwitz. "The really sobering thought is that the old broadcast reform coalition has clearly collapsed, and a new . . . conservative movement . . . seeks to limit standing, curtail the ability of citizens to bring legal actions and diminish public intervention in general." It has become increasingly difficult to approach reform with a non-market theory of public interest, he said (Horwitz, 1997).

Although television's powerful images of the civil rights struggle helped Americans understand its human dimensions, TV coverage of rioting following the assassination of Martin Luther King in 1968, and of other riots in Watts, Detroit and Washington, D.C. in the 1960s "provoked a reaction by the end of the decade, marked by the presidential campaign slogans calling for law and order," said the Museum of Broadcast Communications. "Consequently, many of the very images that supported the movement simultaneously helped to fuel the national backlash against it" (MBC, 2010).

Television stars join activists

In the wake of the Medgar Evers assassination and the controversy over racism at television station WLBT, students at Tougaloo College began a letter writing campaign to ask performers visiting Jackson, Mississippi to cancel their appearances in protest of segregated music halls and fairgrounds. Many did, including Original Hootenanny USA, trumpet player Al Hirt, and piano player Gary Graffman.

The cast of *Bonanza*—Lorne Greene (Ben Cartwright), Michael Landon (Little Joe) and Dan Blocker (Hoss)—also agreed with the students and canceled a contracted appearance at the county fair in January, 1964. Blocker even sent a telegram to the Jackson *Daily News* explaining that he was disgusted with residents of the town. In response, Jackson's two daily newspapers started a "black out Bonanza".

campaign, but local ratings remained unchanged. "Most white viewers, when pressed to choose between enjoying a favorite television show or upholding the claims of racial segregation, chose the former," said historian Michelle Hilmes (Hilmes, 2006).

Only a few months later, in April, 1964, a *Bonanza* episode featured the story of an opera singer who had been invited to come to Virginia City. When the singer arrives, people realize for the first time that he's an African American, and a variety of prejudiced reactions result. He's also jailed on a mistaken warrant as an escaped slave, and the Cartwrights have to help straighten out the problem.

"The importance of appealing to the uncommitted middle in achieving a solution to the racial problem was related in the final scene, when the singer forgets his humiliation and gives his concert," a *New York Times* reviewer said. The show "added to the stature of popular TV entertainment." General Motors, the sponsor of *Bonanza*, was concerned about potential controversy, but NBC executives for once stood firm against the sponsors (*The New York Times*, April 27, 1964).

Many television and film stars joined the civil rights movement in the 1960s, including Harry Belafonte, Tony Bennett, Frankie Laine, Peter, Paul and Mary, Sammy Davis, Jr and Nina Simone. However, few of these had the impact on white southern opinion like the stars of *Bonanza*.

Social responsibility and media reform

Public broadcasting

Forty years after the Federal Radio Commission shoved educational and public broadcasters out of the way to create the RCA/NBC network, an act of Congress created a framework for the Public Broadcasting Service and other educational efforts. It took 40 years for the "broadcast reform movement," as it was called, to finally find a national home on the airwaves.

One major focus for the reform movement was the National Association of Educational Broadcasters (NAEB), which began as an alternative to the NAB in the 1934. Their studies and lobbying led the FCC to reserve radio frequency space for educational channels in the 1940s. Because it was so expensive to lease telephone lines, a "bicycle network" of taped educational radio programs allowed stations to share programs.

When the FCC thawed out the frozen television frequency allocation system in 1952, one innovation was the reservation of 242 channels nationwide for noncommercial education use. New ideas about educational programming also began emerging at various universities at this time, aided by new momentum from the "sputnik crisis" of 1957. The next year, Congress passed the National Defense Education Act to aid direct school-to-home and other instructional TV projects. The act got unexpected support from Southern congressmen who were opposed to school integration and were looking for a way to maintain education outside the public school system.

By the 1960s, networks of regional educational stations were springing up and new federal funding was helped them expand. Innovative programs like Julia Child's *The French Chef* series and Fred Rogers' *Mister Rogers' Neighborhood* made the networks increasingly popular. Also significant was the creation of the Children's Television Workshop in 1968, which produced *Sesame Street* for PBS that first aired in 1970 and other children's programs like *The Electric Company*.

Educational programs from British Broadcasting Corporation (BBC) also padded out the broadcast schedule for public television in the United States. The BBC's educational programs had a dual purpose of both improving broadcasting quality in Britain and strengthening the "open universities," which were the equivalent of American community colleges. Costume dramas that depicted nineteenth-century literary classics, along with television lecture series like Jacob Bronowski's *The Ascent of Man* and James Burke's *Connections* series were funded as supplements to university education.

Figure 9.13 Big Bird and the First Lady—one legacy of the broadcast reform movement was an increasing emphasis on educational television for children through shows like *Sesame Street*. In this 1993 photo, Big Bird meets Hilary Clinton. (National Archives)

The major milestone in educational broadcasting, and the culmination of 40 years of the broadcast reform movement, was the 1967 Public Broadcasting Act authorizing federal operating aid to educational stations. But the act was flawed in that it depended on year-to-year funding rather than other more permanent funding mechanisms. (An alternative, suggested by the Ford Foundation, would have been the use of profits from satellite communications to finance educational television.)

The year-to-year funding was an ongoing political problem for PBS. As early as 1971, President Richard Nixon vetoed a two-year authorization bill, and in 1981, President Ronald Reagan started making drastic cuts in CPB funding, but in 1984, the FCC loosened the rules for public broadcasting, allowing advertising under the name of "enhanced underwriting."

Other controversies included a variety of confrontations over liberal versus conservative social issues in programming. Conservatives objected to a 2004 cartoon called *Postcards from Buster* in which the child has "two mommies." They claimed that PBS documentary producer Bill Moyers was too liberal, pressuring him to resign in 2005. (He did, but returned when PBS invited him back in 2007.)

In the twenty-first century, about half of PBS revenues come from state and federal taxes and another half come from private donations. Some believe that public broadcasting has outlived its usefulness, since it started as an alternative to the three major networks. Others point to a long history of educational and public broadcasting and maintain that commercial television is not capable of consistently producing educational programming.

Television advertising

Tobacco advertising

Television advertising is powerful, more so than radio or print, and the images it presents can be highly influential. When the US Surgeon General issued a report in 1964 summarizing 7,000 studies on the destructive effects of tobacco smoking on health, some of the first recommendations involved warning labels on cigarettes and a ban on television advertising.

The Federal Communications Commission considered that since the topic of smoking was controversial, broadcasters were breaking the Fairness Doctrine when they aired cigarette commercials since they didn't provide air time for opposing viewpoints. Although anti-smoking ads stared appearing on television in the late 1960s, the glamorization of smoking was itself controversial. This included advertising campaigns featuring the "Marlboro Man"—a rugged cowboy depicted in a Western setting smoking a cigarette—and even children's cartoon characters like the Flintstones. Congress passed the Public Health Cigarette Smoking Act, banning cigarette advertising on television on January 2, 1971.

Tobacco companies shifted advertising to magazines and sports events, but new US laws and regulations in 2010 prohibit companies from sponsoring sports, music and other cultural events.

An international treaty banning all tobacco advertising was approved by 168 nations, not including the United States, in 2005. The treaty, called the World Health Organization Framework Convention on Tobacco Control, is seen as a watershed moment for global public health.

Advertising to children

A variety of controversies over television advertising to children emerged in the 1970s and continue to the present. Among them are the sheer volume of advertising; the advertising of unhealthy foods; and the psychological and programming approaches used by advertisers to engage children.

The average child watches about 25,000 TV commercials a year (Holt, 2007) and the rate has risen slightly since the 1970s. Ads for foods with high amounts of sugar and fat are the most troubling to consumer advocates, who have seen a connection to childhood obesity.

Consumer advocates argued that children are trusting and vulnerable, and that advertisers were taking advantage of that innocent frame of mind. In 1974, the FCC issued new guidelines for children's advertising that separated program content from commercial messages and limited the number of commercials. "If our policy against over-commercialization is an important one," the FCC said, "it is particularly important in programs designed for children." The same year the advertising industry put together the Children's Advertising Review Unit (CARU), a voluntary regulation agency that dealt with complaints and made recommendations to advertisers.

Organizations and grass-roots groups concerned about advertising asked the FCC for tightened regulations. But in the 1980s, with the Reagan administration's deregulatory approach, the FCC took the opposite stand and began deregulating all advertising, saying "the market will regulate itself." One of the groups, Action for Children's Television (ACT) petitioned the FCC for a re-hearing about the specific question of children's advertising, presenting evidence that the market had already failed to regulate advertising for children. The FCC refused to reconsider children's advertising, and ACT filed a federal lawsuit.

A federal court examined the issue and found that the FCC had changed the regulations without considering the problem at all, which it found "profoundly wrong." (*ACT v. FCC*, 1987). In 1990, Congress passed the Children's Television Act, noting that market forces alone had not created an adequate amount of children's educational programming and that government action was needed. The act limited ads to 12 minutes per hour on weekdays and 10.5 minutes per hour on weekends, along with limiting program length advertising (shows that depicted a character also being sold as a toy).

Since the 1990 act, media choices exploded, with cable satellite and internet services. But advocates say the amount and quality of educational programming has not really increased (Conley, 2010).

One effect of top-down regulation has been an increase in alternative advertising approaches, such as running contests and events where the advertiser has only a subtle presence. This was "exactly the opposite of what some of the advocacy groups were aiming for," a *New York Times* article noted (Clifford, 2010).

Controversy over television violence and indecency

The question of whether television influences people, especially children, to commit violent acts has been hotly debated for decades. Hundreds of commissions, studies, lobbying groups, and regulations emerged since then, with two major recommendations: better approaches to the way television is produced for young children; and the development of a rating system that parents can use to evaluate programs that may be unsuitable.

The regulatory saga began with the Commission on the Causes and Effects of Violence, started in 1968 by President Johnson. A panel of industry and academic experts studied previous studies and commissioned 23 more social science and psychological studies of the effects of television. The panel's report in 1972 was controversial, as industry struggled against academics to tone down the report's conclusions.

The National Association of Broadcasters code prohibited gratuitous violence or pandering to morbid curiosity, but the public appetite for violent programs brought home a longstanding dilemma: what's in the public interest is often not what the public is interested in.

The gravity of the problem of violence on TV was reinforced with a 2002 report by the American Academy of Child and Adolescent Psychiatry. The report said that violence on TV was not the only cause of violent behavior, but that hundreds of studies had shown that children were becoming numb to the horror of violence;

were gradually accepting violence as a way to solve problems; and were imitating what they saw on TV (AACAP, 2002).

Also in the latter decades of the twentieth century, as indecent talk shows and comedy routines became increasingly popular, the problem of children's exposure to casual indecency on the air remained.

Two approaches were taken to address the problems. First, under the "safe harbor" concept, FCC regulations are intended to keep patently offensive material off the air from 6 a.m. to 10 p.m.

Secondly, the idea of using technology to allow parents to block objectionable programming was written into the Telecommunications Act of 1996. Television receivers sold since 1999 have to have "V-Chip" as part of the circuitry. V-Chips can detect information about a program's rating and block it if parents desire. Yet according to a 2007 FCC survey, only 27 percent of parents could figure out how to program the V-Chip. And in a separate poll that year, only 12 percent of parents were using parental controls such as the V-Chip, and the conservative Parents Television Council called it a failure.

Broadcast deregulation: the end of the media reform era

The big change in broadcasting policy from the 1980s to the twenty-first century was a greater emphasis on marketplace competition and reduced emphasis on social responsibility theory. The milestone was the Telecommunications Act of 1996, which deregulated ownership rules for radio, television and cable companies, leading to a host of mergers and consolidations that concentrated the broadcast industry.

The advent of new technologies like cable and satellite television challenged the original reason for FCC regulations , which was the idea that broadcasting depended on government allocation of the broadcast frequency spectrum—a limited public resource. In other words, now that the resource was not so scarce, the "scarcity rationale" that justified government regulation had been undermined. What this meant was that broadcasters pushed for—and got—a deregulation of the content and the structure of broadcasting.

One casualty of the new market approach was the Fairness Doctrine. Originally created by the FCC to ensure that all sides of controversial issues could be heard, the doctrine was used to assure that anti-smoking advertising balanced tobacco advertising in the 1960s. The doctrine was affirmed by the Supreme Court in cases like *Red Lion Broadcasting v. FCC*, 1969, which involved a station's attack on an individual book author. But the courts did not agree that environmental issues such as leaded gasoline advertising deserved balance from the environmental perspective (*Friends of the Earth v. FCC*, 33 FCC 2nd 648 1972).

By the 1980s, the view of broadcasters as community trustees was replaced by a conservative view of broadcasters as marketplace participants. The courts also noted the complexities of enforcing balance emerged in a case involving the League of Women Voters, and a few years later, the FCC said it would no longer enforce the doctrine.

Calls for a return of the Fairness Doctrine are frequently heard, such as one from environmental lawyer Robert F. Kennedy Jr:

> The airwaves belong to the public. They were public-trust assets, just like our air and water, and broadcasters could be licensed to use them but only with the proviso that they use them to promote the public interest and to advance American democracy . . . Today six giant multinational corporations now control all 14,000 radio stations in our country, almost all 6,000 TV stations, 80 percent of our newspapers, all of our billboards, and now most of the Internet information services. So you have six guys who dictate what Americans have as information and what we see as news. The news departments have become corporate profit centers. They no longer have any obligation to benefit the public interest; their only obligation is to their shareholders. (Kennedy, 2004)

Another casualty of the market-oriented approach was the "News Distortion Rule," which says that as public trustees, broadcast licensees may not intentionally distort the news, and that "rigging or slanting the news is a most heinous act against the public interest." However, in cases where the rule was invoked, the FCC took no action. For example, in 1997, two Florida reporters said their investigation on the dangers of a synthetic growth hormone (BGH) used by dairies was distorted, but complaints to the FCC were not upheld.

New realities in the global village

The larger impact of global satellite communications was highly unsetting to old political systems. One of the most important impacts was, according to many Eastern Europeans, the end of Soviet domination of Eastern Europe and the dismantling of the Berlin Wall.

In a 2002 interview with *Wired* magazine, Lech Walesa said:

> " . . . Rapid development of satellite television and cell phones . . . helped end communism by bringing in information from the outside. It was possible to get news from independent sources; stations like the BBC (British Broadcasting System) and VOA (Voice of America) were beyond government control. During '50s and '60s, the Communist government put people accused of listening to these stations in prison . . . It's hard to believe that things like that actually happened from today's perspective." (Scheeres, 2002)

The possibilities had dawned on many others. Technologies to organize intelligence and communication could be liberating as well as tyrannical. Ithiel de Sola Pool noted this trend in the converging telecommunications industry in *Technologies of Freedom*, and Ray Kurzweil predicted in 1987 that that the Soviet Union "would be swept away by this growth of decentralized communication."

The technological improvements in communication have not always been welcome, nor have they been without controversy. Perhaps the biggest international controversy over communication involved a 1980 report Many Voices, One World, by a Commission on International Communication for United Nations Educational,

Scientific and Cultural Organization (UNESCO) chaired by Nobel Laureate Seán MacBride.

The commission said that the communications revolution had created dangers as well as opportunities. The unequal flow of communication was making developing nations dependent on the cultural products of the industrial West. Centuries-old customs, time-honored cultural practices and simple life styles were being threatened.

The one-way flow of information from industrial nations to developing nations was also a problem, the report said. News about the developing world in North American and Europe was dominated by spot reports on disasters and military coups, but the underlying realities and developments were ignored. One recommendation was for more professional international training for journalists on both sides of the divide between industrial and developing nations. Another recommendation involved protection of journalists and freedom of the press.

Another recommendation was that small nations should foster internal media development, have more control over the cultural processes of modernization and find ways to reduce the commercialization of communication. These recommendations amounted to an international theory of social responsibility for the media—a Hutchins Commission report on a global scale.

But the recommendations, and subsequent proposals for a New World Information and Communication Order were seen as opening the door to increased media regulation by non-democratic nations, and the International Federation of Newspaper Publishers (FIEJ), among others, issued strong denunciations of the NWICO. The US and Britain withdrew from UNESCO in protest in 1984 and 1985 (although they later rejoined in 2003 and 1997, respectively).

The MacBride report's authors "had the foresight to hope for a kind of 'globalization' that, rather than signify divisions among citizens of the world, acknowledged our common humanity," said Andrew Calabrese in a 25th anniversary article on the report. "With all of its flaws, for which progressive communication activists understandably have distanced themselves over the past twenty-five years, the MacBride Report projects a spirit of hopefulness about how a better world is possible, (and) about the continued importance of public institutions as means to ensure global justice" (Calabrese, 2005).

Satellites increase tensions between Islamic, Asian and Western cultures

As satellite communications brings cultures together, tensions are inevitable. One of the areas most prone to divisiveness is the representation of Islam in Western societies with a tradition of free speech and criticism of religion.

Salmon Rushdie, a British-Indian novelist and essayist, was sentenced to death in absentia for his 1988 book, *The Satanic Verses*, which contained a storyline that many Muslims believed was blasphemous. As the world moved ever closer, even small incidents provoked violent controversy. In September of 2005, for instance, violent reactions followed news that a Danish newspaper, *Jyllands-Posten*, had printed editorial cartoons depicting the Islamic prophet Muhammad in an unfavorable light. And riots broke out in 2011 when a Florida minister burned copies of the Qur'an.

New voices from Islamic nations, now available through satellite, may eventually lead to more international understanding, although there has been considerable controversy. One new satellite news network, Al Jazeera, was founded in Qatar in 1996 and presents news from an Islamic viewpoint. The network is frequently at odds with conservative US policies, and objections to "incitements to violence" have been made at many levels by US officials. However, Al Jazeera presents legitimate journalism and is just as controversial in Arab nations. Moreover, the network has vehemently denied allegations that it showed gruesome videos glorifying terrorist violence.

Another controversy emerged around the joint Chinese-American development, the Phoenix satellite system. The US-based News Corporation, headed by publisher Rupert Murdoch, sent the satellite up in 1996. Access was shut down by the Chinese government in 1999, but a Phoenix InfoNews Channel was established in 2001 as a joint venture with state-owned China Central Television (CCTV). Critics accused Murdoch of bowing to censorship, but his partner in the venture, Chinese businessman Liu Changle, believes that taking a cautious and deliberate approach is best. "China is opening up step by step," Liu said. "Opening up news and media should be slower than the overall economy. It will probably be the last to open. We and the Western media should be prepared for this and not expect too much" (McDonald, 2005).

In *The World is Flat*, columnist Thomas Friedman noted the sense of humiliation and relative depravation that people in highly traditional cultures have felt when confronted with advances in the other regions of the world. It's impossible to return to a time when cultures had less contact, he concludes. The answers will have to come from progressive forces within Arab and Asian cultures, based on their historical traditions. It's not impossible for that to happen, Friedman believes. Arab culture was the original source of the higher mathematics on which the digital revolution now depends. "The entire modern information revolution . . . can trace its roots all the way back to Arab-Muslim civilization," said Nayan Chanda, a Yale Global Online editor (Friedman, 2008). Again, the value of history in helping us understand paths forward into the future cannot be underestimated.

As Marshall McLuhan observed, the global village "doesn't necessarily mean harmony and peace and quiet, but it does mean huge involvement in everybody else's affairs."

Cable and satellite home television

Cable television was originally created in the 1940s to serve remote communities where broadcast signals were weak. When the cable systems began to use microwave relays in the 1960s to import more programming, independent non-network stations operating on the UHF bands were afraid that would be driven out of business.

Broadcasters mounted a "fight pay TV" campaign, and the FCC effectively blocked the expansion of cable systems.

When satellite communications became available in the early 1970s, thousands of community cable systems began merging to take advantage of new channels such as Home Box Office (HBO) and Music Television (MTV). "Superstations" such as WTBS in Atlanta began serving more of the cable market through satellites. They grew into larger organizations such as Cable News Network (CNN). In the process, cable service had an overall market penetration of 60 percent by the year 2000.

The majority of cable TV services were owned by five or six large integrated companies, ranging from Comcast and Time Warner to Cox and Charter. But local franchises are administered by cities and counties, which have not been prepared to deal with major corporations. Cable companies took advantage of their monopoly status, according to the Consumer Federation of America, noting that deregulation of cable in the Telecommunications Act of 1996 meant that cable rates rose at three times the rate of inflation.

Meanwhile, hobbyists who did not want to pay for cable TV in the 1980s could order kits to build a large (three meter) satellite dish and pick up some unscrambled transmissions from satellites. At one point the market was growing so quickly that a Congressman joked that they had become the "state flower of West Virginia."

Small dish direct broadcasting (DBS) home satellite TV, introduced in 1994 by Hughes DirecTV, was followed in 1996 by EchoStar. Proposals to merge the two satellite TV companies were rejected by the FCC in 2002 because television audiences would then only have the choice between a local cable monopoly and a satellite TV monopoly.

By 2010, cable TV had peaked at about 60 percent of all US homes, while satellite TV had about 30 percent of the market. New digital systems would quickly undermine the old monopolies.

Hard times for traditional media

Television networks and other content providers went into a tail spin similar to that of newspapers in the first decade of the twenty-first century. Smaller audiences meant declining profits, which led lower quality programs, which led to smaller audiences.

At its peak in 1976, the three US networks (ABC, CBS and NBC) attracted 92 percent of all viewers. By 2008, the four main networks (including Fox) attracted only 46 percent of viewers. Over the previous decade, NBC's ratings dropped 37 percent, ABC's 35 percent, CBS's 33 percent and PBS dropped 37 percent.

Network news was especially hard hit, overwhelmed by the financial demands of corporate owners who have "little appreciation for the sacred trust that goes with owning a news organization," said Philip S. Balboni in *Nieman Reports*, noting the "near extinction" of the kinds of television documentaries produced by Edward R. Murrow and others in the 1950s and 60s (Balboni, 2001).

Staffs cuts of half or more of a newsroom made once-thriving network news offices look empty, and news bureaus closed down in most cities outside Washington and New York. The new austerity meant that the reporters who managed to keep

their jobs had to perform at a higher level. They would no longer be accompanied by a producer or camera crew, but would now set up their own camera, record their own news story, edit it, and send it back to the newsroom on their own. While the technology made this process easier, it didn't make it any less time-consuming. "They're getting away from substance," said one journalist. "They're not covering the statehouse, the city council, the county board. They do whatever's quick and easy" (Kurtz, 2010).

One of the quickest and easiest ways to attract audiences was through television talk programs. Usually TV talk shows are hosted by a celebrity, conducted in the present tense, and highly structured. They are fairly inexpensive to produce, compared to network dramas, and can bring in high returns for networks (Timberg, 2002). They also involved a relatively neutral figure moderating the conflict.

The US political debate became less moderated as audiences and channels fragmented in the late twentieth and early twenty-first centuries. On the one hand, more channels meant that viewers could simply click the remote to hear a different point of view. And because there were more channels, there was no "scarcity rationale" for government-imposed content boundaries, such as the Fairness Doctrine. Under heavy commercial pressures, network news and public affairs became increasingly shrill and partisan.

Traditional television networks, losing audiences and desperate for a return to their once-lucrative market positions, retreated into a level of vitriolic partisanship not seen for a century. Fired up by the deregulation of political advertising, partisan television especially seemed to be fragmenting the political center in the United States.

In a speech reminiscent of Edward R. Murrow's NAB address (quoted above), John Stewart, a television comedy show host, noted:

> "The press can hold its magnifying glass up to our problems, bringing them into focus, illuminating issues heretofore unseen, or it can use its magnifying glass to light ants on fire, and then perhaps host a week of shows on the sudden, unexpected dangerous flaming-ant epidemic. If we amplify everything, we hear nothing . . . The press is our immune system. If it overreacts to everything, we actually get sicker . . . And yet, with that being said, I feel good. Strangely, calmly good, because the image of Americans that is reflected back to us by our political and media process is false. It is us through a funhouse mirror." (Burnett, 2010)

The image was false, Stewart said, because in everyday life, people cooperate and work together in ways that belie the media image of constant partisan politics.

The impact of digital networks and tv

As usual in the history of media technology, the reaction to a monopoly is the development of new technologies. We've seen the trend in printing, for example, when magazines led the Progressive era charge for broad social reforms at a time when newspapers were too monopolized to take risks. We've seen it in the intent to replace the telegraph monopoly with the telephone, which itself became a monopoly. We've

seen it in home satellite delivery television that was intended to circumvent local monopolies of cable television systems.

Similarly, in the second decade of the twenty-first century, home broadband internet technologies expanded to the point where consumers could access television programs without paying high satellite or cable fees, as a wide variety of news and entertainment programs became available on computers. But the economic impacts of connecting the internet to the home television posed problems for both delivery systems and content providers.

New types of delivery systems included Netflix, a subscriber service which offered instant movies by internet access; and Hulu, an advertising-supported experiment by three big networks (NBC, ABC and Fox) to deliver their content over the internet.

Technically, it was easy around 2010 to begin distributing television through the internet to home television sets. Set-top boxes from providers Apple TV, Google TV and Boxee became available around 2010. However, content providers like NBC, ABC, Fox and others, worried about profits, blocked the new set-tops from carrying their programming. The largest cable provider in the United States, Comcast, bet on creating its own on-demand programs in a bid to compete with on-demand models like Netflix and Google TV.

Broadcasters in Europe were much quicker to embrace the internet TV model, offering "catch-up" television where the original broadcast would be available for a week or on the internet through services like itvPlayer in the UK and M6 in France.

Audiences found they didn't need to pay for a bundle of network programming when what they really wanted was just a few favorite programs. The ability of to unbundle news, sports and entertainment had impacts in other areas, such as newspaper readership, as we have seen. Yet by 2010, it seemed inevitable that cable and satellite television would shift, in part, to the internet, breaking up old monopolies and allowing new forms of competition.

Broadcasting as re-tribalization

One interesting issue was the possibility that social evolution had taken a turn toward what Marshall McLuhan called "re-tribalization" through broadcasting. McLuhan used the term as a way to describe the tendency of radio and television to enhance the post-literate culture, making it more passionate while, at the same time, craving a harmonious and unified sense of social balance. In a 1969 interview, McLuhan said:

> The instant nature of electric-information movement is decentralizing—rather than enlarging—the family of man into a new state of multitudinous tribal existences. Particularly in countries where literate values are deeply institutionalized, this is a highly traumatic process, since the clash of the old segmented visual culture and the new integral electronic culture creates a crisis of identity, a vacuum of the self, which generates tremendous violence—violence that is simply an identity quest, private or corporate, social or commercial.

Although McLuhan observed the trend with concern for violence, there are others who have seen changes in the individual ties to society as simply emerging in new forms. Tribes, according to Business writer Seth Godin, have always been a natural focus for social change. What the internet has done, and what mass marketing through one-way broadcasting media never could do, is allow the development of small groups that could lead social change (Godin, 2008).

"Narrowcasting" of video through the Web can empower global innovation, according to Chris Anderson, a media entrepreneur behind the TED conference (Technology, Education and Design). Anderson believes that the expansion of video on the Web will make up for the decline in public information from network television and printed media.

"This is the technology that's going to allow the rest of the world's talents to be shared digitally, thereby launching a whole new cycle of crowd-accelerated innovation," he said in a 2010 TED talk. Noting that 80 million hours of YouTube are seen every day, it's possible to imagine an internet-fueled learning cycle "capable of carrying all of us to a smarter, wiser, more beautiful place."

"If it's all puppies, porn and piracy, we're doomed," Anderson said. "I don't think it will be. Video is high-bandwidth for a reason. It packs a huge amount of data, and our brains are uniquely wired to decode it" (Anderson and Wolf, 2010).